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LEAD THE PHYSIOTHERAPY EVOLUTION

ABSTRACT BOOK

AUSTRALIAN PHYSIOTHERAPY ASSOCIATION

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SECTION 1: PLENARY KEYNOTES

Enhancing access to best practice physiotherapy care - progress in pulmonary rehabilitation

Anne Holland[1,2]

1School of Translational Medicine, Monash University, 2Department of Physiotherapy, Alfred Health

Plenary 5 Journal of Physiotherapy Rob Herbert Oration, Halls CD, October 25, 2025, 08:30 - 09:00

There is high quality evidence to support the benefits of pulmonary rehabilitation for people living with chronic respiratory disease but implementation remains poor, with inadequate access to this treatment across the globe. Patient experiences of access barriers have been powerful for informing development of novel models of care that better meet their needs, including home-based pulmonary rehabilitation and telerehabilitation. High quality clinical trials of these models demonstrated clinical efficacy, and this has been a strong driver of change in clinical guidelines, policy and practice. However implementation challenges remain, particularly in quality assurance and adaptation to local context. The evolution of pulmonary rehabilitation provides an example of how patient needs and priorities can propel changes to research and practice, delivering progress towards better access to care.

SECTION 2: INTERNATIONAL KEYNOTES

A physiotherapists secret weapon: Acupuncture & Dry Needling for PPGP & OAB

Carl Clarkson[1]
[1]Breeze Academy

1A: Acupuncture for pelvic health, Rooms E2&E3, October 23, 2025, 11:05 - 11:50

Physiotherapists are at the forefront of managing pelvic health conditions like overactive bladder (OAB) and pregnancy-related pelvic girdle pain (PPGP). OAB affects an estimated 12–16% of the population, and PPGP up to 80% of pregnancies, significantly impacting quality of life. While education, lifestyle changes, and exercise remain the gold standard in conservative treatment, many patients continue to struggle with persistent symptoms. For these individuals, acupuncture and DN presents a powerful, non-surgical, and drug-free alternative—one that is gaining traction in clinical practice.

In the last two decades, research has driven major advancements in recognizing and addressing PPGP and OAB, leading to more comprehensive treatment plans that now integrate acupuncture and dry needling alongside traditional physiotherapy interventions.

This talk delves into the evolving role of acupuncture in pelvic health, unpacking its benefits, limitations, and practical applications. Through the evidence-base and clinical insights we'll explore how needling can enhance patient outcomes, when to incorporate it into care, and why it deserves a place in modern physiotherapy practice.

Think fast, fall less: Targeting cognitive and brain outcomes to prevent falls through exercise

Teresa Liu-Ambrose[1]
[1]*University of British Columbia*

2D: Exercise, falls and cognition, Rooms E2&E3, October 23, 2025, 11:55 - 12:40

Background: Cognitive impairment is a key risk factor for falls. Thus, cognitive impairment and falls often co-exist in older adults. Exercise reduces falls and it is generally hypothesized to do so by improving physical outcomes, such as balance and muscle strength. However, exercise may also reduce falls by improving cognitive or brain outcomes.

Results: Findings from randomized controlled trials of exercise among older adults with cognitive impairment or a history of falls will be presented and discussed from the perspective that improved cognitive or brain outcomes may be mechanisms by which exercise promotes mobility or reduces falls.

Key Practice Points: To consider targeting beyond physical outcomes when prescribing exercise to reduce falls risk or falls.

The current state of science with manual therapy

Chad Cook
Department of Orthopaedics, Duke University, USA

2F: Manual therapy evidence, Halls CD, October 23, 2025, 11:55 - 12:40

Manual therapy (MT) refers to passive or actively assisted applications to the body for therapeutic purposes. The evidence supporting MT is structured across three levels of research questions: first, second, and third order. First-order questions examine whether MT has a clinical effect. Numerous studies indicate that MT is equal to or more effective than comparable interventions, which is why it is recommended in multiple clinical practice guidelines across various body regions. Second-order questions explore how MT works, focusing on mechanisms research. Thousands of preclinical and basic science studies suggest that MT affects numerous physiological systems. However, few causal mechanistic studies exist, raising uncertainty about whether observed mechanisms directly cause the clinical improvements seen in patients. Third-order questions ask for whom MT is most effective. Addressing these questions requires moderator analyses to identify individuals who benefit from MT versus other interventions. However, few studies have examined these questions, and where moderating effects have been observed, they tend to be small. Given the current state of MT research, further investigation into second- and third-order questions is needed. Future studies would also benefit from refining which treatments should be considered legitimate MT categories.

A paradigm shift towards multimodal lifestyle interventions for persistent musculoskeletal pain

Jo Nijs[1]
[1]*Vrije Universiteit Brussel*

4H: Multimodal approaches to chronic pain, Halls CD, October 23, 2025, 14:30 - 15:15

In any chronic condition, the search for perpetuating factors is crucial for identifying treatment targets. Cumulating evidence shows that lifestyle factors such as physical (in)activity, stress, poor sleep, unhealthy diet and smoking are associated with persistent musculoskeletal pain severity via direct (e.g., neurophysiology) and indirect (e.g., improved mood) mechanisms and sustainment across all age categories. Persistent musculoskeletal pain is associated with decreased life expectancy. This association can partly be explained by adverse lifestyle factors such as low physical activity levels, poor dietary habits and smoking, but can also partially be explained by the fact that inflammation, which is evidently linked to persistent musculoskeletal pain and predisposes individuals for the development of such diseases.

Yet current treatment options for patients with persistent musculoskeletal pain often do not, or only partly address the many lifestyle factors associated with persistent musculoskeletal pain, or attempt to address them in a standard format rather than providing an individually tailored multimodal lifestyle intervention. This lecture aims at addressing this gap by discussing how clinicians can simultaneously incorporate various lifestyle factors into an individually tailored multimodal lifestyle intervention for individuals with persistent musculoskeletal pain. Such a paradigm shift from a tissue- and disease-based approach towards individually tailored multimodal lifestyle interventions fits well into the current understanding of underlying mechanisms of persistent musculoskeletal pain. Moreover, it should lead to improved outcomes and decrease the psychological and socioeconomic burden of persistent musculoskeletal pain. Evidence supporting this paradigm shift for persistent musculoskeletal pain is growing.

Groin pain in athletes: Assessment and management

Kristian Thorborg

Sports Orthopedic Research Center, Copenhagen (SORC-C), Department of Orthopedic Surgery, Amager-Hvidovre hospital, Institute of Clinical Medicine, Copenhagen University, Copenhagen, Denmark

4K: Athletic hip and groin pain, Rooms E2&E3, October 23, 2025, 14:30 - 15:15

Groin pain is a frequent and complex issue in athletic populations, particularly in sports involving high-speed change of direction and kicking. This keynote presents a modern, evidence-based framework for managing groin pain in athletes, grounded in recent agreement and classification consensus and recent advances in prevention and rehabilitation research.

Attendees will learn how to differentiate between types of groin pain, implement standardized assessment strategies, and design load-based rehabilitation programs tailored to injury stage and athlete profile. Emphasis will be placed differential diagnosis, strength and functional testing and exercise interventions—as well as groin injury prevention and return-to-sport planning.

The session will provide clinicians with practical tools to improve outcomes and reduce recurrence risk in both elite and recreational athletes.

Demystifying nociplastic pain: Clinical reasoning to facilitate a personalized treatment

Jo Nijs[1]
[1]*Vrije Universiteit Brussel*

5I: Clinical reasoning in pain management, Riverbank Rooms 7&8, October 24, 2025, 10:35 - 11:20

Worldwide, the physiotherapy profession has been and is at the forefront of implementing pain science in clinical practice. However, pain science continues to evolve, and clinicians often struggle implementing pain science in clinical practice. Particularly the variety of and rapid change in concepts and terminology used can be challenging for clinicians. For these reasons, this lecture provides a terminology update, including common misconceptions, in a clinically applicable way.

The knowledge regarding central sensitization has revealed a paradigm shift in the understanding and management of chronic pain that allows clinicians to think beyond muscles and joints, and to account for the role of pain modulation in the central nervous system. In addition to nociceptive and neuropathic pain, the dominant role of central sensitization in many chronic pain conditions contributed to establishing a third pain phenotype (i.e., nociplastic pain). In 2021, the International Association for the Study of Pain (IASP) released clinical criteria and a grading system for nociplastic pain, which were adapted to patients with low back pain and cancer survivors. The lecture also puts pain phenotyping in the broader perspective of precision pain medicine, or even precision pain physiotherapy as the future of our profession. It is explained that precision pain physiotherapy goes beyond pain phenotyping, and refers to the ability to classify patients into comorbidity subgroups (e.g., insomnia, overweight/obesity, stress intolerance that differ in their prognosis or in their treatment response, and thus to tailor physiotherapy to the patient's comorbidities.

Minimizing the impact of concussion in paediatric athletes – an update on evidence informed recommendations for practice

Kathryn Schneider

7I: Child and youth concussion, Halls CD, October 24, 2025, 14:15 - 15:00

Learning objectives:

1. Define the current state of the evidence for the prevention of concussion
2. Apply evidence informed principles of multifaceted assessment of concussion
3. Interpret assessment findings to inform evidence-based rehabilitation following concussion in children and adolescents.

Concussions continue to be among the most common injuries in contact and collision sport and are among the most common injuries in children and adolescents. Recent advances in prevention have identified equipment, rule and training strategies can be effective in preventing concussions. Early detection (secondary prevention) can be optimized through the use of a multifaceted assessment. Evidence supports an initial period of relative rest followed by an active approach to rehabilitation. Symptom tolerated aerobic exercise can prevent persisting symptoms and facilitate recovery. Targeted rehabilitation, including cervical and vestibular rehabilitation has been shown to facilitate recovery following concussion in adolescents and adults. This talk will provide an overview of the latest evidence informed considerations to optimize the prevention, detection and management of concussion in paediatrics. This talk will also include application to a case with practical recommendations for clinical practice.

Physical activity to promote longevity in chronic respiratory disease: a matter of quality of quantity?

Chris Burtin[1]

[1]*Hasselt University*

8B: International keynote address, Halls CD, October 24, 2025, 15:35 - 16:20

Physical inactivity is a crucial treatable trait in persons with chronic respiratory disease. Pulmonary rehabilitation programs across settings have shown effective to increase physical capacity and quality of life, but maintaining effects on the long-term proves challenging. Therefore, long-lasting behavioural change in terms of physical activity is needed. But should people then engage in life-long exercise training or is it sufficient to obtain a fairly active lifestyle – think of a daily walk - in order to optimize well-being? Can we be happy with any activity or should we aim for more?

The aim of this talk is to focus on the importance of intensity of physical activity to maximally stimulate longevity in persons with chronic respiratory disease. It will discuss to what extent physical fitness versus physical activity levels in daily life are drivers of long-term health. It will explore current trends in research and clinical practice and contrast dreams of a physio-scientist with the real world.

This talk might want to provoke you (just a bit) and potentially challenge our current practices. Rather than giving a simple answer, it will hopefully make you reflect on how we use the ingredient of “intensity” in our daily work with persons with chronic respiratory disease.

Treatment mechanisms of manual therapy

Chad Cook

9D: Manual therapy mechanisms, Halls CD, October 25, 2025, 10:35 - 11:35

Manual therapy treatment mechanisms (also known as force-based mechanisms) reflect the steps or processes through which an intervention (or some independent treatment) actually unfolds and produces the change in an outcome variable. Mechanisms are responsible for determining “how do treatments work”? Prior work has categorized treatment mechanisms as “causal” (those that occur as a result of the treatment and directly influence the outcome measures that are tested) and “associational” (temporally related to the application, but not tested against an outcome). Treatment mechanisms have also been categorized by multisystem biomechanical, neurovascular, neurological, neurotransmitter/ neuropeptide, neuroimmune, neuroendocrine, and neuromuscular domains, and are hallmarked by their complex interactions. Most (>99%) mechanism-based studies are spread across multiple professions and settings including lab-based and clinical-based designs, animal and human models, and asymptomatic and symptomatic specimens. To date, there are very few causal mechanistic designs that are defined to determine if the mechanisms evaluated in basic science and preclinical work are the reasons we see changes in outcomes in patients with musculoskeletal disorder. Future translational studies are needed to better understand the true causal treatment mechanisms of manual therapy.

Psychologically informed physiotherapy for functional neurological disorder: Evolving evidence and practical application

Glenn Nielsen[1]

[1]*St George's University of London*

11G: Functional neurological disorder, Halls CD, October 25, 2025, 13:40 - 14:25

Psychologically informed physiotherapy for Functional Neurological Disorder (FND) has attracted growing interest from researchers, clinicians, and the patient community. Is this newfound attention justified? Given that FND often presents with physical symptoms and impaired mobility, physiotherapy appears to have strong face validity. Additionally, secondary complications such as disuse weakness, soft-tissue contractures, and coexisting conditions often necessitate physical rehabilitation. However, there remains limited clarity on how physiotherapy should be applied to symptoms that defy conventional neurological models and lack identifiable structural correlates in the brain or spinal cord.

This presentation will examine the evolving role of physiotherapy in the treatment of FND, with a particular focus on the development of empirically grounded interventions that target the mechanisms believed to underlie symptoms. Drawing on emerging evidence, it will explore physiotherapy's potential to reduce symptoms, improve quality of life, minimize iatrogenic harm, and contribute to cost-effective care. Limitations of physiotherapy, the importance of interdisciplinary collaboration, and the challenges of translating theory into practice will be addressed. Case studies will illustrate the practical application of these approaches in clinical settings.

Environmental physiotherapy - Recent developments and future perspectives for the transformation of health

Filip Maric[1]

[1]*Uit The Arctic University of Norway*

12H: Environmental physiotherapy and the transformation of health, Halls CD, October 25, 2025, 14:30 - 15:15

Mounting social and ecological crises, including climate change, biodiversity loss, conflicts, wars and forced displacement, extreme weather events, large-scale land systems change, and others are increasingly affecting the health of people everywhere around the world. The recognition of these challenges is driving efforts in transformative change across all sectors of society, most famously via the UN Agenda 2030 Sustainable Development Goals. In the context of health, much of this transformative change is championed through the exponentially growing activity around planetary health, One Health, sustainable healthcare and, in our profession, environmental physiotherapy. All these movements share two fundamental assumptions: (1) That the ways humans have dealt with each other, with our planetary environment, and with health have proven unsustainable; (2) That we need to develop and implement new visions of health and healthcare that address health, social and ecological issues in a more integrated manner that does justice to their inseparable interconnections.

This talk will provide an overview of environmental physiotherapy and its cross-cutting implications and importance for the present and future of all specialties and subject fields of the physiotherapy profession. Environmental physiotherapy has been growing rapidly over the past six years, changing physiotherapy education, opening new areas for physiotherapy research, and, increasingly, providing both short and long-term perspectives for the transformation of physiotherapy practice. As will become evident, environmental physiotherapy is not an optional, nice-to-have addition but something that is already inherent to all of physiotherapy that simultaneously holds potential for its wholesale transformation.

SECTION 3: INVITED PRESENTATIONS

What is required for advanced physiotherapy care of back pain, now and in the future?

Mark Hancock[1]

[1]*Spinal Pain Research Centre, Macquarie University*

1B: Advanced care for low back pain, Hall A, October 23, 2025, 11:05 - 11:50

Background: All physiotherapists aim to provide high-quality, effective care for their patients, including those with low back pain. Physiotherapists in advanced practice roles, such as emergency departments or surgical screening clinics, have increased exposure to patients with sinister pathology. They require high-level knowledge and skills in assessment, diagnosis and management planning, but these skills are also critical to physiotherapists workings in traditional settings.

Objectives: This presentation will discuss recent advances in understanding of how best to assess and manage low back pain. This will be used as a framework to explore the most critical knowledge and skills required by musculoskeletal physiotherapists to provide high-quality care to patients. The advanced practice setting will be explored, considering both the differences and similarities in the required knowledge and skills, compared to traditional settings. The talk will draw from recent clinical trials of effective interventions for back pain, such as cognitive functional therapy and the WalkBack intervention, and what has been learnt about clinician training and upskilling. A theme of the talk will be the importance of advanced communication and coaching skills.

Key Practice Points: After attending this presentation attendees should:

- Understand the latest evidence on diagnosis and management of low back pain
- Be aware of the key skills and competencies required by physiotherapists to provide high-quality diagnosis and management for low back pain
- Be able to reflect on their own knowledge and skills required to provide high-quality care for low back pain and other musculoskeletal conditions

Progressing the evidence base for rotator cuff rehabilitation

Nadine Foster[1]

[1]*STARS Education and Research Alliance, Surgical Treatment and Rehabilitation Service, The University of Queensland and Metro North Health*

1G: Innovation in shoulder rehabilitation and service delivery, Riverbank Room 4, October 23, 2025, 11:05 - 11:50

Recent systematic reviews and RCTs conclude that, compared to traditional immobilisation, early exercise after rotator cuff surgery can improve shoulder movement and reduce the risk of postoperative stiffness and complications without adversely affecting pain, function or re-tear rates (1). Previous RCTs have been mostly small with sample sizes averaging less than 100 (less than 50 per group), and there are substantial reporting deficiencies regarding pain-related prescription parameters (2). Further large and more definitive evidence is needed, that includes better information on rotator cuff tear size and rehabilitation interventions.

In late 2023/early 2024 a national online survey was distributed across professional societies and networks to explore current approaches to rehabilitation following rotator cuff repair. of the 73 respondents (60 physiotherapists, 13 surgeons), 67% agreed there is clinical uncertainty about the most effective approach to rehabilitation following rotator cuff surgery and 63% agreed that individualised patient-directed rehabilitation where the patient discards their shoulder sling as they feel able following surgery and move as their pain allows might benefit recovery. Concerns about the risk of re-tear were raised by 53%, however.

Willingness-to-randomise patients in a future RCT was influenced by tear size (66-71% willing for those with medium tears (1-3cm); 54% for cases with large tears (3-5cm)). High shoulder functional demands after surgery, diabetes and smoking also influenced decision-making. Responses from physiotherapists highlighted the surgeon-directed nature of post-operative rehabilitation in Australia. The presentation will conclude with options for future multicentre RCT designs that would strengthen the evidence base in this field.

From Ideas to Impact: Driving Innovation in Paediatric Health and Disability

Noula Gibson[1]
[1]*Perth Children's Hospital*

1H: Innovation in paediatric health and disability, Panorama Room 1&2, October 23, 2025, 11:05 - 11:50

Innovation and research are essential for advancing healthcare. Extending these beyond academic research to include clinical ideas and service improvement projects can maximise positive impact. This presentation explores strategies to enhance clinical research impact and drive meaningful clinical practice innovation, offering practical tools to bridge the gap between ideas and clinical applications.

Two distinct programs that share foundational strategies for transforming an idea into practice will be presented:

1. RESP-ACT a collaborative model of care for managing respiratory illness in children with cerebral palsy and medical complexity; and
2. FrameRunning pathways to boost physical activity opportunities for people with disabilities.

Whilst vastly different programs, the key strategies applicable to both these programs enabled the successful movement of an idea (one clinical, one research) to a tangible outcome.

Clinicians will learn about these two programs, as well as the six common strategies leading to the success: Consumer involvement, multi-stakeholder collaboration, empowering clinicians and clinician-researchers, effective knowledge dissemination, and strategic implementation grounded in behaviour change models and implementation science.

The talk will highlight how these strategies are applied in research, clinical and real-world initiatives to transform ideas into a tangible, feasible outcome. The importance of measuring clinical impact and planning for sustainability will also be highlighted.

These strategies will equip clinicians and researchers with actionable insights to advance their own ideas of innovative physiotherapy treatments, research or health care practices to improve outcomes for children and young people.

'Listen to me, Learn from me': Supporting person-centred care through interdisciplinary health workforce pain management training.

Helen Slater[1]

[1]*Curtin University*

1I: Clinician training in person centred care and pain, Halls CD, October 23, 2025, 11:05 - 11:50

Outline In this presentation, I will share research that our team, along with cross-sectoral collaborators, have been undertaking with the aim of strengthening health workforce training efforts to support high quality person-centred chronic pain care.

Background A focus of the presentation is the development and implementation of the 'Listen to me, learn from me' interdisciplinary health professional pain training framework, empirically derived in partnership with Australian people living with chronic pain, carers and cross-discipline health professionals1. This framework forms the underpinning of a novel interdisciplinary pain training program, the Online Pain Education Network (OPEN), launching July 2025.

Using 'Models of Care' as a policy vehicle, I will describe how evidence can be driven from a systems-level through policy into health services and practice to support health workforce pain management training, in parallel with consumer self-management upskilling. Models of Care provide an effective vehicle to bridge across disciplines, connecting and supporting clinicians, services and systems, and responding to clinical needs, service reform and policy directions in a coherent collaborative way. The use of digital technologies as an implementation enabler will be discussed, showing how concurrent capacity building of our health workforce and upskilling of people living with pain, can help mitigate care disparities and support access to person-centred pain care.

Key practice points This presentation will demonstrate how as a pain community we can shape our cross-discipline understanding of high quality care, and how we can strengthen our pain training efforts, our ways of communicating, coordinating and integrating quality person-centred pain care.

Lower limb muscular aponeurosis injuries–factors affecting return to play

Sam Pietsch[1]
[1]*LaTrobe University*

1K: Musculotendinous injury assessment and rehabilitation, Riverbank Room 5, October 23, 2025, 11:05 - 11:50

Lower-limb muscle injuries represent a significant burden in elite sport, being among the most common causes of time lost from training and competition. Recent research has highlighted the potential prognostic importance in identifying injury in the intramuscular aponeurosis (intramuscular tendon).

It has been proposed that muscle injuries with aponeurotic disruption are associated with longer rehabilitation periods, delayed return to play (RTP), and an increased risk of recurrence compared with injuries without aponeurotic involvement. However, evidence remains mixed, and the precise impact of aponeurotic injury on clinical outcomes continues to be debated. The detection and characterisation of aponeurotic injury on MRI provides potential prognostic insights that may assist clinicians in tailoring management strategies.

This presentation will review the relevant anatomy and radiological features of lower-limb muscular aponeurotic injuries, with particular focus on commonly affected muscles in running and kicking athletes. The implications of aponeurotic involvement for prognosis, rehabilitation, and RTP decision-making will be discussed, focusing on recent research into rectus femoris injuries.

The pelvic floor and birth outcomes, should we care about length, strength, both, or neither?

Joelene Murdoch-Ward[1]
[1]*The Physiotherapy Clinic*

1L: Antenatal physiotherapy, Room E1, October 23, 2025, 11:05 - 11:50

A body of research has been underway investigating the pelvic floor soft tissue biomechanics in pregnancy and its relationship to birth. A systematic review in 2015, reviewed the research focused on pelvic floor muscle strength training in pregnancy and found having a stronger pelvic floor may reduce time in second stage of labour. Other studies have explored the role of high resting tone and/or poor distensibility of the pelvic floor and its influence on birth outcomes, and more recently the coordination of the pelvic floor muscles during the bearing down manoeuvre (BDM) and its relationship with birth. A systematic review in 2025 analysed the available data on pelvic floor biomechanics and coordination during pregnancy and its relationship with birth outcome. The review found an association with higher pelvic floor resting tone, poor distensibility or poor coordination and either one or more of the following; labour dystocia in first stage of labour, prolonged second stage of labour, instrumental delivery or emergency caesarean section. The majority of studies analysed in this review analysed the pelvic floor using transperineal ultrasound (TPUS) at rest, on pelvic floor muscle contraction and during the BDM. Current research suggests a pelvic floor assessment in pregnancy, analysing resting position, ability to contract, relax, and length during the BDM, utilising TPUS is a worthwhile assessment. The obvious next step is understanding how best to improve the resting tone, distensibility, and coordination of the pelvic floor muscles during the BDM, in pregnant women, to help optimise birth outcomes.

New insights into loading during inspiratory muscle training: implications for training weak and complex patients

Bernie Bissett

[1]*University of Canberra,* [2]*Canberra Health Services*

2B: Inspiratory muscle training and rapid fire updates in cardiorespiratory physiotherapy, Hall A, October 23, 2025, 11:55 - 12:40

Background

Inspiratory muscle training (IMT) can improve quality of life and exercise tolerance across a broad range of diseases and conditions. The evolution of technology, in particular electronic IMT, has enabled new insights into the precise loading of respiratory muscles that occurs during IMT. Better understanding of loads and training benefits can steer physiotherapists towards more specific instructions for patients performing IMT. Optimising load is particularly crucial for patients who are very weak (e.g. ICU patients who have been mechanically ventilated) or complex (e.g. neurological patients).

Objectives

To describe recent and emerging international evidence regarding load and training outcomes for very weak and complex patients performing IMT.

Results

Results from recent trials indicate that the external load imposed upon inspiratory muscles during IMT appears less important than the total load (external + internal resistance). Internal load is a function of individual respiratory system compliance. Instructions to perform fast maximal breaths during IMT result in higher total load than slower breaths for an equivalent external load. Patient perception of effort may be a critical determinant of training success and should be included in future studies of IMT.

Key practice points:

- Regardless of external load imposed during IMT, physiotherapists should instruct patients to perform fast maximal (“short and sharp”) breaths to optimise total loading of inspiratory muscles and perception of effort. This approach is likely to maximise training benefits even in those who are profoundly weak, but may be challenging in patients with coordination or slowness impairments (e.g. Parkinsons disease).

National best practice framework for early childhood intervention: Development, tools and resources for physiotherapists

Denise Luscombe[1]

[1]*PRECI - Professionals and Researchers in Early Childhood Intervention*

2C: Foundations for all, Room E1, October 23, 2025, 11:55 - 12:40

This presentation will briefly describe the development of, and the tools and resources associated with, the DSS-commissioned new National Best Practice Framework for Early Childhood Intervention. The aim of this Framework is to support the understanding of high-quality early childhood intervention (ECI) for children with developmental concerns, delay or disability no matter the source of the services and supports they seek and receive across Australia. The implementation of the National Disability Insurance Scheme (NDIS) in Australia, which provides personalised funding to support access to disability services and supports, profoundly disrupted the provision of services to young children with developmental concerns, delay or disability and their families. The Framework provides background information, a decision-making guide and a variety of tools and resources to support physiotherapists working with children under 9 years of age, and their families to provide high-quality ECI.

Methods included a desktop review of the evidence describing best practice, (ii) community consultations undertaken with four stakeholder groups (n=1400+): families of children with developmental concerns, delay or disability; Aboriginal and Torres Strait Islander families, community-controlled peak organisations and service providers; young people aged 15-30 years with lived experience; and ECI practitioners, researchers, advocacy organisations, peak and professional bodies, managers and government agencies; (iii) synthesis of findings from the desktop reviews and consultations to create a new National Practice Framework; and (iv) development of tools and resources as requested by the field. Information on where to access the Framework and resources will be provided.

Bridging the gap between physical and mental well-being for patients and practitioners

Jenny Brockis[1]

[1]*Dr Jenny Brockis*

2E: Bridging the gap between physical and mental health, Riverbank Room 5, October 23, 2025, 11:55 - 12:40

Healthcare, as we know it, is evolving rapidly.

Patients' expectations have changed, new technologies continue to evolve, and practitioners must also adapt.

The key to thriving is knowing what matters to your own health and well-being, because you cannot serve from an empty cup.

Discover the three elements that keep you happy, healthy, and fulfilled.

Psychosocial triage and matched care: Positioning physiotherapists as leaders in return-to-work planning

Mary Wyatt[1]
[1]RTWMatters.org

2I: The Influencer, Hall B, October 23, 2025, 11:55 - 12:40

Psychosocial triage and matched care: Positioning physiotherapists as leaders in return-to-work planning.

The current biomedical model is failing injured workers. Despite decades of discussion, psychosocial factors—which account for up to 85% of prolonged work disability—remain largely unaddressed until late in the recovery journey. Early identification studies show the strength of psychosocial management.

This session presents a substantial, evidence-based framework that positions physiotherapists as leaders in modernising return-to-work outcomes. The systematic three-step approach: psychosocial risk triage using validated tools like the SF Örebro, targeted risk assessment to identify specific barriers, and matched care interventions tailored to individual needs.

The session will showcase how physiotherapists can orchestrate coordinated care involving RTW coordinators, psychologists, and medical teams, moving beyond traditional treatment boundaries to address the full spectrum of recovery barriers. Real-world case studies demonstrate remarkable outcomes: 40% reduction in days lost from work, substantial reduction in long term disability, reduced disputes along with high levels of participant satisfaction rates.

The session will review implementation strategies, from introducing screening tools into clinical practice to developing professional networks that support comprehensive biopsychosocial interventions.

The evidence is clear: psychosocial issues are treatable and modifiable. Physiotherapists have the greatest experience with screening tools and are well positioned to lead this shift from reactive treatment to proactive, psychosocially-informed care.

The evolution, development and delivery of a standardised Australasian Level 1 dry needling program

Jane Rooney[1]
[1]*Physio Educators*

3A: Dry needling update on education and outcomes, Panorama Room 1&2, October 23, 2025, 13:40 - 14:25

Minor adverse events occur in approximately 10 % of people. More serious adverse events including pneumothorax and organ puncture occur approximately 0.0001%.

Dry Needling misadventures have resulted in the highest claim costs for Insurers of Physiotherapists in Australia with 8 pneumothoraxes recorded in the past 5 years.

In response to this alarming professional issue a standardised national program was implemented in Australia in 2021, with a high emphasis on safety and anatomy using a clinical reasoning approach, written by Associate Professors' Jane Rooney and Peter Selvaratnam. This course has six hours of online learning modules presenting the theoretical concepts of dry needling and includes a comprehensive prerequisite safety module written by Paula Raymond Yacoub, Leigh McCutcheon & Tristan Chai. The 2-day practical workshop has standardised video instruction accompanying a comprehensive manual. The course delivery includes learning in action activities, live patient case demonstrations, a competency technique checklist, concluding in a theoretical and practical examination.

Several presenters and tutors have been trained to deliver this program across Australia.

There has been a downward trend in serious adverse events in Australia over the past 4 years since the national roll out of this program. Jane will present the structure of this nationalised course which may serve as a proforma for other post graduate physiotherapy courses in the future.

Respiratory physiotherapy – Where have we come from? Where are we going?

Jennifer Alison[1]

[1]*University of Sydney*

3B: National keynote address, Halls CD, October 23, 2025, 13:40 - 14:25

There have been pivotal points in the development of respiratory physiotherapy in terms of exercise rehabilitation and airway clearance techniques for people with both chronic and acute lung conditions. The evidence-base for these physiotherapy interventions has grown exponentially. But how do we ensure that people requiring these evidence-based physiotherapy interventions have access to them? What is the role of virtual care and how can this be used safely and effectively while maintaining the fidelity of the interventions and ensuring that the 'magic sauce' of the interaction between clinician and patient is not lost?

The use of implementation science methodologies may demonstrate how increased access to our physiotherapy interventions can be achieved but needs to be followed up by advocacy for policy change in funding models for respiratory physiotherapy services to ensure wider scale-up.

A future focus should include the impact of climate change on our practices which will require review of the environmental effects of our services. These topics will be discussed in this presentation.

Delivering and promoting physical activity in brain injury rehabilitation: from guideline development to implementation

Leanne Hassett[1]

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3F: Traumatic brain injury / Brain injury 1, Rooms E2&E3, October 23, 2025, 13:40 - 14:25

Aim: To develop an Australian physical activity clinical practice guideline for health professionals working with people with moderate-to-severe traumatic brain injury (msTBI) with implementation and sustainment in mind.

Design: Guideline development using Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach.

Methods: Guideline development and implementation planning were framed within the Exploration Preparation Implementation Sustainment (EPIS) Framework and involved: a rapid review synthesising evidence in msTBI, reviewing guidelines in other relevant health conditions (e.g., stroke) to identify indirect evidence, qualitative consultations with six interest-holder groups including people with msTBI, and a clinical audit of 26 rehabilitation services in Australia.

Results: The guideline incorporates 10 de novo recommendations for the delivery and promotion of physical activity along the continuum of care for children, adolescents, adults and older adults with msTBI. Data from the audit and focus groups indicates feasibility and acceptability of guideline recommended physical activity, however barriers to implementation exist in the inner (e.g., resources) and outer (e.g., funding legislature) settings. Implementation strategies addressing barriers, facilitators and cultural considerations for guideline implementation will be tested in a funded implementation trial in Australian rehabilitation services.

Conclusion: Implementing guideline recommendations will enable equitable and consistent evidence-based rehabilitation to improve outcomes for people with msTBI.

- Frameworks are critical for guiding the implementation process
- Promotion of physical activity should start early and be repeated along the rehabilitation journey.

- Physical activity interventions tailored to the individual's goals and needs should be standard clinical practice for health professionals working with people with msTBI.

From survival to sustainability: The evolving role of physiotherapists in Occupational Health

Jenny Legge[1]
[1]Staunch Technology

3H: OHP evolution, Riverbank Rooms 2&3, October 23, 2025, 13:40 - 14:25

Occupational Health Physiotherapy is a dynamic field shaped by the biological, technological, and societal forces that influence human progress. This thought-provoking keynote explores the growth of work-related physiotherapy through the lens of evolutionary theory, examining how our biology intersects with the demands of modern work – how we shape it, and how it shapes us.

We begin by tracing the evolutionary roots of human movement and behaviour, highlighting the mismatch between our ancestral physiology and today's sedentary, high-stress work environments which underpins many of the health challenges in workplaces today.

Technological innovation is accelerating this evolutionary shift. From AI-driven risk prediction to robotic exoskeletons, wearable sensors, motion capture and virtual rehabilitation, physiotherapists are collaborating with technology to improve workplace safety, injury prevention, and return-to-work outcomes. These tools extend, not replace, clinical insight enabling more precise and proactive care.

Grounded in evidence-based practice, we explore interventions aligned with evolutionary biology, including movement variability, circadian-aligned work schedules, and harmonious environments, which have demonstrated improved health in occupational settings.

Ultimately, we discuss the role of physiotherapists in driving transformative social change. As advocates for inclusive, human-centred work design, physiotherapists are uniquely positioned to lead the cultural evolution of work – ensuring that future workplaces prioritize human wellbeing alongside productivity.

Weaving together research, innovation, practice and social transformation, this keynote offers a compelling vision for the future of occupational health physiotherapy - one that evolves in step with our biology, empowered by technology, and guided by our human commitment to sustainable, equitable work.

Integrating exercise into the lung cancer care continuum

Vinicus Cavalheri[1,2]

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4B: Physiotherapy and the implementation of national lung cancer screening, Panorama Room 1&2, October 23, 2025, 14:30 - 15:15

The implementation of the National Lung Cancer Screening Program (NLCSP) represents a significant advancement in the early detection of lung cancer among high-risk individuals. While the primary objective of the NLCSP is to identify malignancies at an earlier, more treatable stage, this initiative also presents a unique and timely opportunity to incorporate physical activity promotion and structured exercise training into the broader lung cancer care continuum. The NLCSP is also likely to identify people with other respiratory diseases who may then be referred to/can benefit from physiotherapy interventions.

Evidence suggests that physical deconditioning is highly prevalent amongst people with lung cancer, due to both the disease and its associated treatments. Interventions that include tailored exercise may mitigate these impairments, enhancing functional capacity, treatment tolerance, and quality of life. A growing body of research supports the efficacy and safety of exercise training in this population. In this presentation, A/Cavalheri will present key findings and clinical implications relating to: (i) links between physical activity and lung cancer incidence and outcomes; (ii) objective methods for assessing exercise capacity in individuals with lung cancer; (iii) the role of preoperative and postoperative exercise in patients with early-stage; and (iv) the application and benefits of physical activity promotion and exercise training during treatment for people with inoperable lung cancer.

By integrating assessment of exercise capacity and exercise prescription into the lung cancer care continuum, we may significantly improve both short- and long-term outcomes, supporting a more holistic and person-centred model of lung cancer care.

The world of elite para sport

Paula Peralta[1]
[1]*Australian Sports Commission*

4D: Elite para sport, Hall B, October 23, 2025, 14:30 - 15:15

Paralympics Australia fielded a team of 160 athletes (including ten guides, ramp assistants, handlers, pilots) across 17 sports accompanied by 198 support staff at the Paris 2024 Paralympic Games.

The world of elite para sport continues to grow. There has been significant financial investment in para sport over the last eighteen months to increase Australian representation across more sports and more impairment classes on the world stage. The medium to long term goal is for the Australian Paralympic Team to achieve more medals across more sports leading into, and at Brisbane 2032.

There has been significant investment into the high performance system targeting pre-categorised athletes, classification and the performance support for emerging athletes.

Understanding the elite para sport system and initiatives may help increase participation and representation from the wider disability community, in turn having positive health impacts and greater social impact.

Fit-for-purpose training for chronic low back pain

Ben Wand[1]

[1]*The University of Notre Dame Australia*

4F: Manual therapy mechanisms, Riverbank Rooms 7&8, October 23, 2025, 14:30 - 15:15

Background

Chronic and disabling non-specific low back pain appears unresponsive to many commonly applied interventions. Difficulties in formulating a coherent appreciation of the complexity of the problem and unclear guidance on how to structure a comprehensive and cohesive treatment model likely contributes to this circumstance. We have proposed the Fit-For-Purpose Model as a framework to explain the development and persistence of non-specific low back pain and an accompanying graded, multimodal, neuroscience informed, treatment programme.

Objectives

This talk will offer an overview of the Fit-For-Purpose Model and provide detailed insight into the complementary treatment programme that seeks to:

1. Help people with chronic low back pain understand it is safe and helpful to move
2. Address the neurobiological consequences of persistent pain so the person feels safe to move
3. Precisely and skilfully load the system within a feedback rich environment to engender a functionally authentic experience of safety with movement
4. Consolidate the understanding, feeling and experience of safety with action and promote positive tissue adaptations with ongoing exercise that entails loading of functionally relevant activities.

Some data supporting this approach will also be presented.

Key practice points

- The Fit-For-Purpose Model aims to help clinicians make sense of the complexity of the chronic low back pain experience and offers the theoretical framework for an integrated, multimodal treatment programme that shows some promise.

The anatomy and physiology of fascia: implications for assessment and manual therapy treatment

Alison Slater[1]
[1]*The Source Physiotherapy*

5A: Anatomy of fascia and the vertebral column across species, Riverbank Room 5, October 24, 2025, 10:35 - 11:20

This presentation will address an overview of fascia and why its consideration is critical in improving outcomes across human and animal patient populations. Fascia is ubiquitous throughout the vertebrate body, constituting our richest sensory system however, its inclusion in formal anatomical education is lacking.

Under its most conservative definition, the term fascia includes loose connective tissue, deep and visceral fascia, aponeuroses, tendons and ligaments. It houses abundant autonomic and mechanoreceptive, nociceptive and vasomotor functionality. Influenced by hormones, pH, temperature and hydration, fascia connects yet compartmentalises the body. It integrates whole-body movement, orchestrating proprioception and force transmission, and plays crucial roles in inflammation, wound healing, fluid dynamics and immune and lymphatic efficacy.

A proliferation of research into all aspects of fascia challenges long-established paradigms around classical anatomy, and how it is taught. It also calls for the reframing of our approach to assessment, rehabilitation, strength and mobility, and the pathophysiology of pain. The need for more holistic clinical appraisal is underscored, to guide clinical reasoning and management for more satisfying outcomes for both patients and clinicians.

Mobilising change: evolving evidence for physical activity in acute hospital settings

Claire Baldwin[1]
[1]*Caring Futures Institute, College of Nursing and Health Sciences, Flinders University*

5B: Optimising movement in the acute hospital setting, Hall A, October 24, 2025, 10:35 - 11:20

Background:
Physical activity and mobility have long been recognised as fundamental components of care for people in acute hospital settings. Physiotherapists play a central role in shaping patients' movement behaviours, through their direct care and their influence on healthcare teams and systems. Yet practice change to get the most at-risk patients in hospital moving, to improve their outcomes remains difficult.

Objectives:
This session will refresh and update your knowledge on why movement matters and how physiotherapy in hospital settings, impacts patients' health and care journey. It will explore the evolving landscape of physical activity and sedentary behaviour research in acute hospital settings, with a focus on older adults and general medical populations, for whom practical guidance and support is particularly lacking. Key concepts such as hospital-associated functional decline, frailty, and cognitive impairment will be explored in terms of their intersection with activity behaviours and interventions. Theory-to-practice links will be made, including how relevant frameworks can be used to move forward from research on barriers and enablers, to new, targeted and sustainable intervention strategies. This will include a summary of locally led research on evidence-based consumer guideline and intervention development, that has sought to focus on principles of care quality, equity, person-centred care, inter-professional practice and functional independence.

Key practice points:

- This session aims to inspire and equip physiotherapists to lead and collaborate in advancing mobility-focused care across hospital settings. Translatable learnings and commonalities between practice in acute care and inpatient rehabilitation and residential aged care will be highlighted throughout.

Embedding digital physiotherapy in aged care to reduce falls and improve mobility: the TOP-UP trial

Rik Dawson[1], Marina Pinheiro[1], Juliana Oliveira[1], Judy Kay[2], Bernard Bucalon[2], Lauren Cameron[1], Abby Haynes[1], Cathie Sherrington[1]

[1]Institute of Musculoskeletal Health, Sydney Musculoskeletal Health, Sydney Local Health District and University of Sydney, [2]School of Computer Science, University of Sydney

5C: PA and telehealth, Halls CD, October 24, 2025, 10:35 - 11:20

Aim: Evaluate the effectiveness, implementation feasibility, and cost-effectiveness of the TOP UP telephysiotherapy program in aged care.

Design: Hybrid Type 1 RCT with cost-effectiveness analysis, and a mixed-methods feasibility study.

Methods: Adults aged ≥65 receiving aged care (n=242) were randomised to a 6-month telephysiotherapy intervention (10 Zoom sessions, care worker support, online videos) or wait-list control. Outcomes included mobility (SPPB), fall incidence, pain (VAS), quality of life (EQ-5D-5L), and healthcare costs. The step tracker study involved 16 aged care recipients using Fitbit devices over four weeks. Feasibility and acceptability were also evaluated using mixed methods.

Results: The intervention group improved mobility by +2.1 SPPB points (95% CI: 1.4–2.7), reduced fall risk by 38% (RR: 00.62, 95% CI 0.42-0.92), and improved pain and quality of life. The program cost $2,061 per participant, with associated reductions in healthcare use and cost ($4,512 vs. $5,874). Acute care costs were 23% lower, primary care 18% lower, and specialist care 21% lower than controls. The step tracker trial achieved 83% enrolment and 93% retention. Participants reported strong motivation, social engagement, and ease of Fitbit use. Usability and health issues were barriers.

Key practice points:

- Telephysiotherapy improves mobility, reduces falls, and lowers costs in aged care.
- Step trackers motivate older adults and promote physical activity.
- Digital physiotherapy models are feasible and acceptable when locally supported.
- This presentation will highlight how clinicians can apply emerging telephysiotherapy models across diverse health settings to improve access, continuity of care, and patient outcomes in everyday practice.

Prevention of sports-related head injuries: What can we learn from current research in football (soccer)

Kerry Peek[1]

[1]*Federation Internationale de Football (FIFA)*

5K: Sports-related concussion, Rooms E2&E3, October 24, 2025, 10:35 - 11:20

The short- and long-term consequences of head injuries in football are a global concern given that they account for around 20% of all medically assessed injuries in football. While all players are more likely to sustain a head injury through player-to-player contact when competing for an aerial ball, women are far more likely than men to be injured by the ball itself. An emerging area of research is whether improved technical and tactical performance of aerial play (in both contested and uncontested heading situations) should be considered as an injury prevention strategy. Research, led by this presenter, has demonstrated several differences in the technical performance of heading between men and women. In a purposive sample of FIFA World Cup matches women were observed to perform fewer controlled headers than men, were less likely to head the ball using their foreheads, less likely to use their upper body and closed their eyes earlier before the header when compared with a similar sample of men. Published, and unpublished qualitative research has also shown that women are less likely to report formal training in heading technique, which might in part explain why women are more likely to be injured by the ball and report a higher number of concussions than men. This presentation will discuss these findings as well as a first look at data exploring the use of a coaching framework to mitigate head injury risk in football, and how this approach might translate to other sports.

Beyond the needle; unravelling the mechanisms of Acupuncture and Dry Needling and their clinical utility

Jonathan Wray

6A: Pain science for needling, Riverbank Room 5, October 24, 2025, 11:25 - 12:10

Many in the physiotherapy profession are calling for the abandonment of hands-on treatment, arguing that more active and psychologically informed strategies are said to better empower patients and are more cost effective. “Passive” treatments including acupuncture and dry needling are considered out of date when trying to manage the complexity of musculoskeletal disorders. So where does acupuncture and dry needling fit into a biopsychosocial approach to managing musculoskeletal pain? How effective is it compared to recommended treatments, primarily patient education and exercise?

This presentation will discuss contemporary pain science and the role of acupuncture and dry needling as it relates to clinical practice. Ideas around the neurophysiological treatment effects of acupuncture and dry needling including analgesic, affective and somato-perceptual will be explored. Emerging concepts and ideas around the Bayesian brain and predictive processing models of a person’s sensory experience in relation to pain will be introduced and how acupuncture and dry needling can produce therapeutic effects beyond the needle.

Falls prevention - what enables effective implementation?

Anne-Marie Hill[1]
[1]*The University of Western Australia*

6D: Falls prevention, Rooms E2&E3, October 24, 2025, 11:25 - 12:10

Background:

Falls prevention continues as a critical focus for physiotherapists who work with older people. The Australian Institute for Health and Welfare reports that in 2020-21 falls injuries cost the health system an estimated $4.7 billion. Recent world falls guidelines recommend all older adults should be advised about falls prevention and physical activity, with advice tailored for their preferences. For gerontology physiotherapists, our position statement emphasises that “Physiotherapists are experts in maintaining and improving mobility, falls prevention and reduction, and minimising harm from falls.”

Objectives:

How can we as gerontology focused physiotherapists implement these recommendations?

Results:

This presentation will synthesise current evidence and recommendations for addressing falls prevention, in the context of community, hospital, high needs and frail populations. Emerging evidence for practical implementation and translation of falls prevention evidence into practice will be summarised, with emphasis on how to engage with older adults successfully around falls prevention by providing holistic older adult centred care with motivating discussion about falls prevention.

Key practice points:

- Key topics will focus on addressing barriers identified by older adults to engaging in exercise particularly after injury or illness, as functional decline associated with inactivity can further increase falls risk. Ageism is a key barrier that impacts on older people’s beliefs, attitudes and motivation to engage in healthy ageing behaviours. Encouraging age friendly practice underpins the physiotherapist’s approach to falls prevention. As gerontology physiotherapists, we can lead in age friendly practice that recognises the diversity, skills, capability talent and contribution of all older people.

Breathing, exercise, and sleep therapies in neuromuscular disease. BEST in NMD

David Berlowitz[1]

[1]*The University of Melbourne*

6G: Respiratory management in neurological conditions, Halls CD, October 24, 2025, 11:25 - 12:10

Neuromuscular diseases are a heterogeneous group of conditions such as motor neurone disease, spinal cord injury, and spinal muscular atrophy. Each disorder is individually rare, but together they affect over 70,000 Australians, with overall prevalence increasing as the population ages and disease modifying therapies improve survival.

Sleep and breathing problems are the leading cause of death in neuromuscular disease and a major cause of impairment.

Drawing particularly on research with motor neurone disease and spinal cord injury, this presentation will review:

- the pathophysiology of impairment,
- the evidence of efficacy for physical, particularly respiratory therapies, and
- the complexity of respiratory care delivery in neuromuscular disease

Pelvic floor (and sexual) dysfunction in gynaecological and breast cancer: Prevalence and management strategies

Robyn Brennen[1]
[1]University of Melbourne

6L: Cancer, Hall B, October 24, 2025, 11:25 - 12:10

Intro: Pelvic floor disorders can increase distress for patients negotiating the challenges of treatment and survivorship in gynaecological and breast cancer.

Methods: New data on the prevalence of pelvic floor disorders and physical activity after gynaecological cancer will be presented from observational research and systematic literature review. Data on conservative management will be presented from clinical intervention studies, systematic reviews and patient interviews.

Results: High prevalence of pelvic floor disorders was found before and after treatment for gynaecological cancer, and after treatment for breast cancer. Some patients experience new onset of pelvic floor disorders with cancer treatment. There is level 2 evidence that pelvic floor muscle training plus education can improve pelvic floor disorders in gynaecological cancer survivors, and that pelvic floor muscle treatment plus education can improve sexual function in breast cancer survivors. Both gynaecological and breast cancer survivors had high adherence to, and report high acceptability for telehealth pelvic floor muscle training including intravaginal biofeedback.

Conclusion: Pelvic floor disorders are highly prevalent after gynaecological and breast cancer. Conservative management improve symptoms and is acceptable to patients

Key practice points:

- Patients want to be offered information and treatment for pelvic floor disorders after gynaecological and breast cancer
- Vaginal dilator training can improve sexual function, however patients are often given insufficient support in implementing this therapy
- Pelvic floor muscle training can improve pelvic floor disorders after gynaecological cancer
- Telehealth pelvic floor muscle training with vaginal biofeedback is acceptable and may improve pelvic floor disorders after gynaecological and breast cancer

Understanding balance decline in hereditary cerebellar ataxia and the benefits of aquatic and land physiotherapy

Sarah Milne[1,2,3,4]

[1]Murdoch Children's Research Institute, [2]Monash Health, [3]Monash University, [4]The University of Melbourne

7B: Ataxia and aquatic physiotherapy, Riverbank Rooms 2&3, October 24, 2025, 14:15 - 15:00

Aims: A multi-centre randomised controlled trial was used to examine the effectiveness of a 30-week rehabilitation program on physical functioning for individuals with hereditary cerebellar ataxia (HCA). A mixed-method approach was used to understand balance progression and falls in individuals with HCA.

Methods: 76 individuals aged 15 years and above were randomised to receive either a 30-week rehabilitation program or were asked to continue their usual healthcare. The rehabilitation program involved six-weeks of outpatient rehabilitation consisting of aquatic and land physiotherapy, followed by a 24-week supported home exercise program. The primary outcome was the motor domain for the Functional Independence Measure (mFIM). Sixty-eight individuals with HCA described their falls using the Ashburn and colleagues' (2008) interview guide fortnightly over a 30-week period.

Results: After six-weeks of outpatient rehabilitation, mFIM scores improved in the rehabilitation group compared with the control group (mean difference 2.26, 95%CI:0.26-4.26, p=0.028). There were similar improvements in the Scale for the Assessment and Rating of Ataxia (mean difference -1.21, 95%CI:-2.32--0.11, p=0.032) and Berg Balance Scale (BBS) (mean difference 4.08, 95%CI:2.29-5.86, p<0.001). Improvement in the BBS was maintained at 30 weeks in the rehabilitation group compared with the control group (mean difference 2.67, 95%CI:0.75-4.60, p=0.007). 359 falls were reported over 30-weeks. 27% (98/359) of falls resulted in injury, the majority bruises and pain.

Key practice points:

- Rehabilitation is beneficial for individuals with HCA, with more intensive outpatient therapy potentially more effective.
- Falls are frequent for individuals with HCA and may not be related to disease severity.

Advanced musculoskeletal physiotherapy: is it time to innovate?

Matthew Beard[1], Saravana Kumar[2]

[1]Royal Adelaide Hospital, [2]University of South Australia

7E: New models of care, Hall A, October 24, 2025, 14:15 - 15:00

Background:

The safety and utility of Advanced Musculoskeletal Physiotherapists (AMP's) operating in surgical outpatient clinics has been clearly established. The challenge now, is to manage competing demands from stakeholders, hospital finance and emerging technologies.

Objective:

Physiotherapist-led, Spinal Assessment Clinics (SAC) at Central Adelaide Local Health Network (CALHN) have adopted many novel reforms without additional budgetary support. This involved applying a tiered approach to spinal care, from point of referral to definitive surgical opinion. Specifically, application of web-based Decision Support Tools, Virtual Clinics and Telehealth have managed increases in service demand. Research collaboration with colleagues at the University of South Australia has been instrumental in testing these innovations.

Key practice points:

- Matthew will discuss emerging models of care and whether they may be applicable to other services in the context of a challenging health environment.

Endometriosis and persistent pelvic pain: how effective is physiotherapy care?

Helena Frawley[1,2,3]

[1]The University of Melbourne, [2]The Royal Women's Hospital, [3]Mercy Hospital for Women

7L: Endometriosis and pelvic pain, Rooms E2&E3, October 24, 2025, 14:15 - 15:00

The global prevalence of persistent pelvic pain in reproductive-aged females is estimated to be ≥ 25%. Persistent pelvic pain encompasses several different conditions and syndromes, with pain associated with a diagnosis of endometriosis representing the largest sub-group. It is a challenging and complex disorder which presents with a range of biopsychosocial symptoms, including pain, sexual, bladder and bowel dysfunction and emotional distress. A recent systematic review has provided up to date evidence of the effectiveness of physiotherapy in the treatment of persistent pelvic pain excluding endometriosis, and more recent evidence has emerged of the effectiveness of physiotherapy in the treatment of endometriosis-associated pelvic pain. Clinical implications and practice guidance from these recent evidence summaries will be presented to help clinicians choose the right treatment for the right patient at the right time.

Revolutionising cancer care: Evolving models of physiotherapy in oncology

Lauren Whiting

8A: Models to implement community-based exercise oncology into usual practice, Riverbank Rooms 2&3, October 24, 2025, 15:35 - 16:20

1. Overview: Physiotherapists are uniquely positioned to lead a transformation in how supportive cancer care is delivered. As survivorship rises and treatment effects become more complex, the demand for personalised interventions across the cancer continuum is growing. This presentation explores how Physiotherapy is evolving to meet these needs not only as a clinical service, but as a critical pillar in modern cancer care.

2. Relevance to Conference Themes: This session aligns strongly with the conference theme “Lead the Physiotherapy Revolution”, particularly across the Practice and Business streams. It challenges Physiotherapists to think beyond traditional care models and highlights how the profession can innovate, lead, and expand its impact in oncology both in clinical practice and in shaping service delivery systems.

3. Background: At Lift Cancer Care Services, Physiotherapists are embedded across every phase of the cancer journey from the point of diagnosis and prehabilitation, through active treatment, survivorship, and into palliative care. This integrated approach has shifted Physiotherapy from a reactive, referral-based role to a proactive and central contributor within multidisciplinary teams. Physiotherapists at Lift have a broad scope of practice with in the growing sub-speciality of Oncology Physiotherapy. They lead the delivery of exercise medicine, conduct lymphoedema screening and early intervention, provide pre- and post-surgical care, manage scars, and support pelvic health. Beyond direct treatment, they play key roles in treatment planning, patient education, and supporting long-term recovery goals. Whether building resilience before treatment or helping a patient reclaim function after treatment completion, these roles demonstrate the depth and breadth of what Physiotherapy can offer in modern cancer care. This presentation draws on these real-world insights to show how Physiotherapy-led models can be scalable, impactful, and future-ready when embedded with clear intent and strong leadership.

4. Conclusion: Physiotherapy in oncology is at a tipping point. With the right vision, collaboration, and leadership, the profession can shape more equitable,

effective, and patient-centred models of cancer care. This session offers practical insights and aims to offer inspiration for Physiotherapists ready to lead that change.

5. Take-Home Messages:
    - Physiotherapy is essential to modern cancer care.
    - Oncology Physios can lead change across public, private, and community settings.
    - The future of cancer care needs Physiotherapists who are ready to lead.

The right to rehabilitation for people living with dementia

Michele Callisaya[1,2]
[1]University of Tasmania, [2]Monash University

8C: Dementia and cognition, Hall B, October 24, 2025, 15:35 - 16:20

Background

Rehabilitation is defined by the World Health Organisation as "a set of interventions designed to optimise functioning and reduce disability in individuals with health conditions in interaction with their environment". Dementia is a major cause of disability, yet people with dementia are often denied equitable access to rehabilitation. This is despite well-established evidence that people with dementia, and their care partners, can benefit from rehabilitation for both dementia related disability and for co-morbidities such as hip fracture and stroke.

Objectives of the presentation are to:

- describe the barriers to accessing rehabilitation for people with dementia from a person, health professional, organisational and systems level.
- outline how the physiotherapy profession can address these barriers including dementia related stigma, low knowledge and confidence in working with people with dementia, and the lack of pathways.
- describe some of the key strategies in working with people living with dementia including cognitive and communication strategies and addressing unmet needs.
- provide an update on a number of key works relevant to dementia rehabilitation including the Update of the National Clinical Practice Guidelines and Principles of Care for People with Dementia, the National Dementia Education and Training Standards Framework and the ADI World Alzheimer's Report 2025 on Rehabilitation.

Key practice points

Participants will:

- have greater knowledge in how to advocate, and make change, to improve access to rehabilitation for people with dementia in their workplace
- learn some key strategies in working with people with dementia in a rehabilitation context.

Improving care of low back pain

Adrian Traeger[1]

[1]*Institute for Musculoskeletal Health, Faculty of Medicine & Health, The University of Sydney*

8J: High value care in pain management, Room E1, October 24, 2025, 15:35 - 16:20

Two important contributors to global disability from low back pain are underuse of evidence-based care, and overuse of unnecessary care. Unnecessary care exposes patients to risk of psychological distress, addictive medicines, and serious adverse events. The problem compounds when unnecessary care begins to crowd out evidence-based care. A person with back pain presenting for medical care in Australia is currently much more likely to receive an ineffective pain medicine (such as opioids) than safer options such as advice or effective physical and psychological therapies. In emergency departments, which are overcrowded and under-resourced, the likelihood of a patient receiving evidence-based care gets even lower. In the private sector, commercial interests can drive clinical decisions more than patient outcomes. How do we improve care for low back pain when some health systems seem to encourage the opposite?

This presentation will review our current understanding of high-quality care for low back pain, the drivers of unnecessary care, and how this might affect the day-to-day clinical practice for physiotherapists. It will cover findings from recent randomised trials of strategies to improve care for low back pain that have targeted both clinicians and patients.

Key practice points

- Back pain is among the commonest conditions seen by primary contact practitioners, including physiotherapists
- Overuse of unnecessary care can harm patients
- Our understanding of high-quality care for low back pain has developed substantially; but achieving sustained, system-wide practice change has been difficult
- Physiotherapists play an integral role in improving care for low back pain

Moving dementia into the 21st Century: Access to disability support, including rehabilitation

Kate Swaffer[1]
[1]University of South Australia

9C: Rehabilitation and dementia, Hall B, October 25, 2025, 10:35 - 11:35

In 2019 there were an estimated 57 million people living with dementia (PLWD) globally, and an estimated 10 million new diagnoses annually. Despite this growing prevalence, there's been little improvement in the lived/living experiences of PLWD. Whilst some research focuses on improving post diagnostic care, there has been a paucity of research on dementia as a disability and the potential of this approach to minimise dependence and disability.

This presentation discusses my own pathway from diagnosis and Prescribed Disengagement®, to activism and research. It then discusses the right to disability support including rehabilitation following diagnosis. Utilising critical disability theory through the lens of human rights, this presentation presents data investigating whether people with dementia should be advised the symptoms are acquired disabilities, as without this knowledge, people with dementia 'don't know what they don't know', and are therefore being denied their disability rights. It examines if not supporting people with dementia as people with disabilities from the time of diagnosis is central to the reason for ongoing known violations of human rights of all PLWD. The project is guided by an international expert advisory group, including people with and without dementia, the overarching goal being to improve the post diagnostic experiences of PLWD and their care partners and family members, and, to stop the persistent, known violations of rights. Finally, I will share emerging evidence which suggests the development of a new post diagnostic pathway which embraces proactive disability assessment and support, including rehabilitation.

Brain health exercise prescriptions: benefits of fitness training after stroke

Amy Brodtmann[1]
[1]*Monash University*

9E: Stroke /Acquired brain injury, Rooms E2&E3, October 25, 2025, 10:35 - 11:35

Physical inactivity and sedentary behaviours are highly prevalent following stroke. Cardiorespiratory exercise rehabilitation has been a validated secondary prevention and risk reduction strategy in cardiovascular disease for decades, yet stroke clinicians lack validated exercise programs to prescribe to their patients. Brodtmann will present the foundational studies demonstrating rapid brain volume loss and cognitive impairment following ischaemic stroke. These led to the development of a RCT of fitness training to preserve brain volume and cognition, PISCES-ZODIAC.

The results of this study will be presented, including impacts on brain atrophy, cognition, mood, cardiometabolic markers and physical activity. These data will be contextualised with findings from exercise studies in stroke free middle-aged adults. The concept of brain exercise prescriptions to preserve brain health will be presented, as well as the notion that stroke clinicians should all function as brain health ambassadors.

More than rails, ramps and reach: Inclusive design in manufacturing

Valerie O'Keeffe[1], Ryan Jang[1], Sara Howard[1]
[1]*Flinders University*

9F: Workplace innovation and design, Riverbank Rooms 7&8, October 25, 2025, 10:35 - 11:35

Aim:

People with disability are under-represented in employment, though capable of working with technology and learning new tasks. Successful employment requires inclusive, accessible workplace design. We aimed to redesign a cut-to-length cable process (loading, measuring, cutting, packing) for people with diverse disabilities to sustain work 3-4 hours per day, 3-4 days per week.

Design:

Universal design principles were applied using co-design and risk management practices to:

- present information accommodating sensory and cognitive capabilities,
- enable safe efficient interaction with tools, technology and environment (the workspace),
- learn from stakeholders during co-design.

Method:

Applying technology to improve accessibility and safety; research and task analyses were undertaken to identify potential end-users, capabilities, and cable processing redesign opportunities using anthropometric and psychological data.

After 15-minutes introduction, seven participants with intellectual and sensory disabilities trialled the redesigned process in a 45-minute task comprising two work orders. Level of independent performance was measured against a stepwise training procedure. On completion, participants were interviewed and rated workload using a modified NASA-TLX scale.

Results:

Task completion time averaged 38 (range 30-45) minutes. Learning improved rapidly with 74 % of steps performed independently by completion of the first work order. Fewer than 10% of steps required more than verbal instruction. Participants rated workload demands as moderate indicating they were likely to successfully sustain 3–4-hour work periods.

Key practice points:

- Inclusive manufacturing requires attention beyond workspace design to the broader work system embracing the workplace.
- Building inclusive culture through accessible information, equipment, procedures and genuine engagement are critical cornerstones to success.

Physical exercise: mechanisms and its effect on central sensitisation in individual

Mark Hutchinson[1]
[1]University of Adelaide

9H: Pain and exercise, Panorama 3, October 25, 2025, 10:35 - 11:35

Interactions between physical exercise and the brain involve various biological systems, focusing on neuroimmune mechanisms that affect pain processing, cognition, and emotions. Exercise significantly influences immune-like cells in the brain and spinal cord, known as glia, which are crucial for brain health. This mind-body connection serves as molecular neurosurgery, with exercise acting as a tool to modulate neuroimmune signalling and brain function.

Moderate-intensity exercise shows anti-inflammatory and immunostimulatory properties, altering cellular immune responses. This impacts the psychoneuroimmunological axis through various pathways, such as cytokine production regulation, neuroplasticity enhancement, and neurotransmitter synthesis. Our new research has revealed real-time biomarker dynamics during exercise, offering insights into these cascades.

The responses to exercise significantly affect pain modulation, indicating that individual reactions vary due to the complex interplay of immune function, neurological processes, and behaviour. Our KNOW Human Integrated Sensor System trial has shown how these variations can be tracked and quantified.

Research shows regular exercise reduces stress-related psychological and immunological changes, which is crucial for understanding brain health. It influences the neuroimmune response and pain perception. Ongoing studies of pain's neurobiological basis demonstrate how exercise creates a dialogue between the immune system and neural circuits, achieving targeted neuromodulation through natural processes.

These findings illuminate exercise's therapeutic potential for managing brain health. Implications extend beyond pain management to cognitive function, emotional regulation, and reward processing. Integrating molecular, cellular, and systems-level responses to exercise marks a paradigm shift in understanding how physical activity serves as a precise intervention for neurological health optimisation.

From stress to strength: Effective management of bone stress injury

David Spurrier[1]
[1]Sportsmed SA, [2]SASI

9K: Musculoskeletal health and performance, Riverbank Rooms 2&3, October 25, 2025, 10:35 - 11:35

The skeleton absorbs and distributes forces during sport movement. When repetitive stress exceeds the bone's capacity to repair itself, microdamage accumulates, leading to a stress injury. Factors such as inefficient biomechanics, muscle imbalances, and inadequate recovery (eg sleep and nutrition) can exacerbate stress on both bone and connective tissues.

Bone stress injuries (BSIs) primarily affect bone tissue, but they also involve connective tissues such as tendons, ligaments, and periosteum—the dense layer of connective tissue that covers bones. While BSIs are not classified as connective tissue disorders in the traditional sense, they do share characteristics with other connective tissue conditions, especially in terms of mechanical stress, inflammation, and healing responses.

This presentation will investigate bone health and BSI management from translation of bone science research to the clinical paradigm. In particular the management of BSI with respect to physiological bone response in the athlete training environment.

Dry needling and acupuncture in Australian physiotherapy: Exploring adverse events and safety insights

Cassandra Zaina[1]

[1]Handsup For Health, [2]ReturnToWorkSA

10A: Safety in needling, Riverbank Room 4, October 25, 2025, 11:40 - 12:40

Dry needling and acupuncture are widely used by physiotherapists and other allied health professionals in Australia to treat musculoskeletal pain and dysfunction.

While both techniques offer therapeutic benefits, they are invasive procedures with potential risks ranging from minor adverse effects to rare but serious complications.

This presentation explores the current landscape of adverse events following needling interventions in physiotherapy settings. Drawing on recent survey data, we highlight the prevalence of both minor events (such as bruising, bleeding, and discomfort) and major complications, including syncope and pneumothorax. Case studies illustrate how inadequate training, poor anatomical knowledge, and lapses in infection control have contributed to adverse outcomes.

We will discuss professional obligations, consent processes, and scope-of-practice considerations, guided by current risk management recommendations and the APA Code of Conduct.

Attendees will gain practical insights into improving safety through enhanced training, anatomical precision, infection prevention, and clinical communication.

By examining adverse outcomes through a prevention-focused lens, this session aims to strengthen practitioner awareness, promote regulatory compliance, and reinforce public confidence in needling therapies.

Embedding human rights and elevating disability voices

Natalie Wade[1]
[1]*NDIS Quality and Safeguards Commission*

10C: Upholding dignity and access for all, Room E1, October 25, 2025, 11:40 - 12:40

The National Disability Insurance Scheme (NDIS) is a transformative initiative that aims to uphold the rights, dignity, and inclusion of people with disability in all aspects of life – including their engagement with allied health services such as physiotherapy. As of the NDIS Quality and Safeguards Commission, Natalie Wade co-leads the independent national regulator of the scheme. In this presentation, she will share insights into how the NDIS Commission is embedding a human rights-based approach to regulation, service delivery and workforce development, with a focus on safety, quality, and accountability.

The NDIS Commission registers and regulates NDIS providers and workers. It also works with people with disability to improve the quality and safety of their NDIS supports and services. The NDIS Commission recognises the co-regulatory environment in which allied health professionals (AHPs) operate, and works closely with the Australian Health Practitioner Regulation Agency (AHPRA), the National Disability Insurance Agency (NDIA) and other partners to build quality across AHP services in the NDIS market. This includes a proportionate approach to registration, and aligning qualifications and experience requirements with other regulatory programs. Wade will discuss the NDIS Commission's ongoing reform agenda, including reforms to strengthen the scheme's registration model, and what it means for AHPs.

Working together: from insight to action through partnering with survivors of stroke in research

Elizabeth Lynch[1]
[1]Flinders University

10F: Co-design and self management, Panorama Room 1&2, October 25, 2025, 11:40 - 12:40

Background:

There is growing recognition of the importance and value of involving people with lived experience in research. Benefits of involving survivors of stroke in research and service improvement activities include prioritising what is most important to address, highlighting potential problems early, supporting development of novel solutions and facilitating translation and sustainability of new initiatives.

Objectives:

To provide guidance to physiotherapists and researchers on how and why to work with survivors of stroke in research and service improvement activities.

Strategies and tips on what to do (and what NOT to do) when working with survivors, developed in collaboration with survivors will be presented, along with three case studies of projects that have involved survivors of stroke in different ways, including as consultants, research assistants and co-investigators.

Successes and challenges of the projects will be shared.

Key practice points:

Survivors of stroke have a wealth of expertise about living with the effects of stroke.

When physiotherapists combine their clinical expertise alongside that of people with lived experience of stroke, new ways of providing therapy, of running projects, of collecting and analysing data can be explored.

By working together, and acknowledging each other's mutual expertise, physiotherapists can more easily address issues that are important to survivors, thereby becoming more impactful in their practice.

Functional anatomy of the equine thoracolumbar spine related to equine back rehabilitation

Lynne Harrison[1]

[1]University of Queensland, [2]Horse & Rider Physiotherapy

11A: Anatomy of fascia and the vertebral column across species, Room E1, October 25, 2025, 13:40 - 14:25

Back pain and diseases of the spine are prevalent issues in sport horses, with diagnosis of the underlying pathology proving a challenge for the clinician. Historically, veterinary medicine, like human medicine, has concentrated on identifying the pain generator linked to specific anatomical lesions. However, significant work in human back pain patients has revealed that many cases exhibit no identifiable lesion on imaging, or that changes to images may not correlate with the patient's pain. This has resulted in physiotherapy-led research focusing on effects of acute, sub-acute and chronic pain on spinal muscles, as well as the implications for rehabilitation. This presentation aims to summarise existing literature on muscular changes due to back pain in both human and equine patients, while exploring the physiotherapy-led rehabilitation principles tailored to the various stages of back pain.

Addressing total knee replacement dissatisfaction: A novel sensorimotor approach in orthopaedic rehabilitation

Lyndon Huf

11H: Challenging knee arthoplasty patients - origin and opportunity, Hall B, October 25, 2025, 13:40 - 14:25

Total knee replacement (TKR) is a common and effective surgical intervention for end-stage knee osteoarthritis. Despite high surgical success rates, up to 20% of patients report dissatisfaction post-operatively, citing persistent pain, functional limitations, and a sense of disconnection from the joint. Traditional rehabilitation focuses primarily on restoring strength and range of motion to aid function, often overlooking the central role of the sensorimotor system in joint function and perception.

This presentation explores a novel physiotherapy-led approach that integrates sensorimotor retraining into post-TKR rehabilitation. The sensorimotor system, which encompassing proprioception, neuromuscular control, and cortical integration, plays a critical role in joint awareness, movement precision, and overall satisfaction. Evidence suggests that deficits in proprioception and altered cortical representation post-surgery may contribute to ongoing discomfort and dissatisfaction.

We outline a pilot program that incorporates a targeted sensorimotor intervention aiming to restore the brain's internal model of the knee and improve neural efficiency. Preliminary outcomes demonstrate improved patient-reported satisfaction, functional mobility, and subjective joint confidence compared to standard rehabilitation alone.

This approach represents a shift towards a more holistic model of orthopaedic rehabilitation—one that addresses not only the mechanical but also the neuroscience and perceptual components of recovery. By targeting the sensorimotor system, physiotherapists can play a key role in reducing post-TKR dissatisfaction and enhancing long-term outcomes. Future research directions and clinical implications for broader implementation will be discussed.

Evidence-based, reasonable and necessary: Documenting the case for aquatic physiotherapy in "NDIS 2.0"

Julie Bowman[1]

[1]*Homeplace Living Supports Incorporated*

12B: Aquatic physiotherapy and disability: clinical reasoning and navigating the NDIS, Room E1, October 25, 2025, 14:30 - 15:15

Introduction/background:

Physiotherapists can struggle to articulate how services meet NDIS 'reasonable and necessary' criteria, resulting in less/no funding for physiotherapy and/or less funding overall in participant plans. This session assumes basic knowledge of physiotherapy report writing but does not require experience in NDIS report writing. While aquatic physiotherapy examples will be used to illustrate the art/science of crafting successful reports, the examples can be generalised to physiotherapy more broadly.

Aims/Objectives

To understand what the NDIS Act "Getting the NDIS Back on Track" amendments (October 2024) mean for participants and physiotherapists; understand what impairment categories are and the crucial ones for participants and physiotherapy documentation; gain confidence and a framework to articulate the value of physiotherapy within the NDIS.

Approach:

Illustrative examples from reports for (aquatic) physiotherapy funding will demonstrate successful/unsuccessful examples and mistakes to avoid.

Key practice points

- Shift thinking and evolve report-writing to 'think like a NDIA planner" - using their language, and priorities
- Report to all six NDIS 'reasonable and necessary' criteria in the context of participant impairment category(ies)
- Bring in the **evidence base for physiotherapy into NDIS reports**

Leveraging health literacy to enhance physiotherapy research and practice

Cassie McDonald[1]

[1]*University of Melbourne,* [2]*Alfred Health*

12C: Health literacy / Awards, Hall B, October 25, 2025, 14:30 - 15:15

Health literacy is ubiquitous in health care, influencing every facet of physiotherapy care and affecting patient and family health outcomes. This presentation will focus on the concept of health literacy and its application within healthcare contexts. An update on the contemporary definition of health literacy will be provided. Available options for measuring health literacy as well as current gaps and limitations will be summarised. Practical resources, frameworks, toolkits, and considerations will be highlighted for developing health literacy-responsive information, resources, and environments for patients and their families. Case studies will demonstrate how the health literacy needs of patients and families can be addressed within research and practice. Delegates can expect to leave with: an understanding of health literacy, its relevance to physiotherapy practice, and ideas for applying health-literacy responsive principles to clinical practice, quality improvement and research.

Perspectives on carving out a brilliant career pathway in neurological physiotherapy

Emeritus Sheila Lennon[1]

[1]*Physiotherapy, College of Nursing and Health Sciences, Flinders University*

12G: Neurological conditions and clinician perspectives, Hall A, October 25, 2025, 14:30 - 15:15

Neurological physiotherapy aims to develop, maintain, and restore maximum movement and functional ability to enable our clients to live well in their community. Key questions are raised about priority skills, experience and attributes that can guide our career pathway, and develop our clinical reasoning to deliver person-centred care for optimal client outcomes.

Learning objectives:

1. Reflect on pivotal moments for career development.
2. Exchange ideas for implementing evidence into practice.
3. Explain guiding principles underpinning clinical reasoning in contemporary practice.

Pivotal moments that can shape your career pathway will be discussed to progress from novice to expert practitioner. Different ways in which the evidence-base can be implemented will be explored. Our theoretical beliefs provide the explanation for our clinical reasoning influencing how we assess and select interventions. Neurological physiotherapy is a complex intervention, it is crucial to unpack the black box of physiotherapy by exploring the tools in our toolkit that are supported by research and implementing these selected interventions in the clinical setting. Thirteen key principles are proposed to guide neurological physiotherapy and rehabilitation.

Key practice points:

- The beliefs that therapists subscribe to determine the therapy that is offered.
- These beliefs need to be science-driven, and evidence-based with more emphasis placed on getting research into practice.
- Further research is required to evaluate the combination of critical elements that account for change in our clients.
- Our profession has yet to reach a consensus on the essential components underlying an optimal clinical reasoning framework.

The SELF Framework: towards building resilience against chronic pain by acting in early childhood

Sarah Wallwork[1]

[1]*University of South Australia*

12I: Paediatric pain management, Riverbank Room 4, October 25, 2025, 14:30 - 15:15

Background: Chronic pain continues to be a major public health problem. Affecting ~1 in 4 adults and ~1 in 5 young people, it disproportionately affects people from marginalised and minoritised backgrounds, with significant and unequal burden on individuals, their families, healthcare systems, societies, and economies worldwide. While significant advancements have been made in the pain field with regards to identifying pain mechanisms and management strategies, research addressing the primary prevention of chronic pain is scarce.

Objectives: To develop a framework that takes a biospsychosocial-societal approach to chronic pain prevention.

Findings: In this presentation, Wallwork will present the SELF (Situate – Experience – Learn – Feel) Framework, outlining what, why, and how we could target early childhood to prevent chronic pain, or reduce its impact and burden where prevention may not be possible. The framework is based on (i) identified modifiable risk factors for chronic pain, (ii) evidence-based treatment targets for chronic pain, and (iii) mediating factors believed to be associated with recovery from chronic pain. The SELF Framework considers factors associated with where a child is SITUATEd within society, the impact of early life EXPERIENCEs, the LEARNing of skills and knowledge around pain and healthcare utilisation, and the ability to understand and differentiate bodily FEELings.

Key practice points:

- Wallwork will draw on broad and diverse literatures to provide compelling evidence arguing why and how targeting the early years of life may present as an untapped opportunity to prevent and build resilience against future chronic pain.

Care provision for women with pregnancy-related pelvic girdle pain in Australia

Dragana Ceprnja[1,2]
[1]WSLHD, [2]USYD

12L: Antenatal physiotherapy, Rooms E2&E3, October 25, 2025, 14:30 - 15:15

Aim: To investigate the prevalence of pregnancy-related pelvic girdle pain (PPGP) and determine a road map to improve the quality of healthcare for women with PPGP.

Design: A mixed-methods approach was undertaken comprising of epidemiological, observation and qualitative studies.

Method: Participants included women with PPGP (N=800) and health care professionals (HCPs) (N=30) working in maternity care. The first study utilised classification criteria, including a physical examination, to determine the prevalence of PPGP and associated factors in an Australian population. In the second and third studies, women with PPGP and HCPs were interviewed to describe their lived experience of PPGP and perspectives towards care needs.

Results: The prevalence of PPGP was 44% and an individual and family history of lumbar and PPGP, increasing parity and gestational age, being born in Australia, and a greater duration of time spent in standing were associated with PPGP. Thematic analysis highlighted that women required greater support from healthcare services, including early education and intervention. Barriers to the provision of care were identified across patient, clinician and organisational levels.

Discussion: While PPGP is a common problem in Australia and worldwide, it is under-recognised and leads to challenges in the organisation of care and adequate support for these women.

Key practice points:

- This presentation will extend the current understanding of care provision for PPGP and outline improvements required to meet women's care needs more effectively.
- A number of recommendations for clinical practice will be made with an emphasis on shared decision making and multi-disciplinary care.

SECTION 4: PAPERS, HOW TO, 5X5 PRESENTATIONS

Sensory characteristics of acupuncture/needling sensation: randomised controlled study of needle technique of Qing Long Bai Wei

Christopher Zaslawski[1]
[1]APA

6A: Pain science for needling, Riverbank Room 5, October 24, 2025, 11:25 - 12:10

Acupuncture needling often involves both objective (muscle twitch, redness around needling site) and subjective (needling sensation often termed deqi) reactions from an acupuncture recipient. This report explores the key sensory experiences following a specific needling technique (Wagging the Dragon's Tail) collected from 47 participants in an acupuncture clinical trial. The sensations, measured by the Massachusetts General Hospital Acupuncture Sensation Scale (MASS), fell into two categories, and the psychophysical response profile obtained will be presented. The needling sensations were also compared to a mock "sham laser" control intervention and the statistical factor loading of the two different interventions will be presented. Finally, the mechanism and importance of obtaining deqi will be discussed and the role that interoception (the conscious perception of sensations/signals from inside the body) plays in the phenomena will also be reviewed.

Chinese Qigong and Taijiquan- its relevance and efficacy for the Australian patient.

Christopher Zaslawski[1]

[1]*University of Technology Sydney*

10A: Safety in needling, Riverbank Room 4, October 25, 2025, 11:40 - 12:40

The use of taijiquan (Tai chi) and more recently Qigong has been clinically demonstrated to be an effective tool for patient rehabilitation and for the treatment of somatic pain. This presentation will explore the current status of these two practices and review their clinical efficacy. An overview of the different types of qigong and tai chi will be presented, as will be a review of the published scientific evidence, including randomised clinical trials. A simple demonstration of qigong and tai chi will also be presented and an argument for its inclusion as a potential physiotherapy intervention for Australian patients will be explored.

Advanced practice physiotherapy-led model of care provides appropriate clinical management of paediatric spinal conditions

Lillian Carley[1], Anthony Trojman[2], Ishani Perera[2], Bronwyn Thompson[2], Leanne Johnston[2], Geoff Askin[2]

[1]The University of Queensland, [2]The Queensland Children's Hospital

4A: Advanced practice innovation, Room E1, October 23, 2025, 14:30 - 15:15

Aim: To evaluate an advanced practice physiotherapy-led model of care for managing children with orthopaedic spinal conditions in a tertiary children's hospital focusing on inter-professional radiographic reliability, diagnostic and management concordance, and caregiver satisfaction, compared with a surgeon-led care model.

Design: Observational cross-sectional study of clinical concordance (Part A) and caregiver satisfaction (Part B).

Methods: Forty children (5-18 years) attended a physiotherapy-led clinic for mild/moderate scoliosis (≤30° Cobb angle) and/or spinal pain. A spinal surgeon independently reviewed radiographs and clinical case reports, blinded to physiotherapists' findings. Inter-professional inter-rater reliability was assessed for scoliosis Cobb angle (intra-class correlation coefficient, ICC) and Risser classification (Cohen's weighted Kappa, κw). Clinical decision-making concordance was evaluated using percentage exact agreement or Cohen's Kappa (κ). Caregiver satisfaction was compared between physiotherapy-led and surgeon-led clinics using the modified Visit-Specific Satisfaction Instrument.

Results: Cobb angle (ICC = 0.97) and Risser classification (κw = 0.91) inter-rater reliability was near-perfect. Diagnostic concordance was near-perfect for stress reactions/fractures, disc and facet pathologies, coccydynia (κ = 1.00 each), and scoliosis (κ = 0.93), but fair for non-specific back pain (κ = 0.29). Management recommendations showed 100% concordance between physiotherapists and surgeons. Caregiver satisfaction was excellent, with statistically higher scores for physiotherapy-led (92/100) versus surgeon-led (81/100) clinics (p = 0.004).

Conclusion: Advanced practice physiotherapy-led care model is reliable, with accurate decision-making and high caregiver satisfaction for managing children with mild/moderate scoliosis or spinal pain.

Key practice points:

- Advanced practice physiotherapists effectively manage children with spinal conditions, including mild/moderate scoliosis, with high caregiver satisfaction.

Improving fracture care for Australian paediatric patients utilising a virtual clinic

Rebecca Pile[1], Dina Pogrebnoy[1], Laura McCalman[1], Chris Harris[1,2], Catherine M Said[1,3]
[1]Western Health, [2]The Royal Children's Hospital, [3]The University of Melbourne

4A: Advanced practice innovation, Room E1, October 23, 2025, 14:30 - 15:15

Aim: To determine if a physiotherapy-led paediatric virtual fracture clinic is responsive, cost-effective, safe, and acceptable as an alternative to face-to-face care.

Design: Mixed-methods design. Prospective quantitative and qualitative data compared, with historic cohort.

Method: Data collected related to responsiveness and safety of a virtual fracture clinic for patients (<18 years of age) with stable fractures, compared to face-to-face care at Western Health. Parents of children managed in the virtual clinic were invited to complete a feedback questionnaire eight weeks post-injury.

Results: The virtual care group had an average time from referral to appointment of 3 days (SD 1.6), compared to 8 days (SD 3.5) in the face-to-face group. Seventeen (6%) patients in the virtual care group did not attend compared with 79(26%) in the face-to-face group. The virtual group completed 28 follow-up radiographs compared to 171 in the face-to-face group. Only nine patients (4.5%) in the virtual group required face-to-face care, and three patients visited the Emergency Department with no further escalation of care. No adverse events were reported. Eighty-one percent of questionnaire respondents felt the telehealth approach was successful.

Conclusion: A physiotherapy-led paediatric virtual fracture clinic is safe, more responsive with improved attendance and is acceptable to patients. A virtual clinic also has potential to reduce health care costs with no increase in adverse events.

Key practice points:

- Virtual fracture clinics could lead to reduced healthcare costs and improved access to care
- Physiotherapists are skilled to lead simple fracture care and support a sustainable workforce model.

Diverting from ED to a physiotherapist? What's next! Evidence based whole health service re-design

Piers Truter[1,2,3], Pippa Flanagan[1,4]

[1]South Metropolitan Health Service, [2]University of Notre Dame Australia, [3]Chief Allied Health office, [4]Curtin University

4A: Advanced practice innovation, Room E1, October 23, 2025, 14:30 - 15:15

Aim:

To synthesise the research from the Rockingham Hospital ED musculoskeletal diversion pathway and the evidence for the next phase of physiotherapist led health service re-design.

Design:

A literature review of health service evaluation research from the diversion pathway clinicians and synthesis directing the expansion from one hospital to cover a whole health service.

Method:

This review brings together 12 quantitative, qualitative, and economic analysis publications, with a consumer consultation and service data to justify the Diversion Pathway and expansion of this service model.

Results:

Patients with musculoskeletal conditions (6-12% of ED presentations) choose the ED for convenience (fractures) or a perceived need (low back pain). Consumers want easy access to free quality patient centred care. Care is delivered by many different ED clinicians and is variable in quality. Primary contact physiotherapists (PCP) provide high quality care that improves ED patient flow. Diverting patients from the ED is even more efficient, particularly for patients with atraumatic pain (e.g. low back pain). Diverting ED patients to an outpatient physiotherapist also addresses unmet care needs, as 15% benefit from additional post-ED care (telehealth preferred). Outside office hours, patients can be safely offered a next day physiotherapy appointment (instead of waiting in ED). The diversion pathway patient experience matches consumer expectations.

Conclusion:

In the next phase the ED diversion pathway will be expanded to all hospitals in the health service, with a service wide telehealth linking hub.

Key practice points:

- The diversion pathway provides access and care continuity meeting consumer needs and expectations.

Defining the scope and reach of practice primary contact physiotherapists in a tertiary emergency department

Piers Truter[1,2,3], Louise Giglia-Smith[4,6], Susan Brooker[4], Paul Atkinson[4], Luke Bongiascia[4], Pippa Flanagan[4,5]

[1]South Metropolitan Health Service, [2]University of Notre Dame Australia, [3]Chief Allied Health office, [4]Fiona Stanley Hospital, [5]Curtin University, [6]Sir Charles Gairdner Hospital

7A: Advanced Practice in the Emergency Department, Room E1, October 24, 2025, 14:15 - 15:00

Aim:

To define the scope of practice of primary contact physiotherapists (PCP) in a tertiary hospital emergency department (ED).

Design:

A retrospective audit of 10 years of ED presentations, with an iterative expert panel definition of scope of practice by discharge diagnosis.

Method:

Data for all patients managed by a PCP between 2015 and 2024 were extracted from ED systems. The discharge diagnoses were rated as ‘core scope’, ‘supported practice’, ‘future scope expansion’ and ‘out of scope’.

Length of stay (LOS) for in-scope PCP patients was compared to those managed by other ED clinicians. The reach of the PCP team was modelled against in-scope ED presentations.

Results:

PCPs provided care to 37,771 patients with 388 diagnoses. The expert panel rated 208 diagnoses as in scope (190 core scope, 18 supported practice) and 180 not in scope of practice. Using the ‘in-scope’ definition, modelling of 2024 ED data showed physiotherapists reached 43% of suitable patients. Patients managed by PCPs average ED LOS was 170 (167-173 95% CI) minutes. When managed by other clinicians, the average LOS was 328 (323-333 95%CI) minutes.

Conclusion:

PCPs contribute significantly to ED efficiency for patients in and out of their scope of practice, which includes 208 discharge diagnoses. In the study ED, an increase in the PCP workforce would likely lead to further efficiency gains.

Key practice points:

- PCPs are an efficient ED workforce
- PCPs have a broad independent scope and potential to improve departmental efficiency by increasing reach or breadth of practice.

Reinforcing Informed Medication prescription for low back pain in the emergency department: the RIME study

Shaun O'Leary[1,2], Janelle Heine[1,3], Panagiotis Barlas[4], Emma Ballard[5], Jacelle Warren[4], Charles Okafor[6], Gary Mitchell[3], William See[7], Tanya Smyth[4], Gustavo Machado[8], Michelle Cottrell[1], Tracy Comans[6], Nadine Foster[2,9]

[1]Physiotherapy Department, Royal Brisbane and Women's Hospital, [2]School of Health and Rehabilitation Sciences, The University of Queensland, [3]Emergency and Trauma Centre, Royal Brisbane and Women's Hospital, [4]Jamieson Trauma Institute, Royal Brisbane and Women's Hospital, [5]Statistics Unit, QIMR Berghofer Medical Research Institute, [6]Centre for Health Services Research, The University of Queensland, [7]Emergency Department, The Prince Charles Hospital, [8]Institute for Musculoskeletal Health, University of Sydney and Sydney Local Health District, [9]Surgical Treatment and Rehabilitation Service (STARS) Education and Research Alliance, The University of Queensland and Metro North Health

7A: Advanced Practice in the Emergency Department, Room E1, October 24, 2025, 14:15 - 15:00

Aims: An intervention previously reported to improve Emergency department clinician use of recommended low back pain management guidelines was implemented with the aim of evaluating its impact on non-recommended medication prescription by Emergency department clinicians for low back pain.

Design: A controlled Interrupted Time Series study evaluating effectiveness and costs pre-post implementation at an index Emergency department, and compared with a control Emergency department in a different hospital in the same health service.

Methods: Data were routinely collected Emergency department patient records pre (24 weeks), during (12 weeks), and post-implementation (24 weeks). Implementation was multifaceted; clinical decision flow chart, education sessions and resources, provision of alternative treatments, audit and feedback, implementation champion support (advanced practice Emergency Physiotherapy Practitioner). Primary outcome was the percentage of patients prescribed non-recommended medications (opioids, benzodiazepines, gabapentinoids).

Results: Non-recommended medication use reduced by 16% (95% CI 5-28) following the intervention at the index Emergency department (n=737) and by 8% (95% -4–20) in the control Emergency department (n=918). Non-recommended medication use returned to baseline levels by the end of the post-implementation period in the index Emergency department (59% (95% CI 50–67)).

Conclusion: Implementation of the intervention significantly reduced prescription of non-recommended medications in the index Emergency department but improvements were not sustained over the post-implementation period.

Key practice points:

- There is an evidence-practice gap between care recommended and care received for low back pain in some Emergency departments.
- Sustaining the benefits of interventions improving uptake of recommended low back pain guidelines over time is challenging.

RESHAP-ED qualitative evaluation: a randomised trial of primary-contact physiotherapy for musculoskeletal pain in emergency departments

Tarcisio De Campos[1,2], Chathurani Sigera[1,2], Danielle Coombs[1,2], Eman Abukmail[2], Alla Melman[1,2], Chris Maher[1,2], Gustavo Machado[1,2]

[1]School of Public Health, Faculty of Medicine and Health, The University of Sydney, [2]Institute for Musculoskeletal Health, Sydney Local Health District

7A: Advanced Practice in the Emergency Department, Room E1, October 24, 2025, 14:15 - 15:00

Aim: To assess the acceptability and feasibility of a primary-contact physiotherapy (PCP) pathway in emergency departments (EDs).

Design: Multi-centre, pragmatic, open-label, two-arm, parallel randomised controlled trial with nested qualitative evaluation.

Methods: The RESHAP-ED trial was conducted in five hospitals of New South Wales, Australia. Adult patients with simple musculoskeletal conditions presenting to the ED were recruited. Participants allocated to the PCP group and ED clinicians (physicians, nurses, physiotherapists) were invited to participate in semi-structured qualitative interviews, guided by data saturation. Participants were purposively selected to vary by gender, age, and musculoskeletal condition, while clinicians were selected by profession, age, gender, and ED experience. Thematic analysis was used to report results.

Results: So far, we have completed qualitative interviews with 20 participants and 24 clinicians. Based on preliminary thematic analysis, both participants and clinicians expressed positive feedback regarding their experience with the PCP pathway in the ED. Participants were purposively selected to vary by gender, age, and musculoskeletal condition, while clinicians were selected by profession, age, gender, and ED experience. Both groups emphasised the need for continued and expanded PCP presence in the ED for the management of musculoskeletal conditions.

Conclusions: Preliminary qualitative interviews suggest that the PCP pathway positively impacts patient care, with both patients and clinicians expressing a strong need for the presence of PCPs in the ED.

Key practice points:

- The PCP pathway is considered feasible and well-accepted by ED staff and patients.
- Physiotherapists' efficiency, expertise, and approachability contributed to high satisfaction among patients.

Determining appropriateness of performing a neurological examination via telehealth for individuals with back pain

Michelle Cottrell[1], Patrick Swete Kelly[1], Maree Raymer[2], Sarah Featherston[1], Oliver Rowley[1], Michael Hockey[1], Thorbjorn Loch-Wilkinson[1], Peter Window[1], Shaun O'Leary[1,3]

[1]Royal Brisbane & Women's Hospital, [2]Queensland Musculoskeletal Physiotherapy Screening Clinic & Multidisciplinary Service, [3]University of Queensland

9A: Advanced practice in spinal and neurosurgery clinics, Room E1, October 25, 2025, 10:35 - 11:35

Aim: Evaluate the appropriateness of performing a neurological examination via telehealth for individuals with LBP-related symptoms.

Design: Repeated-measures agreement study, with nested mixed-methods process evaluation.

Method: Thirty-eight participants completed a standardised neurological examination both in-person and via telehealth by independent assessors. The in-person examination was repeated for 18 participants by a third assessor. Individual tests were dichotomised as normal/abnormal for sensation, strength, deep tendon reflexes, functional and long tract tests. Agreement was expressed as exact percentage agreement and PABAK coefficients. Assessors completed a survey and focus group to ascertain clinical perspectives towards performing a neurological examination via telehealth.

Results: Sensation, functional and long tract tests observed similar (fair to almost perfect) levels of agreement both between modes and in-person examination, though agreement was lower between modes for heel walk (PABAK[95%CI]: 0.22[-0.13-0.54] vs. 0.67[-0.17-0.93]) and Hoffmans test (PABAK[95%CI]: 0.55[0.18-0.81] vs. 0.76[0.27-0.97]). Lower agreement between modes compared to between in-person examination was demonstrated for both deep tendon reflexes (PABAK -0.03-0.33) and most strength tests. Assessors associated lower agreement via telehealth with the challenges of participant self-assessment and/or visualisation for some tests.

Conclusion: Neurological examination via telehealth for individuals with LBP-related symptoms appears comparable to in-person examination for only some tests. Results reflect both the acknowledged challenges of telehealth, but also inherent inter-rater variability in test application, response and interpretation.

Key practice points:

- First study to test the validity of a neurological examination modified to a telehealth environment.
- Findings are applicable to any health profession considering undertaking neurological examinations via telehealth.

An innovative approach for managing low acuity spinal clinic referrals: A spinal virtual clinic

Mark Jarrett[1], Matthew Beard[1], Saravana Kumar[2]

[1]Royal Adelaide Hospital, [2]University of South Australia

9A: Advanced practice in spinal and neurosurgery clinics, Room E1, October 25, 2025, 10:35 - 11:35

Aim:

To explore the impact of an innovative model of care, the Spinal Virtual Clinic (SVC), using advanced practice physiotherapists in a large metropolitan hospital in South Australia which provides desktop review of low acuity referrals and customised clinical advice to the referring General Practitioner.

Method:

A prospective clinical audit (stage 1) of sequential low acuity referrals triaged to the SVC, and subsequent audit to capture any further engagement with the Orthopaedic Spinal Service. Data were descriptively analysed. Stage 2 involved semi-structured interviews with patients who were managed through SVC.

Results:

309 referrals were triaged to the SVC (1 January to 30 June 2021). A vast majority triaged as low acuity did not need formal specialist review and could be managed safely in primary care. Only a small proportion needed surgical review. Semi-structured interviews (n=11) revealed mixed perspectives about SVC and the need for better engagement with the referrer.

Conclusion:

The SVC is an alternate pathway to long waitlists for low acuity referrals, and provides prompt alternative management options for management in primary care, avoiding the known impact on clinical outcomes associated with long-term waitlists. The SVC improves access and reduces the burden on the health system for low acuity patients.

Key practice points:

- Innovative models of care can be successfully implemented to manage low acuity spinal referrals as an alternate to long-term waitlists.
- Advance Practice Physiotherapists are well placed to identify potential surgical cases at desktop review in a cohort of low acuity cases

Clinical diagnostics of physiotherapy first contact practitioners – Do you get it right?

Brigitte Tampin[1,2,3]

[1]Sir Charles Gairdner Hospital, Department of Physiotherapy, Neurosurgery Spinal Clinic, [2]Curtin University, Curtin School of Allied Health, [3]Hochschule Osnabrueck, University of Applied Sciences, Faculty of Business and Social Sciences

9A: Advanced practice in spinal and neurosurgery clinics, Room E1, October 25, 2025, 10:35 - 11:35

Background:

An Advanced Scope Physiotherapy (ASPs) led Neurosurgery Spinal Clinic operates at Sir Charles Gairdner Hospital in Western Australia. The ASPs examine persons referred with suspected spinal pathology from the Neurosurgery waitlist for their suitability for spinal surgery and instigate work-up where required, and for evaluation by a Neurosurgeon or appropriate non-surgical management. Sound clinical reasoning and diagnostic skills are crucial in order to not misdiagnose a condition or, as seen in some cases, to not miss a diagnosis that had not been identified by the referrer. This 'how to' session is relevant not just to ASPs, but to any physiotherapist working as first contact practitioner in the neuro-musculoskeletal field.

Objectives:

- To demonstrate case presentations of persons referred to a Neurosurgery Spinal Clinic for back/neck and limb pain
- To outline the clinical reasoning process and choice of diagnostic work-up in these cases

Approach:

Case studies will be presented of persons seen by ASPs in the Neurosurgery Spinal Clinic/Sir Charles Gairdner Hospital. The clinical reasoning process and diagnostic work-up will be outlined. This seminar is planned to be interactive, using live polling (e.g polling software slido). There will be a question time at the end of the presentation.

Key practice points:

- This ‘how to’ session highlights the importance of thorough clinical examination of people with suspected neuro-musculoskeletal disorders.
- It is aimed at helping clinicians improving clinical reasoning and diagnostic skills in their clinical assessment.

Outcomes and factors associated with return to ridden exercise in horses with ORDSP in Australia

Genna Harkness[1], Catherine McGowan[1], Lesley Goff[2]

[1]University of Liverpool, [2]University of Queensland

11A: Anatomy of fascia and the vertebral column across species, Room E1, October 25, 2025, 13:40 - 14:25

Aim: To identify treatment and management factors associated with successful outcomes for horses diagnosed with overriding dorsal spinous processes (ORDSP).

Design: Cross-sectional study using an online questionnaire.

Method: Australian horse owners of horses diagnosed with ORDSP by a veterinarian were invited to complete a questionnaire shared via social media and through veterinary and physiotherapy clinics. Fifty-nine owners responded. The questionnaire was hosted on the JISC platform (licensed to the University of Liverpool). Data were analysed using SPSS Statistics (IBM) and Epitools (Ausvet, 2004). Chi-squared analysis assessed associations between management factors and outcomes.

Results: After treatment, 59% of horses returned to riding, 27.5% returned to previous athletic function, and 17% maintained that level for 12+ months. Five factors were significantly associated with returning to riding: training at an intermediate to high level (OR 10.36, CI: 2.48–43.31), exercising >180 minutes/week (OR 1.87, CI: 1.43–2.64), surgical management (OR 5.5, CI: 1.07–28.22), completing a rehabilitation program (OR 11.68, CI: 3.01–55.46), and professional saddle fitting (OR 13.96, CI: 3.51–55.46). No factors were associated with returning to or maintaining athletic function for 12 months.

Conclusion: Return to previous athletic function was limited. However, horses with a higher pre-injury workload that received surgical treatment, rehabilitation, and saddle fitting were more likely to return to ridden work.

Key practice points:

- Horses with higher pre-injury workload were more likely to return to ridden work.
- Surgical management combined with structured rehabilitation supported improved outcomes.

Aquatic Physiotherapy for older adults who are obese and admitted for inpatient rehabilitation: case series

Catherine Garland[1], Paul Smith[1], Sophie Heywood[2,3,4], Jennifer Jones[1,3,7], Catherine Said[3,5,6]

[1]Austin Health, [2]Physiotherapy Department, St. Vincent's Hospital, [3]Physiotherapy, Melbourne School of Health Sciences, The University of Melbourne, [4]Hydro Functional Fitness, [5]Physiotherapy Department Western Health, [6]Australian Institute for Musculoskeletal Science (AIMSS), Sunshine Hospital, [7]Institute of Breathing and Sleep

2A: Aquatic Physiotherapy: Enabling movement and rehabilitation, Riverbank Room 4, October 23, 2025, 11:55 - 12:40

Aim: To describe aquatic physiotherapy for older people who are obese and unable to mobilise independently on admission to inpatient rehabilitation.

Design: Case series

Methods: Clinical case study reports of people fitting inclusion criteria: > 65 years; admitted for inpatient rehabilitation; obese (Body Mass Index >30); and referred to aquatic physiotherapy were completed. Data collected included demographics, length of stay, weight-bearing status, transfers, mobility on land and in water, additional planning considerations, aquatic and land-based physiotherapy treatment, Functional Independence Measure (FIM) score and discharge destination.

Results: Five cases (aged 68-79 years, weight 88-190 kg) admitted for 1. Tibia and fibula fracture following a fall 2. Fibula fracture following a fall 3. Functional decline 4. Stroke and 5. Revision of total knee arthroplasty were included. FIM scores (locomotion) on admission for all cases was one (total assistance), with total FIM scores ranging from 26-80 and the length of sub-acute stay between 26-89 days. Aquatic physiotherapy included functional exercises, gait training, cardiovascular conditioning, trunk stability, balance and lower limb muscular performance exercises, with greater variety, and more advanced functional positions in aquatic compared to land-based programs. Discharge FIM scores for all cases improved and all were discharged to their pre-admission residence. No adverse events were recorded.

Conclusion: Aquatic physiotherapy can provide a safe alternative or conjunct to land based rehabilitation for improving functional mobility.

Key practice points:

- Aquatic physiotherapy is safe and feasible for people who are obese.
- Water-based rehabilitation may offer functional training and greater variety with lower manual handling demands

Barriers and enablers to aquatic exercise for people with chronic musculoskeletal conditions: A systematic review

Sophie Heywood[1,2,3], Chiu Yin Chan[4], Chun Hei Pang, Yat Long Gene Choy, Melanie Farlie[5], Catherine Garland[6,7]

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2A: Aquatic Physiotherapy: Enabling movement and rehabilitation, Riverbank Room 4, October 23, 2025, 11:55 - 12:40

Aim

To identify the reported barriers and enablers to aquatic exercise for people with chronic musculoskeletal conditions to inform the development of effective, patient-centred programs.

Methods

This qualitative systematic review was guided by the Enhancing Transparency in Reporting the Synthesis of Qualitative Research statement. Four databases (MEDLINE, CINAHL, Embase, PsycINFO) were searched for qualitative studies in adults with chronic musculoskeletal conditions exercising in water up to March 2024. Included studies were evaluated using the Critical Appraisal Skills Program qualitative checklist. All data was extracted and coded independently by two researchers. A framework synthesis approach was used to map barriers and enablers to the Capability Opportunity Motivation - Behaviour model.

Results

Nine studies were included in the review (participants diagnosed with arthritis or fibromyalgia). Thirty enablers and 24 barriers were reported across the studies. Key enablers to aquatic exercise were symptom relief, improved well-being, increased physical activity, and peer support. Barriers included exercise-related pain, cost, facility limitations, and scheduling issues. The predominant enablers mapped to physical capability were improvements in symptoms, physical activity and general wellbeing. Motivation included positive feelings, while opportunities included social and physical enablers. Intensity of exercise and facilities were reported as barriers and enablers.

Conclusion

The number and frequency of reported enablers is greater than barriers to aquatic exercise with physical capability, physical and social opportunity and automatic motivation the highest represented.

Key practice points

- Engagement in aquatic services may be influenced by modifiable factors such as social support, appropriate intensity, and involving participants in program design.

Aquatic therapy for adolescents and adults with cerebral palsy: A mixed methods scoping review

Isabel Huf[1], Sze-Ee Soh[2], Prue Morgan[1]

[1]Monash University, [2]University of Melbourne

2A: Aquatic Physiotherapy: Enabling movement and rehabilitation, Riverbank Room 4, October 23, 2025, 11:55 - 12:40

Aim: To identify characteristics of participants, intervention features, and outcomes in studies examining aquatic therapy for adolescents and adults with cerebral palsy.

Design: Mixed methods scoping review

Method: Four electronic databases were systematically searched. Studies that included people with a diagnosis of cerebral palsy (mean age ≥15 years), and an intervention that involved an aquatic activity were considered for inclusion. Quantitative and qualitative results were reported narratively.

Results: Eleven studies with 66 participants were identified and included in the review. Eight studies used a non-experimental quantitative design. Three studies included participants with greater disability (Gross Motor Function Classification System Level V); four studies included participants older than 30 years. Aquatic program components were variable. Reporting of program variables, adverse events, and safety measures was generally poor. Participation outcomes were included in only three studies. No study formally gathered participant experiential data.

Conclusion: Aquatic therapy programs for individuals with cerebral palsy predominantly focus on children and those with mild-to-moderate disability. Poor reporting of program design has led to non-reproducible studies and inconsistent approaches to aquatic therapy for adolescents and adults with cerebral palsy. Participant, carer and clinician perspectives on aquatic programs remains unknown.

Key practice points:

- Few aquatic therapy programs for adolescents and adults with cerebral palsy, or for those with more complex disability, have been rigorously evaluated.
- Consistent reporting of safety measures, adverse events, and program variables is required to build the evidence base for aquatic therapy in cerebral palsy across the lifespan.

A splash into education: Making aquatic physiotherapy more effective in public health settings

Catherine Senserrick[1], Gabriella Bednarek[1], Thomas Gladman[1]

[1]*Eastern Health*

2A: Aquatic Physiotherapy: Enabling movement and rehabilitation, Riverbank Room 4, October 23, 2025, 11:55 - 12:40

Aim/Rationale: Undergraduate education in aquatic physiotherapy is limited, and there is variable exposure on clinical placements. Post- graduate courses can be expensive for this niche area, and thus less desirable for rotating junior physiotherapists in the public health system. The aim was to increase the confidence of junior staff and the effectiveness of the aquatic physiotherapy program by providing an in-house, evidence-based education program.

Design: Eight mixed theoretical and practical education sessions were designed for Grade 1 physiotherapists, as well as Grade 2 physiotherapists with limited aquatic physiotherapy experience. Five physiotherapists with post graduate aquatic education delivered the education. Patients were used as case studies wherever possible.

Method: Eight weekly education sessions were trialled with three separate groups. There was a maximum of five participants in each group. Pre and post surveys were conducted to establish confidence levels, applicability of education delivered and suggestions for improvement.

Results: A total of fourteen physiotherapists participated in the program. The original series was modified after the first group and eight weekly sessions were modified to become six. Acceptability was shown with high attendance rates. Feasibility was established and the program has been embedded in the service. Confidence was high at the end of the education.

Key Practice Points:

- An in-house education program was feasible and increased the confidence of junior staff to provide effective aquatic physiotherapy.
- The plan is to trial the program for off-site physiotherapists in the health service using external pools, as well as develop more advanced practical sessions.

Aquatic physiotherapy feasibility, clinical reasoning and interventions for adults with complex disability needs: case series

Gabrielle Young[1], Samuel Wong[1], Catherine Garland[1,2], Clare Martinac[3], Jessica Grissell[4], Sophie Heywood[5,6,7]

[1]Allied Health, Each, [2]Physiotherapy Department, Austin Health, [3]Hydrotherapy Brisbane, [4]Neuro Alliance, [5]Physiotherapy Department, St Vincent's Hospital Melbourne, [6]Physiotherapy, School of Health Sciences, University of Melbourne, [7]Hydro Functional Fitness

12B: Aquatic physiotherapy and disability: clinical reasoning and navigating the NDIS, Room E1, October 25, 2025, 14:30 - 15:15

Aim: To describe the feasibility and content of aquatic physiotherapy for adults with complex disability needs in a community setting.

Design: Prospective case series

Methods: Five adults with complex needs participating in aquatic physiotherapy in a community-based setting gave consent to have their data recorded by two treating physiotherapists across a minimum of two sessions using the International Classification of Functioning, Disability and Health and clinical reasoning frameworks including: communication, assessment, context, planning, body structure and function, activities, goalsetting and decision-making processes.

Results: Participants (42 to 74 years) included the following primary diagnoses: cerebellar ataxia, cerebral palsy, multiple sclerosis, spinal cord injury. Outcome assessments included Patient Specific Functional Scale. Land-based assessments influencing aquatic interventions included access, screening and goal setting, safety and communication planning, support workers, and entry/exit. Aquatic assessments included confidence in water, breath control, static stability, dynamic control, and manual handling. Aquatic physiotherapy programs utilised a range of positions, techniques, and exercises, justified by ensuring the unique properties of water and function were maximised. Longer term planning included educating and training support workers, regular updates and reports for funding, maximising options for active movement and physical activity not available on land, and incorporating evidence and function.

Conclusion: Aquatic physiotherapy in a community setting is feasible and explores multiple positions and techniques to assist function and meet therapeutic and participant goals.

Key practice points:

- Clinical reasoning in aquatic physiotherapy is facilitated by communication and handling skills.
- Decision making on programs has a focus on unique opportunities, evidence and function.

Group exercise-based cancer telerehabilitation may not improve quality-of-life of cancer survivors: A randomised controlled trial

Amy Dennett[1], Katherine Harding[1,2], Nora Shields[1], Casey Peiris[1,3], Christian Barton[1], Phillip Parente[2,4], Lauren Lynch[2], Nicholas Taylor[1,2]

[1]La Trobe University, [2]Eastern Health, [3]Royal Melbourne Hospital, [4]Monash University

8A: Models to implement community-based exercise oncology into usual practice, Riverbank Rooms 2&3, October 24, 2025, 15:35 - 16:20

Aim:

To evaluate the effectiveness of a group exercise-based cancer rehabilitation program delivered via telehealth compared to usual care for improving quality of life.

Method:

An assessor-blinded, pragmatic randomised controlled trial was conducted with adult cancer survivors. Participants were randomised to an 8-week, twice-weekly, supervised online exercise group or usual care. The primary outcome was health-related quality of life (EORTC QLQ-C30) at T1. Secondary measures included walking capacity (6-minute walk test), physical activity (activPAL accelerometer), self-efficacy (Health Action Process Approach Questionnaire), adverse events and health service data. Analyses used linear mixed-effects models.

Results:

A total of 117 participants were recruited. One in four participants failed to attend any online exercise session. Adherence to online sessions was hampered by frequent non-attendance due to conflicting medical appointments and illness. Telerehabilitation was safe and no major adverse events occurred. There was no difference in outcomes between the experimental and control groups for primary (EORTC-QLQ C30 MD -2.5 points (95% CI -6.6 to 1.7) and secondary outcomes.

Conclusion: An online group exercise telerehabilitation intervention was safe however, efficacy of the intervention was impacted by non-attendance and found not effective compared to usual care including standardised physical activity advice and assessment.

Key practice points:

- Group exercise telerehabilitation should not be the first-line exercise option for people with cancer if an in-person alternative is available.

- Telerehabilitation may be more suitable for people without access to in-person rehabilitation such as those in rural areas or those with less barriers to exercise with good access to technology.

Challenges of managing a national physiotherapy multicentre randomised controlled trial with a digital intervention

Jamie Waterland[1,2], Linda Denehy[1,2]

[1]Peter MacCallum Cancer Centre, [2]University of Melbourne

11B: Managing multicentre trials and cancer pre and rehabilitation trial newsflashes, Riverbank Room 4, October 25, 2025, 13:40 - 14:25

Background:

Physiotherapy is an evidence-based profession, with the need for high quality research evidence. Large multicentre randomised controlled trials are exciting and provide the opportunity to demonstrate effectiveness, but they will always come with challenges. As physiotherapists seek larger grants to provide evidence and backing for their interventions, it becomes essential to plan for challenges that are inevitable during the roll out of large-scale trials. Lessons learned from managing the Implementing Teleprehabilitation into Cancer Care Pathways (STTARRS) Trial will be shared as part of this presentation. The STTARRS Trial is a MRFF funded and ethically approved for eight sites across five Australian states. This presentation is aimed at physiotherapists who may be interested in conducted their own or managing randomised controlled trials.

Objectives:

1. Provide an overview of a current large MRFF funded randomised controlled trial
2. Discuss challenges and pitfalls to consider in the early stages of the trial.
3. To explore and discuss strategies to combat these challenges and better prepare physiotherapists to deliver high quality multicentre randomised controlled trials.

Approach:

1. Setting the scene: overview of a large MRFF RCT currently in progress (5min).
2. Discussion: description of recent challenges and potential future challenges (20min)
3. Questions from audience and opportunity for peer-to-peer learning (5min)

Key practice points:

- This ‘how to’ session is aimed at physiotherapists who may be interested in conducted their own or managing larger scale randomised controlled trials.

Implementation of an individualised exercise program for breast cancer: listening to women

Katherine Maka OAM[1], Dragana Ceprnja[1], Elisabeth Elder[1], Nirmala Pathmanathan[1], Masrura Kabir[1]

[1]*WSLHD*

11B: Managing multicentre trials and cancer pre and rehabilitation trial newsflashes, Riverbank Room 4, October 25, 2025, 13:40 - 14:25

Aim: Regular physical activity and exercise has the potential to improve health outcomes in the breast cancer population. This pilot study aims to investigate the effectiveness of an exercise program and to identify facilitators and barriers to implementation of an exercise program in women with breast cancer

Design: A single-arm Type 1 hybrid effectiveness-implementation pilot study with mixed methods.

Method: Participants were enrolled in a 12-week supervised exercise program. Outcome measures included physical fitness, strength, quality of life and fatigue scores. Focus groups were conducted with participants to determine acceptability, appropriateness and feasibility of the program.

Results: Women with early-stage breast cancer (N=130) reported improved quality of life, reduced fatigue and increases in strength upon participation in an exercise program ($p<0.001$). Focus groups revealed strong themes around the program being an important social support, assisting with physical recovery and empowering women to feel confident in doing more exercise and returning to activities of daily living.

Discussion: Women with breast cancer recognise the important physical and psychological health benefits offered by participation in an exercise program and acknowledge the social connections with other women a group program supports. The findings to date suggest implementation of an individualised and supervised exercise program is very acceptable and feasible in a tertiary setting.

Key practice points:

- An exercise program is acceptable to women with breast cancer
- Women reported wide-ranging benefits with exercise for outcomes such as quality of life and fatigue
- Exercise programs offer a community of support in breast cancer

Embedding pre-operative exercise training in lung cancer: an implementation trial

Meredith King[1,2,3], Sally Wootton[2,3], Nicole Roche[1,3,4], Benjamin Harris[1,3,4], Michael Hibbert[1,3,4], Gregory King[1,3,4,5]

[1]Royal North Shore Hospital, [2]Chronic Disease Community Rehabilitation Service, [3]Sydney Medical School, Faculty of Medicine and Health, The University of Sydney, [4]Department of Respiratory and Sleep Medicine, Royal North Shore Hospital, [5]Woolcock Institute of Medical Research, Airway Physiology and Imaging Group

11B: Managing multicentre trials and cancer pre and rehabilitation trial newsflashes, Riverbank Room 4, October 25, 2025, 13:40 - 14:25

Aim: Pre-operative exercise training (PreOpET) is recommended for people awaiting lung cancer resection but can be challenging to deliver in clinical practice with patient and health service-related barriers. The aim of this study was to evaluate the implementation of PreOpET in people awaiting lung cancer resection.

Design: Prospective mixed methods study.

Methods: Participants aged >50 years undergoing lung cancer resection were identified. All participants completed a baseline assessment and were offered the choice of joining PreOpET which consisted of up to five sessions/week, gym and/or supervised telerehabilitation sessions, from baseline until surgical date. Implementation was evaluated with the primary outcome of PreOpET uptake. Secondary outcomes included completion rates, adverse events, PreOpET type and PreOpET volume completed and participant acceptability and experience.

Results: To date, thirty-two participants, 35% male, with mean (SD) age of 70 (6) years have been recruited. Twenty-two (69%) opted to join the PreOpET program. Program choice has been mixed with 44%, 28% and 28% of participants completing hybrid, gym and telerehabilitation program respectively. Participants completed an average of 16 (4) sessions over 4 (4) weeks prior to surgery. All participants completed PreOpET and participant reported level of acceptability and perceived benefit was high.

Conclusion: Prior to lung cancer resection, a hybrid PreOpET model resulted in high levels of participation.

Key practice points:

- Frequency, duration and type of exercise preferred by participants is varied so PreOpET programs should be flexible to maximise access.
- Further study is required evaluating the effectiveness and participant experience of this PreOPET model.

In-hospital daily step count and fatigue in adults following autologous haematopoietic stem cell transplant

Joanne Houston[1], Gillian Gregory[1], Bradley Augustson[2], Christina Crosbie[2], Kylie Hill[3], Vinicus Cavalheri[3,4]

[1]Physiotherapy Department, Sir Charles Gairdner Hospital, [2]Haematology Department, Sir Charles Gairdner Hospital, [3]Curtin School of Allied Health, Curtin University, [4]Allied Health, South Metropolitan Health Service

11B: Managing multicentre trials and cancer pre and rehabilitation trial newsflashes, Riverbank Room 4, October 25, 2025, 13:40 - 14:25

Aim: To describe in-hospital step count in people following elective autologous haemopoietic stem cell transplant for haematological malignancy and investigate associations with fatigue.

Design: Longitudinal observational study.

Method: Participants were recruited from a tertiary hospital in WA. On admission, prior to transplant, fatigue was measured via the Functional Assessment of Chronic Illness Therapy fatigue scale (FACIT-fatigue). Participants were then asked to wear a device to track daily steps (Stepwatch) 24 hours/day from day 1 post-transplant until hospital discharge. On discharge, fatigue measurement was repeated. We explored: daily changes in step count from day 1 to the day with the lowest step count post-transplant; change in fatigue from admission to discharge; and the correlation between the magnitude of change in step count and fatigue.

Results: Twenty-six adults (age: 60±10yr, 8 [31%] female, post-transplant length of stay: 13±3 days) provided complete Stepwatch data. Mean daily step count and FACIT-fatigue score on day 1 were 2,414±1,619 steps and 41.8±6.6, respectively. Mean reduction (95% CI) in daily step count from day 1 to lowest point post-transplant (day 9) was 1,344 (709 to 1,980) steps. Mean change (worsening) in FACIT-fatigue was 9.2 (5.4 to 13). There was no correlation between the magnitude of change in step count and fatigue (r=0.09).

Conclusion: Strategies are needed to improve physical activity and fatigue post-transplant.

Key practice points:

- During in-hospital stay, adults undergoing transplant for haematological malignancy demonstrated a reduction in daily steps and worsening in fatigue.
- The magnitude of change in these variables were not correlated.

Does prehabilitation improve physical capacity following bone marrow transplant?

Shaza Abo[1,2], Lara Edbrooke[1,2], Maddie Adair[2], Morgan Smith[2], Chris Swain[1], Amit Khot[3], Linda Denehy[1,2]

[1]Physiotherapy, Peter MacCallum Cancer Centre, [2]Physiotherapy, University of Melbourne, [3]Clinical Haematology, Peter MacCallum Cancer Centre and Royal Melbourne Hospital

11B: Managing multicentre trials and cancer pre and rehabilitation trial newsflashes, Riverbank Room 4, October 25, 2025, 13:40 - 14:25

Aim: Bone marrow transplant leads to deconditioning for people with blood cancer. Exercise prior to transplant, prehabilitation, has potential to ameliorate this, and shows promising outcomes in solid cancer though evidence is limited in blood cancer. This study aimed to compare physical capacity in patients treated with autologous bone marrow transplant for blood cancer who received prehabilitation compared to those who did not.

Design: Baseline data of a sub-group of participants having prehabilitation from a multi-site, assessor-blinded RCT.

Method: Adults 30-days following autologous bone marrow transplant completed six-minute-walk distance, 30sec-sit-to-stand and grip strength. Differences between patients receiving exercise prehabilitation were compared to those not receiving prehabilitation using independent samples T-tests.

Results: 108 participants (65% male; age 61 [53-67]yrs) receiving autologous bone marrow transplant for myeloma (60%) or lymphoma (40%) were included. Whilst patients receiving prehabilitation (n=67) tended to present with higher physical capacity at 30-days compared to those who did not (n=41), differences between groups were not statistically significant for six-minute-walk distance, 30-sec-sit-to-stand, nor grip strength (MD (95% CI): 10.7m (-30.7 to 52.1), p=0.41; 2.2 stands (0.4 to 4.0), p=0.20; 1.9kg (-5.0 to 2.5), p=0.02).

Conclusion: Exercise prehabilitation may improve physical capacity at 30-days post-autologous bone marrow transplant, however clinical significance needs to be determined. Analysis of further data may help understand whether certain elements of prehabilitation, for example intensity of prescribed exercise, can be enhanced to maximise benefits and support physiotherapy service models.

Key practice points:

- Prehabilitation for people with blood cancer treated with bone marrow transplant shows promise.

A theory-driven qualitative exploration of participation in a home-based lung cancer exercise clinical trial

Georgina Whish-Wilson[1], Lara Edbrooke[1,2,3], Mei Krishnasamy[3,5], Emma Visentin[1,6], Emma Kinnersly[1], Rachel Mitchell[6], Catherine Granger[1,6], Selina Parry[1,6]

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1C: Innovations in physiotherapy practice, Hall B, October 23, 2025, 11:05 - 11:50

Aim:

We conducted a multi-site randomised controlled trial (RCT) of home-based exercise and self-management for patients after lung cancer surgery, which improved intervention group exercise capacity and self-efficacy and objectively measured physical function. This qualitative evaluation aimed to explore participants' experiences of the program and understand factors influencing participation, behaviour change, and acceptability.

Design:

Qualitative study informed by the Theoretical Domains Framework (TDF) and Theoretical Framework of Acceptability (TFA).

Method:

The intervention group participated in a 12-week postoperative remotely-delivered exercise and self-management program. Individual, semi-structured telephone interviews were conducted with intervention participants at program discharge. Interviews were recorded, transcribed, cross-checked, and analysed using directed content analysis.

Results:

Twenty-one participants took part (mean age 61.9, 52% female, 39% underwent adjuvant therapy). Thirty-three themes were developed and mapped to TDF and TFA domains. Key TDF domains driving behaviour change included reinforcement, skills, and social influences. Exercise enablers included regular physiotherapy phone consultations and pedometers. Barriers to exercise included symptoms, poor weather, and competing priorities. Perceived effectiveness was a key TFA domain driving intervention acceptability. Most participants felt the program improved their physical

health, exercise self-efficacy and capacity, and physical activity levels. Areas for improving acceptability included increased flexibility/tailoring and exercise supervision/demonstration.

Conclusion:

The home-based program was acceptable to participants and facilitated meaningful behaviour change. Qualitative and quantitative RCT findings at program discharge aligned, particularly regarding improvements in exercise self-efficacy and capacity.

Key practice points:

- Participants of a home-based exercise and self-management program supported by telephone reviews viewed it as acceptable and effective.

Resource usage costs and greenhouse gas emissions of mHealth (m-PR) and centre-based pulmonary rehabilitation programs.

Sarah Brown[1,2,3], Michelle Cunich[1,4], Sally L Wootton[1,3], Marita T Dale[1], Jennifer A Alison[1,4], Andrew SL Chan[1,3,5], Marlien Varnfield[6], Ian Yang[7,8], Zoe McKeough[1]

[1]Faculty of Medicine and Health, The University of Sydney, [2]Physiotherapy Department, Royal North Shore Hospital, [3]Chronic Diseases Community Rehabilitation Service, [4]Sydney Local Health District, [5]Department of Respiratory and Sleep Medicine, Royal North Shore Hospital, [6]Australian eHealth Research Centre, CSIRO, [7]Thoracic Medicine, The Prince Charles Hospital, [8]Faculty of Medicine, The University of Queensland

1C: Innovations in physiotherapy practice, Hall B, October 23, 2025, 11:05 - 11:50

Aim:

To determine the resource usage costs and greenhouse gas (GHG) emissions associated with mobile health (mHealth) pulmonary rehabilitation (m-PR) when compared to centre-based PR (CB-PR) in people with COPD.

Design:

Cost and GHG emission analyses alongside a randomised controlled equivalence trial.

Methods:

Participants with COPD were randomised to eight weeks of m-PR or CB-PR. Resource usage costs from a societal perspective in 2024 Australian dollars, and Scope 1, 2 and 3 GHG emissions measured in kilograms of carbon dioxide equivalent ($kgCO_2e$) were collected over the intervention period for each participant. A base-analysis, which considered resource usage costs and GHG emissions in research conditions, and a scenario-analysis, which considered m-PR and CB-PR programs implemented within clinical practice in Sydney, Australia, were performed.

Results:

90 participants were randomised (mean [SD]: age 75 [7] years, FEV_1 57 [14] % predicted), with 38 m-PR and 42 CB-PR participants included in the base-analysis. From the base-analysis, there were no between-group differences in per-participant costs (MD $21, 95% CI -46 to 88) or GHG emissions (MD -21$kgCO_2e$, 95% CI -51 to 8). From the scenario-analysis, m-PR resulted in a cost-saving of $144 (95% CI 91 to 197) and a GHG emission-saving of 36 $kgCO_2e$ (95% CI 8 to 63) per participant when compared to CB-PR.

Conclusion:

mHealth PR is associated with lower resource usage costs and GHG emissions when compared to centre-based PR for people with COPD.

Key practice points:

- mHealth PR could be implemented into clinical practice to optimise cost and GHG emission savings.

Feasibility of a physiotherapy prehabilitation service for patients undergoing head and neck reconstructive surgery.

Leonie Shaw[1], Lyndsey Hoogenhout[1], Alana Jones[1], Carrie Service[1], Lauren Davies[1], Aruska D'Souza[1], Linda Denehy[2,3], Anand Ramakrishnan[1,2]

[1]The Royal Melbourne Hospital, [2]University of Melbourne, [3]Peter MacCallum Cancer Centre

1C: Innovations in physiotherapy practice, Hall B, October 23, 2025, 11:05 - 11:50

Aim:

To determine the feasibility of introducing physiotherapy into a multidisciplinary prehabilitation service for head and neck reconstructive surgery.

Design:

Prospective observational study.

Method:

Between May 2023 and June 2024, patients planned for head and neck reconstructive surgery were referred to prehabilitation that consisted of multidisciplinary educational videos and screening for targeted therapy. Patients with a Duke Activity Status Index < 34 were referred to physiotherapy. Bowen's feasibility framework was used to determine demand (referrals, patient numbers), practicality (time for intervention), implementation (sessions) and acceptability (patient surveys).

Results:

Time from referral for prehabilitation to surgery was a median 27 days [IQR 20 - 35] (practicality). of the 55 patients undergoing prehabilitation, 98% (n = 54) accessed the online educational videos and 29% (n = 16) were referred for targeted physiotherapy intervention. Fifty-three physiotherapy appointments were delivered via multiple modes including telehealth and face-to-face (implementation). Participants completed 78% of their prescribed physiotherapy sessions; non-completion reasons included: time to surgery and non-attendance.

At hospital discharge, 96% (n = 46) reported satisfaction with information received preoperatively; 83% reported the videos prepared them for surgery and 90% made changes to in-hospital health behaviours because of the prehabilitation service (acceptability).

Conclusion

It was feasible to incorporate physiotherapy into a multidisciplinary prehabilitation service before head and neck reconstructive surgery

Key practice points

- A physiotherapy prehabilitation service is feasible before head and neck reconstructive surgery.
- Physiotherapy intervention was limited by short time to surgery and geographical distance.
- Prehabilitation programs should include multi-modal service delivery.

Exploring perceptions of people with Parkinson's disease on inspiratory muscle training: A qualitative study

Juliana De Mendonca[1], Hannah Wallett[1], Allyson Flynn[1], Elisabeth Preston[1], Bernie Bissett[1], Macey Barratt[1]

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2B: Inspiratory muscle training and rapid fire updates in cardiorespiratory physiotherapy, Hall A, October 23, 2025, 11:55 - 12:40

Background: Inspiratory muscle weakness is a known consequence of Parkinson's Disease (PD) and could be a potential contributor to the dyspnoea experienced by 40% of people with PD. However, inspiratory muscle training (IMT) has received little attention in this population. It is unclear how the training affects inspiratory muscle strength and dyspnoea, and research on patients' perceptions of this training is lacking.

Objective: To explore the perceptions of people with PD about IMT after an 8-week program.

Methods: Qualitative data will be collected from a subset of experimental group participants undergoing an eight-week IMT program. This study will use semi-structured interviews with open-ended questions about their experiences of IMT on dyspnoea, and daily activities performed before and after training. Interviews will be transcribed and analysed using reflexive thematic analysis.

Results: Data analysis is to occur between February to May 2025. The findings will provide evidence on potential enablers and barriers of inspiratory muscle training and the effects of the training based on the perceptions of people with PD disease.

Key practice points:

- IMT has the potential to be a compelling, widely available treatment option for people with PD.
- The findings may inform clinical guidelines for managing dyspnoea in PD and support the integration of inspiratory muscle training into standard care practice.

Ethics: Ethics approval by the University of Canberra Human Research Ethics Committee (9268).

Comparison of two fixed-intensity clinical exercise tests to measure exertional dyspnea

Tanya Palmer[1,2,3], Steven Obst[1], James Walsh[2,3], Surendran Sabapathy[2], Norman Morris[2,3]

[1]CQUniversity, [2]Griffith University, [3]The Prince Charles Hospital

2B: Inspiratory muscle training and rapid fire updates in cardiorespiratory physiotherapy, Hall A, October 23, 2025, 11:55 - 12:40

Exertional dyspnea (ED), which is reported as shortness of breath during exertional activities, is a leading symptom reported by patients with COPD. Two walking exercise tests, the Constant speed shuttle test (CSST) and the Dyspnea Challenge (DC) are fixed-intensity clinical exercise tests which assess ED. The aim of this study was to compare the protocols of the two ED specific exercise tests in healthy and COPD populations.

Methods:

Healthy and COPD participants aged 55-85years completed both tests in random order. Primary outcome of modified Borg (mBorg) measured ED pre and immediately post (peak) exercise tests. The Multidimensional Dyspnea Profile (MDP) was completed at completion of the exercise tests.

Results:

Twenty-two healthy participants 64-82years (71±5) and twenty COPD participants 55-85years (74±7) completed all exercise testing. No significant interaction (p=0.48) of Peak mBorg was observed between the DC (3.8±1.6) and CSST (3.5±1.8) in COPD patients. A significant interaction (p=0.02) was observed in Peak mBorg between the DC (3.1±1.0) and CSST (2.0±1.7) in healthy participants. COPD participants reported a higher MDP breathing discomfort score (A1) at the completion of the DC (4.6±2.6) compared to the CSST (3.5±2.6). Similar was observed in the healthy participants (DC 2.5±1.9; CSST 1.3±1.7). COPD patients reported the Sensory Dimension of 'Breathing a lot' of the MDP as the best descriptor of their ED sensation at the completion of both exercise tests, with healthy participants reporting 'Muscle work'.

Both tests induce ED in both populations. The DC elicits higher Peak mBorgs in both populations when compared to the CSST.

The impact of lung cancer resection: an observational study

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2B: Inspiratory muscle training and rapid fire updates in cardiorespiratory physiotherapy, Hall A, October 23, 2025, 11:55 - 12:40

Aim:

Surgical resection is the recommended form of management for Stage I-III lung cancer in Australia and has demonstrated low peri-operative mortality and complication rates. However, the impact of current resection techniques on post-operative lung function, functional capacity and symptoms is unclear. The aim of this study was to evaluate the impact of lung resection on lung function, exercise capacity, health related quality of life (HRQoL) and fatigue.

Design:

Prospective, observational study.

Methods:

Participants aged >50 years with confirmed or suspected lung cancer amenable to surgical resection were identified through a Lung Cancer Multidisciplinary team meeting. Lung function testing, incremental shuttle walk tests (ISWT) with a portable metabolic cart measuring oxygen consumption (V02) and questionnaires examining HRQoL and fatigue were completed both pre-operatively and six months post-operatively with change over time analysed using paired t-tests.

Results:

To date, ten participants, mean (SD) age 69 (8) years, 50% male have completed both study visits. Post-operatively lung function, forced expiratory volume in one second, forced vital capacity, and V02 has reduced with a change of 320ml, 620ml and 1.7ml/kg/min respectively ($p<0.05$.) but ISWT distance was unchanged [44 (75)m ($p=0.11$)]. Symptoms and fatigue worsened with changes of 10.5 (10.4) and 8.3 (10.6) points ($p<0.05$).

Conclusion:

Lung cancer resection has a significant impact of lung function, oxygen consumption and symptoms.

Key practice points:

- Symptoms of worsening fatigue, HRQoL and oxygen consumption persist after lung resection.
- Further study is required to identify predictors of these changes and interventions to reduce post-operative symptom burden.

The clinical utility, barriers, and facilitators of peripheral and respiratory muscle ultrasound: Mixed methods study

Dominic Truong[1], Marlena Klaic[2], Sunita Mathur[3], Catherine L Granger[1,4], Shaza Abo[1,5], Lee-anne Chapple[6], Kate Lambell[7], George Ntoumenopoulos[8], Aarti Sarwal[9], Kirby P Mayer[10], Felipe González-Seguel[10,11], Sabrina Eggmann[12,13], Owen Gustafson[14], Chris Burtin[15], Danielle E Bear[16,17,18], Abraham Samuel Babu[19,20], Vinicius Maldaner da Silva[21], Selina M Parry[1]

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4C: Assessment and outcomes in cardiorespiratory physiotherapy practice, Riverbank Rooms 2&3, October 23, 2025, 14:30 - 15:15

Aim: To explore the clinical utility, barriers, and facilitators of peripheral and respiratory muscle ultrasound by health professionals in international acute adult hospitals.

Design: Explanatory, sequential, mixed-methods

Methods: An international online survey was distributed via Qualtrics (May-June 2024) to health professionals in acute adult hospitals. The survey addressed demographics, ultrasound utility, barriers/facilitators, equipment/resources, and training, followed by semi-structured interviews using the Theoretical Domain Framework and Acceptability Framework.

Results: of 891 survey responses, 641 (72%) were eligible, with 547 complete responses. Respondents represented 45 countries, with 38% from Australia and New Zealand and 53% physiotherapists. Over half were non-users but interested in peripheral (54%) and respiratory muscle ultrasound (58%). Quadriceps (69%) and diaphragm (96%) were the most imaged muscles. Forty semi-structured interviews were completed, involving six health professions from 15 countries.

Key barriers identified:

- Capability: limited knowledge and skills of muscle ultrasound
- Environment: insufficient access to equipment and training
- Motivation: lack of confidence to adopt ultrasound without proper training

Key facilitators identified:

- Knowledge: clinical evidence regarding muscle ultrasound
- Optimism: perceived benefits of diaphragm ultrasound
- Social influences: champion to promote ultrasound use

Conclusion: Despite many non-users, there is significant interest in muscle ultrasound. Results highlight the need for targeted education and skill development, with future efforts focussing on creating competency frameworks and training programs to overcome barriers and leverage facilitators.

Key practice points:

- Access to equipment and training is essential for muscle ultrasound adoption.
- Clinical evidence should be leveraged to promote muscle ultrasound adoption.

Postoperative pulmonary complications: Day of onset and incidence differs with different scoring methods

Claire Hackett[1,2], Linda Denehy[2,3], Peter Kruger[1], Ianthe Boden[2,4,5]

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4C: Assessment and outcomes in cardiorespiratory physiotherapy practice, Riverbank Rooms 2&3, October 23, 2025, 14:30 - 15:15

Aim:

To describe and compare the frequency and timing of postoperative pulmonary complication with four assessment methods.

Design:

Secondary analysis of the PHYSIO+++ randomised controlled trial.

Method:

Participants were 49 adults with hypoxaemia following major abdominal surgery; mean (SD) age 62 (10), BMI 32 (7), female 24 (49%). Participants were assessed daily for seven postoperative days with four pulmonary complication assessment methods (Melbourne Group Score, StEP-COMPAC, Pneumonia, and Atelectasis). Atelectasis was diagnosed if reported on imaging. Outcomes were described using frequencies, percentages and confidence intervals as appropriate.

Results:

Chest imaging was available in 40 participants. of 49 participants, the incidence of pulmonary complications within seven postoperative days was 69% (95%CI 55%-80%; 34/49) diagnosed with Atelectasis, 46%, (95%CI 34-61%; 23/49) with StEP-COMPAC, 12% (95%CI 6-24%; 6/49), with Melbourne Group Score and 8% (95%CI 2-17%; 4/49) with Pneumonia. First diagnosis of Atelectasis and StEP-COMPAC peaked on the day of surgery with 47% (95%CI 34-61%, 23/49) and 27% (95% CI 16-40, 13/49), whereas first diagnosis using Melbourne Group Score and Pneumonia peaked on postoperative day two 12% (95% CI 6-24; 6/49) and 6% (95% CI 2-17; 3/49) respectively.

Conclusion:

Atelectasis is common in patients with postoperative hypoxaemia. The StEP-COMPAC tool may identify pulmonary complications earlier and more frequently than the Melbourne Group Score or Pneumonia in hypoxaemic patients.

Key practice points:

- When designing clinical trials, researchers should consider the frequency and timing of postoperative pulmonary complication assessment methods.
- Not all patients with postoperative hypoxaemia undergo chest imaging, however atelectasis is common.

A comparison of the six minute walk and cardiopulmonary exercise tests in pulmonary hypertension

Norman Morris[1,2], John Feenstra[2], Michael Trotter[2], Craig Aitken[1,2], Menaka Louis[1], Julie Adsett[1,3], Fergus O'Connor[1,2], Helen Seale[2]

[1]Griffith University, [2]The Prince Charles Hospital, [3]The Royal Brisbane and Womens Hospital

4C: Assessment and outcomes in cardiorespiratory physiotherapy practice, Riverbank Rooms 2&3, October 23, 2025, 14:30 - 15:15

Rationale

Compared to a cardiopulmonary exercise test (CPET), the six minute walk test (6MWT) is assumed submaximal, however this remains unknown in pulmonary hypertension(PH). Study aims: (i)compare the end-exercise response between the 6MWT and a stationary-cycling CPET; (ii)develop a simple prediction equation to estimate peak power (Wpeak) utilising physical characteristics and 6MWT distance (6MWD).

Methods:

Volunteers with PH completed two 6MWT and a CPET on cycle-ergometer on separate days whilst pulmonary gas exchange was measured (Cortex, Metamax). Paired end exercise cardiopulmonary responses were compared between groups (aim (i)) and a prediction equation for Wpeak developed using stepwise multiple linear regression from the 6MWD and participant physical characteristics(aim (ii)).

Results:

Data presented as mean (standard deviation). 60 individuals with PH (age: 50 (7) yr, body mass index (BMI): 25.5(6.5) Kg/m^2, Functional Class I-III, right ventricular systolic pressure: 60(25) mmHg) completed the study. The measured 6MWD and Wpeak were 559(84)m, and 75(20)W, respectively. The peak oxygen consumption (VO_2, 6MWT: 16.3(4.4); CPET:15.7(4.7) mL/Kg/min) and heart rate (HR, 6MWT:139(22); CPET:135(21) beats/min) achieved during the CPET and 6MWT were not significantly different ($p>0.05$). Stepwise regression found the Predicted Wpeak = -65.467-0.3xage+0.19x6MWD+1.92xBMI R^2=67%.

Conclusion:

In terms of the VO_2 and HR, the 6MWT is not a submaximal test, but similar to the CPET. The 6MWT can be used to predict Wpeak in PH which may prove beneficial for prescribing exercise in the absence of CPET.

Key practice points:

- In PH the 6MWT is similar to a peak exercise cycling test and can be used to prescribe rehabilitation cycling training intensity.

Using quality indicators to improve patient mobility practices in general medical wards

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5B: Optimising movement in the acute hospital setting, Hall A, October 24, 2025, 10:35 - 11:20

Aims : To pilot a list of mobility-related quality indicators in 10 medical wards across four hospitals, and to describe their utility for monitoring changes in practice over time.

Design: Prospective observational study, undertaken pre and post implementation of a co-designed mobility intervention.

Method: An expert stakeholder group reviewed 23 internationally published indicators and collectively adapted these for local context. Twenty-four indicators were selected for final inclusion. Audits relating to policy, documentation, equipment and environment and patient-related items, were undertaken in 2022 and 2024.

Results: Data were provided by 202 patients in 2022 and 265 patients in 2024. Improvements were observed in many indicators, including the proportion of patients who sat out of bed during the day, whereby seven out of 10 wards reached the pre-specified target of 80% in 2024, compared to three out of nine wards in 2022. Opportunities for improvement were identified for indicators related to equipment, storage and staff promotion of early mobilization.

Conclusion:

Evaluation and monitoring of mobility quality indicators has highlighted successful reductions in some barriers to inpatient mobility as well as areas for future improvements within the health service. The expert stakeholder group is currently refining these indicators to develop a core set to be considered for inclusion as part of standard care.

Key practice points

- Physiotherapists have a key role in promoting and supporting mobility practices for hospital inpatients
- Monitoring mobility indicators provides valuable information about common barriers to inpatient mobility, changes in practice and ongoing opportunities for improvement

Does exercise rehabilitation improve exertional dyspnoea in chronic cardiorespiratory populations? A systematic review

Tanya Palmer[1,2,3], Steven Obst[1], James Walsh[2,3], Surendran Sabapathy[2], Norman Morris[2,3]

[1]CQUniversity, [2]Griffith University, [3]The Prince Charles Hospital

6B: Systematic reviews: Synthesising the evidence, Room E1, October 24, 2025, 11:25 - 12:10

Exertional dyspnea (ED) is a key diagnostic symptom for chronic cardiorespiratory disease populations. Exercise-based rehabilitation remains the leading non-pharmacological intervention prescribed to improve exercise capacity and QoL of patients. However, the impact of exercise programs on ED for chronic cardiorespiratory disease populations remains unknown. Aim of this review was to evaluate the impact exercise interventions had on ED measured using fixed-intensity exercise tests.

Methods:

A systematic search of five electronic databases identified papers that examined 1) fixed-intensity exercise tests and measured ED (e.g. mBorg), 2) chronic cardiorespiratory populations, 3) ED reported at isotime or upon completion of fixed-duration exercise tests, 4) completed an exercise intervention, 5) published in English.

Results:

Searches identified 7525 papers. Eight papers met inclusion criteria, seven performed on COPD patients. The exercise interventions were heterogenous. Intervention duration ranged from 6-12 weeks and training typically occurred 3-days/week. High intensity protocols (60-85% VO2 or Peak workrate) were the most common (n=6) and showed the greatest reductions in ED. Low-intensity interventions (50% Peak workrate) (n=2) still yielded notable improvements in ED. Reductions in ED measured on the mBorg ranged between 0 to 3.2. Cycling (n=7) was the most common exercise modality used to test and train participants, treadmill exercise used to train in four studies.

Despite studies using a heterogenous approach to the exercise prescribed and the tests used to measure ED, interventions that were longer duration and higher intensity yielded larger improvements in ED. Results support exercise programs in chronic cardiorespiratory disease patients lower reported dyspnea on exertion.

Physiotherapy to prevent complications after major gastrointestinal cancer surgery: a systematic review and meta-analysis

Sarah White[1,2], Sarine Mani[7], Romany Martin[2], Julie Reeve[3], Jamie L. Waterland[4,5], Kimberley J. Haines[6,8], Ianthe Boden[2,4,7]

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6B: Systematic reviews: Synthesising the evidence, Room E1, October 24, 2025, 11:25 - 12:10

Aim: To evaluate and synthesize the evidence for perioperative physiotherapy interventions delivered with a prophylactic intent on postoperative outcomes when compared to a no-treatment control, or usual care of early mobilization alone, in adults undergoing gastrointestinal surgery for cancer. To evaluate the effect on postoperative outcomes due to timing of physiotherapy interventions (preoperative, perioperative or postoperative).

Design: Systematic review and meta-analysis

Method: Registered with PROPSERO (CRD42024578131). Four databases were systematically searched in August 2024. Data were extracted from eligible randomized controlled trials. Postoperative pulmonary complications were the primary outcome. Other outcomes included all-cause complications, acute length of stay, and all-cause mortality. Meta-analyses using Mantel-Haenszel random effects examined aggregated effect of physiotherapy on outcomes. Subgroup analyses examined the effect of physiotherapy timing (preoperative, postoperative, or perioperatively).

Results: Eight studies with a total sample of 1,418 participants were included. Meta-analysis found an estimated 59% reduction in risk of postoperative pulmonary complications with exposure to prophylactic physiotherapy (RR 0.41, 95% CI 0.23 to 0.73, $p<0.001$). Preoperative alone or perioperative physiotherapy significantly reduced risk (RR 0.32, 95% CI 0.17 to 0.60, $p<0.001$), whilst the effect of postoperative physiotherapy was uncertain.

Conclusion: Physiotherapy delivered with prophylactic intent reduces postoperative pulmonary complication risk by between 23% to 77% compared to no physiotherapy or usual care alone after major gastrointestinal cancer surgery. Timing of interventions may be important, with preoperative and perioperative interventions more effective than postoperative.

Key practice points:

- Physiotherapy interventions minimize risk of postoperative pulmonary complications after gastrointestinal surgery.
- Benefits of postoperative physiotherapy remains uncertain.

Long-term functional outcomes and health-related quality of life following in-hospital cardiac arrest: A systematic review

Gemma Pound[1], Chantal Grimwood[2], Alana Rix[3], Kate Wickham[3], Daryl Jones[1,4,5], Glenn Eastwood[1,4,5], Anais Charles-Nelson[1], Carol Hodgson[1,3,5,6]

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6B: Systematic reviews: Synthesising the evidence, Room E1, October 24, 2025, 11:25 - 12:10

Aim:

To evaluate long-term functional outcomes following in-hospital cardiac arrest.

Design:

Systematic review and meta-analysis.

Method:

Five databases (MEDLINE, EMBASE, CINAHL, CENTRAL, and PEDro) were searched to 14 February 2025. Eligible studies included adults who received cardiopulmonary resuscitation for in-hospital cardiac arrest and reported neurological, cognitive, psychological, or health-related quality of life outcomes ≥3 months post-discharge. Risk of bias was assessed using the Quality in Prognosis Studies tool. Meta-analyses were performed using random-intercept logistic regression. Narrative synthesis was used where pooling was not feasible.

Results:

Thirty-nine studies were included (n = 16–1539). Most were moderate to high risk of bias. In the full cohort, pooled proportion of poor neurological outcome was 78.9% (95% CI 73.5 to 83.4%; I^2 = 95.6%). Among survivors, 9.9% (95% CI 5.8 to16.3%; I^2 = 86.4%) had poor neurological outcome, with lower proportions at longer follow-up. Clinically significant anxiety and depression affected 13.1% and 8.1% of survivors, respectively. Quality-of-life impairments were common, particularly in pain/discomfort (60.5%), usual activities (52.6%), and anxiety/depression (49.0%). Substantial heterogeneity was observed across analyses (I^2 >75%). Variation in outcome measures, follow-up intervals, and reporting methods limited synthesis.

Conclusion:

Although many survivors of in-hospital cardiac arrest experience good long-term recovery, a meaningful proportion report persistent functional impairments. Consistency in outcome assessment is needed to guide future research and post-arrest care.

Key practice points:

- Some in-hospital cardiac arrest survivors experience persistent functional impairments.
- Outcome measures and follow-up time points vary widely.
- Standardisation is needed to support evidence synthesis and care planning.

Active cycle of breathing technique, oscillating-positive-expiratory-pressure therapy or walking with huffing during a bronchiectasis exacerbation

Jennifer Phillips[1,2], Rodney Pope[1,3], Wayne Hing[1], Ashleigh Canov[2], Nicole Harley[2], Annemarie Lee[4,5]

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6C: Cystic Fibrosis, Bronchiectasis and resourcing in pulmonary rehabilitation, Panorama 3, October 24, 2025, 11:25 - 12:10

Aim:

Compare effects of active cycle of breathing technique, oscillating positive expiratory pressure and walking with huffing on sputum expectoration and health-related-quality-of-life for adults hospitalised with exacerbations of bronchiectasis.

Design:

Multi-site randomised controlled trial.

Method:

Fifty-five adults were randomised within 48-hours of admission. The primary outcome measure was sputum collected during airway clearance sessions, one-hour post session and the following 23 hours, with total 24-hour sputum and percentage of 24-hour sputum produced during session and one-hour post session calculated. The secondary outcome measure was health-related-quality-of-life (Bronchiectasis Health Questionnaire, Quality-of-Life Bronchiectasis questionnaire and Leicester Cough Questionnaire). All measures were collected day two of hospital admission and discharge day.

Results:

62% had severe bronchiectasis. There was no significant difference between groups in the primary outcome measure at either time point. Only active cycle of breathing technique group experienced a clinically significant reduction in 24-hour total sputum at discharge. Active cycle of breathing technique and walking with huffing significantly improved scores in all quality-of-life measures. Walking with huffing group demonstrated significant improvement compared to oscillating positive expiratory pressure in Leicester Cough Questionnaire total score. No other significant differences between groups in secondary outcome measures were observed.

Conclusion:

Findings support walking with huffing as a stand-alone airway clearance technique in adults hospitalised during an exacerbation of bronchiectasis.

Key practice points:

- There was no significant difference in sputum expectoration between three common airway clearance techniques during hospital admission.
- Walking with huffing and active cycle of breathing technique significantly improved quality-of-life during hospital admission.

Improved health outcomes with implementation of the treatable traits approach in bronchiectasis

Kirsty Watson[1,2], Annemarie Lee[3], Tiffany Dwyer[1,4], Zoe McKeough[1]

[1]The University of Sydney, [2]Central Queensland Hospital and Health Service, [3]Monash University, [4]Royal Prince Alfred Hospital

6C: Cystic Fibrosis, Bronchiectasis and resourcing in pulmonary rehabilitation, Panorama 3, October 24, 2025, 11:25 - 12:10

Aim:

Treatable traits are identifiable, measurable and treatable features of disease. The study's aims were to evaluate whether a bronchiectasis clinic in a regional setting in Australia, implementing a treatable traits approach would lead to: (1) Improvements in quality of life (QoL); (2) Increased pulmonary rehabilitation completion; (3) Reductions in exacerbations of bronchiectasis.

Design:

An implementation study.

Method:

Adults with bronchiectasis, new to an outpatient clinic implementing a treatable traits approach in Rockhampton between 2021-2023 were invited to participate. Quality of life (QoL-Bronchiectasis respiratory symptom (QoL-B rs) score, Leicester Cough Questionnaire (LCQ) total score), pulmonary rehabilitation completion and annual exacerbation frequency (self-reported diary record) were evaluated at baseline, three and 12 months from first attendance.

Results:

50 participants were recruited [mean (SD) age 71 (12) years; Bronchiectasis Severity Index (%) mild (22), moderate (44), severe (34)]. There was a clinically significant improvement in QoL at three and 12 months from baseline [3 months: QoL-B rs mean difference (95% CI) 10.1 (3.9-16.3) points, LCQ 1.8 (0.8-2.8) points; 12 months: QoL-B rs 9.2 (3.2-15.2) points, LCQ 1.7 (0.6-2.8) points]. Pulmonary rehabilitation completion was high (84% participants referred, 74% completed) and exacerbation frequency decreased compared with baseline [median (IQR) from 1.0 (0.0-3.0) to 0.0 (0.0-1.0), $p<0.05$].

Conclusion:

A treatable traits approach improved quality of life, pulmonary rehabilitation completion and exacerbation frequency in people with bronchiectasis.

Key practice points:

- Treatable traits can be implemented by physiotherapists and nurses
- A low resource approach can improve health outcomes for people with bronchiectasis

The treatable traits approach is highly acceptable to patients in a regional bronchiectasis outpatient clinic

Kirsty Watson[1,2], Annemarie Lee[3], Marita Dale[1], Tiffany Dwyer[1,4], Zoe McKeough[1]

[1]The University of Sydney, [2]Central Queensland Hospital and Health Service, [3]Monash University, [4]Royal Prince Alfred Hospital

6C: Cystic Fibrosis, Bronchiectasis and resourcing in pulmonary rehabilitation, Panorama 3, October 24, 2025, 11:25 - 12:10

Aim: The treatable traits approach to clinical care, when implemented in chronic respiratory conditions, has demonstrated improvements in quality of life, but the acceptability of the approach has not been determined. The study aim was to determine if implementation of the treatable traits approach in a bronchiectasis outpatient clinic in regional Australia would be acceptable to patients.

Design: A qualitative study using a relativist, constructionist thematic analytic approach.

Method: New patients with bronchiectasis who attended an outpatient clinic using a treatable traits approach to care in Rockhampton, Australia between 2021-2023, were invited to participate. Semi-structured interviews were conducted after the three-month clinic review appointment, evaluating the components of the theoretical framework of acceptability. Interviews were audio recorded, transcribed verbatim, with codes and themes developed through an iterative process.

Results: There were 10 participants recruited [mean (SD) age 70 (12) years; 70% female; Bronchiectasis Severity Index (%) mild (20), moderate (50), severe (30)]. Five main themes were developed. Participants described acceptability according to four key components the clinic provided/supported: (1) the motivation to engage and change; (2) multi-intervention, targeted clinical care, which was enjoyable and highly valued; (3) psychosocial and physical health benefits; (4) the long-term understanding and acceptance of self-management. Theme five described the persistent challenges of living with bronchiectasis, despite the interventions of the clinic.

Conclusion: The treatable traits approach was highly acceptable to patients.

Key practice points:

- A treatable traits approach could be used to manage bronchiectasis patients in an outpatient clinic given the high level of acceptability.

Physiotherapy for a pulmonary exacerbation of Cystic Fibrosis: current practice

Kristen Andrews[1,2], Nathan Ward[3], Tom Snelling[4], Andre Schultz[5,6], Anne E Holland[1,7], on behalf of the BEAT-CF investigators

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6C: Cystic Fibrosis, Bronchiectasis and resourcing in pulmonary rehabilitation, Panorama 3, October 24, 2025, 11:25 - 12:10

Aim:

Identify current physiotherapy practice for people with cystic fibrosis (CF) admitted to hospital with a pulmonary exacerbation (PEx).

Design:

Observational study utilising data collected as part of the Bayesian Evidence Adaptive Treatment of Cystic Fibrosis (BEAT-CF) study.

Method:

Prospective clinical, demographic, intervention and outcome data of people with CF admitted to hospital with a PEx enrolled in the BEAT-CF PEx cohort have been collected within the BEAT-CF platform. Data pertaining to physiotherapy practice, including inhalation therapy, were extracted and analysed descriptively.

Results:

Participants were 301 people with CF (median age 12, IQR 7-17). Almost all participants (98.7%) performed at least one type of airway clearance therapy (ACT) during the PEx, with positive expiratory pressure most commonly reported (56.8%). Over half (57.5%) of the participants reported performing two or more types of ACT. Less than half of the participants (44.5%) combined inhalation with ACT. 112 participants (37.2%) undertook at least one type of exercise during admission, with aerobic exercise most commonly reported (27%). An average of 30 minutes or less was reported for the majority of ACT (91.6%) and Exercise (95.8%) sessions.

Conclusion:

Almost all participants completed ACT, whereas rates of inhalation and exercise were relatively low. Most of the exercise and ACT interventions were completed within 30 minutes.

Key practice points:

1. Knowledge of current practice may enable the development and design of the most effective approach to physiotherapy for a PEx in the era of highly effective modulator therapy.
2. An understanding of current practice may support clinical decision making.

Interest and resources of Australian primary care physiotherapists and exercise physiologists in providing pulmonary rehabilitation

Jessica Walsh[1], Marita Dale[1], Jennifer Alison[1,2], Jeanette Thom[1], Zoe McKeough[1], Sarah Dennis[1,3,4]

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6C: Cystic Fibrosis, Bronchiectasis and resourcing in pulmonary rehabilitation, Panorama 3, October 24, 2025, 11:25 - 12:10

Aim:

To ascertain whether physiotherapists and accredited exercise physiologists (AEPs) in private practices were interested in delivering pulmonary rehabilitation (PR), the resources available within practices to provide a PR program, and alignment to business models.

Design:

Cross-sectional survey

Methods:

An online survey was distributed to Australian physiotherapists and AEPs working in private practices through national professional bodies and networks, Primary Health Networks, Lung Foundation Australia and researcher networks November 2023 to August 2024. Quantitative data was analysed by descriptive statistics and free text responses by thematic analysis.

Results:

The survey was opened by n=299, with 245 (82%) eligible responses received from 182 (74%) physiotherapists and 63 (26%) AEPs across Australia. 99% of participants were aware of the benefits of PR, with 91% expressing an interest in providing PR in their practice with many having suitable resources and space. 92% agreed or strongly agreed that a Medicare funding stream would be an enabler. 86% agreed or strongly agreed providing PR in their practice aligned with their business model. Analysis of the free text responses supported quantitative data.

Conclusion:

Physiotherapists and AEPs are interested in providing PR in private practices and have appropriate space and resources to conduct PR programs, however there are significant barriers.

Key practice points:

- Demand for PR is only going to grow, and alternative model are needed to support hospital services.
- Private practice physiotherapists and AEPs may offer an alternative setting. However, without a sustainable referral pathway and funding scheme, this is not viable from a business perspective.

PhysiotheRapy following OPen HEart SurgerY (PROPHESY): A feasibility study

Michelle Paton[1,2], Andrew May[1], Nina Moorrees[1], Chantelle Chapman[1], Jackson Wood[1]
[1]Monash Health, [2]ANZIC-RC, Monash University

7C: Cardiac surgery and vasoactive medications: advancing physiotherapy practice, Riverbank Rooms 7&8, October 24, 2025, 14:15 - 15:00

Aim: Ascertain the feasibility of measuring activity following open cardiac surgery to inform future investigations regarding the influence of post-operative physiotherapy

Design: Observational cohort feasibility trial

Methods: Adults undergoing open heart surgery at a Victorian tertiary hospital between June and September 2024 were included. Participant's post-operative activity was measured by a tri-axial accelerometer worn for 7 post-operative days or until hospital discharge. Recruitment and clinical outcomes occurred on weekdays only, with feasibility outcomes calculated following the recruitment period.

Results: of the 134 eligible patients who underwent open cardiac surgery, 64% (n=86) were included (median [IQR] age 66 [57-74] years; 80% male), with a post-operative length of stay of 7.5 [5.7-8.7] days where 84% (n=72/86) discharged straight home. Patients received an average (±SD) 4.6±1.3 physiotherapy or allied health assistant sessions during their post-operative stay. Not continuing the study across weekends was the main reason for missed recruitment (54%, n=26/48) and not obtaining outcome measures (54%, n=20/37). Complete data sets were attained for 57% of recruited participants (n=49/86). Median device wear adherence was 87% [73%-95%]. Step count and active time increased progressively to a peak at day 5 post-operatively, which aligned with discharge from physiotherapy (day 5 [4-7]).

Conclusion: While participant adherence to wearing the tri-axial accelerometer was adequate, limiting study processes to weekdays influenced feasibility outcomes.

Key practice points:

- Future studies necessitate continuation across seven days to ensure a thorough understanding regarding the influence of post-operative physiotherapy in open cardiac surgery

New Zealand health professionals' knowledge and confidence in implementing "Keep your move in the tube"

Doa El-Ansary

7C: Cardiac surgery and vasoactive medications: advancing physiotherapy practice, Riverbank Rooms 7&8, October 24, 2025, 14:15 - 15:00

Aim: Research establishing the safety of early upper limb resistance training and KMIT ® post-cardiac surgery supports a paradigm shift in practice. This study aimed to explore the effect of an educational video on health professionals' (HPs) knowledge and confidence regarding KMIT® implementation.

Method: This study utilised a pre-post intervention design. A questionnaire exploring knowledge and confidence of KMIT® was developed based on the Kirkpatric model of learning. Health professionals were invited to complete the questionnaire before and after viewing an educational video highlighting the evidence base and practical demonstrations of KMIT®.

Results: of the 35 participants, 22 (62.9%) reported using KMIT® in clinical practice. Median knowledge score pre-video was 4 out of 9 (range 0-8) compared to 7 (range 5-9) post-video. Mean scores for all questions improved post-video. The lowest pre- and post-video scores related to how and when activities can be performed outside the tube. Pre-video 34.3% felt confident to provide information about KMIT® to patients compared to 94.3% post-video. The most reported barriers to implementing KMIT® were the preferences of surgeons and needing wider team agreement to changing historic practices.

Conclusion: While the findings are not necessarily representative of all HPs, this study identified overall low knowledge and confidence about KMIT® which improved following an educational video.

Key practice points:

- KMIT® safely enhances recovery however there is need for educational opportunities to enable appropriate implementation into practice. Physiotherapists have a potential role in upskilling the wider multidisciplinary team to facilitate knowledge translation into practice in this area.

Standardising post operative management following median sternotomy using the "knowledge to action framework" in Australia

Samara Phillips

7C: Cardiac surgery and vasoactive medications: advancing physiotherapy practice, Riverbank Rooms 7&8, October 24, 2025, 14:15 - 15:00

Aim: To standardise post operative management following cardiac surgery using a median sternotomy, using the 'Knowledge to Action Framework', to align with the evidence.

Method: This study was a prospective, pre-post intervention design, using the RE-AIM framework for evaluation. The project was undertaken in four main phases aligned with the 'Knowledge to Action Framework'; i) scoping survey to define current CR practice, ii) development, and co-design of an implementation strategy to standardise education and exercise training, iii) implementation, and iv) evaluation. The research translation framework identified a structured process to co-design, develop, and implement a tailored implementation strategy acknowledging local context, barriers and enablers to implementation and sustainability. The strategy included acquisition of KMIT® resources, clinician education and training and empowerment of local change champions.

Results: The Knowledge-to-Action framework, alongside project and change management processes underpinned this research translation project which occurred between 2022 and 2024. An implementation strategy was incrementally applied across four public hospitals and 35 CR programs delivered from 56 sites. 366 clinicians were trained. Clinician familiarity with KMIT® improved from 11% to 76% with 82% updating their practice to align with evidence, an increase from 23% at baseline. Very high agreement between clinicians existed that practice change would be maintained.

Conclusion: This study has demonstrated a successful strategy for translating evidence into practice which could be modelled within other jurisdictions.

Key practice points:

- The "Knowledge to Action Framework" can be used to effectively translate evidence to facilitate recovery and optimal patient outcomes following cardiac surgery.

Mobilising critically ill patients on vasoactive medications: Barriers and current practice of physiotherapists

Amy Combers[1], Suzy Munns[1], Peter Thomas[1]
[1]*Charles Sturt University*

7C: Cardiac surgery and vasoactive medications: advancing physiotherapy practice, Riverbank Rooms 7&8, October 24, 2025, 14:15 - 15:00

Aim: To investigate current practices and barriers of mobilising critically ill patients on vasoactive medications.

Design: Cross-sectional survey of intensive care physiotherapists in Australia and New Zealand.

Method: The survey included Likert scales, multiple-choice questions, and free-text options. Chi-square and Mann-Whitney U testing were performed.

Results: The survey included 115 physiotherapists (35 non-senior, 80 senior). Respondents had positive attitudes towards mobilisation, believing it is not harmful (84%), poses no unnecessary risk (92%), and patients are not too sick to mobilise (85%). Supportive mobilisation practices occurred with sufficient staffing (87%), supportive seniors (83%), physiotherapy autonomy (76%), blood pressure monitoring (70%), and equipment availability (93%). There was consensus on which patients were safe to mobilise (65%); but no consensus regarding a protocol ($p = 0.102$).

The amount of vasoactive medications was a barrier to mobilisation: one increasing to a high dose (84%), one at a high dose (78%), and two with one being greater than a low dose (70%). Response rates were low for high and contraindicated vasoactive doses (37-49% non-senior, 28-49% senior physiotherapists not selecting any response). Vasoactive medications were not adjusted before mobilisation (79%); however, were increased to low-moderate doses if hypotension occurred (48%).

Conclusion: The current practices of physiotherapists and intensive care units support pro-mobilisation. A lack of consensus on vasoactive doses was identified as a factor preventing mobilisation.

Key practice points:

- Despite the risks and barriers, mobilisation is being safely integrated into intensive care settings.
- A consensus is needed on vasoactive dose ranges for safe patient mobilisation.

Impact of mobilisation dosage during critical illness on likelihood of discharge home: PREDICT-dosage secondary analysis

Michelle Paton[1,2], Natalie Lincke[2], Eldho Paul[2], Jennifer Liacos[3], Ashlea Hills[1], Carol Hodgson[2,3]

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9B: Jill Nosworthy prize session - Part 1, Hall A, October 25, 2025, 10:35 - 11:35

Aim: To assess the association of mobilisation during an Intensive Care Unit (ICU) admission on the likelihood of discharge home.

Design: Post-hoc secondary analysis.

Methods: Patients ventilated >24hrs from three Victorian ICUs in the PREDICT study (August 2017–January 2019) were included. Mobilisation data (frequency, intensity via the Intensive Care Mobility Scale [IMS], and time to first mobility milestone [IMS ≥3]) were retrospectively extracted from medical records. Multivariable logistic regression adjusted for age, sex, illness severity, comorbidities, frailty, and admission diagnosis assessed the impact of mobilisation on the odds of discharge home.

Results: In 724 patients (mean age 56±16yrs; 63% male), a median of 2 [1–4] active mobilisation sessions occurred during a median ICU stay of 6 [4–11] days. Patients sat on the edge of the bed (IMS ≥3) on day 4 [2.3–7.8] after 435 (93%) were extubated. Each higher IMS level achieved increased the odds of discharge home by 46% (OR 1.46, 95%CI 1.35–1.59, p<0.0001). Patients reaching IMS 5 (sitting out of bed) were 9.4 times more likely to be discharged home (95%CI 6.93–15.71, p<0.0001). Although increased frequency and delayed mobilisation onset independently influenced discharge odds, the effect was minimal (OR 1.03, 95%CI 1.02–1.03, p<0.0001; OR 0.9, 95%CI 0.86–0.93, p<0.0001).

Conclusion(s): Optimising mobilisation in ICU is independently associated with an increased likelihood of discharge home, although confounders may be present.

Key practice points:

- Achieving higher mobilisation levels during ICU admission has the greatest impact on the likelihood of discharge home.

Prevalence of falls in older adults with cancer: a systematic review with meta-analysis

Catherine Granger[1,2], Udari Colombage[3], Ilana Ackerman[4], Selina Parry[1], Thanh Nguyen[3], Keith Hill[5], Sze-Ee Soh[1,3,4,5]

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9B: Jill Nosworthy prize session - Part 1, Hall A, October 25, 2025, 10:35 - 11:35

Aim: To determine the prevalence of falls and fall-related injuries in community-dwelling older adults over the age of 60 who have been diagnosed with cancer.

Design: Systematic review with meta-analysis.

Methods: Following a search of five electronic databases, two independent reviewers determined study inclusion, assessed risk of bias and extracted data. Studies were included if they included ≥50 community-dwelling adults ≥60 years with a current or past diagnosis of cancer and reported data on the prevalence of falls and/or fall-related injuries. Pooled prevalence rates of falls or fall-related injuries were calculated using meta-analysis, and meta-regression was used to investigate the association between cancer characteristics and reported prevalence of falls.

Results: 57 studies with sample sizes ranging from 51-146,959 participants (mean age 73 years) were included. The pooled prevalence of older adults with cancer who fell in the last 6-months (25%; 95% CI 19%, 32%) and 12-months (29%; 95% CI 24%, 34%) was similar. Subgroup analyses showed that the pooled prevalence of falls among older adults with breast cancer was higher (26%; 95% CI 22%, 30%) compared to those with prostate (14%; 95% CI 9%, 20%) and colorectal cancer (13%; 95% CI 11%, 16%).

Conclusion: The overall prevalence of falls in community-dwelling older adults with cancer is relatively similar compared to the general older adult population, noting that fall events may be underreported.

Key practice points:

- Falls are common among community-dwelling older adults with cancer
- The link between cancer characteristics and exposure to falls risk requires further investigation

Associations of step count and intensity with risk of heart failure in people with hypertension

Sonia Cheng[1,2], Raaj Biswas[1,2], Nicholas Koemel[1,2], John O'Sullivan[3,4,5], Angelo Sabag[1,2], Matthew Ahmadi[1,2], Emmanuel Stamatakis[1,2]

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9B: Jill Nosworthy prize session - Part 1, Hall A, October 25, 2025, 10:35 - 11:35

Aim:

To examine the dose-response associations of step count and stepping intensity with risk of incident heart failure (HF) in people with hypertension.

Design:

Prospective cohort study.

Method:

Data was obtained from participants with established hypertension from the UK Biobank accelerometry sub-study. Participants wore a wrist-worn accelerometer for seven consecutive days. An accelerometer-based activity machine learning scheme and validated step-count algorithm for wrist accelerometers were used to estimate daily step count. Peak 30-minute cadence, an indicator of stepping intensity, was calculated as the average steps/min recorded for the 30 highest cadence values in a day. Dose-response associations of daily step count and peak 30-minute cadence were examined with risk of HF, with hazard ratios (HR) and 95% confidence intervals (CI) calculated for the median values.

Results:

In 36 192 participants (mean (SD) age 64 (7) years, 48% male, follow-up period 7.8 years), inverse dose-response associations with risk of HF were observed for daily step count and peak 30-minute cadence. Approximately 6 500 steps/day was associated with lower risk of HF (HR 0.68, 95% CI 0.55-0.84), with an average 21.6% lower risk for every 1 000-step increase in daily step count. Seventy-six steps/min was associated with lower risk of HF (HR 0.63, 95% CI 0.50-0.78).

Conclusion:

Taking 6 500 steps/day may be sufficient to reduce the risk of HF in people with hypertension if undertaken at a reasonable intensity.

Key practice points:

- Modest improvements in daily steps, and higher stepping intensity, can lower risk of HF in people with hypertension.

MyoVision-US: An artificial intelligence-powered software for automated analysis of skeletal muscle ultrasonography

Zoe Calulo Rivera[1], Felipe González-Seguel[2,3,4], Arimitsu Horikawa-Strakovsky[2,5,6], Catherine Granger[1], Aarti Sarwal[7], Sanjay Dhar[8], George Ntoumenopoulos[9], Jin Chen[10], Cody Bumgardner[6,11], Selina M Parry[1], Kirby P. Mayer[2,3], Yuan Wen[2,6,11,12,13]

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9B: Jill Nosworthy prize session - Part 1, Hall A, October 25, 2025, 10:35 - 11:35

Aim: To develop and validate an artificial intelligence (AI)- powered software by measuring consistency and predictability in analysing lower-limb muscle ultrasound images in critically ill, lung cancer and healthy individuals compared to expert manual analysis.

Design: Prospective study

Method: Ninety ultrasound images of both the quadriceps complex (QC) and tibialis anterior (TA), acquired using portable ultrasound devices from active and completed studies, were randomly selected for analysis. Images were taken from critically ill, lung cancer and healthy subjects. Muscle parameters of interest included muscle thickness, cross-sectional area, and echointensity. Manual analysis was conducted by three experts using Image J software. Automated analyses were performed using a newly-developed deep-learning AI model (MyoVision-US). Consistency was calculated using intraclass correlation coefficients (2-way mixed ICC for consistency), and predictability was determined using linear regression (adjusted R2) analysis.

Results: MyoVision-US took 247 seconds to analyze all 180 images compared to 24 hours of manual analysis. Consistency between manual and automated analysis was

good-to-excellent for all QC (ICC = 0.85-0.99) and TA (ICC=0.93-0.99) parameters. Values were not attenuated when examining each group separately, showing excellent ICC values for critically ill (ICC=0.91–0.98) and lung cancer (ICC=0.85–0.99) images. The predictability of MyoVision-US was moderate-to-strong for QC (adj. R2=0.56–0.94) and TA (adj. R2=0.81–0.97) parameters.

Conclusion: Application of AI automating muscle ultrasound analyses showed improvements in speed, excellent consistency, and strong predictability compared with manual analysis across all cohorts.

Key practice point(s):

- Automated analysis of lower-limb muscle ultrasound images using MyoVision-US may be useful in future clinical practice and research.

Empowering recovery: A co-designed intervention to transform care for people with operable lung cancer

Georgina Whish-Wilson[1,2], Lara Edbrooke[1,3,4], Vinicius Cavalheri[5,6,7], Zoe Calulo Rivera[1,10], Madeline Cavallaro[1], Daniel Seller[8,9], Catherine Granger[1,10], Selina Parry[1,10]

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10B: Jill Nosworthy Prize Session - Part 2, Riverbank Rooms 7&8, October 25, 2025, 11:40 - 12:40

Aim:

This study aimed to understand the key design requirements of a pre- and post-operative exercise rehabilitation program for patients with operable lung cancer and to co-design an acceptable intervention prototype.

Design:

Experience-based co-design (EBCD) study.

Method:

An EBCD approach involving two rounds of workshops from November 2023 to May 2024. Workshops were underpinned by the COM-B Model and Theoretical Domains Framework. Qualitative data were thematically analysed by two independent researchers, and barriers and facilitators were mapped to the Behaviour Change Wheel. The final intervention prototype was presented using the Template for Intervention Description and Replication.

Results:

Eleven patients (55% female, mean age 66.4 (+/- 9.3) years), one caregiver, and 16 professionals (physiotherapists, nurses, respiratory physicians, a thoracic surgeon, consumer advocates and researchers) participated. Retention between workshop rounds was high (86%). Nineteen major themes were identified, including unmet education needs; the link between mental health and recovery; and the influence of unexpected, persistent symptoms and functional decline. Core program principles

included flexibility, individualisation and provider continuity. Essential components included screening/assessment, education, exercise, behaviour change, and mental health support. The intervention prototype was refined in workshop round two.

Conclusion:

This EBCD identified key experiences and barriers and facilitators to preparing for and recovering from lung cancer surgery. It engaged stakeholders in complex intervention design, culminating in a flexible, multi-modal rehabilitation program prototype. Future projects will evaluate the prototype's acceptability and feasibility.

Key practice points:

- Our co-designed prototype exercise intervention can support the integration of exercise into routine operable lung cancer care.

LungFlareCare: a new web-based education resource for people with acute exacerbations of COPD

Christian Osadnik[1,2], Alethea Kavanagh[1,3], Ruben Hopmans[1], Georgia Roberts[3], Chooi-Ee Lai[3], Jessica DeGaris[3], Lauren Palmer[3], Amy Catlin[3], Marielle Collings[3], Rachel Smith[3], Carla Gordon[1,3]

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10B: Jill Nosworthy Prize Session - Part 2, Riverbank Rooms 7&8, October 25, 2025, 11:40 - 12:40

Aim:

To develop and evaluate the utility and usability of a new online education resource for patients with acute exacerbations of chronic obstructive pulmonary disease (AECOPD).

Design:

Three-phased study involving mixed-methods co-design principles.

Methods: Content analysis of qualitative interviews with eight patients, two carers and nine healthcare professionals regarding AECOPD experiences. Results informed a two-round web-based Delphi survey involving 20 international expert clinician-researchers rating the importance of education items. Consensus items informed website construction and alpha testing by professionals and consumers. Physiotherapists led real-world tablet-based beta testing pilot implementation of the resource with 19 inpatients. Feedback was sourced upon discharge and at one-month follow-up. The final resource was presented via webinar to community healthcare professionals and feedback captured via survey.

Results:

53/58 items reached consensus during the Delphi survey. Survey data (n=25) showed 80% of inpatients found the resource useful and 72% reported an increased willingness to participate in pulmonary rehabilitation. Physiotherapists described high levels of satisfaction with the resource and improved time and care efficiencies. of 21 community professionals surveyed, the median response was ‘strongly agree’ that they ‘would recommend the web resource to patients and/or carers’.

Conclusion:

www.lungflarecare.com is a free new web-based educational resource that can aid the delivery of high-quality education regarding best-practice care for people with AECOPD.

Key practice points:

- Tablet-administered education during AECOPD is feasible however patients may need guidance to specific content sections to optimise impact
- Further research may help identify population characteristics for targeting resource users and best implementation recommendations.

Physical outcomes from an Australian Long COVID recovery clinic incorporating personalised exercise prescription

Tanya Buettikofer[1,2], Allison Maher[1], Michelle Bennett[1], Veronica Rainbird[2], Hsin-Chia Carol Huang[1,3], Philip Gaughwin[1,2], Miriam Vandermeide[1], Rory Carlyle[1], Marc Nickels[4], Wendy Ho[1], Mary Johnson[1], Madeleine Brady[1], Kacie Patterson[1], Jo Morris[1], Imogen Mitchell[1,3], Jenny Paratz[5,6], Bernie Bissett[1,2]

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11C: COVID and advancing knowledge in cardiorespiratory physiotherapy practice, Riverbank Rooms 2&3, October 25, 2025, 13:40 - 14:25

Aims: To investigate the physical outcomes of an Australian multidisciplinary Long COVID Recovery Clinic that incorporates personalised exercise prescription including respiratory and peripheral strengthening and carefully monitored cardiovascular training and pacing.

Design: Single-centre prospective observational cohort study.

Methods: Setting and participants: consumers ≥18 years old who completed the Long COVID Recovery Clinic at University of Canberra Hospital by 30/06/2023. Outcome measures on enrolment and completion: Modified COVID-19 Yorkshire Rehabilitation Scale, maximum inspiratory pressure, Timed-Up-and-Go and 6-minute-walk-test. Data analysis: descriptive statistics and comparison of assessment and reassessment of outcome measures.

Results: 207 consumers were referred, 160(77%) commenced, 72(35%) completed the program, 128(62%) male, median age 45(SD16, range18-84), median duration 112days (SD65.0, range5-384). Consumers showed improvement in Modified Yorkshire Scale (MD-6.6, SD14.5, $p=0.02$), Timed-Up-and-Go (MD-0.9, SD0.3, $p<0.001$) and 6-minute-walk-test distance (MD63.0, SD140.0, $p<0.001$) and maximum-inspiratory-pressure (MD11.6 cmH2O, SD26.1, $p=0.002$). There were no adverse events as a result of participation in exercise.

Conclusion: The majority of participants showed improvement in some physical outcome measures after attending the Long COVID clinic that incorporates supervised personalised exercise, without deleterious effects.

Key practice points:

- No adverse events occurred when prescribing personalised peripheral and inspiratory muscle training to consumers with Long COVID.
- Attendance at the Long COVID clinic was associated with improvements in physical outcomes, although lack of a control group limits interpretation of these findings.
- Despite the prevalence of Long COVID, only one-third of referred patients completed the program, largely due to symptom resolution. This has implications for future Long COVID clinic design.
  Participant perspectives on pulmonary telerehabilitation for respiratory post-acute sequelae of COVID (PASC): a qualitative study

Consumer experience of an Australian multidisciplinary Long COVID clinic that incorporates personalised exercise prescription

Tanya Buettikofer[1,2], Allison Maher[1], Veronica Rainbird[2], Michelle Bennett[1], Nicole Freene[2], Imogen Mitchell[1,3], Hsin-Chia Carol Huang[1,3], Philip Gaughwin[1,2], Mary Johnson[1], Jenny Paratz[4,5], Bernie Bissett[1,2]

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11C: COVID and advancing knowledge in cardiorespiratory physiotherapy practice, Riverbank Rooms 2&3, October 25, 2025, 13:40 - 14:25

Aims:

To understand the consumer experience and acceptability of a novel Australian Long COVID Recovery Clinic, which incorporates personalised exercise prescription including respiratory and peripheral strengthening and carefully monitored cardiovascular training.

Design:

Qualitative study; semi-structured interviews conducted by a researcher external to the clinic delivery.

Method:

A convenience sample of participants who have completed the Long COVID Recovery Clinic. Major themes were identified by inductive thematic analysis.

Results:

Fifteen participants were interviewed. 14/15(93%) participants described the clinic model as acceptable or highly acceptable. Five core themes were identified:(1)encouraging staff and light-filled facilities support recovery; (2)supervised exercise and pacing improve confidence with exercise; (3)peer support and group therapy augments recovery; (4)other services augment Long COVID recovery, and (5)importance of GP involvement in connection with clinic participation. Suggestions for improvement: extending the duration of the clinic programme beyond 2months, reducing wait times by increasing staffing levels and adjusting the clinic schedule to broaden access options.

Conclusions:

The majority of participants found that the Long COVID Recovery Clinic, which incorporates supervised exercise and pacing, is acceptable and would recommend it to others. From the consumer perspective, the clinic aids recovery alongside GP management through peer support and an individually tailored programme.

Key practice points:

- The COVID Recovery Clinic was highly acceptable to consumers, ongoing peer support groups could further facilitate recovery.
- Supervised exercise in the clinic was important to consumers as it built confidence to safely exercise independently.
- Consumers value encouraging staff, light-filled facilities and ongoing integration with GP care.

Participant perspectives on pulmonary telerehabilitation for respiratory post acute sequelae of COVID (PASC): A qualitative study

Jack Reeves[1,2,3], Lissa Spencer[2,3], Ling-Ling Tsai[2,3], Andrew Baillie[2], Jennifer Alison[2]

[1]University of Technology Sydney, [2]The University of Sydney, [3]Royal Prince Alfred Hospital

11C: COVID and advancing knowledge in cardiorespiratory physiotherapy practice, Riverbank Rooms 2&3, October 25, 2025, 13:40 - 14:25

Aim: to explore the perspectives of people with respiratory post-acute sequelae of COVID (PASC) who participated in a 4-week pulmonary telerehabilitation randomised controlled trial (RCT).

Design: A nested qualitative study in a randomised controlled trial

Methods: Semi-structured interviews were used in a convenience sample of RCT participants who completed at least one session of telerehabilitation. Recruitment continued until thematic saturation. Interviews were recorded, de-identified, transcribed verbatim, and coded. Codes were generated by two researchers using thematic analysis and themes developed from coding.

Results: Fifteen participants were interviewed [mean(SD) age 54(14) years; 5 females], of whom 12 completed the telerehabilitation program and 3 commenced but did not complete. Seven key themes emerged from participants' perspectives: Remote access to telerehabilitation; Access to a health professional; Validation of PASC; Having a shared experience; Work commitments; PASC symptoms; Desire for more telerehabilitation opportunities.

Conclusion: The identification of positive and negative participant experiences may help to shape future telerehabilitation programs for people with respiratory PASC.

Key practice points:

- Participants undergoing rehabilitation for PASC valued the ability to engage with a health professional, having remote access to sessions, validation of their PASC, and having a shared experience with others.
- Participants commented that work commitments and PASC symptoms sometimes made participation in exercise sessions difficult.

Long-term outcomes following a pulmonary telerehabilitation trial for people with respiratory post-acute sequelae of COVID

Jack Reeves[1,2,3], Lissa Spencer[2,3], Ling-Ling Tsai[3], Joshua Bishop[4], Yuna Han[3,5], Amanda McAnulty[3], Andrew Baillie[2], Regina Leung[6], Jennifer Alison[2]

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11C: COVID and advancing knowledge in cardiorespiratory physiotherapy practice, Riverbank Rooms 2&3, October 25, 2025, 13:40 - 14:25

Aim: To determine whether any changes in physical, psychological or health status occurred in the 12 months following a randomised controlled trial (RCT) comparing pulmonary telerehabilitation (PTR) with usual care (UC) in people with respiratory post-acute sequelae of COVID (PASC).

Design: An observational cohort study

Methods: Participants who were recruited to a RCT of 4-weeks PTR or UC were reassessed after 12 months. The primary outcome was functional capacity using the 1-minute sit-to-stand test (1-minSTST). Secondary outcomes were the 5-repetition sit-to-stand test (5STST); Montreal Cognitive Assessment Blind-version; COVID-19 Yorkshire Rehabilitation Scale; COPD Assessment Test (CAT); 36-Item Short-Form Health Survey; Hospital Anxiety and Depression Scale; Fatigue Severity Scale; and the Kessler Psychological Distress Scale. All outcomes were assessed at baseline (prior to commencing the RCT) and 12-months following the RCT. Work status was measured at 12 months. Data were analysed as a single group, since there was no statistically significant between-group differences in the RCT. Paired-tests were used to compare baseline to the 12-month outcomes.

Results: of the 50 participants enrolled in the RCT, 29 (58%) participated in the 12-month follow-up (PTR n=25, UC n=4). Compared to baseline, at 12-months follow-up there were statistically significant improvements in the 5STST (-1.4 seconds CI -2.7 to -0.1; p=0.045), CAT (-4.1 points CI: -6.8 to -1.4; p<0.004) and some domains of SF-36 and YRS-C19. Work status was poorer than pre-COVID.

Conclusion: Some recovery over time was evident in people with respiratory PASC,

Key practice points:

- Those with respiratory PASC may require time for recovery.

Lung volume recruitment: Exploring prescribing practices of health care professionals in Australia

Nicole Sheers[1,2], Thomas Phyland[3], Kate Carey[1,2], Stephanie Versaci[3], Olivia Rowland[3], Vinicius Maldaner[4,5], David Berlowitz[1,2,3]

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11C: COVID and advancing knowledge in cardiorespiratory physiotherapy practice, Riverbank Rooms 2&3, October 25, 2025, 13:40 - 14:25

Aim:

To explore lung volume recruitment (LVR) use by Australian health care professionals (HCP) and their clinical decision making.

Design:

Quantitative cross-sectional national online survey.

Methods:

A survey of 26 questions comprising workplace characteristics, LVR rationale, assessment and prescription was distributed via emails to professional and community networks, social media advertising, and snowballing recruitment. HCPs working in Australia and providing clinical care to people with neuromuscular disease were eligible. Responses were analysed using descriptive statistics.

Results:

From 30/5/2024 to 23/7/2024, 79 HCPs responded, and 11 excluded (did not provide clinical care). All 68 eligible participants were physiotherapists. Most respondents had >5 years respiratory care experience (76%), worked in metropolitan areas (87%), acute settings (60%), and with adult populations (83%). 79% of eligible participants prescribed LVR therapy, commonly via mechanical insufflation-exsufflation or LVR bag. Major barriers for non-prescribing physiotherapists (n=14) were lack of equipment (n=9), training (n=7) and knowledge of when to use LVR (n=5).

Physiotherapists used LVR to improve cough (93%), clear secretions (72%), increase thoracic mobility (70%), prevent (61%) or treat (57%) chest infections. 46% of prescribers advised on all possible side-effects; 65% mentioned the most serious side-effect (pneumothorax).

Conclusion:

Respondents commonly prescribe LVR in adult neuromuscular populations, with use aligning with published recommendations. Access to equipment, training, and knowledge are the biggest hurdles faced by physiotherapists looking to prescribe LVR.

Key practice points:

- There is an opportunity for further training and upskilling of physiotherapists, especially across the care continuum and outside metropolitan areas to increase LVR uptake.

Association between chronic respiratory diseases and mental health disorders in Australian males: A longitudinal study

Nnamdi Mgbemena[1], Eme John[2], Anayochukwu Anyasodor[3], Kam Wong[2], Tracy Macfarlane[2], Kingsley Agho[4], Uchechukwu Osuagwu[2]

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11C: COVID and advancing knowledge in cardiorespiratory physiotherapy practice, Riverbank Rooms 2&3, October 25, 2025, 13:40 - 14:25

Aims:

To examine the association between chronic respiratory diseases (CRDs), and mental health disorders among Australian men.

Design:

This retrospective study analysed the data from the Australian Longitudinal Study on Male Health (Ten to Men) across four waves (2013 - 2023).

Method:

The study analysed self-reported diagnoses of CRDs (chronic obstructive pulmonary disease and asthma). Depression and anxiety were assessed using the patient health questionnaire-9 and generalised health disorder-7, respectively. Generalized estimating equation models were utilised to examine the relationship between CRDs and depression and anxiety whilst adjusting for sociodemographic and lifestyle factors.

Results:

At baseline, 3,326 men were reported to be diagnosed with CRD. Males with CRDs had 23% higher risk (RR = 1.23; 95% CI: 1.17 to 1.30) of developing depression, 13% higher risk (RR = 1.13; 95% CI: 1.07 to 1.19) of anxiety and 27% higher risk (RR = 1.27, 95% CI: 1.17 to1.38) of experiencing both depression and anxiety simultaneously. Other significant predictors of depression and anxiety included ageing (> 30 years), sleep disturbances, living in regional areas, past/current smoking and being divorced/separated.

Conclusion:

Australian men with CRDs face an elevated risk of depression and anxiety, re-emphasizing the need for integrated healthcare strategies that include routine mental health screening and support for men with CRDs.

Key practice points

- Healthcare providers should routinely screen for mental health disorders in men with CRDs.
- Targeted programs like pulmonary rehabilitation should involve on-going assessment for depressive symptoms and anxiety as well as links to mental health support services.

Does enhanced recovery after surgery with prehabilitation improve outcomes following head and neck surgery?

Leonie Shaw[1], Carrie Service[1], Alana Jones[1], Lauren Davies[1], Lyndsey Hoogenhout[1], Aruska D'Souza[1], Linda Denehy[2,3], Alisha da Silva[1], Anand Ramakrishnan[1,2]

[1]The Royal Melbourne Hospital, [2]University of Melbourne, [3]Peter MacCallum Cancer Centre

11C: COVID and advancing knowledge in cardiorespiratory physiotherapy practice, Riverbank Rooms 2&3, October 25, 2025, 13:40 - 14:25

Aim:

To determine if Enhanced Recovery After Surgery with prehabilitation impacts time to sit out of bed and mobilise, post-operative pulmonary complications, decannulation timing, and length of stay following head and neck surgery.

Design:

Before after study.

Methods:

A multidisciplinary perioperative care pathway using Enhanced Recovery After Surgery Society guidelines and prehabilitation was delivered (May 2023 to August 2024). Outcomes were compared with pre-implementation data (January to December 2022).

Results:

Pre-implementation (n = 76) and post-implementation (n = 96) groups had similar demographics, perioperative risk factors, tumour factors and reconstruction type. While time to sit out of bed remained unchanged (median [IQR] 2 [1 - 2] versus 1 [1 - 2] days, p = 0.11), time to mobilise away from the bedside reduced (median [IQR] 4 [2 - 6] versus 2 [2 - 4] days, p < 0.001). Post-operative pulmonary complications increased (8%, n = 6, versus 19%, n = 18, p = 0.04). There were no changes to decannulation timing (median [IQR] 8 [6 - 13] versus 7 [6 - 13] days, p = 0.66) or length of stay (median [IQR] 17 [11 - 24] versus 15 [10 - 22] days, p = 0.18).

Conclusion

It is unclear whether Enhanced Recovery After Surgery with prehabilitation improves outcomes following head and neck surgery.

Key Practice points

- Enhanced Recovery After Surgery for head and neck surgery may enable reduced time to mobilisation.
- Statistically powered research is required to determine the impact of Enhanced Recovery After Surgery with prehabilitation.

Designing neurotype inclusive physiotherapy communication: An introduction to universal design

Carrie Taylor[1]

[1]University of South Australia, [2]South Australian Health and Medical Research Institute (SAHMRI)

2C: Foundations for all, Room E1, October 23, 2025, 11:55 - 12:40

Introduction/background:

People with neurodivergent diagnoses, such as autism, ADHD, tic syndromes (and more!) comprise up to 20% of the population. People who identify as neurodivergent experience increased health inequity, as well as increased co-morbidities (e.g., complex/hard to diagnose health conditions), resulting in shorter lifespan. With barriers to diagnosis, many people within your client group with neurodivergence may be undiagnosed, yet still require the need for inclusion/accommodation. Communication is critical to the success of physiotherapy treatment. Thus, understanding how communication and informational needs differ between neurotypical and neurodivergent populations and how this can be managed is key. Universal design allows for flexibility and inclusion for effective and personalised physiotherapy communication.

Aims/objectives:

1. To outline the need for inclusive design within physiotherapy practice
2. To develop understanding of the principles of universal design and how it supports inclusive practice
3. To provide a practical example that can be implemented

Approach:

1. Setting the scene for disability inclusion – current Australian vs. world trends (2 mins)
2. Service design – current approaches – siloing and division vs inclusion/flexibility (2 mins)
3. Principles of universal design (2 mins)
4. Information provision within physiotherapy – the spectrum of communication needs (4 mins)
5. Application with a practical example including audience engagement (10 mins)
6. Participant engagement: Questions from the audience (5 mins)

Key practice points:

- This “how to” session will provide background and practical strategies on how clinicians and physiotherapy practice owners can consider inclusion in delivering information to physiotherapy clients across the spectrum of neurotypes.

Beachfront healthcare – Physiotherapists' and occupational therapists' perspectives on beach-based therapy for people with disability

Sasha Job[1], Luke Heales[2], Steven Obst[1]

[1]Central Queensland University, [2]Central Queensland University

10C: Upholding dignity and access for all, Room E1, October 25, 2025, 11:40 - 12:40

Aim: To determine physiotherapy and occupational therapy practices, barriers, and facilitators of implementing beach-based therapy for people with disability.

Design: Anonymous online cross-sectional survey.

Method: A 30-item survey (categorical, ordinal, open response data) was developed to explore beach accessibility awareness, current practices, barriers, and facilitators of beach-based therapy. Descriptive statistics were used to report findings.

Results: 171 therapists completed the survey (61% physiotherapists; mean (range) practice experience range 15 (0-48) years. The principal work setting was private practice (53%), with most (81%) managing clients with disability three–five days/week. 93% of respondents were familiar with beach accessibility, though only 39% had used the beach for therapy. The most frequently reported barriers to beach-based therapy were limited general beach accessibility (97%) and specialised mobility equipment (97%), and additional costs (90%). Most (90%) respondents were willing to support future accessible beach initiatives. The most frequently reported facilitators of beach-based therapy included increased access to accessible beach equipment (96%) and information/resources (94%), and evidence to support accessible beach initiatives (91%). Therapists do/would use the beach for prescribing self-directed interventions (86%) and conducting individual (75%) and group (46%) interventions for physical (91%), mental (95%), and social (94%) health goals.

Conclusion: Use of the beach as a therapeutic setting is widely accepted though currently limited primarily due to inadequate beach accessibility and increased costs.

Key practice points:

- Therapists recognise the health value of the beach but are not currently equipped to provide beach-based therapy.
- High quality evidence is needed to support beach-based therapy implementation.

Supporting physiotherapists to help their patients be more active: the PROPOSE and PROMOTE-PA implementation-effectiveness trials

Kate Purcell[1], Jennifer Baldwin[1], Jo Dawson[1], Roslyn Savage[1], Leanne Hassett[1], Anne Tiedemann[1], Belinda Wang[1], Marina Pinheiro[1], Abby Haynes[1], Kerry West[1], Cathie Sherrington[1]

[1]*University of Sydney*

1D: Physical activity, Riverbank Room 6, October 23, 2025, 11:05 - 11:50

Aim: To collaboratively develop and evaluate support for physiotherapists, including telehealth coaching, on physical activity (PA) of adults attending outpatient services.

Design: Two hybrid type I effectiveness-implementation randomised trials.

Method: PROPOSE: Older adults attending outpatient physiotherapy were randomised to receive telehealth coaching (2-6 sessions) or a booklet. Outcomes included steps/day and moderate-vigorous PA (ActiGraph) and self-reported PA. PROMOTE-PA qualitative: Interviews and focus groups with outpatient clinicians investigating barriers and solutions to promoting PA in practice. PROMOTE-PA trial: Thirty outpatient teams randomised to receive clinician support immediately or after a delay. Support strategies include clinician training in '5As' PA promotion, building referral pathways, and patient telehealth coaching.

Results: PROPOSE: Thirty-six patients were randomised. Intervention participants took 2403 more steps/day (95% CI 147-4659) and walked 2.5 more hours/week (CI 0.1 to 4.9) than controls. Participants valued physiotherapists' knowledge, qualifications and interpersonal skills and reported physical, emotional and social benefits. PROMOTE-PA qualitative: Ninety-eight clinicians identified clinical demands, patient factors and limited information as major barriers. Support strategies developed included education and training, tailored strategies to address community barriers and system-level clinical champions. The PROMOTE-PA trial is ongoing, with 23 teams randomised so far.

Conclusion: Telehealth coaching from physiotherapists increased steps and walking among older adults. Strategies to support physiotherapists to deliver PA promotion were collaboratively developed and are being investigated in a large cluster-randomised trial.

Key practice points:

- Physiotherapist-led coaching increases PA among older adults

- Multiple barriers to PA promotion in outpatient physiotherapy practice exist
- Support strategies have been developed and are being evaluated

Active ageing in older people living with chronic disease: Barriers and enablers to exercise

Jo-Aine Hang[1,2,3], Anne-Marie Hill[1,2], Trish Starling[1,2], Wei Xin[1,2,4,6], Daniel Xu[4,6], Sharmila Vaz[1,2,7]

[1]The University of Western Australia, [2]WA Centre for Health & Ageing (WACHA), [3]The University of Notre Dame Australia, [4]Curtin University, [5]St. John of God Health Care Midland, [6]The First Affiliated Hospital, Sun Yat-sen University, [7]Murdoch University

1D: Physical activity, Riverbank Room 6, October 23, 2025, 11:05 - 11:50

Aim: This study aimed to explore barriers and enablers to exercise in older people living with chronic disease who participated in a self-directed physical activity program delivered in a community hub.

Methods: A secondary analysis of a randomised-controlled feasibility trial was conducted. Participants (n=18, mean age 70.8 ± 8.1, n=8 intervention, n=10 control) living with chronic diseases, who completed a 12-week physical activity program at a Western Australia community hub were interviewed. Only two intervention participants (25% adherence) completed over 70% of the sessions. Barriers and enablers were explored using Bronfenbrenner's social-ecological framework via deductive content analysis.

Results: At the individual level (microsystem), health problems such as fatigue, breathlessness, aggravation of existing health conditions and impaired mobility and balance contributed to low program participation. Although some participants found the program's social aspect beneficial, others found it difficult to develop longer-term social connections. At the community hub level (mesosystem), working individuals were unable to access the program out of business hours while at the community level (macrosystem), access to parking and transport were challenging.

Conclusion: Older people living with chronic disease reported significant barriers to exercise engagement, with a major problem being inability to manage their symptoms. Sustained support to assist this cohort to transition to community programs may improve exercise engagement.

Key practice points:

- Health professionals should provide tailored education to older adults with chronic conditions about symptoms management and benefits of exercise.

- Community hubs may need to provide more personalised community programs for older adults with chronic disease.

Effectiveness of interventions using activity trackers for increasing physical activity in older adults: Systematic review

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[1]University of Technology Sydney, [2]Institute for Musculoskeletal Health, School of Public Health, Faculty of Medicine and Health, The University of Sydney, Camperdown, NSW, [3]Masters and Doctoral Programs in Physical Therapy

1D: Physical activity, Riverbank Room 6, October 23, 2025, 11:05 - 11:50

Aim

The primary objective of this study is to evaluate the effectiveness of interventions using activity trackers and smartphone applications for increasing physical activity in people aged 60 years and above.

Design

This study is a systematic review and meta-analysis of randomized controlled trials (RCTs).

Method

Participants: The study includes 29 trials with a total of 3005 participants aged 60+ years. Interventions using activity trackers or smartphone applications were compared with minimal interventions and other active interventions. Six databases were searched from inception to January 2025. The Physiotherapy Evidence Database (PEDro) scale was used to assess the methodological quality of the included studies. A random effects model was used for the meta-analysis, and the certainty of the evidence was assessed using the GRADE approach.

Results

The analysis identified low certainty evidence that activity tracker-based interventions significantly increased physical activity in the short-term compared to minimal interventions (MD=1113 steps/day, 95% CI 669.03 to 1557.54, 20 trials). However, there was low-certainty evidence of no differences at intermediate (6 months) or long-term follow-ups (12 and 24 months). Comparisons between activity trackers and other active interventions showed very low certainty evidence of a significant increase in short-term physical activity (MD=912, 95% CI 411.70 to 1412.80, 8 trials).

Conclusion

The findings suggest that activity trackers are effective in increasing physical activity in older adults in the short term compared to minimal or other active interventions. However, the sustained effects of these interventions remain uncertain.

Key practice points:

1. Short-term effectiveness.
2. There is uncertainty in sustained impact.
3. Holistic Approach needed

Does a Targeted Acute Physiotherapy Program (TAPP) reduce subacute admission rates?

Meaghan Helms[1], Christopher Weiers[1], Mary De Gori[1], Cathy Said[1], Kimberley Haines[1], Kate Baudinette[1], Dina Pogrebnoy[1]

[1]*Western Health*

3C: Service delivery, Riverbank Rooms 7&8, October 23, 2025, 13:40 - 14:25

Aim:

To evaluate whether providing additional physiotherapy-led targeted input, on acute wards, can lead to direct discharge home for eligible patients.

Design:

A quasi-experimental study.

Methods:

A 10-week pilot physiotherapy service ran from September to November in 2023 and was staffed by a full-time physiotherapist, with subacute rehabilitation expertise, and ad-hoc allied health assistant. Patients were screened by their treating physiotherapist and referred if they were medically stable, aged ≥18, had potential for home discharge (e.g., family support, appropriate environment), and a modified Iowa Level of Assistance (mILOA) score <26. Data collected included demographics, clinical frailty score (CFS), mILOA on admission and discharge and type and frequency of intervention received.

Results:

Fifty patients (68% female, mean age 83 ± 9.87 years) were referred, 37 (74%) participated. of these, 10 (27%) were discharged directly home. There were no significant baseline differences in frailty (CFS, p=0.4721) or function (mILOA, p=0.4211) between patients discharged home and patients transferred to subacute care. Patients discharged home showed no functional disadvantage compared to those receiving subacute rehabilitation (mILOA, p=0.972). Living 'with others' correlated positively, whilst having acute delirium, correlated negatively with direct discharge home.

Conclusion:

A targeted acute physiotherapy-led rehabilitation program has the potential to reduce the need for subacute admissions for select patients.

Key practice points:

- Additional physiotherapy in the acute setting has the potential to improve hospital access and flow.
- To better target our services, future research should focus on improving our understanding of patient presentations which will likely benefit most from early intervention.

What is known about organisational barriers and enablers of adult mobility in acute hospitals?

Jo Nolan[1,2], Claire Hutchinson[1,3], Alison Mudge[4,5], Amy Ross[2], Nicky Baker[1,6], Maayken van den Berg[1], Tiffany Conroy[1,2]

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3C: Service delivery, Riverbank Rooms 7&8, October 23, 2025, 13:40 - 14:25

Aim:

To identify and characterise the extent, type and sources of evidence regarding organisational barriers and enablers of patient mobility in acute hospitals.

Design:

Scoping review

Method:

Using JBI Scoping Review methodology, 10 databases were searched from 2013 to October 2024 for studies addressing organisational barriers and enablers of mobility in hospitalised adults. Two researchers independently completed screening and data extraction. The Consolidated Framework for Implementation Research (CFIR) was used to map organisational barriers and enablers of mobility at the hospital and broader societal level.

Results:

of the 8821 identified studies, 52 were included from 11 countries, with 31 (65%) focused on older adults and 25 (48%) used qualitative methods. From 5821 participants there were 1684 (29%) patients, 2111 (36%) nursing staff, 211 (4%) physiotherapists and 91 (2%) managers and executives. All studies described hospital-level barriers e.g. time poor staff (n=33), and a culture of bed-centred care (n=22). Roles and responsibilities for mobility either enabled or inhibited mobility when well-defined (n=14) or poorly defined (n=21). Fifteen studies described societal-level barriers or enablers such as local attitudes (n=10) and policies and laws (n=4).

Conclusion:

The literature to date has largely included patients and clinicians and thus focussed on hospital level barriers. Engagement of organisational level stakeholders may offer new

insights to explain the challenging structural and cultural barriers commonly reported for in-hospital mobility.

Key practice points:

- Mobility improvement interventions face a range of organisational barriers in the acute hospital setting, and engagement of senior stakeholders might support novel solutions.

A framework for optimising physiotherapy service provision in a subacute setting using value-focused thinking

Jennifer Jones[1,2], Zoe Langford[2], Laura Murphy[2], Sue Berney[1,2], Emily Ramage[1], Leonid Churilov[1], Kelly Bower[1]

[1]The University of Melbourne, [2]Austin Health

3C: Service delivery, Riverbank Rooms 7&8, October 23, 2025, 13:40 - 14:25

Aim:

Use Value-Focused Thinking to investigate what is important in optimising the physiotherapy subacute service at Austin Health.

Design:

Value-Focused Thinking was used to develop a framework for optimising the physiotherapy subacute service at Austin Health. The Value-Focused Thinking approach was used to identify physiotherapists fundamental values and desired outcomes, followed by development of strategies to achieve them.

Method:

Two consensus-based workshops were conducted with 21 physiotherapists (19 internal and 2 external). In Workshop 1, fundamental objectives were identified (i.e. what is important). Workshop 2 focused on developing means objectives (i.e. how to achieve these). Following each workshop, data were digitised and collaboratively analysed using concept mapping to visually organise relationships and an interpretive description approach to synthesise key themes and link means objectives to fundamental objectives.

Results:

Three fundamental objectives emerged: 1) maximise effectiveness (patient outcomes and experience), 2) maximise operational efficiency (of service providers, systems and processes), and 3) maximise workforce sustainability (staff development and wellbeing). Eight means objectives were described and mapped to these fundamental objectives, providing strategies for improving service delivery.

Conclusion:

Our findings offer a framework to inform workforce initiatives and service delivery improvements to ultimately enhance patient outcomes, operational efficiency, and workforce sustainability.

Key practice points:

1. With growing demand for healthcare services, an ageing population, increasing patient complexity, and improving technology that alters recovery trajectory, strategies are needed to improve delivery of subacute care.
2. Our study demonstrates the utility of Value-Focused Thinking in identifying priorities for physiotherapy service optimisation in subacute care.

Considerations for hospital fall prevention programs: Results from three studies

Charlotte McLennan (Kilmartin)[1], Cathie Sherrington[1], Abby Haynes[1], Vasi Naganathan[2], Leanne Hassett[1], Matthew Jennings[3], Wendy Tilden[4]

[1]Institute for Musculoskeletal Health, University of Sydney & Sydney Local Health District, [2]Centre for Education and Research on Ageing, Concord Hospital, The University of Sydney, [3]South Western Sydney Local Health District, [4]Sydney Local Health District

4E: Implementation science, Hall A, October 23, 2025, 14:30 - 15:15

Aim: We aimed to provide evidence to inform the design and implementation of hospital fall prevention programs.

Design: Mixed methods: three studies were completed to inform multiple aspects of hospital fall prevention programs.

Methods: 1) An Intervention Component Analysis (ICA) of 45 hospital falls trials in a Cochrane review update, 2) a qualitative study with 50 hospital staff and patients, and 3) a feasibility study of supported implementation of tailored multicomponent fall prevention interventions across four hospital wards, evaluated via 97 staff pre- and post-implementation surveys and 12 post-implementation interviews.

Results: The ICA identified contextually tailored approaches and involvement of multidisciplinary ward staff, patients and families in fall prevention as features that may impact effectiveness of interventions. In our qualitative study, key considerations when implementing hospital fall prevention programs included: 1) Fall prevention is a priority, but whose? 2) Disempowered stakeholders, 3) Shared responsibility may be a solution. The feasibility study found that staff perceived the implementation strategies to be acceptable (mean score 7.4/10) and feasible. Barriers and facilitators relevant to the intervention, implementation strategies, recipients and context were identified.

Conclusion: These studies highlight an array of considerations for hospital fall prevention programs that are important for physiotherapists working in acute hospitals. These findings informed the PROTECT Fall Prevention Program which is currently being evaluated in an effectiveness-implementation stepped-wedge trial.

Key practice points:

- Physiotherapists can play a valuable role in fostering a genuine multidisciplinary approach to hospital fall prevention, and in empowering patients and families to engage in preventative behaviours.

Incorporating outcome measures into general medicine routine practice: measuring fidelity after digital and non-digital strategies

Joseph Cobbledick[1], Abbey Begeman[1], Aisling Burke[1], Alisha da Silva[1], Aruska D'Souza[1]

[1]*The Royal Melbourne Hospital*

4E: Implementation science, Hall A, October 23, 2025, 14:30 - 15:15

Aim: To measure fidelity of outcome measure use in general medicine physiotherapy over 19 months after introducing digital and non-digital strategies.

Design: Implementation study.

Method: Physiotherapists were asked to complete the Clinical Frailty Scale on admission and two mobility measures (de Morton Mobility Index, modified Iowa Level of Assistance Scale) on admission and discharge for all general medicine patients referred to physiotherapy between June 2023 and December 2024. Strategies to increase compliance were implemented including non-digital strategies (education, competitions, incentives, collecting measures for research) and digital strategies (electronic medical record enhancements and prompts). Fidelity was calculated by dividing the number of completed measures by the total number of eligible patients.

Results: All three measures at all time points were available for 23% of eligible participants (n = 732/3,176, median age 81 [IQR 70 - 87]). Clinical Frailty Scales were completed on 2,122 (67%) of occasions. Admission mobility measures were completed substantially more often than at discharge (de Morton Mobility Index on admission n = 1,790, 56%, discharge n = 947, 30%; modified Iowa Level of Assistance on admission n = 1867, 59%, discharge n= 1067, 34%). Highest increases in fidelity occurred after digital prompts and collection for a team research project.

Key practice points

- Digital and non-digital strategies can be used to increase physiotherapy fidelity with outcome measures.
- Routine use of outcome measures can be used to inform clinical decision making or benchmark the general medicine cohort.
- Ongoing work to improve uptake is warranted.

The acceptability of embedding three outcome measures into usual general medicine practice: A survey

Aisling Burke[1], Abbey Begeman[1], Joseph Cobbledick[1], Aruska D'Souza[1], Alisha da Silva[1]

[1]*Allied Health, The Royal Melbourne Hospital*

4E: Implementation science, Hall A, October 23, 2025, 14:30 - 15:15

Aim: To investigate the acceptability of embedding frailty and mobility measures into general medicine physiotherapy practice.

Design: Descriptive acceptability study.

Method: Acceptability of the Clinical Frailty Scale and mobility measures de Morton Mobility Index and modified Iowa Level of Assistance Scale by general medical physiotherapists was evaluated using a Theoretical Framework of Acceptability survey. A one-way repeated analysis of variance summarised overall acceptability of the measures.

Results: Twenty-two physiotherapists participated; 50% had at least three years of experience in general medicine. Overall, scores for the Theoretical Framework of Acceptability were high for The Clinical Frailty Scale (mean = 34.54, SD 3.49), modified Iowa Level of Assistance Scale (mean = 32.68, SD 3.80) and de Morton Mobility Index (mean = 31.91, SD 3.57). Pair-wise comparisons showed that the Clinical Frailty Scale was most acceptable ($F(2, 42) = 6.634$, $p = 0.003$). There was no clear preference for either the de Morton Mobility Index or the modified Iowa Level of Assistance to measure mobility. Time and clinical indication were the largest barriers to completion.

Conclusion: All three measures were accepted by physiotherapists working in general medicine, with the Clinical Frailty scale being most accepted. A noted barrier to completion was time to administer the measures.

Key practice points:

- Inclusion of three measures into practice was acceptable to physiotherapists delivering patient care in general medicine.
- Utility of outcome measures in clinical decision-making may improve uptake (e.g. prediction of discharge destination).
- Future strategies to reduce time to administer measures are needed.

Implementation of falls huddles in public health hospitals

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4E: Implementation science, Hall A, October 23, 2025, 14:30 - 15:15

Background:

Inpatient falls are a leading cause of adverse hospital events and may result longer hospital-stay, delirium, functional decline, greater morbidity and mortality post-hospital discharge in the older person. Falls huddles, a multi-disciplinary approach to recurrent falls, may reduce inpatient falls in public hospitals. In 2022, Caboolture Hospital, Queensland mandated falls huddles for all inpatient fallers.

Methods:

A Theoretical Acceptability and RE-AIM framework informed survey explored inpatient (non-fallers and falls huddle participants) and hospital staff (managers and clinicians) perceptions of acceptability and feasibility of falls huddles aimed to prevent recurrent inpatient falls and injury severity hospital-wide.

Results:

34 Non-fallers,14 Falls huddle participants, 66 Clinicians and 11 Managers participated.

Regarding acceptability, Falls huddle participants were more likely to report that a falls huddle was not effective in preventing a recurrent fall than Non-fallers ($p<0.05$). Inpatients were more likely to report a falls huddle would be a burden than hospital staff ($p<0.05$). Clinicians but not managers reported that falls huddles may not lead to evidence-informed practice and negatively influence patient care e.g. reducing mobility and increasing functional decline.

Regarding ongoing feasibility, all participant groups reported (1)Patient health-related factors (esp. cognitive), (2)operational challenges (e.g. timing of falls-huddle, multidisciplinary staff availability) and (3)the alignment of falls huddle with evidence-informed practice negatively influenced the ongoing feasibility.

Conclusion/Clinical Implication:

Acceptability and support for ongoing implementation of falls huddles is variable amongst inpatients and hospital staff. Patient-, operational-related and alignment with evidence-based practices, especially inpatient mobility and preventing functional decline, need to be addressed for ongoing implementation.

Real-world impact: Benefits observed following the implementation of a residential care exercise protocol

Jennie Hewitt
[1]Whiddon

4E: Implementation science, Hall A, October 23, 2025, 14:30 - 15:15

Aim: This presentation discusses an exercise protocol for residential aged care, its national roll out, and a clinical example of implementation at an organisation.

Design: In the “Strength and Balance Exercise in Aged Care” (SUNBEAM) study, an individually prescribed progressive resistance and balance training program was run on 16 participating residential care sites, with 221 residents with an average age of 87 years, and up to 101 years, for 50 hours over a 25-week period. The results showed a 55% reduction in falls, and an improved SPPB score, among other results.

Method: Australian government supported the roll-out of the program nationwide, with the support of Australian Physiotherapy Association. The program was also rolled out as part of Whiddon’s Live It UP program, together with falls risk education and nutritional advice.

Results: Since the launch of Live it UP, Whiddon has seen a 50% reduction in falls across participating aged care homes

Conclusion: This protocol, created and researched in clinical practice, offers an individual based, progressive strength and balance protocol that uses a machine or theraband based strength and balance protocol that can be implemented in clinical practice. The results from rollout sites show similar falls reduction data as the initial data.

Key practice points:

- The implementation of a strength and balance program should be part of every residential facility not just to prevent falls, but also to improve quality of life to all.

Users perspectives on an online physical activity resource for older people

Cathy Said[1,2,3], Frances Batchelor[4], Kelly Bower[1], Michele Callisaya[5], Rik Dawson[6,7], Anne-Marie Hill[8], Shylie Mackintosh[9], Courtney West[6,7], Cathie Sherrington[6,7]

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5C: PA and telehealth, Halls CD, October 24, 2025, 10:35 - 11:20

Aim: To evaluate users' perspectives of the Safe Exercise at Home website (SEAH), developed to support older people with physical activity.

Design: Mixed-methods

Method: A survey, based on the Theoretical Framework of Acceptability, was distributed via the SEAH website. Respondents had the option to participate in a semi-structured interview. Quantitative data were analysed descriptively. Free text responses and interview data were analysed using inductive content analysis.

Results: Fifty-two respondents completed the survey, 12 of whom were health professionals. Overall website experience was high (mean score 8.1 SD = 1.9; 1 indicating very poor overall experience, 10 indicating an excellent experience). Most useful sections were Information for older people and the downloadable booklet. Analysis of interviews (n = 11) identified four themes: Value and benefit; Suitability and relatability; User friendly and accessible; and Suggestions for improvement. Participants valued information on exercise and activity and perceived content as relevant and inclusive for older people. The website was easy to navigate and provided a variety of modes of engagement. Suggestions for improvement included accessibility for people with specific needs (e.g. visual impairment), and resources for specific health conditions.

Conclusion: Users perceived that the SEAH website can support physical activity in older people. User feedback will guide future modifications to the website.

Key practice points:

- Online delivery is an acceptable way to provide resources to support physical activity in older people.
- Information on exercise for older people and downloadable booklets are useful to users.

Teaching clinical reasoning in gerontological physiotherapy: experiences and perceptions of clinical supervisors.

Hannah Sharma[1], Cassie E McDonal[1,2], Brett Vaughan[1], Kelly Bower[1]

[1]The University of Melbourne, [2]Allfred Health

7D: Education, Riverbank Room 5, October 24, 2025, 14:15 - 15:00

Aim:

Teaching clinical reasoning to physiotherapy students is essential for preparing them to work effectively with patients. This study aimed to explore the experiences and perceptions of clinical supervisors of teaching clinical reasoning in gerontological physiotherapy.

Design:

Qualitative interview study.

Methods:

Australian-based clinical supervisors for student placements in gerontological physiotherapy (n=9) participated in individual semi-structured interviews via videoconferencing. Data were analyzed using Braun and Clark's reflexive thematic analysis.

Results:

Four themes were developed from the data:

1) "Preparedness for placement: students and supervisors" – highlighted the influence of students' knowledge, students' and supervisors' attitudes, supervisor training and organisational factors on teaching clinical reasoning;
2) "Dynamic placement adaptations to meet individual learning needs" - described the continual adjustments supervisors made to create a supportive and personalised learning experience.
3) "Negotiating clinically complex and variable patient needs" – identified the challenges of teaching clinical reasoning within gerontology; and
4) "Crafting learning opportunities amidst complexities" – described designing learning experiences to develop clinical reasoning.

Conclusion:

This research enhances current understanding on factors influencing teaching clinical reasoning in gerontological physiotherapy. Supervisors engage in planning prior to placements, adapt tasks, discussions and feedback throughout the placement, and

promote multi-disciplinary learning experiences to highlight person-centered and collaborative care.

Key practice points:

- The challenges and strategies identified can improve students' and supervisors' preparedness for placements, assist them to negotiate complexity and create opportunities to strengthen the learning experience.
- The offerings of gerontological clinical placements for teaching clinical reasoning skills can be explored.

Key words: clinical reasoning, physiotherapy

Additional follow-up coaching for therapist skill development applying the balance intensity scale with community-dwelling adults

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7D: Education, Riverbank Room 5, October 24, 2025, 14:15 - 15:00

Aim: What is the impact of additional online coaching following in-person training on physiotherapists' and exercise physiologists' ability to apply the Balance Intensity Scale (BIS) with community-dwelling older adults?

Design: Longitudinal 12 week qualitative study.

Method: Physiotherapists and Exercise Physiologists were offered a 3-hour training session on the BIS. Thirty people were trained. Eleven trained therapists consented to participate in 12 weeks of follow-up coaching sessions on BIS application in practice. Sessions included BIS practice rating videos of older adults performing balance exercise. Sessions were recorded and transcribed. Data were analysed using descriptive statistics and thematic analysis.

Results: Therapists (n=11) with varied balance exercise prescribing experience (M=11.45 years, SD 5.37) attended 12 weeks of coaching. Therapist ratings were consistent with expert ratings by the fourth session. Identified themes related to the process of applying the BIS and the impact of the coaching model of training delivery on their intentions to use the BIS in practice.

Conclusions: Participants reported online coaching after in person training enhanced skill consolidation and motivated them to persist working through challenges commonly encountered when learning a new skill.

Key practice points:

- Physiotherapists and Exercise Physiologists can integrate the use of the BIS into routine care.
- The addition of online coaching after initial training was an effective method for consolidating skill development.
- The addition of follow-up coaching may increase the translation of skills learned in training sessions into clinical practice.

Design, train, evaluate: Physiotherapist-led falls prevention training for community home care staff

Jacqueline Francis-Coad[1,2], Jo-Aine Hang[1,2], Vanessa Jessup[1,2], Bernie Wong[3], Anne-Marie Hill[1,2,4]

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7D: Education, Riverbank Room 5, October 24, 2025, 14:15 - 15:00

Aim: To design and evaluate training for community therapy staff to deliver a falls prevention program (education and Otago-based exercises) to home care clients.

Methods: Mixed methods design. A series of role-based training workshops were designed and conducted using a Train-The-Trainer model. Training was systematically evaluated using the New World Kirkpatrick model levels 1-4: Staff training surveys, online emails/meetings, performance-based checklists, field notes and client pre and post program mobility outcomes were measured. Quantitative data were presented using descriptive statistics and Wilcoxon signed-rank tests, qualitative data were subjected to deductive content analysis.

Results: Five physiotherapists and 14 therapy assistants completed training. Staff were very satisfied with training, significantly improved their knowledge and skills ($p = 0.001$), and felt motivated and confident to train other staff or clients respectively. Therapy assistants translated critical behaviours learned in training when delivering the program to clients. Preliminary client mobility outcomes trended towards improvement together with adoption of falls prevention safety messages.

Conclusion: Using a Train-The-Trainer model was effective in training community therapy staff to deliver a falls prevention program to home care clients. Staff learning was translated to the workplace and clients demonstrated adoption of falls prevention safety messages and preliminary improvements in mobility.

Key practice points:

- Physiotherapists can effectively lead sustainable training in falls prevention using a Train-The-Trainer model in community home care settings
- Planning a systematic evaluation of training can deduce program acceptability, knowledge gains, translation of learning to the workplace and impact for end-users

The association between cognitive domains and postural balance: A systematic review of literature and meta-analysis

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8C: Dementia and cognition, Hall B, October 24, 2025, 15:35 - 16:20

Aim

This review aims to determine which cognitive domain is most closely associated with static and dynamic balance.

Design

This systematic review analysed existing cross-sectional studies to explore the relationship between cognitive domains and balance performance in older adults. The review categorised balance tasks into static and dynamic, focusing on domain-specific and task-specific associations to better understand the links between cognition and balance.

Method

A total of 30 studies involving older adults (aged 60+) were included. Cognitive domains were evaluated for their correlation with balance tasks using meta-analytical approaches to quantify effect sizes and identify key relationships.

Results

Executive function demonstrated the strongest correlation with dynamic balance tasks, while episodic memory exhibited a weaker association. Processing speed and global cognition showed moderate correlations. Associations between cognitive domains and static balance tasks were consistently weaker across all domains.

Conclusion

The relationship between cognition and balance is both domain-specific and task-specific. Dynamic balance is most strongly associated with executive function, suggesting its potential as a biomarker for early cognitive decline. However, the moderate and weak correlations observed for other domains highlight the need for targeted, domain-specific interventions.

Key practice points

- Executive function is the cognitive domain most closely associated with dynamic balance, making it a key target for fall prevention strategies.
- Understanding the domain-specific links between cognition and balance can guide tailored assessments and interventions for older adults at risk of falls.
- Task-specific associations between cognition and balance highlight the need for individualised rehabilitation strategies.

Modifiable cognitive reserve proxies and dementia across socioeconomic strata: Tailored intervention targets for vulnerable populations

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9C: Rehabilitation and dementia, Hall B, October 25, 2025, 10:35 - 11:35

Aim: To examine the influence of late-life modifiable cognitive reserve (CR) proxies on dementia risk across socioeconomic strata (SES).

Design: A prospective cohort study using UK Biobank data.

Method: Included 361,450 participants from 502,369 individuals recruited in 2003-2006, with follow-up until September 2024. CR proxies were categorized into two groups: (1) early- and midlife determinants (education and occupational attainment) and (2) late-life modifiable CR proxies (television viewing, confiding, social connections, leisure activities). Education and occupation were combined to define four SES groups: low education, low occupation (LE/LO), high education, low occupation (HE/LO), low education, high occupation (LE/HO), and high education, high occupation (HE/HO).

Results: Over 4,809,624 person-years, 3,859 participants developed dementia. Compared to the LE/LO group, the other three SES groups had lower dementia risks (HE/LO: hazard ratio (HR) = 0.87, 95% CI: 0.79 to 0.96; LE/HO: HR = 0.83, 0.76 to 0.91; HE/HO: HR = 0.68, 0.62 to 0.74 respectively). Late-life modifiable proxies exhibited comparable protective effects in the LE/LO group (HR: 0.81 to 0.87). Reduced television viewing was most protective in the HE/LO group (HR: 0.72, 0.58 to 0.89), while leisure activities provided the greatest protection in the LE/HO group (HR: 0.76, 0.61 to 0.94). No significant effect was observed in the HE/HO group.

Conclusion: Dementia prevention strategies targeting modifiable CR proxies could address the specific needs of SES groups.

Key practice points:

- LE/LO group: All modifiable proxies reduce dementia risk.
- HE/LO group: Less TV viewing offers greatest protection.
- LE/HO group: Leisure activities are most protective.

Increasing representation of ethnically diverse communities in research to reduce falls

Cathy Said[1,2,11], Emily Ramage[2], Hannah Sharma[1], Frances Batchelor[3], Erin Bicknell[4], Lyn Bongiovanni[2], Bianca Brijnath[5], Priyanka Cahill[1], Michele Callisaya[6], Sherisse Celestino[2], Agnieszka Chudecka[7], Rosa Cursio-Barcham[8], Kwang Lim[4], Cassie McDonald[1], Marina Pinheiro[9,10], Catherine Sherrington[9,10], Sara Vogrin[1,11], Jesse Zanker[1,4], Cheng Zheng[8], Marlena Klaic[1]

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10D: Falls prevention, Hall B, October 25, 2025, 11:40 - 12:40

Aim: The one in three older Australians from ethnically diverse communities are under-represented in research. We aim to explore learnings from the in-progress MOVE Together: Reduce Falls pilot trial which embeds codesigned strategies to enhance research participation of older people from ethnically diverse communities.

Design: Pilot two-arm RCT

Method: Sixty older people at risk of falls from Italian, Chinese and Arabic-speaking communities will be recruited individually or with a buddy and randomly assigned. The experimental arm will receive the MOVE Together: Reduce Falls intervention, including physiotherapy sessions, individualised home exercises and culturally adapted education resources. The control arm will receive usual care and education resources. Primary outcome is feasibility. Codesigned strategies include culturally responsive approaches to recruitment and intervention delivery; use of interpreters and translated resources; and partnerships with ethnically diverse community leaders and organisations.

Results: As of March 2025, 15 participants have been randomised; recruitment anticipated to be completed by August 2025. There is representation across all communities and no dropouts. While all strategies have been useful, partnerships with community have been critical. Challenges include connecting with potential participants and trial logistics, such as booking appointments and collecting outcome data.

Conclusion: Findings highlight the importance of working closely with community partners and interpreting services, and iterative refinement of trial processes to optimise trial success.

Key practice points:

- Codesigned, culturally-informed strategies enhance research participation of older people from ethnically diverse communities.
- Working in partnership with people from ethnically diverse communities can optimise participation, and ultimately, healthcare equity.

Factors influencing sustained engagement in falls prevention exercise for older people from ethnically diverse backgrounds

Hannah Sharma[1,2], Marlena Klaic[1], Emily Ramage[2], Frances Batchelor[3], Erin Bicknell[4], Lyn Bongiovanni[2], Bianca Brijnath[1,3], Priyanka Cahill[1], Michele Callisaya[5], Sherisse Celestino[2], Agnieszka Chudecka[6,7], Lidia Engel[8], Kwang Lim[1,4], Cassie E McDonald[1,9], Marina B. Pinheiro[10,11,12], Catherine Sherrington[10,12], Sara Vogrin[1,13], Jesse Zanker[1,4], Cheng Zheng, Catherine M Said[1,2,13]

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10D: Falls prevention, Hall B, October 25, 2025, 11:40 - 12:40

Aim: Specific and tailored exercise reduces falls risk in older adults. Ethnically diverse older people may experience unique barriers to exercise. This study explores perceived factors influencing engagement in falls prevention exercise for older people from Arabic-speaking, Chinese and Italian communities.

Design: A qualitative phenomenological study

Method: Five workshops were conducted with older people with lived experience from Arabic speaking, Chinese and Italian communities with interpreters (n=58). Workshop topic guide and seeding questions were based on the Theoretical Domains Framework. Transcribed data were analysed using the framework method.

Results: The following domains were identified as important: 1) Skills and Knowledge: gaps were identified in understanding the concept of exercise for falls prevention and skills to perform appropriate exercises; 2) Beliefs about consequences and capabilities: participants reported uncertainty about exercising in presence of health conditions and emphasised exercises must be matched to individual abilities; 3) Social influences: connecting with others was considered a key motivator to exercise; 4) Resources: participants desired culturally appropriate resources in multiple formats, such as written instructions and videos.

Conclusion: Specific resources and strategies may be important for ethnically diverse older people to understand why and how to exercise to reduce falls risk. Individually tailored exercise and opportunities for social connection may facilitate uptake and adherence to falls prevention exercise

Key practice points:

- Interventions to support ethnically diverse older people to exercise regularly may benefit from developing specific resources and strategies in appropriate formats, a culturally responsive approach and offering opportunities for social connection.

Tailored dance program for wellbeing and fall prevention in people aged 65+: a pilot trial

Heidi Gilchrist[1], Abby Haynes[1], Cathie Sherrington[1], Juliana Oliveira[1,2], Marina Pinheiro[1], Leanne Hassett[1], Dafna Merom[3], Anne Tiedemann[1]

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10D: Falls prevention, Hall B, October 25, 2025, 11:40 - 12:40

Aims

Test the acceptability, feasibility, and impact of a tailored dance intervention for individuals aged 65+.

Design

Pilot randomized controlled trial.

Method

Sixty community-dwelling adults aged 65+ were recruited from the local Brisbane area and randomised to intervention or control group. The intervention is a 10-week, twice-weekly, 75-minute small (<20) group dance program. Key features of the program include meaningful music, narrative and imagery, accessibility through modification and graduated challenge, and a relational approach fostering a humanizing environment. The control group receives the same program after the follow-up data collection period. The primary outcome is participant satisfaction. Secondary outcomes include study feasibility, impact on balance, strength, memory, health and wellbeing measures, and potential adverse events.

Results

In round 1, 16 participants were randomly assigned to the intervention, 18 to the waitlist control group. Acceptability of the program was high: 92% of intervention participants would recommend the program to others aged 65+; 92% would continue attending if available;100% found the study procedures and assessments acceptable; and 86% would recommend the study procedures to others. Feasibility was also high with 34 participants recruited in 6 weeks. Thirty-one completed the 10-week trial (91% retention), and all attending at least 70% of classes.

Conclusions

The tailored dance intervention shows good acceptability and feasibility at the halfway mark.

Key practice points

The tailored dance program will:

- Inform the design of a larger trial with falls as the primary outcome.
- Provide an accessible and enjoyable strategy for preventing falls in older adults, if effective.

Is frailty associated with length of stay, mobility improvements and discharge in hospitalised older adults?

Abbey Begeman[1], Alisha da Silva[1], Aisling Burke[1], Joseph Cobbledick[1], Aruska D'Souza[1]

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11E: Frailty, Riverbank Room 4, October 25, 2025, 13:40 - 14:25

Aim: To explore the relationship between frailty, length of stay, improvement in mobility and discharge destination in patients admitted to general medicine.

Design: Single-site observational study.

Method: Included participants were admitted to general medicine (March 2023-December 2024), completed a Clinical Frailty Scale on admission and a modified Iowa Level of Assistance Scale and de Morton Mobility Index at admission and discharge. Relationships between frailty and length of stay, mobility and discharge destination were explored via Spearman's rho test and odds ratio.

Results: of the 3,375 included patients (median age 81 years [70-87], female (51.3%), median length of stay six days [3-11]), weak correlations were found between Clinical Frailty Scale and all outcomes. Small correlations were found between being more frail and having a longer length of stay ($r = 0.149$ $p = <0.001$) and being more frail and having less changes in mobility as measured by the modified Iowa Level of Assistance Scale ($r = 0.113$ $p = 0.02$) or the de Morton Mobility Index ($r = -0.189$ $p = <0.001$).There was no significant difference in the odds of discharge home between non-frail (Clinical Frailty Scale score 1-4) and frail patients (Clinical Frailty Scale score 5-9, Odds Ratio = 0.45, 95% CI 0.36 to 0.55, $p = <0.001$).

Conclusion: The Clinical Frailty Scale was not associated with length of stay, mobility or discharge destination.

Key practice points:

- Older adults can improve their mobility regardless of frailty.
- People who are frail have a similar chance of returning home compared to non-frail.

Association between preadmission frailty and in-hospital mortality in patients with critical illness: Retrospective cohort analysis

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11E: Frailty, Riverbank Room 4, October 25, 2025, 13:40 - 14:25

Aim: To determine the prognostic impact of preadmission frailty in ICU patients with or without hematologic malignancies.

Design: Retrospective cohort study

Methods: Chart review of all consecutive adult mixed ICU patients (≥3-day ICU stay) between April 2021 and March 2024. Preadmission frailty was assessed with the Clinical Frailty Scale (CFS) at ICU admission. The primary outcome was time to in-hospital mortality. Cox regression analysis, adjusted for age, gender, APACHE II score, Charlson comorbidity index (CCI) and mechanical ventilation, was used to assess the association between CFS and in-hospital mortality. The CFS was treated as a continuous variable, and patients who were discharged alive were censored.

Results: Among 642 patients (age: median 72 (IQR 58-81) years, 59.5% males, CCI: 2 (1-4)), 289 (45.0%) had CFS ≥ 5. CFS was independently associated with in-hospital mortality (HR: 1.125, 95% CI: 1.012–1.251, p = 0.029). In the stratified analysis, CFS was associated with mortality in patients with hematologic malignancies (HR: 1.394, 95% CI: 1.073–1.811, p = 0.013), but not in patients with non-hematologic malignancies (HR: 1.117, 95% CI: 0.989–1.262, p = 0.074).

Conclusions: Frailty was associated with in-hospital mortality in ICU patients, especially in those with hematologic malignancies.

Key practice points

- The Clinical Frailty Scale is valuable for predicting mortality risk in ICU patients
- Clinicians should incorporate preadmission frailty as a mortality risk screening
- Assessment of frailty can be useful in critical care decision-making

Effects of blood flow restriction training on physical functioning in older adults: A systematic review

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11E: Frailty, Riverbank Room 4, October 25, 2025, 13:40 - 14:25

Aim: To consolidate the evidence regarding the effects of blood flow restriction (BFR) training on physical functioning in older adults.

Design: Systematic review with meta-analysis of randomised controlled trials (RCTs).

Method: A literature search was conducted across PubMed, Embase, Web of Science, and Cochrane Library databases. Eligible RCTs were determined by two independent researchers.

Results: Twenty-nine trials assessing the effects of BFR on physical functioning in individuals aged 60 years and older were included in the review. Compared with no intervention, low-load BFR (LL-BFR) training improved knee extension strength (SMD: 1.08, 95%CI: 0.49 to 1.67), leg press strength (SMD: 1.15, 95%CI: 0.27 to 2.02), five-times sit-to-stand (5-STST) (SMD: 1.27, 95%CI: 0.66 to 1.87), balance (SMD: 0.91, 95%CI: 0.06 to 1.76), and six-minute walk test (6MWT) (SMD: 0.51, 95%CI: 0.00 to 1.02), and timed-up-and-go test (TUG) (SMD: -1.78, 95%CI: -2.50 to -1.07). Walking with BFR (W-BFR) outperformed conventional walking, yielding greater improvements in knee extension (SMD: 0.77, 95%CI: 0.24 to 1.31) and flexion strength (SMD: 2.28, 95%CI: 0.61 to 3.95), 5-STST (SMD: 2.06, 95%CI: 0.35 to 3.76), TUG (SMD: -0.45, 95%CI: -0.59 to -0.32) and 6MWT (SMD: 2.58, 95%CI: 1.29 to 3.87). However, BFR was not superior to high-load resistance training, and its efficacy relative to low-load resistance training remained inconclusive.

Conclusion: LL-BFR and W-BFR training enhance various aspects of functional performance.

Key practice points:

- BFR is a useful treatment option for improving physical functioning in older adults. May be particularly useful for those who have difficulty with high-load resistance training.

Mobility Matters! Psychometric evaluation of the modified Iowa Level of Assistance (mILOA) in general medicine

Aruska D'Souza[1,2], Aisling Burke[1], Sze-Ee Soh[3,4], Catherine Said[4,5,6], Dina Pogrebnoy[5], Joseph Cobbledick[1], Casey Peiris[1,2]

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12D: Outcome measures, Panorama Room 1&2, October 25, 2025, 14:30 - 15:15

Aim

To assess the psychometric properties of the mILOA in general medicine.

Design

Prospective observational study

Method

Recommended psychometric techniques were used to determine inter-rater reliability, measurement error, construct validity, criterion predictive validity, responsiveness, floor and ceiling effects in patients aged ≥65 years admitted to general medicine at two Australian tertiary hospitals.

Results

A total of 246 participants were included (median age 83.2 [Interquartile Range 46.1–88.0] years, 47% female, length of stay 7.00 [3.00-12.00] days). The mILOA demonstrated excellent inter-rater reliability (ICC 0.88 95% CI 0.79-0.93), measurement error 2.36 (minimal detectable change 6.53 points). With regards construct validity, mILOA scores correlated significantly and positively with de Morton Mobility Index scores (Spearman's rho = 0.86 95% CI 0.81-0.90, $p<0.001$); and could differentiate between participants who were discharged home (median 7.00, IQR 4.00-12.00) and those who were not (median 15.00, IQR 9.00-22.00, $p<0.001$). Admission mILOA scores were able to predict discharge destination (area under curve 0.74 95% CI 0.66-0.81). No floor or ceiling effects were observed, and it was highly responsive to change (effect size 0.80).

Conclusion

The mILOA has excellent inter-rater reliability, construct validity, may be able to predict discharge home, is responsive to change and has no floor or ceiling effect.

Key practice points

- The mILOA is an accurate and reliable outcome measure that physiotherapists can use in acute general medicine.
- The mILOA may be a useful tool in clinical decision making, including measuring detecting improvements over time and prediction of discharge destination.

Implementation of the 5-item Dizziness Handicap Inventory in the subacute inpatient setting in older adults.

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[1]Royal Melbourne Hospital, [2]University of Melbourne, Faculty of Medicine Dentistry and Health Sciences

12D: Outcome measures, Panorama Room 1&2, October 25, 2025, 14:30 - 15:15

Aim: Assess the feasibility of using the 5-item Dizziness Handicap Inventory to screen for Benign Paroxysmal Positional Vertigo in subacute older adult inpatients.

Design: Post-implementation prospective observational study extending previous work in the subacute setting.

Method: Subacute inpatients >50 years reporting a fall within the preceding six months were eligible for inclusion unless they were receiving end-of-life care or could not participate in standard physiotherapy. The 5-item Dizziness Handicap Inventory was administered by ward physiotherapists to consecutive eligible patients over a six-month period. Responses to the five questions (looking up, getting out of bed, quick head movements, rolling over in bed, and bending over) generated a total score (0 – 20). Demographic data were extracted from electronic medical records.

Results: Participants (n=112) had a mean (SD) age of 79.8 (4.9) years and 56% were female. Overall, the 5-item Dizziness Handicap Inventory was completed in 78 eligible patients (70%). The most common reason for non-completion was cognitive dysfunction followed by communication impairment and language barriers. Only 6% of respondents (n=5) scored 12 or above on the metric; clinical reasoning supported positional testing in four of these patients.

Conclusion: Utilising the 5-item Dizziness Handicap Inventory reduced the frequency of positional testing for Benign Paroxysmal Positional Vertigo. It can be used in clinical practice for subacute older adult inpatients, however, cognitive dysfunction and communication impairment limit administration.

Key Practice points:

- The 5-item Dizziness Handicap Inventory has clinical utility in directing Benign Paroxysmal Positional Vertigo testing in subacute hospitalised older adults.

Using artificial intelligence to predict discharge home from hospital in people receiving physiotherapy early rehabilitation

Jennifer Jones[1,2], Kartik Kishore[1,2], Sue Berney[1,2], Joleen Rose[2], Catherine Said[1,3], Marlena Klaic[1], Mark Merolli[1], David Berlowitz[1,2], Mark Hindson[2], Dina Pogrebnoy[3], Kimberley Haines[1,3], Paul Yates[1,2]

[1]The University of Melbourne, [2]Austin Health, [3]Western Health

12D: Outcome measures, Panorama Room 1&2, October 25, 2025, 14:30 - 15:15

Aim: Use artificial intelligence to develop predictions for discharge home for people treated by the Physiotherapy Early Rehabilitation service when admitted to Austin Health, Victoria.

Design: Observational cohort study from 1 January 2021 to 31 August 2023. Reporting guidelines for prediction models using machine learning (a subtype of artificial intelligence) were followed.

Method: People admitted to Austin Health with two or more treatments by the Physiotherapy Early Rehabilitation Service and a Clinical Frailty Scale score recorded in the electronic medical record were eligible. Logistic regression with artificial intelligence (machine learning) was used to predict if patients would be discharged home from the acute hospital (primary outcome).

Results: There were 2510 patients included, the median age was 78 (IQR 67, 86) and 31% (n = 770) were discharged home from acute hospital. The prediction model had an area under the curve of 0.88, indicating good discrimination between people who were and were not discharged home from acute hospital. The accuracy of the model was 82%, meaning every four out of five patients were correctly predicted to discharge home or not.

Conclusion: Prediction of discharge home with artificial intelligence for people in hospital receiving Physiotherapy Early Rehabilitation treatment was feasible with good discrimination and accuracy.

Key practice points:

1. These preliminary findings show promise in using artificial intelligence to rapidly synthesise information so health professionals can spend more time helping patients.
2. Research to refine the prediction model and rigorous testing in the clinical setting is needed before adoption in practice.

Exploring smoking, vaping, and alcohol behaviours of Bond University allied health and medical students

Jaclyn Szkwara[1], Kirstin Macdonald[1], Evelyne Rathbone[1], Sara Cloros[2], Jackson Scott[2], Tanika Smith[2], James Furness[1], Nikki Milne[1]

[1]Faculty of HSM, Bond University, [2]Doctor of Physiotherapy Student, Bond University

8D: No health without mental health, Riverbank Room 4, October 24, 2025, 15:35 - 16:20

Aim:

To examine health behaviours of smoking, e-cigarette use and alcohol consumption among Bond University allied health and medical students in their first semesters.

Design:

Cross-sectional study.

Methods:

201 first semester allied health and medical students at Bond University completed the Bond Online Survey for Student Health and Wellbeing Tracking (May 2024).

Results:

of the 201 students surveyed, 92.0% of medicine and 91.6% of allied health students had never smoked, and 92.1% of medicine and 91.6% of allied health students had never used e-cigarettes. A total of 81.5% of students reported drinking alcohol, with most consuming less than once per month (26.1%). Among allied health and medical students, 21.0% and 26.5% (respectively) drank five or more standard alcoholic drinks when they consumed alcohol. No significant difference was found in total weekly alcohol consumption between the groups.

Conclusion:

Most allied health, and medical students abstain from smoking and e-cigarette use. However, many engage in risky alcohol consumption. Students enrolled in allied health and medical programs may face increased levels of stress due to demands of coursework and clinical practice, potentially influencing their engagement in these high-risk health behaviours.

Key practice points:

- Development of supportive educational programs that emphasise risks and provide strategies for healthier habits is important.
- Integration of stress-reduction programs tailored to the unique challenges of allied health and medical students should be considered. This emphasises the need for targeted interventions to address stress and risky behaviours while promoting healthy lifestyles and behaviours.

Lessons learnt- introducing physiotherapy to a large public mental health service in Victoria.

Catherine Senserrick[1]

[1]*Eastern Health*

8D: No health without mental health, Riverbank Room 4, October 24, 2025, 15:35 - 16:20

Background:

The 2021 Royal Commission into mental health in Victoria proposed structural reforms to develop new and enhanced workforce roles, including expanding allied health. Funding was rolled out between 2021-2024 to support this, however many public health services have struggled to recruit physiotherapists, develop a model of care and support structure, and retain this valuable workforce.

Objectives/Aims:

To share tips for recruitment and setting up a support structure for staff, including learning and supervision. Describe how a model of care and referral strategy was developed, and how this distinguished physiotherapy from other service providers. Detail expansion of the service and funding for this. Outline quality and research initiatives commenced as well as demonstrate innovation in this space.

Participants interested in learning about the role of a physiotherapist in mental health are also welcome to attend.

Approach:

Participant engagement will be sought through group discussion activities, as well as dedicated question time. Networking between health services will be strongly encouraged.

Key practice points:

- Learn about how a successful model of physiotherapy care was developed and implemented in a public mental health service, including tips for successful recruitment, support and retention of staff.

Sensory processing, pain, and disability: The mediating role of psychological factors in persistent shoulder pain

Danielle Hollis[1], M. Dilani Mendis[1], Shu-Kay Ng[1], Jeremy Lewis[2], Michael Thomas[3], Darryn Marks[4], Julie Hides[1], Leanne Bisset[1]

[1]Griffith University, [2]University of Nottingham, [3]Gold Coast Hospital Health Service, [4]Bond University

3D: Mechanisms, mediators, predictors, Riverbank Rooms 2&3, October 23, 2025, 13:40 - 14:25

Aim:

To investigate associations between sensory processing and pain and disability in people with persistent shoulder pain, with psychological factors as potential mediators.

Design:

Cross-sectional study.

Methods:

Participants with persistent shoulder pain (n = 119) underwent sensory testing (pressure pain threshold, temporal summation, conditioned pain modulation). Psychological variables (pain catastrophising, pain self-efficacy, depression, anxiety, stress, kinesiophobia) were assessed. The Shoulder Pain and Disability Index measured pain and disability. Associations between variables (linear regression) informed structural equation models to evaluate mediation effects of psychological variables on the sensory-pain/disability relationships.

Results:

Local pressure pain threshold was negatively associated with pain/disability ($p = 0.008$), while local temporal summation was positively associated with pain/disability ($p = 0.003$). Altered sensory processing correlated with higher pain catastrophising, anxiety, and stress. Pain catastrophising (36.5% of total effect), anxiety (21.5%), and stress (18%) significantly mediated the relationship between pressure pain threshold and pain/disability. Anxiety and stress each mediated 16% of the relationship between temporal summation and pain/disability.

Conclusion:

Psychological factors influence the relationships between altered sensory processing and clinical outcomes in people with persistent shoulder pain. Addressing maladaptive thoughts and beliefs may improve sensory and clinical outcomes.

Key practice points:

- People with persistent musculoskeletal shoulder pain exhibit altered sensory processing
- Hyperalgesia (reduced pressure pain threshold) and increased sensory facilitation correlate with greater pain and disability.
- Mal-adaptive thoughts and beliefs partially explain the relationship between sensory changes and pain and disability.

Prognostic factors in active-duty military personnel with musculoskeletal disorders: A systematic review with meta-analysis

Simon Olivotto[2], Kerrie Evans[1], Kerry Peek[1], Debra Shirley[1], Tania Gardner[1], Megan Donovan[1], Trudy Rebbeck[1]

[1]Department of Defence, [2]University of Sydney

3D: Mechanisms, mediators, predictors, Riverbank Rooms 2&3, October 23, 2025, 13:40 - 14:25

Aim:

Identify prognostic factors for poor recovery in active military members with musculoskeletal disorders.

Design:

Systematic review of prognostic studies including prospective, retrospective, and secondary analyses of randomised controlled trials.

Method:

Seven databases were searched from inception to March 2025. Studies were included if they evaluated prognostic factors for association with recovery outcomes (pain, disability, work status, or perceived recovery) in active military personnel with any musculoskeletal disorder. Two reviewers independently screened eligible studies and assessed methodological quality using the Quality in Prognostic Studies (QUIPS) tool. Descriptive analysis of multivariate data was undertaken with meta-analyses performed where possible.

Results:

Twenty-eight studies from international militaries were included in this review. The factor most strongly associated with poor recovery was initial pain severity [short-term recovery OR 2.21 (1.34-3.66) 0.002 and long-term recovery OR 2.23 (1.22- 4.06) 0.009]. Psychiatric diagnoses [OR 1.58 (1.20-2.09) 0.001] and male sex [OR 2.86 (1.38 – 5.93) 0.005] were both independently associated with poor short-term but not long-term recovery.

Conclusion:

High initial pain severity and psychological factors are important domains for clinicians to assess when treating military personnel with musculoskeletal disorders. An improved understanding of the interaction between psychological factors and pain symptoms in

military populations may identify modifiable factors that can be addressed to improve recovery outcomes.

Key practice points:

- Psychiatric diagnoses, post-traumatic stress, and workplace stressors were identified as key prognostic factors of relevance in military settings.
- Identifying key modifiable prognostic factors in this population may facilitate targeted interventions to improve outcomes.

Is adherence associated with pain and function outcomes among participants receiving treatment for Achilles tendinopathy?

Matthew Kenny[1], Peter Malliaras[1], Shannon Munteanu[2]
[1]Monash University, [2]La Trobe University

3D: Mechanisms, mediators, predictors, Riverbank Rooms 2&3, October 23, 2025, 13:40 - 14:25

Aim: To investigate whether self-report exercise adherence to a 12-week calf exercise program is associated with pain and function in individuals with Achilles tendinopathy.

Design: A prospective observational follow-up study.

Methods: 127 participants with Achilles tendinopathy self-reported exercise adherence data - frequency, volume and intensity, with patient outcomes - VISA-A and pain, via questionnaires at 6 and 12 weeks, over a 12-week rehabilitation program.

Results: Completion rates were high (91%-95%) for adherence assessments and outcome measures. Pain and function (VISA-A) scores significantly improved over time. Linear mixed modelling revealed adherence to sets ($F [215] = 8.55$, $p = 0.04$), repetitions ($F [216] = 6.25$, $p = 0.013$), and added weight ($F [222] = 10.03$, $p = 0.002$), were significantly associated with higher VISA-A, and adherence to repetitions ($F [199] = 6.10$, $p = 0.014$) was significantly associated with lower pain, whilst controlling for potential confounders. Adherence to frequency was not associated to any outcome.

Conclusion: Although adherence to frequency of exercise is commonly assessed in the literature, it was not associated with clinical outcomes. Using more weight and doing higher volume may have some relationship with clinical outcomes.

Key practice points:

- Adherence is important in influencing exercise effectiveness in Achilles tendinopathy.
- Certain exercise parameters (volume and adding weight) prescribed in Achilles rehabilitation are important in improving outcomes.
- Researchers need to measure and report adherence in more detail, and clinicians need to be aware of adherence to various exercise parameters and its potential influence on outcomes in people with Achilles tendinopathy.

Complex presentations of migraine: how to integrate latest evidence into physiotherapy practice

Zhiqi Liang[1], Aimie Peek[2], Trudy Rebbeck[2]

[1]University of Queensland, [2]University of Sydney

3E: Migraine/headache, Hall B, October 23, 2025, 13:40 - 14:25

Introduction:

Migraine is a leading cause of disability worldwide. Almost 90% of patients with chronic migraine also suffer neck pain and these patients present to physiotherapy. This population consists of a wide range of presentations with complex neurological and musculoskeletal mechanisms. Our research demonstrates that individuals have unique neurochemical and cervical musculoskeletal profiles. This work has important implications for how physiotherapists assess and in turn how we can provide precision rehabilitation for these patients alongside pharmacological interventions.

Aims:

1. Review the current evidence for brain neurochemistry changes and neck pain presentations in migraine.
2. Explore the clinical reasoning underlying assessment and management illustrated by a complex clinical case.

Learning outcomes: Participants will gain understanding of underlying mechanisms and improved clinical reasoning to guide assessment and management of patients with complex migraine and neck pain.

Approach: The session will start with an overview of research evidence. Aimie Peek will outline her recent research on clinical profiles and brain neurochemistry changes in migraine. Zhiqi Liang will present her research on cervical musculoskeletal and sensitivity subgroups. Trudy Rebbeck will then facilitate participants clinical reasoning regarding assessment and management of migraine using a complex case presentation. There will be time for questions from the participants at the end.

Key practice points:

- There are different clinical and neurochemistry profiles in migraine with neck pain.
- Underlying mechanisms should guide clinical reasoning for targeted assessment and selection of management for appropriate patients.

Patients' expectations and experiences of physiotherapy management of migraine

Samantha Kelley[1], Julia Treleaven[2], Lucy Thomas[3], Zhiqi Liang[4]

[1]SHRS, University of Queensland, Brisbane, Australia, [2]University of Queensland, [3]University of Queensland, [4]University of Queensland

3E: Migraine/headache, Hall B, October 23, 2025, 13:40 - 14:25

Aim: The role of physiotherapy in migraine is debated given its primary headache status. This study aimed to explore participants' expectations and experiences of physiotherapy management for migraine to clarify the goals of treatment.

Design: Twenty participants with migraine were recruited between March-September 2024 through social media and community posters. Each participant was interviewed once in-person or over video conferencing. Interviews were semi-structured to explore different viewpoints. Research team discussions were held throughout the study as part of the reflexive thematic analysis process to refine interview questions and identify key themes through coding of transcriptions.

Results: The average age of participants was 38.15 ±16.2 years, 90% were female, 65% had concomitant neck pain and 60% had physiotherapy treatment for migraine previously. Interviews ranged from 17-46 (mean 27) minutes. Three themes emerged: (i) Participants' perceptions of what physiotherapy can offer, including understanding interventions and previous experiences; (ii) Participants' treatment preferences, such as preferred outcomes, trust in clinicians, and a desire to share their story; and (iii) The role of physiotherapists within the multidisciplinary team.

Conclusion: The findings indicate that patients seeking physiotherapy for migraine management prioritise both short-term relief and long-term strategies. Physiotherapists should be equipped with the necessary skills to provide pain relief, education, and self-management techniques, alongside conventional medical care.

Key practice points:

- Physiotherapy for migraine appears to provide value for both immediate and long-term self-management.
- Clear communication and patient-specific education enhance patient trust and engagement.
- Collaboration within a multidisciplinary team is essential for comprehensive care.

Cervical musculoskeletal impairments and pain hypersensitivity in tension-type headache

Chalomjai Pensri[1], Zhiqi Liang[1], Gwendolen Jull[1], Julia Treleaven[1], Lucy Thomas[1]
[1]School of Health and Rehabilitation Sciences, The University of Queensland

3E: Migraine/headache, Hall B, October 23, 2025, 13:40 - 14:25

Aim: To determine how cervical musculoskeletal impairments present amongst individuals with tension-type headache (TTH), compared to idiopathic neck pain (INP) and pain-free controls.

Design: A single-blind cross-sectional study.

Method: Eighty participants with TTH, 25 INP and 27 pain-free controls were assessed with quantitative sensory measures, cervical musculoskeletal tests, tenderness and active trigger points. Cluster analysis grouped participants according to multiple cervical musculoskeletal measures in each participant. Nonparametric and descriptive statistics were employed to explore differences between clusters. The frequency of pain with testing was analysed in TTH participants.

Results: Two clusters emerged. Cluster 1 (normal cervical function) included pain-free controls (93%), TTH (71%) and INP (12%). Cluster 2 (cervical dysfunction) included INP (88%), TTH (29%) and pain-free controls (7%). Participants in cluster 2 had more joint dysfunction and reduced movement accuracy, range of extension, mean velocity and flexor and extensor endurance ($p < 0.001$ to $p = 0.04$) than cluster 1. TTH in cluster 1 had higher pressure pain threshold at the neck ($p = 0.002$) and lower neck pain intensity ($p = 0.006$) than TTH in cluster 2. There was no difference in pain reports with cervical testing between TTH clusters.

Conclusion: While 29% of TTH participants had cervical musculoskeletal signs akin to INP, the majority did not. Pain with testing did not influence cervical musculoskeletal function outcomes.

Key practice points:

- Cervical musculoskeletal impairment is a feature in only 30% patients with TTH.
- Pain with cervical musculoskeletal testing is not necessarily indicative of dysfunction and should be interpreted carefully.

Lesser-known patient-reported symptoms arising from the craniocervical complex – A scoping review

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[1]The University of Queensland, [2]Healthia Limited

3E: Migraine/headache, Hall B, October 23, 2025, 13:40 - 14:25

Aim:
Little is known about symptoms arising from the upper cervical spine beyond headache and neck pain, despite atypical symptoms often reported. This review aimed to describe the diverse range, causes and sources of these symptoms in people with craniocervical complex disorders, informing potential neuro-musculoskeletal management.

Design:
Scoping review

Method:
Six databases were searched using predefined terms. Studies investigating the craniocervical spine with reported symptoms were included. Conditions inappropriate or unlikely to present to physiotherapy or with well-documented symptoms were excluded. Two reviewers independently screened titles, abstracts, and full texts. Data was extracted into a charting table and descriptive statistics performed.

Results:
Patient-reported symptoms were grouped into different sites. Head and neck pain was most common, but 14 other groups were identified, including facial, pharyngeal and tongue-related. Symptoms originated from central nervous system structures (79%), primarily lower cranial nerves and spinal cord and peripheral nervous system (21%), primarily from the styloid process and associated neurovascular structures and C2 spinal nerve. Causes of symptoms were extradural (54%) and intradural (46%). The source of most symptoms was from effects on the central nervous system, predominantly from an extradural cause, primarily upper cervical joints.

Conclusion:
The findings alert clinicians to the wide range of potential diagnoses and full spectrum of symptoms associated with the craniocervical complex.

Key practice points:

- Lower cranial nerves were the most common source of central nervous system symptoms
- Atypical symptoms such as pharyngeal, facial, tongue and even cardiorespiratory and gastrointestinal symptoms can be reported in craniocervical disorders

Physiotherapist-led treatment for Femoroacetabular Impingement Syndrome (The PhysioFIRST study): An assessor-blinded, limited-disclosure randomised controlled trial

Joanne Kemp[1], Anne Smith[2], Mark Scholes[1], Coburn Sally[1], Denise Jones[3], Richard Johnston[1], Mick Girdwood[1], Anthony Schache[1], Benjamin Mentiplay[1], Matthew King[1], Danilo De Oliveira Silva[1], Marcella Pazzinatto[1], Diogo Gomes[1], Kay Crossley[1]

[1]La Trobe University, [2]Curtin University, [3]Barwon Health

5D: Clinical trials for MSK conditions, Panorama Room 1&2, October 24, 2025, 10:35 - 11:20

Aim:

Compare physiotherapist-led targeted-strengthening (STRENGTH) to physiotherapist-led standardised-stretching (STRETCH) on hip-related quality of life (QOL) and perceived improvement at six-months in people with femoroacetabular impingement (FAI) syndrome.

Design:

Assessor-blind, limited disclosure, parallel, superiority RCT

Methods:

Participants aged 18-50 years with FAI syndrome were included.

Both groups received 6-months of supervised exercise and education. STRENGTH received individualised strengthening. STRETCH received standardised stretching. Primary outcomes: hip-related QOL (International Hip Outcome Tool-33 (iHOT-33, 0-100 points)); perceived improvement (GROC-pain 7-point Likert scale). Secondary outcomes included hip muscle strength. Analyses used intention-to-treat.

Results:

In 154 participants (STRENGTH n=79 (53% women, 35(9) years); STRETCH n=75 (45% women, 36(9) years)), there was no difference between groups for change in hip-related QOL (mean difference (95% confidence interval) 0.2 (-5.9 to 6.3) p=0.95) or patient-perceived global improvement (GROC-pain 0.2 (-0.2 to 0.7), p=0.23). When dichotomised into “improved” or “not improved”, there was a significant difference for GROC-pain (Odds ratio (OR) 2.36 (1.15-4.84), p=0.019) favouring STRENGTH. Both groups improved in iHOT-33 (19-21 points). STRENGTH had greater improvements in hip strength (10.9N(0.8 to 20.9); p=0.034 to 17.4N (6.1 to 28.7); p=0.002).

Conclusion:

While we found no difference between groups on hip-related QOL, both groups showed improvements greater than minimal clinically important change.

Key practice points:

- Physiotherapist-led treatment could be considered first line of care in people with FAI syndrome.
- Giving patients with FAI syndrome the confidence and support to exercise might be more important than the type of exercise provided.
- Targeted strengthening interventions were more effective at increasing hip muscle strength.

Frequency of manual therapy for people with knee osteoarthritis: The Opti-OK trial

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5D: Clinical trials for MSK conditions, Panorama Room 1&2, October 24, 2025, 10:35 - 11:20

Aim: Investigate if frequency of manual therapy (MT) affects clinical and cost-effectiveness at 6-months for people with knee osteoarthritis. MT is beneficial for people with knee osteoarthritis, although evidence about dose is sparse. Clinical and economic analyses will inform service planning and funding.

Design: Opti-OK was a three-arm superiority randomised controlled trial with 6-month follow-up.

Method: Community-dwelling participants (n=154) with knee osteoarthritis were randomised to six MT treatments once per week (MT1), six MT treatments twice per week (MT2), or usual care control (UC). All groups received tailored exercise, advice, and education. Primary clinical outcome was function at 6-months (KOOS), analysed using linear mixed models. Cost-effectiveness from NZ health system and societal perspectives, compared between-group quality adjusted life years (QALYs), and healthcare costs using multivariable regression.

Results: At 6-months, there was no difference in function between MT groups: MT2 was 2.24 lower than MT1 (95% CI -7.89 to 3.40) p=0.432. MT groups combined were functionally superior to UC, 5.68 (95% CI 0.57 to 10.79) p= 0.03. For cost analysis, MT groups combined had incremental cost savings of $17 from the health system perspective, $947 from the societal perspective, and a QALY gain of 0.007 over UC.

Conclusion: It is clinically and cost effective to add MT to best-practice for people with knee osteoarthritis, although frequency of treatment does not impact this substantially.

Key practice points:

- Adding MT to exercise and advice benefits people with knee osteoarthritis
- Frequency of treatment does not impact effectiveness
- MT is cost-effective

Efficacy of radial shockwave therapy for insertional Achilles tendinopathy: a randomised controlled trial

Baraa Alsulaimani[1], Luke Perraton[1], Patrick Vallance[2], Tim Powers[1], Peter Malliaras[1]
[1]Monash University, [2]La Trobe University

5D: Clinical trials for MSK conditions, Panorama Room 1&2, October 24, 2025, 10:35 - 11:20

Aims: To investigate the efficacy of adding radial shockwave therapy (rSWT) or sham to exercise for people with insertional Achilles tendinopathy.

Design: Randomised controlled trial.

Methods: Adults diagnosed with insertional Achilles tendinopathy with a symptom duration of greater than 3 months were eligible. A total of 76 people were randomly assigned (one-to-one ratio) to receive three sessions of rSWT or sham to the affected side. All participants received identical education and exercise. The primary outcome was the Victorian Institute of Sports Assessment– Achilles questionnaire. Measures were recorded at baseline, 6 weeks and 12 weeks.

Results: At 12 weeks, data were available from 37 people (96%) in the rSWT group and 36 people (95%) in the sham group. For the primary outcome, we found no evidence for between-group differences at 6 (3, 95% confidence interval −4.6–10.5) or 12 weeks (4.6, 95% confidence interval −2.5–11.6). There was also no evidence for a between-group difference for any secondary outcome measures at either 6 or 12 weeks. No serious adverse events were reported.

Conclusion: The addition of rSWT to exercise and education did not lead to improvements in pain, function or other outcomes compared to sham at 6 or 12 weeks among people with insertional Achilles tendinopathy.

Key practice points:

- Clinician's may consider rSWT for the management of insertional Achilles tendinopathy, but any benefits found may be explained by the placebo mechanism.
- rSWT is relatively safe, with few minor adverse events and no serious adverse events found in this trial.

Cervical sensorimotor tests in a VR headset – evaluation of concurrent validity

PhD Student Karin Forsberg[1], Johan Jirlén[1], Inger Jacobson[1], Ulrik Röijezon[1]

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7F: Digital health and technology 2, Panorama Room 1&2, October 24, 2025, 14:15 - 15:00

Aim: to investigate the concurrent validity of cervical sensorimotor tests in a virtual reality (VR) headset

Design: cross-sectional concurrent validity study.

Method: Twenty people aged 18-65, 13 without and 7 with neck pain, participated. They performed a test protocol using a VR headset, assessing cervical range of motion (ROM) [°], fast cervical rotation (maximum velocity degrees/s [°/s]), Joint Position Sense (JPS) (absolute error [°]), and Cervical Reaction Acuity (CRA) (reaction time milliseconds [ms] and maximum velocity [°/s]). VR measurements were compared to a gold-standard motion capture system using the Bland–Altman method for agreement, presented as mean differences and 95% limits of agreement (LOA). Correlations between systems were analyzed using intraclass correlation coefficients (ICC).

Results: Mean biases (LOA) showed ROM ≤ 2.1° (≤ ± 6.1), JPS 0.1-1.3° (≤ ± 4.5), fast cervical rotation < 12°/s (< ± 60), CRA reaction time -20 ms (± 20), and CRA maximum velocity -6.5°/s (± 6.5). ICC values were between 0.835 and 0.998 indicating good to excellent correlations.

Conclusion: VR technology showed clinically acceptable concurrent validity for assessing cervical sensorimotor functions, making it a viable tool for objective measurement in clinical settings. A limitation was the relatively small sample size.

Key practice points:

- The VR headset can be used in clinical settings for precise measurements of cervical ROM, movement velocity, reaction time, and joint position sense. This is valuable for sensorimotor assessments of patients with neck pain, helping to identify specific disturbances and tailor interventions accordingly.

Implementing AI scribes in musculoskeletal physiotherapy: Enhancing documentation, treatment planning, and patient rapport

Barry Nguyen[1]
[1]CliniScribe AI

6E: Technology in assessment, management & documentation, Hall A, October 24, 2025, 11:25 - 12:10

Background:

Clinical documentation and treatment planning are essential yet time-consuming, often reducing direct patient care. AI scribes convert spoken dialogue into structured SOAP notes, reports, and treatment plans, streamlining workflows and reducing admin burdens. This session assumes familiarity with traditional documentation but limited exposure to AI-driven dictation or transcription tools.

Aims/Objectives:

1. Improve Efficiency and Accuracy: Demonstrate how AI scribes enhance documentation and treatment planning.
2. Support Patient-Centred Care: Show how reducing admin tasks can free time for treatment and patient engagement.
3. Optimise Workflow: Provide practical strategies for seamless implementation in private practice.

Approach:

This session offers a step-by-step guide to integrating AI scribes in musculoskeletal physiotherapy. We will compare dictation-only workflows (post-session note dictation) with real-time transcription of clinician-patient dialogue, discussing impacts on workflow and patient rapport. Examples will illustrate generating SOAP notes, reports, and treatment plans via voice prompts or live conversation. We will also cover quality assurance, data security, and system integration, alongside managing patient expectations and minimising disruption. Additionally, we will compare AI scribes with human scribes in terms of cost and flexibility.

Key practice points:

- Increased Efficiency: AI scribes reduce manual note-taking.
- Enhanced Accuracy: Automated transcription minimises errors.
- Preserved Patient Rapport: Thoughtful implementation maintains clinician-patient interaction.

- Cost-Effectiveness: Scalable solutions suit various practice needs.

By the end of the session, participants will know how to effectively integrate AI scribes, improving documentation, treatment planning, and overall patient care.

What is metabolic syndrome and how does it impact your clients?

Sally Mastwyk[1,2], Nicholas Taylor[1,3], Anna Lowe[2], Caroline Dalton[2], Vernon Mittal[4], Jade Brodie[5], Casey Peiris[1,6]

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6F: The medical-MSK intersect, Panorama Room 1&2, October 24, 2025, 11:25 - 12:10

Background: More than one in three clients attending physiotherapy in private practice have metabolic syndrome, a cluster of risk factors that increase the risk of heart disease, cancer and type 2 diabetes. Health promotion interventions delivered by physiotherapists can effectively address metabolic syndrome. Despite this, 28% of private practice physiotherapists have never heard of metabolic syndrome. This is concerning given the inflammatory link between metabolic syndrome and numerous musculoskeletal conditions physiotherapists manage, such as osteoarthritis, rotator cuff disorders and chronic pain. As musculoskeletal disorders can be the first sign of systemic chronic disease, it is important physiotherapists take a holistic person-centred approach to assessment and management that includes consideration of clients' metabolic health.

Objectives: To increase physiotherapist knowledge of metabolic syndrome by: 1) Defining metabolic syndrome and describing its links with musculoskeletal physiotherapy practice; 2) Describing how to identify clinical markers of metabolic syndrome in practice; 3) Outlining evidence-based management of metabolic syndrome to improve treatment outcomes.

Approach: The presenter will provide an evidence-based overview of metabolic syndrome, with demonstrations of how to screen for and manage it, highlighting the relevance to physiotherapy practice. Client perspectives will be shared using videos and participants will have an opportunity to apply learnings to a case study with time for questions.

Key practice points:

- By the end of this session participants will be able to describe metabolic syndrome and know how to identify and manage this in their practice to enhance client outcomes and help to prevent future chronic disease.

VBI positional testing under the microscope

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6F: The medical-MSK intersect, Panorama Room 1&2, October 24, 2025, 11:25 - 12:10

Aim:

To evaluate the diagnostic accuracy of positional testing for vertebrobasilar insufficiency compared to a radiological reference standard. VBI positional testing has been questioned recently and removed from the IFOMPT framework but is based on poor quality evidence. However, tests are important in the diagnostic workup for episodic dizziness to determine adequacy of collateral blood flow to the hindbrain. The evidence urgently needs updating.

Design: Systematic review comparing VBI positional testing with an appropriate radiological reference standard

Methodology:

Searches were conducted in PUBMED, CINAHL and EMBASE from inception to April 2024. Inclusion criteria: reported potential signs or symptoms of vascular compromise related to head movement or position and radiological imaging. Primary outcome measure was confirmation of vascular compromise on dynamic imaging. QUADAS-2 evaluated methodological quality.

Results:

133 studies of sound quality were included. Diagnostic accuracy showed sensitivity of 95.79% and specificity of 28.64%, +ve predictive value 52.46% and -ve 89.21%. Positive and negative likelihood rations were 1.34 and 0.15 respectively. Elicited symptoms included vertigo, dizziness, down beating nystagmus and syncope.

Conclusion:

Findings suggest positional testing remains useful for clinicians, with an indicative history, considering a potential diagnosis of VBI, or to 'rule out' this pathology. Suspected cases of vascular compromise should be referred for medical evaluation.

Key practice points:

- VBI positional tests are important in differential diagnosis of dizziness
- VBI positional tests assess adequate collateral flow with head movement or position

- Be alert for symptoms of potential vascular compromise eg pre-syncope and light-headedness in sustained head positions

Implementation of a virtual hospital model of care for low back pain

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7E: New models of care, Hall A, October 24, 2025, 14:15 - 15:00

Aim: To investigate the effectiveness of a new virtual hospital model of care (Back@Home) in reducing the proportion of patients with low back pain (LBP) admitted to hospital after presenting to an emergency department (ED). We also investigated the effects on hospital length of stay, ED re-presentations within 30 days, and patient-reported outcomes.

Design: Hybrid effectiveness-implementation type-I study.

Method: Implementation of the model occurred between February–June 2023 at three EDs of Sydney Local Health District. Patients diagnosed with non-serious LBP in the ED, meeting eligibility criteria, were referred to Back@Home service, including telephone and video calls, delivery of heat wraps, and Physitrack mobile app for exercise programs. Logistic mixed modelling with random intercept (adjusted for seasonality, secular trend, and COVID-19) and linear mixed modelling was used to analyse data before and after implementation.

Results: A total of 14750 episodes of care were included in the pre-implementation period and 4351 were included post-implementation and presentations across both periods were comparable. Patient-reported outcomes of a sub-sample of 160 patients revealed that patients admitted to the Back@Home had the same high satisfaction with care and reported less pain and better physical function when compared to traditionally admitted patients.

Conclusion: Analysis of service outcomes will be presented at the conference. The preliminary analysis of patient-reported outcomes suggests that Back@Home has the potential to improve patient outcomes while reducing healthcare resource use.

Key practice point:

- Virtual model of care improves clinical practice by offering a more efficient, patient-centered alternative to traditional hospital care.

Adding repetitive transcranial magnetic stimulation to quadriceps strengthening for knee osteoarthritis: A pilot clinical trial

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7F: Digital health and technology 2, Panorama Room 1&2, October 24, 2025, 14:15 - 15:00

Aim: To examine the feasibility and safety of a combined repetitive transcranial magnetic stimulation (rTMS) and quadriceps strengthening exercise intervention for knee osteoarthritis.

Design: An assessor-, therapist- and participant-blinded, two-arm parallel group, pilot randomised controlled trial.

Methods: Participants were randomised to the active rTMS+exercise (AR+EX) or sham rTMS+exercise (SR+EX) group. Participants received either active or sham rTMS immediately before strengthening exercise supervised by a physiotherapist twice weekly for six weeks and home exercises. Feasibility, safety, pain (11-point numeric rating scale), function (WOMAC Osteoarthritis Index physical function subscale, 0-68) and measures of physiological mechanisms were assessed before and after treatment with an additional three-month follow-up of pain and function.

Results: Eighty-six people were screened, 31 were randomised, 28 completed the treatments and three dropped out at three-month follow-up with one mild adverse event. Pain intensity was reduced in the AR+EX group (mean: -2.2 units, 95%CI: -1.1 to -3.4) and SR+EX group (-1.76 units, 95%CI: -0.42 to -3.1) post-intervention but not at three-month follow-up. Function improved only in the AR+EX group (-8.1 units, 95%CI: -2.4 to -13.8) post-intervention. Measures of physiological mechanisms did not change.

Conclusion: Combined rTMS and quadriceps strengthening intervention for knee osteoarthritis is feasible and safe, justifying a full-scale trial to assess the clinical benefits of this novel combination treatment.

Key practice points:

- Twelve supervised exercise sessions over six weeks yielded only short-term improvements for knee osteoarthritis.
- rTMS might be an adjunct to strengthening exercise if clinical efficacy on knee osteoarthritis is established in a definitive trial.

Implementation of an e-resource (MyWhiplash Navigator) within the insurance industry: Improving claims management outcomes

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7F: Digital health and technology 2, Panorama Room 1&2, October 24, 2025, 14:15 - 15:00

Implementation of an e-resource (MyWhiplash Navigator) within the Insurance Industry: Improving Claims Management Outcomes

Aims: Evaluate the effectiveness of a multi-faceted implementation strategy on insurance personnel's knowledge, acceptance, and adoption of clinical guidelines and e-resources for whiplash injuries.

Design: Pilot implementation study using mixed methods, guided by a research translation framework.

Methods: Conducted over three phases across NSW, QLD, and SA. Phase one (pre-implementation, six months) involved co-designing insurer-specific MyWhiplash Navigator resources and evaluating current knowledge (survey) and practice (audit). Phase two (implementation, six months) included interactive education led by insurance peer leaders and researchers, embedding MyWhiplash Navigator within insurer workflows, and using reminder tools. Phase three (evaluation) involved re-administering the survey, conducting post-implementation file audits, and holding semi-structured interviews.

Preliminary Results: 101 insurance personnel participated (NSW = 70, QLD = 12, SA = 19), with a random sample of 140 case files audited (70 pre- and 70 post-implementation). Insurer knowledge and awareness of WhipPredict risk assessment tool significantly improved from 10% to 70%. Referrals to whiplash specialist physiotherapists for high-risk cases increased from 0% pre-intervention to 30% post-

intervention. Barriers to implementation included high staff turnover, variations in insurance schemes, and time constraints. Further data analysis prior to conference.

Conclusions: The implementation strategy successfully changed insurer knowledge and behaviour to be more consistent with guidelines for whiplash.

Key practice points:

- Co-designing with insurers ensured high engagement.
- Insurer resources on MyWhiplash Navigator were well received.
- Greater behaviour change occurred when embedded into workflows compared to influencing referral practices.

Cervical sensorimotor tests in a VR headset – evaluation of concurrent validity

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7F: Digital health and technology 2, Panorama Room 1&2, October 24, 2025, 14:15 - 15:00

Aim: to investigate the concurrent validity of cervical sensorimotor tests in a virtual reality (VR) headset

Design: cross-sectional concurrent validity study.

Method: Twenty people aged 18-65, 13 without and 7 with neck pain, participated. They performed a test protocol using a VR headset, assessing cervical range of motion (ROM) [°], fast cervical rotation (maximum velocity degrees/s [°/s]), Joint Position Sense (JPS) (absolute error [°]), and Cervical Reaction Acuity (CRA) (reaction time milliseconds [ms] and maximum velocity [°/s]). VR measurements were compared to a gold-standard motion capture system using the Bland–Altman method for agreement, presented as mean differences and 95% limits of agreement (LOA). Correlations between systems were analyzed using intraclass correlation coefficients (ICC).

Results: Mean biases (LOA) showed ROM ≤ 2.1° (≤ ± 6.1), JPS 0.1-1.3° (≤ ± 4.5), fast cervical rotation < 12°/s (< ± 60), CRA reaction time -20 ms (± 20), and CRA maximum velocity -6.5°/s (± 6.5). ICC values were between 0.835 and 0.998 indicating good to excellent correlations.

Conclusion: VR technology showed clinically acceptable concurrent validity for assessing cervical sensorimotor functions, making it a viable tool for objective measurement in clinical settings. A limitation was the relatively small sample size.

Key practice points:

- The VR headset can be used in clinical settings for precise measurements of cervical ROM, movement velocity, reaction time, and joint position sense. This is valuable for sensorimotor assessments of patients with neck pain, helping to identify specific disturbances and tailor interventions accordingly.

Hospital avoidance service with supported discharge using digital care for people with low back pain

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7F: Digital health and technology 2, Panorama Room 1&2, October 24, 2025, 14:15 - 15:00

Aim: To evaluate a hospital avoidance service with physiotherapy-led digital follow-up for people seeking emergency care for low back pain (LBP).

Design: Mixed-methods research.

Methods: A six-month prospective audit was undertaken of patients referred to a hospital avoidance service for non-specific LBP. Outcomes included analysis of process, service activity, and hospital re-presentations. Semi-structured interviews with thematic analysis of data were conducted with a convenient sample to explore patient experiences of the service.

Results: There were 108 patients managed in the hospital avoidance service for non-specific LBP, and 87 patients registered for the physiotherapy-led digital care on discharge. The majority could be managed in the community with only 10% requiring escalation of care or hospital re-presentation. Key themes from 20 patient interviews, included: 1) preference for hospital avoidance services over emergency department; 2) reassurance from the comprehensive care received; 3) value of ongoing digital support.

Conclusion: This LBP-pathway delivered through a hospital avoidance service offered an alternative to emergency departments for low acuity cases. Patients valued the rapid, comprehensive care received with digital follow-up.

Key practice points:

- Hospital avoidance services can manage low acuity LBP, reducing emergency department burden.
- Physiotherapists play a critical role in the hospital avoidance of LBP.
- Digital care supported people with LBP to recover in the community after being managed in a hospital avoidance service.

Development of a patient decision aid in relation to imaging for rotator cuff tendinopathy

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8E: Shoulder, Rooms E2&E3, October 24, 2025, 15:35 - 16:20

Aim:

To develop and evaluate a patient decision aid (PDA) for people with rotator cuff-related shoulder pain (RCRSP) to inform decision making about diagnostic imaging.

Design:

Mixed-methods study employing a user-centered design framework. A multidisciplinary steering group including end-users representing diverse demographics and clinical backgrounds guided this research.

Methods:

The PDA was developed iteratively, incorporating feedback from people with shoulder pain and health professionals through semi-structured interviews and acceptability questionnaires. Thematic analysis of qualitative data and descriptive analysis of quantitative data was undertaken.

Results:

Twenty health professionals and nineteen patients were interviewed, and a further 54 patients and 15 health professionals completed acceptability questionnaires. Most patients (74–98%) rated the PDA as acceptable, though 37% perceived it as biased against imaging. Health professionals found the PDA useful (mean agreement 3.9/5) but highlighted concerns about feasibility in time-constrained settings. Interview feedback emphasised clarity, contextualisation of imaging findings, and alignment with clinical guidelines. When using the PDA in a clinical encounter, all patients (5/5, 100%) reported that the information in the decision aid would influence their decision to have a scan, and most health professionals (4/5, 80%) reported that they would use the decision aid in their practice.

Conclusion:

This decision aid appears to be an acceptable and useful tool for helping people with rotator cuff-related shoulder pain to make informed decisions about imaging.

Key practice points:

- This decision aid could be used in clinical practice to help people with RCRSP make informed decisions about whether to have imaging.

"Failing my duty of care": physiotherapists' perspectives of a single session for rotator cuff disorders.

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8E: Shoulder, Rooms E2&E3, October 24, 2025, 15:35 - 16:20

Aim:

To explore barriers, enablers and acceptability of implementing a single session of best-practice physiotherapy advice and exercise prescription for people with rotator cuff disorders.

Design:

Qualitative descriptive pre-implementation study.

Method:

Seventeen physiotherapists from private (n=9) and public (n=8) including advanced practice settings, were recruited through convenience and snowball sampling. During semi-structured online interviews, participants were presented with a United Kingdom trial which found a single session of best-practice physiotherapy for rotator cuff disorders had similar outcomes to multiple (≤6) sessions. Barriers, enablers and acceptability of implementing this intervention within Australian settings were explored. Interviews were analysed using inductive thematic analysis, with themes mapped to the Theoretical Domains Framework.

Results:

Five barriers emerged: conflict with duty of care; lack of individualisation with negative implications to physiotherapist reputation; unlikely patient acceptance; concerns about effectiveness and suitability; and financial disincentives in private settings. Two enablers emerged: improved physiotherapy access; and ease of delivery promoting self-management. Barriers aligned with theoretical domains of professional role, social influences, beliefs about consequences and resources; enablers with beliefs about consequences and confidence. Some physiotherapists found the intervention acceptable for select patients with additional review(s).

Conclusion:

A hybrid effectiveness-implementation study investigating the delivery of a single physiotherapy session for rotator cuff disorders may prove challenging within Australia and requires extensive consultation.

Key practice points:

- A single physiotherapy session may be appropriate for some patients with rotator cuff disorders but requires further investigation within Australia.
- Our findings identify barriers, enablers and acceptability of this intervention, guiding future implementation.

Super shoulders: A physiotherapy rehabilitation group can successfully divert patients with shoulder pain from surgery

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8E: Shoulder, Rooms E2&E3, October 24, 2025, 15:35 - 16:20

Aim: To evaluate the efficacy of an evidence-informed group exercise program to reduce surgery incidence for patients with shoulder pain.

Design: Iterative pilot study.

Method:

Patients with rotator cuff-related shoulder pain were referred to a 12-week group exercise program from orthopaedic clinics (07/2023–06/2024). Primary outcome: diversion from surgery (number added to surgical waitlist). Secondary outcomes: change in pain and function (American Shoulder and Elbow Surgeon's Score, 100 equals no pain, excellent function; Tampa Scale for Kineseophobia, 44 equals highest kinesiophobia; and Clinical Global Impression). Patient feedback including barriers to group attendance were also collected (evaluation survey).

Results:

of the 31 patients referred 25 (81%) enrolled, attending a median of 12 classes; 84% completed the program. Mean age was 64 (SD 11) years, 44% were male, 36% did not speak English as their first language. Median symptom duration was 11 months [IQR 7-18 months]. Sixty-four percent of patients had a cuff tear >1cm. Two patients were wait-listed for surgery after program completion.

Clinical Global Impression showed 71% were 'improved/much improved' after completion. Pain and function scores trended towards improvement, pre-post American Shoulder and Elbow Surgeon's Score (55.0 versus 62.7) and Tampa (28.8 versus 27.9). Ninety-six percent would recommend the group to family and friends. Location and timing of group were perceived barriers to participation.

Conclusions:

Physiotherapy exercise rehabilitation group diverted patients with shoulder pain from surgery.

Key practice points:

- Group exercise reduced the need for shoulder surgeries at a tertiary hospital.
- Scaling may support surgical reform in musculoskeletal pain.

Patient information and rehabilitation protocols relating to shoulder joint arthroplasty in Australia: a descriptive study

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8E: Shoulder, Rooms E2&E3, October 24, 2025, 15:35 - 16:20

Aim:

To describe the content of patient-facing information and rehabilitation protocols relating to total shoulder arthroplasty across Australia.

Design:

A descriptive analysis of documents/resources (patient-facing information and clinician-facing post-operative rehabilitation protocols) related to total shoulder arthroplasty.

Method:

This study was nested within the multi-centre RAPSODI-Australia trial comparing reverse versus anatomic shoulder arthroplasty for painful shoulder osteoarthritis. Physiotherapy services providing post-operative rehabilitation at all 15 RAPSODI-Australia hospital sites were invited to share their patient-facing information/educational resources and post-operative rehabilitation protocols relating to shoulder arthroplasty. Data was extracted by two reviewers using an Excel spreadsheet adapted from a similar UK study and the Consensus of Exercise Reporting Template (CERT).

Results:

Thirty-three resources were collected (21 patient-facing and 12 clinician-facing). Most patient-facing resources focussed on early post-operative exercises, with widely ranging levels of detail, as the CERT tool demonstrated. Some described sling immobilisation and movement restrictions in varying detail, whilst most lacked timeframes for return to daily activities. Clinician-facing protocols were all phased in approach and mostly surgeon-specific, with significant heterogeneity with respect to

type and duration of immobilisation; immediate post-operative restrictions; exercise progression and activity return.

Conclusion:

Current practice in participating Australian hospitals is to provide shoulder arthroplasty patients with post-operative exercises and limited additional information. Whilst most have post-op rehabilitation protocols, there is considerable variation in their content. Robust research evidence is needed to inform best practice.

Key practice points:

- Information resources for patients having shoulder arthroplasty could be improved.
- Variation in post-op rehabilitation protocols underlines clinical uncertainty about best practice.

Active trigger points in tension-type headache

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8E: Shoulder, Rooms E2&E3, October 24, 2025, 15:35 - 16:20

Aim: To determine the frequency of active trigger points (ATrPs) in a cohort of persons with tension-type headache (TTH) and determine any relationship to cervical musculoskeletal impairments and behavioural features.

Design: A single-blind cross-sectional study.

Method: Participants included 80 with TTH. Measures included the number of ATrPs, behavioural aspects (stress, fatigue, sleep quality, anxiety and depression), quantitative sensory measures, multiple cervical musculoskeletal tests and a tenderness score. Cluster analysis determined how participants grouped based on the number of ATrPs. Differences in variables between clusters were analysed using nonparametric statistics.

Results: Two clusters formed. Cluster 1 included 39 TTH with $\leq$ 3 ATrPs and cluster 2 included 41 TTH with $>$ 3ATrPs. Cluster 1 had fewer painful areas ($p = 0.02$) and less tenderness scores at the head and neck (all $p < 0.001$) compared to cluster 2. The only difference in cervical musculoskeletal measures was a higher frequency of cervical joint dysfunction in cluster 1 ($p = 0.02$). There were no differences in behavioural features between the clusters ($p = 0.13$ to 0.96).

Conclusion: ATrPs are common in TTH and related to number of painful areas and tenderness. However, higher numbers of ATrPs do not reflect the degree of cervical dysfunction or elevated scores on behavioural questionnaires.

Key practice points:

- Not all patients with TTH have multiple ATrPs. The presence of multiple ATrPs does not indicate the presence of cervical musculoskeletal impairment or elevated levels of stress, anxiety, depression fatigue or sleep disturbance. This stresses the need for individualised management.

Enhancing clinical reasoning using a free real-time integrative app in the classroom or clinic

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10E: Optimising practice, Rooms E2&E3, October 25, 2025, 11:40 - 12:40

Background/Introduction:

Development of clinical reasoning skills is a key element of physiotherapy education. As part of the Master of Clinical Physiotherapy programs (Curtin University) we developed and tested a real-time integrative app to facilitate clinical learning and reasoning using the Musculoskeletal Clinical Translation Framework. We assessed changes in clinical reasoning skills and physiotherapist attitudes and beliefs through observing real-life consultations with specialist physiotherapists. The app is now freely available for educators and clinicians.

Aims/Objectives:

In this 'How To' session you will:

1. Gain an understanding of a contemporary framework for facilitating clinical reasoning in musculoskeletal pain disorders.
2. See how this framework has been integrated into a web-based app and try it yourself!
3. Learn how to use the above to help develop clinical reasoning skills.
4. See how to measure and track changes in clinical reasoning and beliefs.

Approach:

This session will involve a brief presentation of the clinical reasoning framework and app. The main part of the session will focus on how the above app, in conjunction with real-life patient assessments, can used to promote changes in clinical reasoning skills and physiotherapy related beliefs and attitudes.

This session will involve significant audience participation and engagement including using the web-based app.

Key practice points:

- Clinical reasoning and reflection on clinical practice are key skills to develop.
- Utilising live app technology is an important and helpful step in the "modern classroom" to enhance learning.

- Changes in clinical reasoning and physiotherapist attitudes and beliefs can be readily assessed and measured.

Does online clinical mentoring enhance physiotherapists' patient outcomes? A randomised controlled trial

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10E: Optimising practice, Rooms E2&E3, October 25, 2025, 11:40 - 12:40

Aims:

To determine whether a short-term online clinical mentoring program was more effective than pre-recorded online lectures at improving physiotherapists' patients' outcomes.

Design:

Prospectively registered, randomised controlled trial (ACTRN12622000123741).

Methods:

Twenty-seven physiotherapists were randomised to one of two online professional development activities. Physiotherapists in the experimental group completed six real-time one-hour online clinical mentoring sessions (total six hours). Those in the control group completed six one-hour pre-recorded online lectures (total six hours). The primary outcome was physiotherapists' patients' function, assessed using the Patient-Specific Functional Scale (PSFS). Global Rating of Change Scale (GRC) and Functional Rating Index (FRI) were the secondary outcomes. Differences in patients' outcomes were explored using linear mixed model analysis.

Results:

One hundred and twenty-two patients completed follow up assessments. No between group differences were detected for any outcomes (PSFS MD=0.02, 95% CI -0.83, 0.79, p=0.95; GRC MD=-0.08, 95% CI -1.09, 0.92, p=0.86, FRI MD=-3.01, 95% CI -10.71, 4.69, p=0.42).

Conclusion:

A brief six-hour online clinical mentoring program does not lead to greater improvements in patient outcomes when compared to online lectures.

Key practice points:

1. Six hours of online clinical mentoring is no more effective than online lectures in improving physiotherapy practice.
2. Further explorations of clinical mentoring models are required to determine the optimum design for improving patient outcomes.
3. Potentially effective options are combining online clinical mentoring with other learning activities or including more than 6 sessions of clinical mentoring.

Implementation of a test-cluster for diagnosis of greater trochanteric pain syndrome in advanced hip osteoarthritis

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10E: Optimising practice, Rooms E2&E3, October 25, 2025, 11:40 - 12:40

Aim:

To implement clinical testing for diagnosis of greater trochanteric pain syndrome (GTPS) in people with advanced hip osteoarthritis, waitlisted for primary total hip arthroplasty (THA), informing development of targeted rehabilitation, potentially improving post-surgery outcomes.

Design:

Implementation of clinical diagnostic test-cluster.

Methods:

A GTPS diagnostic test-cluster was implemented into a pre-operative assessment clinic (PAC) over two phases. Phase 1 (Sept 2022-Mar 2023): patients who reported pain located to the greater trochanter, were assessed using five pain-provocation tests. Training sessions and focused clinician feedback groups were completed. Phase 2 included a systematic review, results informing the introduction of a sequenced test-cluster, trialled over 6 months from April 2023.

Results:

Phase 1 (n=8 physiotherapists, 4-hours training, n=28 participants tested) barriers included i) testing required for diagnosis time-intensive (ii) test start-positions difficult for patients due to joint motion restriction. In Phase 2 (n=6 physiotherapists; 4-hours training; n=64 participants tested), the sequenced test-cluster informed by the systemic review provided increased clinical utility. Pain located to the greater trochanter and provoked by palpation of the gluteal tendons, followed by resisted hip abduction and/ or 30 s single-leg stance test, determined a positive GTPS diagnosis. Clinician feedback indicated more time-efficiency and improved ease of testing, with increased diagnostic confidence.

Conclusion:

A sequenced diagnostic hip test-cluster improved clinical utility and GTPS diagnosis in a pre-operative setting.

Key practice points:

- A sequenced test-cluster is feasible for GTPS diagnosis in pre-operative assessment clinic.
- Clinician training increased confidence and ability to diagnose GTPS for people with hip osteoarthritis undergoing THA.

Recreational runners with unilateral achilles tendinopathy have symmetrical lower limb mechanical characteristics during repetitive hopping

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10E: Optimising practice, Rooms E2&E3, October 25, 2025, 11:40 - 12:40

Aim: To compare lower limb biomechanical characteristics between the affected and unaffected sides of runners with unilateral Achilles tendinopathy (AT) during single leg hopping.

Design: Within-subject study

Method: Recreational runners (N = 17, 36 (12) years) with unilateral AT completed tasks including self-selected cadence hopping (20 s), maximal effort hopping (minimum 3 continuous hops), cued tasks at 132 hops.min^{-1} (20 s), and continuous hopping at 120, 108, and 96 hops.min^{-1} (15 s each). Biomechanical characteristics were compared between sides with significance at $p \leq 0.05$.

Results: Symmetry was observed between limbs for ankle kinetics, kinematics, vertical and leg stiffness, and temporal-spatial properties across all tasks. Small differences in hip and knee kinematics were noted at 120 and 108 hops.min^{-1}, and peak hip moment during maximal height hopping. Peak hip power was higher on the AT side (0.82 (0.38) W) compared to the unaffected side (0.58 (0.33) W) ($p = 0.03$) at 120 hops.min^{-1}. Contact time strongly correlated with stiffness (vertical, leg, and ankle joint) during self-selected hopping.

Conclusion: Recreational runners with AT who continue to run and exhibit mild to moderate symptoms, demonstrate symmetrical lower limb biomechanics, except for alterations in hip mechanics, the clinical significance of which remains uncertain.

Key practice points:

- Recreational runners continuing to run with AT do not exhibit asymmetries in lower limb mechanics during single-leg hopping
- Contact time is strongly correlated with stiffness during self-selected hopping, indicating its potential as a clinical tool for assessing lower limb mechanics outside of laboratory settings

Self-efficacy, self-management and use of smartphone apps for low back pain: an observational study

Claudia Didyk[1], Belinda Lange, Lucy Lewis
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10E: Optimising practice, Rooms E2&E3, October 25, 2025, 11:40 - 12:40

Aim: To explore the self-efficacy and self-management practises of people with low-back pain (LBP), including associations between participant characteristics, self-efficacy and self-management.

Design: Prospective observational cross-sectional design.

Method: online survey of Australian adults with current or previous LBP. Descriptive statistics were completed for all variables. Associations between participant characteristics, self-efficacy and self-management were explored through linear regression. Alpha was 0.05.

Results: of 136 included responses (55.5 ±14.5 years, 74% female), most participants (93%) had current low back pain and reported constant or daily (58%) pain of moderate severity. Nearly all self-managed their low back pain (91%). Self-management options included exercise (47%), health professional advice (38%,) and pharmacological management (37%). Most self-managed moderately (35%) or fairly (32%,) well, with self-management and self-efficacy scores above mid-range. Lower socio-economic status and higher personality trait scores were associated with higher self-efficacy ($p<0.05$). Longer duration and recurrence of low back pain were associated with lower self-efficacy ($p<0.05$). Participants with higher self-management were female, older, with higher personality trait scores and lower LBP severity ($p<0.05$). Seventeen participants (13%) used apps.

Conclusion: Most adults with low back pain self-managed well and had above average self-efficacy. Smartphone app use was limited.

Key practice points:

- The personality traits of conscientiousness, emotional stability and openness, are associated with better LBP self-management and self-efficacy.
- People with LBP reported that exercise was very effective for self-management and those who used apps reported that they were at least moderately effective in all phases of LBP management.

The effects of pilates in people with musculoskeletal conditions in the extremities: a systematic review

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10E: Optimising practice, Rooms E2&E3, October 25, 2025, 11:40 - 12:40

Aim: Investigate the effect of Pilates on pain, disability, quality of life, and physical function in people with musculoskeletal conditions in the extremities.

Design: Systematic review and meta-analysis of experimental studies.

Method: Eleven databases were searched from inception to December 2023. Evidence was synthesised as standardised mean differences with 95% confidence intervals using random-effects models. Risk of bias was assessed using the Revised Cochrane risk of bias tool or ROBINS-I tool. GRADE was used to determine evidence certainty.

Results: Eleven studies were included. Studies had moderate to high risk of bias. Pilates reduced pain (5 studies; SMD 1.41, 95% CI 0.54 to 2.28) and disability (5 studies; SMD 0.83, 95% CI 0.15 to 1.50), and improved quality of life (2 studies; SMD 2.10, 95% CI 0.34 to 3.86) compared to non-active control. The effect of Pilates on strength compared to non-active control was estimated to be small (3 studies; SMD 0.35), with unclear true effect due to uncertainty (95% CI -0.27 to 0.98). The effects of Pilates on further aspects of physical function, including balance, proprioception, and range of motion, remain unclear due to a lack of data preventing meta-analysis.

Conclusion: Pilates was found to improve pain, disability, and quality of life in people with musculoskeletal conditions in the extremities. However, this evidence is of a very low certainty. The effect of Pilates on physical function remains uncertain.

Key practice points:

- Pilates is a promising therapy option for the management of musculoskeletal conditions in the extremities.

Registration: PROSPERO (CRD42022375925).

What factors influence the community's use of physiotherapy services as first-line management for temporomandibular disorders?

Alana Dinsdale[1]

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10E: Optimising practice, Rooms E2&E3, October 25, 2025, 11:40 - 12:40

Aim:

To understand 1) what individuals living with a temporomandibular disorder perceive the role of physiotherapy to be in management, 2) how these perceptions influence individuals' behaviour in seeking and receiving care, and 3) what other factors influence individuals' behaviour in seeking and receiving care for a temporomandibular disorder from a physiotherapist.

Design:

Qualitative study (stage 1 of a broader codesign project)

Method:

Fourteen individuals with temporomandibular disorders participated in one-on-one semi-structured interviews. Data were analysed deductively using the COM-B framework via a reflexive thematic analysis approach.

Results:

Data were encapsulated into three themes: 1) motivation, 2) capability and 3) opportunity. Discord between participants' perceptions about temporomandibular disorders and the role of physiotherapists was frequently observed, alongside challenges accessing physiotherapy services due to physical opportunity (e.g. time, financial, geographical, technological) and social opportunity (e.g. connections with and of healthcare practitioners) factors.

Conclusion:

Various intrinsic and extrinsic factors influence individuals' utilisation of physiotherapy services for temporomandibular disorders, including their knowledge about the condition and physiotherapy services available, their social connections, physical opportunity and their motivation to seek help. Promotion of physiotherapy services for temporomandibular disorders should consider these factors to optimise patient care.

Key practice points:

- To improve management pathways for temporomandibular disorders and facilitate uptake of subsequent physiotherapy services in the community, it is important to consider the myriad of factors which underpin care-seeking behaviours of individuals living with temporomandibular disorders in the community. This knowledge may help guide the development of behaviour change strategies using a structured, informed approach.

Perceptions about SUpported Motivational InTerviewing (SUMIT) to improve physical activity for people with knee osteoarthritis

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[1]La Trobe University, [2]Monash University

10E: Optimising practice, Rooms E2&E3, October 25, 2025, 11:40 - 12:40

Aim

To evaluate the perceptions and experiences of people with knee osteoarthritis of participating in SUMIT, a motivational interviewing and a multimedia website intervention to increase physical activity.

Design:

Descriptive qualitative study.

Methods:

Semi-structured interviews followed a topic guide to explore experiences of participating in SUMIT. SUMIT included five 1:1 motivational interviewing sessions online, and access to a bespoke multimedia physical activity website. We used inductive reflexive thematic analysis, grouping codes into overarching themes and subthemes.

Results:

Four themes, encompassing seven subthemes were identified from interviews with seventeen participants, including 11 women (65%). These included: 1) Perceptions of SUMIT, including overall positive experiences and the perceived influence of SUMIT on physical activity; 2) Barriers to increasing physical activity during SUMIT, including internal (pain, other health concerns, previous negative experiences, priority) and external (COVID-19, weather, cost, work and caring obligations) factors; 3) Perceived ongoing barriers (priority, time) and facilitators to continue physical activity following SUMIT (including goal setting, accountability methods); and 4) The SUMIT website being informative but not used to the fullest potential.

Conclusion:

SUMIT was perceived to be beneficial for increasing and maintaining physical activity participation. Motivational interviewing was a useful tool to tailor physical activity plans for individual participants.

Key practice points:

- Motivational interviewing supported by a physical activity multimedia website are perceived as positive aides to increase physical activity in people with knee osteoarthritis.
- SUMIT supported the development of strategies to increase and sustain physical activity including various accountability methods such as social support and fitness tracking.

Do words affect pain? A randomised experiment on people with experimentally induced low back pain

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11F: Perception, pregnancy, hypermobility, Rooms E2&E3, October 25, 2025, 13:40 - 14:25

Aim: We compared the time-course of pain between two groups who received different information during an episode of experimentally-induced acute low back pain.

Design: Prospectively registered, parallel, two-arm, randomised experiment with concealed allocation, masking and intention-to-treat analyses.

Method: Fifty weight-training naïve, pain-free people performed back exercise intended to cause delayed onset muscle soreness. One group was told immediately that their muscles had been damaged and were advised to protect their back over the coming days. The other group's symptoms were described in terms of tissue sensitization and were advised to keep moving. Movement-evoked pain was recorded at baseline, immediately after the exercise and daily for seven days using a 11-point numeric rating scale. Generalised linear regression was used to estimate treatment effects.

Results: The intervention did not affect movement-evoked pain intensity scores (main effect of Group: $\chi^2(1) = 0.02$, $p = 0.895$). The adjusted mean difference between the groups was -0.05/10 (95% CI -0.72 to 0.63, $p = 0.895$) when averaged across all time points.

Conclusion: Information based on tissue sensitivity and advice to remain active did not improve pain compared to information referencing tissue damage and advice to rest and protect the back during an episode of acute experimentally-induced low back pain.

Key practice points:

- Despite clinical practice guidelines recommendations, our words might not affect pain during an episode of acute low back pain.
- It may be safer, for now, not to emphasise descriptions of tissue damage, but we do not know if words effect the trajectory of pain.

Perceptions about preventing pregnancy-related pelvic girdle pain: A qualitative study using the Health Belief M\model

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[1]Western Sydney University, [2]Curtin University

11F: Perception, pregnancy, hypermobility, Rooms E2&E3, October 25, 2025, 13:40 - 14:25

Aim:

Pregnancy-related pelvic girdle pain (PPGP) affects approximately one in two women in Australia impacting women's quality of life. However, there is inconsistency in the application of preventative strategies. This study explores the perspectives of pregnant women and healthcare professionals (HCP) about how PPGP may be prevented.

Design:

Qualitative content analysis study.

Method:

Semi-structured interviews were conducted with pregnant women (n=12) and HCP (n=16) (doctors, midwives, researchers, and physiotherapists). Content analysis was used to identify themes related to prevention of PPGP using the Health Belief Model (HMB) constructs.

Results:

Eleven themes from interviewing both pregnant women and HCPs were identified across six HBM constructs. Early education, personalized guidance and multidisciplinary collaboration were the main items identified to be able to influence prevention of PPGP effectively. Barriers to prevention were limited HPC awareness about PPGP, a lack of standardized referral pathways, and financial constraints which limited access to care.

Conclusion:

There is a need for early identification of women at risk of developing PPGP and prompt access to care for women. Prevention programs can be integrated into current antenatal programs and will require clinical guidelines, training for HCP and strengthening multidisciplinary collaboration. Further, addressing systemic barriers such as healthcare fragmentation, financial limitations, and inconsistent clinical practices are essential to ensuring effective preventative care.

Key practice points:

- Early education and standardised screening tools for pregnant women are crucial for PPGP prevention.
- Antenatal programs should include targeted PPGP prevention strategies.
- Multidisciplinary collaboration can enhance access to physiotherapy and structured antenatal care.

Optimising the effectiveness of exercise in people with hypermobile Ehlers-Danlos syndrome: A Delphi survey

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11F: Perception, pregnancy, hypermobility, Rooms E2&E3, October 25, 2025, 13:40 - 14:25

Aim:

To establish an expert consensus regarding the optimal design of exercise interventions for people with hypermobile Ehlers-Danlos syndrome (hEDS)

Design:

Delphi survey

Methods:

Fourteen physiotherapists participated in a Delphi survey consisting of three questionnaires. Participants rated their level of agreement with statements generated from panel responses on a 6-point Likert scale. Consensus was achieved when at least 80% of the panel agreed or disagreed with an item. The strength and range of opinions was summarized using the median (quartile 1, quartile 3).

Results:

Consensus was achieved for 84% (301/360) of statements. Participants strongly agreed that the safety and effectiveness of exercise is optimized by the prescription, supervision and individualization of exercise by a health professional. There was a lack of consensus regarding the suitability of high impact exercise, contact sports, and stretching. Exercise adherence may be enhanced by setting achievable and motivational goals; facilitating patient self-efficacy and education; management of pain, fatigue and comorbidities, and supervision and support from knowledgeable and empathetic health professionals.

Conclusion:

Findings provide guidance in the optimal design and delivery of exercise interventions for people with hEDS. Further research is required to confirm the validity of items of expert consensus and explore items of non-consensus.

Key practice points:

- A range of exercise/sports may be appropriate for people with hEDS but some caution is advisable regarding high impact exercise, contact sports and stretching
- The safety and effectiveness of exercise and patient adherence may be facilitated by prescription, supervision, individualisation and support provided by physiotherapists

Are physiotherapists ready to lead in the delivery of World Stroke Organisation physical activity guidelines?

Natalie Fini[1], Gillian Mead[2], Sandra Billinger[3], Marie-Louise Bird[4], Janice Eng[5], Coralie English[6], Sarah Moore[7], John Solomon[8], Katharina Sunnerhagen[9], Shamala Thilarajah[10], Frederike van Wijck[11]

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1F: Stroke and physical activity, Riverbank Rooms 2&3, October 23, 2025, 11:05 - 11:50

Aims:

Physiotherapists are pivotal in leading health professional teams to deliver recommendations from the World Stroke Organisation review of physical activity guidelines, but it is unclear whether they are sufficiently trained and confident to do so.

This study aimed to:

1. Determine whether physiotherapists report sufficient training and confidence for implementing post-stroke physical activity guidelines
2. Identify educational needs and preferred delivery formats

Design:

Global online survey of health professionals

Method:

The survey comprised three sections: 1) demographics; 2) knowledge, skills, training and confidence around 12 constructs concerning post-stroke physical activity; 3) educational preferences. Data were analysed descriptively.

Results:

Survey respondents (n=235) were from 33 countries; predominantly female (74%), physiotherapists (76%) and from high income countries (84%).

For each guideline recommendation, gaps were identified in physiotherapists' knowledge, confidence and skills required. The majority (56%) reported they had not received sufficient training in safety aspects of physical activity intervention delivery.

The median (IQR) proportion of physiotherapists reporting sufficient training in promoting physical activity was 40% (7.8%), the proportion reporting sufficient confidence was 54% (7.8%).

Accredited online e-learning was the preferred mode of education delivery (67%).

Conclusion:

There are concerning discrepancies amongst physiotherapists between self-reported and required levels of knowledge, confidence and skills necessary to promote and deliver physical activity interventions post-stroke.

Key practice points:

- Critical gaps exist in physiotherapists' confidence and training in promoting and delivering physical activity post-stroke.
- Accredited online educational resources are needed to enable physiotherapists to lead health professional teams to implement post-stroke physical activity guidelines.

Aerobic exercise positively effects brain derived neurotrophic factor in sub-acute stroke: a pilot RCT.

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1F: Stroke and physical activity, Riverbank Rooms 2&3, October 23, 2025, 11:05 - 11:50

Aim: To determine whether a program of moderate to high intensity aerobic exercise can increase levels of brain derived neurotrophic factor (BDNF) in sub-acute stroke survivors.

Design: A parallel-group, randomised controlled trial with concealed allocation, and assessor blinding.

Method: Stroke survivors undergoing sub-acute rehabilitation were randomly allocated to usual care (control group) or usual care plus 8-week program of moderate-high intensity treadmill walking and self-management (3 x 30 min sessions per week) (experimental group). Participants were assessed at baseline (Week 0) at the end of the intervention period (Week 8), and at 6 months follow up (Week 26).

Results: Sixty-seven participants (n = 67) were recruited to the study. There was a significant between-group difference in BDNF levels across the three time points (p = 0.04). From Week 0 to Week 8 BDNF levels in the experimental group increased by 18% (p = 0.02), and then decreased from Week 8 to Week 26 by 18% (p = 0.02) The control group showed no change from Week 0 to Week 8 (p = 0.37), and no change from Week 8 to Week 26 (p = 0.41).

Conclusion: As concentrations of BDNF increased immediately after a program of moderate to high intensity aerobic exercise, this may present a potential mechanism to enhance recovery after stroke.

Key practice points:

- Aerobic exercise could be used clinically to increase BDNF, which is associated with facilitation of plasticity in the brain post stroke.
- Therapy tasks paired alongside aerobic exercise have potential to enhance the therapeutic gains.

Prospective associations of step count and intensity with risk of stroke in people with hypertension

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1F: Stroke and physical activity, Riverbank Rooms 2&3, October 23, 2025, 11:05 - 11:50

Aim:

To examine the dose-response associations of step count and stepping intensity with risk of incident stroke in people with hypertension.

Design:

Prospective cohort study.

Method:

Data was obtained from participants with established hypertension from the UK Biobank accelerometry sub-study. Participants wore a wrist-worn accelerometer for seven consecutive days. An accelerometer-based activity machine learning scheme and validated step-count algorithm for wrist accelerometers were used to estimate daily step count. Peak 30-minute cadence, an indicator of stepping intensity, was calculated as the average steps/min recorded for the 30 highest cadence values in a day. Dose-response associations of daily step count and peak 30-minute cadence were examined with risk of stroke, with hazard ratios (HR) and 95% confidence intervals (CI) calculated for the median values.

Results:

In 36 192 participants (mean (SD) age 64 (7) years, 48% male, follow-up period 7.8 years), inverse dose-response associations with risk of stroke were observed for daily step count and peak 30-minute cadence. Approximately 6 500 steps/day was associated with lower risk of stroke (HR 0.85, 95% CI 0.69-1.06), with an average 24.1% lower risk for every 1 000-step increase in daily step count. Seventy-six steps/min was associated with lower risk of stroke (HR 0.73, 95% CI 0.59-0.92).

Conclusion:

Taking 6 500 steps/day may be sufficient to reduce the risk of future stroke in people with hypertension if undertaken at a reasonable intensity.

Key practice points:

- Modest improvements in daily steps, and higher stepping intensity, can substantially lower risk of stroke in people with hypertension.

Non-linear measures of mobility provide digital biomarkers of deep brain atrophy in mild multiple sclerosis

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[1]University of Melbourne, [2]Swinburne University, [3]Royal Melbourne Hospital

2G: Gait/Mobility, Panorama 3, October 23, 2025, 11:55 - 12:40

Aim:
More sensitive and readily available biomarkers of multiple sclerosis progression, which demonstrate a mechanistic relationship to disease processes, are needed. Deep grey matter atrophy predicts disability progression. More sensitive than gait speed, non-linear measures of gait instability and postural complexity from wearable sensors detect deterioration in people with mild multiple sclerosis. We investigated measures' relationship to deep grey matter atrophy.

Method:
36 people with relapsing-remitting multiple sclerosis [mean age = 40.8±10.5y, mean Expanded Disability Status Scale = 1.75±1.1] performed instrumented (APDM Opals) walking (self-paced, 20m corridor) and balance tasks (eyes open/closed on firm/foam surface). Regions of interest (thalamus, putamen, caudate, pallidum, hippocampus, cerebellum, and pons) were automatically segmented from Magnetic Resonance Imaging (Morphobox, Siemens). Local Divergence Exponent quantified gait instability, and Multiscale Sample Entropy quantified postural complexity. Linear regression assessed associations between normalised brain areas and digital biomarkers, adjusting for age and sex. Benjamini-Hochberg correction for multiple comparisons was applied to brain regions separately.

Results:
Non-linear biomarkers demonstrated significant, moderate inverse correlations with brain volumes: Complexity with cerebellum (-4.9, $p < 0.002$), Instability with caudate (-5.2, $p = 0.001$), pons (-4.4, $p = 0.006$) and cerebellum (-3.7, $p = 0.018$).

Conclusion:
Non-linear biomarkers of mobility, strongly associated with deep grey matter atrophy, may indicate clinically-relevant disease progression.

Key practice points:
- Non-linear biomarkers from wearable sensors are correlated with deep grey matter atrophy in multiple sclerosis

- These may predict future disability
- Future work aims to validate the use of mobile phones to collect these digital biomarkers

Early mobilisation in patients with aneurysmal subarachnoid haemorrhage in the acute and intensive care settings

Sabrina Hernandez[1,2,3], Claire Tipping[4], Adam Deane[5], Michael Wei[6], Wendy Bower[1,7], Alex Adamides[6], Anais Charles-Nelson[3], Peter Thomas[8], Jonathan Tomkins[1,2], Jane Larkin[1], Carol Hodgson[3,4]

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2G: Gait/Mobility, Panorama 3, October 23, 2025, 11:55 - 12:40

Aims:

To describe current mobilisation practices, outcomes, and barriers in individuals following aneurysmal subarachnoid haemorrhage.

Study Design:

Prospective, observational study.

Methods:

Adults (≥18 years) following aneurysmal subarachnoid haemorrhage repair were included. Severity was classified using the World Federation of Neurological Surgeons scale, dichotomising into "good" (Grade I-II) and "poor" (Grade III-V) grades. Mobilisation outcomes during physiotherapy sessions were collected for 14 days post-repair using the Mobility Scale for Acute Stroke.

Results:

Overall, 102 individuals were included (68% "good") with 410 physiotherapy sessions completed. Patients who were mobilised (n=90, 88.2%) received a median of 4 sessions (IQR 2, 6). A median Mobility Scale score of 36 (IQR 30, 36) and 10 (IQR 6, 20.0) was achieved for patients with "good" and "poor" grades respectively ($p<0.001$). By two weeks post-repair 49% (n=50) of individuals achieved independent walking. Mobilisation did not occur on 193 occasions due to neurological (n=80, 41.5%) or haemodynamic instability (n=43, 22.3%). Safety events during 34 sessions (8.3%) led to early cessation of mobilisation; however, no serious adverse events occurred.

Conclusion:

While most patients were mobilised by two weeks post-aneurysm repair, only half the cohort achieved independent walking. Medical instability commonly limited mobilisation activities.

Key learning points:

- Less severe classification post-aneurysmal subarachnoid haemorrhage suggests better improvement with mobility.
- Post-aneurysm repair, neurological and haemodynamic instability are significant barriers to early mobilisation.
- Vigilant screening prior to and monitoring during mobilisation activities are important.
- Optimal mobilisation programs for people in the acute phase post-aneurysmal subarachnoid haemorrhage repair are unknown.

Stride Forward: Exploring the journey of running with multiple sclerosis. A qualitative study

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2G: Gait/Mobility, Panorama 3, October 23, 2025, 11:55 - 12:40

Aim: To explore the experience of running from the perspective of individuals with multiple sclerosis, through the lens of health professionals.

Design: A qualitative descriptive study using thematic analysis.

Methods: Regular runners with a diagnosis of multiple sclerosis who were living in Australia were invited to participate in one of five semi-structured focus group interviews or an individual interview. Interviews were conducted online and analysed thematically using NVivo software. Demographic and running activity data for 18 runners were collected via survey and analysed using descriptive statistics.

Results: Eighteen participants (3 male, 15 female) with a median age of 44 years (IQR 12.8; range 31-57) participated in the study. Most met or exceeded the multiple sclerosis general aerobic exercise guidelines, running three days per week (IQR 2.0; range 1-4) for a median duration of 42 minutes per run (IQR 25; range 15-243). Six themes were generated from the interviews: running ability and adaptation, navigating environmental temperatures, ensuring environmental safety, managing health and MS, developing strategies to support running, and the need to run.

Conclusion: There are specific needs and challenges faced by individuals with multiple sclerosis who wish to engage in running. Physiotherapists can promote safe running by adapting training, ensuring environmental safety, and facilitating appropriate symptom management.

Key practice points:

- Tailored guidance and support from physiotherapists can be useful in engaging and sustaining safe participation in running for individuals with multiple sclerosis
- Physiotherapists can enable individuals with multiple sclerosis to maximise their potential in exercise such as running.

Gait changes in functional neurological disorder: A longitudinal study

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2G: Gait/Mobility, Panorama 3, October 23, 2025, 11:55 - 12:40

Aims:

To assess whether individuals with functional neurological disorder experience changes in gait over a 12-month period.

Design:

Longitudinal cross-sectional survey.

Methods:

People with functional neurological disorder completed surveys at baseline and 12-month time points. The survey collected symptom severity ratings, gait changes and outcome measurements. Descriptive statistics and linear mixed models were performed to analyse the data.

Results:

The baseline survey was completed by 156 respondents, of which 65 (41.6%) completed the 12-month follow-up survey. Respondents were mostly female (n = 55, 84.6%), with a mean age of 45.6 years (SD 14.1). Self-reported gait changes at 12-months indicated that n = 16 (27.1%) reported worsening gait, n = 28 (47.5%) reported no change and n = 15 (25.4%) reported improvements. There were no statistically significant differences in the self-reported severity ratings of motor and non-motor symptoms between baseline and 12-months. Quality of life ($p < 0.001$), and work and social participation measures ($p = 0.008$), were both significantly improved at 12-months compared to baseline.

Conclusion:

These findings indicate that the majority of respondents reported no change in gait, while others saw improvements or decline, highlighting the individual nature of gait outcomes in this cohort. Quality of life and participation was improved at 12 months.

Key practice points:

- Individuals with functional neurological disorder may experience changes in gait over time.
- Clinicians should consider these changes when planning treatment, particularly during periods of gait decline.
- It appears that quality of life and participation may improve over time, despite declining gait.

The perceived barriers, facilitators and preferences for early mobilisation after aneurysmal subarachnoid haemorrhage

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2G: Gait/Mobility, Panorama 3, October 23, 2025, 11:55 - 12:40

Aim:

To explore barriers, enablers and preferences that influence patient engagement in early mobilisation following aneurysmal subarachnoid haemorrhage within the acute hospital and intensive care.

Design:

Descriptive qualitative study.

Method:

Semi-structured interviews were conducted. Interviews were recorded, transcribed and analysed utilising thematic analysis. The Capability, Opportunity, and Motivation-Behaviour model guided identification of key themes related to barriers and enablers to early mobilisation.

Results:

Thirteen people after aneurysmal subarachnoid haemorrhage were interviewed; mean (SD) age: 53 (12) years, 70% female. Factors facilitating mobilisation in hospital included availability of equipment, visits from family, encouragement and assistance from staff, independent mobility, knowledge of benefits, self-confidence, intrinsic motivation for recovery and the need for toileting. However, barriers to mobilisation included lack of information, environment constraints (such as equipment or limited walkways), physical symptoms (such as fatigue and headaches), difficulty processing events, frequent medical monitoring, concern and discomfort with other patients on the ward and perceived risks. Four key preferences emerged: increased opportunities for physical exercise, greater access to information, social connection and availability of adjunct therapies.

Conclusion:

Various factors influence participation in early mobilisation after aneurysmal subarachnoid haemorrhage. By enhancing facilitators and addressing barriers like environmental constraints and limited information provision, engagement in early mobilisation may be increased.

Key practice points:

- People after aneurysmal subarachnoid haemorrhage may not be provided with enough information on early mobilisation.
- Adapting mobilisation activities to physical symptoms is key.
- Providing tailored advice, adjunct therapies, environmental enrichment and social engagement can boost patient motivation and physical activity levels in hospital.

Clinical decision-making of physiotherapists regarding ambulation in people with neurological conditions: A systematic review

Eloise Holland[1,2], Jill Garner[3]

[1]The University of Adelaide, [2]Flex Rehabilitation Clinic, [3]Flinders University

2G: Gait/Mobility, Panorama 3, October 23, 2025, 11:55 - 12:40

Aims: To (1) describe how physiotherapists make decisions regarding progression of ambulation in people with neurological conditions, (2) identify the choices made by physiotherapists when progressing ambulation in neurological patients, and (3) explore factors that may influence clinical decision-making, including outcome measures.

Design: Mixed-methods systematic review

Methods: Five databases were searched from 1946 to February 25, 2024. Independent reviewers evaluated study eligibility. Data were extracted and synthesised according to the Joanna Briggs Institute approach for mixed-methods reviews and PRISMA guidelines. Qualitative data were analysed using NVivo with thematic analysis, while quantitative data were synthesised narratively, using codes from the qualitative data to interpret questionnaire responses and textual data in quantitative studies.

Results: Ten studies (eight qualitative, one quantitative, one mixed methods) met inclusion criteria The studies were rated as high quality (n=7), medium quality (n=3), low quality (n=1). Five key themes emerged from the qualitative studies: clinician assessment procedure, individualised treatment planning, patient's assessed abilities, integrated decision-making in patient care and patient cognitive capacity.

Conclusion: This review highlights factors influencing decision-making for ambulation progression across varied settings, with clinician experience identified as essential in assessing patient outcomes. Further research should explore ambulation progression in paediatric populations and investigate specific clinical contexts in greater depth.

Key practice points:

- Clinical decision making can be influenced by assessment procedures, treatment planning, the patient's abilities, and patient cognitive capacity.

Building a successful Parkinson's massive open online course: Uptake and knowledge change

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[1]*University of Tasmania*

2H: Neurodegenerative conditions, Riverbank Room 6, October 23, 2025, 11:55 - 12:40

Aim: International guidelines recommend people with Parkinson's should have access to information to help them self-manage, along with a knowledgeable multidisciplinary team. The aims of this project were to co-produce a 5-week free online educational course for the Parkinson's community, and to evaluate its uptake and impact on knowledge.

Design: Pre-post study

Method: The course was co-led by a physiotherapist living with Parkinson's and a Parkinson's neurologist. Modules included animations, quizzes, interactive activities and >80 interviews with people with Parkinson's, family, clinicians and researchers from six continents. The course was advertised globally via social media. Participants completed a pre- and post-Parkinson's knowledge questionnaire.

Results: Seven weeks post launch, n=17,269 participants (n=155 countries) had enrolled, and n=2,676 completed the course. of these, n=8,115 (mean age 50 years, 80% female) consented to research. of these, n=5242 completed questionnaires: 8% had Parkinson's, 17% a family member with Parkinson's, and 70% were health professionals (9% physiotherapists) or social care workers. Class Central ratings were 4.9/5, placing the course 6th globally in Health and Medicine courses. Reviews portrayed the course as an exceptionally well-crafted educational resource that informs, inspires, and supports a global audience interested in understanding and managing Parkinson's. The mean pre-knowledge score was 19/20(17-22). Change scores will be presented.

Conclusion: A free Parkinson's online course has high uptake and positive ratings globally.

Key practice points:

- Online courses are popular for health professionals around the world.
- Courses can meet the needs of both health professionals, people living with Parkinson's and family members.

Access to allied health: perspective of physicians, Parkinson's nurses and people with Parkinson's disease

Cassandra Wong[1], Sarah Dennis[1], Natalie Allen[1], Serene Paul[1]
[1]*The University of Sydney*

2H: Neurodegenerative conditions, Riverbank Room 6, October 23, 2025, 11:55 - 12:40

Aim

To determine the referral patterns of people with Parkinson's disease to allied health, comparing lived experience and clinician perspectives.

Design

This qualitative study recruited general practitioners, neurologists, Parkinson's nurses and people with Parkinson's. All participants completed a demographic questionnaire and semi-structured interview; clinicians completed one interview and people with Parkinson's completed two.

Method

Four neurologists, three general practitioners, four nurses and 18 people with Parkinson's (including six from culturally and linguistically diverse backgrounds) participated. Transcripts were analysed thematically.

Results

The study's nine themes mapped to the Levesque model of healthcare access. All participants encountered difficulties referring to or accessing approachable, available and appropriate allied health services. Culturally and linguistically diverse participants experienced greater challenges. People with Parkinson's who lived alone had reduced ability to reach services. Affordability and ability to pay limited which services patients were referred to or accessed, with funding packages partially alleviating this burden. Ability to perceive the need for care varied, with some culturally and linguistically diverse people with Parkinson's finding traditional medicine more acceptable. All people with Parkinson's had the ability to seek and engage in care.

Conclusion

Clinicians and people with Parkinson's recognise the need for allied health interventions but encounter barriers with access. There is a need for regular, easily accessible and affordable multidisciplinary care for people with Parkinson's.

Key practice points

- Physiotherapists should educate people with Parkinson's on the importance of allied health in managing their disease.
- Clinicians should assist people with Parkinson's to link into Parkinson's-specific services and resources.

Exploring sexuality, intimacy and relationship changes in people with Parkinson's disease and their partners

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2H: Neurodegenerative conditions, Riverbank Room 6, October 23, 2025, 11:55 - 12:40

Aim: To explore the beliefs and attitudes of individuals with Parkinson's Disease (PD) and partners regarding discussions about sexual function, intimacy and relationships. Secondary objectives include exploring opinions on existing consumer handouts available.

Design: Descriptive qualitative study

Method: Semi-structured interviews of both people with PD and partners of someone with PD (non-dyadic) were completed. Data from the semi-structured interviews underwent inductive thematic analysis.

Results: 20 participants (10 PD, 10 partners) (9M: 11F) were interviewed, including three identifying as not in a relationship. Participants were on average 67 years old and mean interview length was 38 minutes. Participants identified several changes in sexual function, intimacy and relationships after diagnosis. Some found other ways to experience intimacy (non-sexual touch) but 30% stating ongoing frustrations in these domains. Single individuals reported difficulties with dating due to embarrassment. Partners revealed conflicting emotions regarding their caring role. Only 10% reported that their treating health professionals had initiated conversations on these topics and none had seen online or written content, and when shown found them unsatisfactory.

Conclusion: People with PD (and partners) identify changes in many aspects of their sexual function, intimacy and relationships and want to talk about these topics with their treating health professionals but felt a lack in opportunity or confidence. Participants were unaware and unsatisfied with resources available.

Key practice points:

- People with PD experience changes to their sexual function, intimacy and personal relationships
- People with PD and their partners want to talk to professionals about these topics
- Current resources are inadequate

Key components for safer mobility behaviour assessment and intervention for people with Parkinson's disease

Daniel Cheung[1,2], Serene Paul[1], Lynette Mackenzie[1], Jacqueline Wesson[1], Natalie Allen[1]
[1]The University of Sydney, [2]Institute for Musculoskeletal Health

2H: Neurodegenerative conditions, Riverbank Room 6, October 23, 2025, 11:55 - 12:40

Aims:

To develop a consensus-based summary of assessment and intervention components targeting safer mobility behaviour for fall prevention in people with Parkinson's disease.

Design:

Modified Delphi study

Method:

Lived experience experts (people with Parkinson's disease and their care-partners) participated in interviews and clinician/researcher experts (physiotherapists, occupational therapists and/or researchers in Parkinson's disease) participated in focus groups to discuss how to assess and improve safer mobility behaviour in people with Parkinson's disease. Assessment and intervention components were generated from these discussions, then rated and ranked based on importance over two survey rounds. Feedback on ratings and comments were provided in the last survey round for components that had not reached 80% consensus.

Results:

Sixty lived experience and 43 clinician/researcher experts participated. Consensus was reached for including 12 out of 13 identified components. Both panels ranked physical and cognitive ability as the top two components for assessing safer mobility behaviour. Likewise, exercise, movement strategy training and cognitive strategy training were the top three intervention components for safer mobility behaviour.

Conclusion:

Key components were identified for inclusion in the development of future assessments and interventions that target safer mobility behaviour in people with Parkinson's disease.

Key practice points:

- A combination of physical and cognitive measures should be used as a part of a holistic safer mobility behaviour assessment for people with Parkinson's disease.
- Safer mobility behaviour interventions for people with Parkinson's disease should involve individualised movement and cognitive strategy training alongside exercise prescription.

Exploring the correlation between oculomotor control and balance in people with multiple sclerosis

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2H: Neurodegenerative conditions, Riverbank Room 6, October 23, 2025, 11:55 - 12:40

Aim:

Exploring oculomotor function and its correlation to balance in people with multiple sclerosis and mild disability.

Design:

Observational cohort study.

Methods:

Eighteen individuals with multiple sclerosis and mild disability were recruited for this study. Oculomotor function was measured using videonystagmography software (VisualEyes®, Interacoustics); and balance using Bertec® Balance Advantage® force plates and the Timed Up and Go test.

Results:

Participants had a mean age (SD) of 47.22 years (10.17). Most had relapsing remitting multiple sclerosis (77.8%) and mild disability levels. Horizontal smooth pursuit correlated with balance elliptical area (r(-)=0.47-0.76, p=0.04-<0.001), medio-lateral and anterior-posterior amplitude (r(-)=0.47-0.62, p=0.04-0.005 & r(-)=0.47-0.69, p=0.04-0.001) and medio-lateral and anterior-posterior velocity (r(-)=0.47-0.69, p=0.04-0.002 & r(-)=0.47-0.72, p=0.04-<0.001). Vertical saccades latency correlated with elliptical area (r=0.47-0.89, p=0.04-<0.001), medio-lateral and anterior-posterior amplitude (r=0.47-0.75, p=0.04-<0.001 & r=0.48-0.70, p=0.04-0.001) and medio-lateral and anterior-posterior velocity (r=0.47-0.75, p=0.04-<0.001& r=0.48-0.70, p=0.04-<0.001).Vertical saccade velocity correlated with anterior-posterior amplitude (r(-)=0.47-0.65, p=0.04-0.003) and the Timed Up and Go test (r(-)=0.45-0.63, p=0.05-0.004). Lower smooth pursuit gains, slower saccade velocity and longer saccade latency correlated to worse balance performance and slower Timed Up and Go test walking speeds.

Conclusion:

Oculomotor function, particularly horizontal smooth pursuit and saccades latency and velocity correlate with balance. Efficient oculomotor system functioning is important for better balance control in people with multiple sclerosis.

Key practice points:

- Oculomotor control may play an important role in maintaining balance in people with multiple sclerosis.
- Integration of oculomotor training in rehabilitation strategies to improve balance, could promote better stability and reduce falls risk.

Relationship between sports concussion assessment tool symptoms and anxiety after moderate-to-severe traumatic brain injury

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[1]Epworth Healthcare, [2]University of Melbourne

3F: Traumatic brain injury / Brain injury 1, Rooms E2&E3, October 23, 2025, 13:40 - 14:25

Aim: To determine to what extent demographic and brain injury factors predict Sports Concussion Assessment Tool (SCAT) Symptom Scale scores pre- and post-exertional testing in the early subacute phase (≤ 3 months post-injury) following moderate-to-severe traumatic brain injury (msTBI).

Design: Observational study.

Method: Consecutive admissions to a TBI inpatient unit were screened for recruitment over four years. Participants undertook cardiorespiratory fitness and/or high-level mobility exertional testing. Demographic and injury-related factors such as age, sex, time post injury, brain injury severity, education (years), body-mass index (BMI), and Hospital Anxiety and Depression Scale (HADS) ratings were recorded at baseline. The number of symptoms endorsed (SCAT-NoS) and the summed symptom severity score (SCAT-SS) were recorded pre- and post-exertion on the SCAT Symptom Scale. Multiple block regression models were performed with SCAT-SS and SCAT-NoS as dependent variables.

Results: One hundred fifty participants consented and completed exertional testing. HADS-Anxiety subscale score was the main predictor of SCAT-SS and SCAT-NoS at both pre- and post-exertion with statistically significant associations found. Statistically significant associations between education (years) for pre-exertion and BMI for post-exertion for both SCAT-SS and SCAT-NoS were also found.

Conclusion: Anxiety symptoms as measured by the HADS appear to be the strongest predictor of symptom ratings on the SCAT symptom scale at both pre- and post-exertion following msTBI.

Key practice points:

- Anxiety appears to be associated with higher SCAT scores after msTBI
- Anxiety appears to influence the number and severity of SCAT symptoms
- Brain injury severity was unrelated to SCAT scores

Significant mobility improvements can occur in most non-ambulant adults within three months post-acquired brain injury

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[1]SA Brain Injury Rehabilitation Service, [2]Flinders University, [3]University of South Australia

3F: Traumatic brain injury / Brain injury 1, Rooms E2&E3, October 23, 2025, 13:40 - 14:25

Aim: Evaluate meaningful changes in mobility for adults remaining non-ambulant one month post-acquired brain injury (ABI)

Design: 12-month longitudinal, observational study.

Method: One hundred adults unable to walk one month after severe ABI were recruited from acute and subacute settings. Mobility data were collected at baseline (median 35 days post-injury) and at three months. Measures included Functional Ambulation Classification (FAC), walking speed (assistance permitted), Clinical Outcome Variables Scale (COVS), sit-to-stand (scored 0-7), assistance for mobility, and transfer method. Mobility scores at baseline and three months were analysed using descriptive statistics and Wilcoxon signed-rank tests.

Results: Non-ambulant classification (FAC = 0) decreased from 100% of participants to 43%. Median (IQR) walking speed increased from 0.00 (0.00) m/s to 0.17 (0.54) m/s, while median (IQR) COVS scores increased from 26.5 (15) to 43 (33). Sit-to-stand ability increased from 3 (2) to 5 (3). Median number of assistants for mobility decreased from two to one. Lifter-aided transfers reduced from 53% to 20%. All observed improvements in mobility scores across the three-month period were statistically significant ($p<0.001$)

Conclusion: Adults with persistent, severe mobility impairments after ABI demonstrated significant mobility progress within three months post-injury.

Key practice points:

- Significant mobility improvements can be achieved by a large proportion of adults who remain non-ambulant one month post-injury.
- To explore meaningful mobility skills for people with ABI, outcomes should include method of transfer, ability to stand and assisted walking.
- Persistent, severe mobility impairment is common after ABI; evidence-based strategies are needed to guide management.

Usability and attitudes towards treadmill games for traumatic brain injury rehabilitation: A mixed methods study

Reem Rendell[1,2,3,4], Lauren J Christie[5,6,7], Marina Pinheiro[4,8], Grahame Simpson[1,3,9,10,11], Kavya Pilli[11], Leanne Hassett[1,3,4,12]

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3F: Traumatic brain injury / Brain injury 1, Rooms E2&E3, October 23, 2025, 13:40 - 14:25

Aim:

To investigate adults with moderate-severe traumatic brain injury and physiotherapist's perceived usability of and attitudes towards commercially available, non-immersive virtual reality games suitable for treadmill fitness training.

Design:

Mixed methods study.

Method:

A grey literature search and expert consultation identified four games for testing. Nineteen adults with moderate-severe TBI (79% male, mean age 35 years (SD 16.4)) and seven physiotherapists and an allied health assistant working in TBI rehabilitation (87.5% female) were purposively recruited. TBI clients tested the games for five minutes each whilst treadmill walking at moderate intensity. Therapists observed a single client session. For each game, all participants provided qualitative feedback using think-aloud methodology, completed the System Usability Scale, and participated in a semi-structured interview. Therapists participated in a focus group following recruitment completion.

Results:

Games rated highly for usability, with good agreement between TBI clients and therapists (System Usability Scale mean 80.5/100, SD 8.3). Thematic analysis identified that TBI clients valued escapism and a sense of discovery, enhanced mood and motivation, variety and competition. Therapists acknowledged the need for individual profiles storing historical data, competition, milestone rewards, goal-setting and easy set-up as features for consideration, as no single game included all features.

Conclusion:

Virtual reality games for treadmill fitness training are usable and acceptable in TBI rehabilitation. Future game development should consider key user-identified features.

Key practice points:

- Treadmill suitable games are usable and acceptable for TBI rehabilitation.
- Specific features, like goal-setting and rewards, could enhance engagement.
- Developers should incorporate user-driven design elements in future games.

Ninety-six percent of articles in physiotherapy interventions using robotics contained abstract spin: A meta-research review

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3G: Robotics and technology, Riverbank Room 4, October 23, 2025, 13:40 - 14:25

Aim: To assess the amount of abstract spin of physiotherapy clinical trials investigating robotic interventions.

Design: Meta-research study

Method: We searched the Physiotherapy Evidence Database (PEDro) for clinical trials from inception September 2024. We included 2-armed clinical trials evaluating robotics with any patient population, any outcome and any comparator. Two raters independently performed title/abstract, full text screening and data extraction. Quality assessment was performed using the PEDro scale. Abstract spin was assessed using an adapted 7-item spin rating scale. Spin ratings were independently performed by 2 raters comparing the information in the abstract and the full text. Data were presented as counts and percentages.

Results: We included 168 articles. Ninety-five percent of trials were in Neurology. Sixty-one percent of trials were high quality. Ninety-six percent of trials had at least 1 item of spin with, 37% containing 1-2 items, 34% containing 3-4 items and 26% containing ≥5 items of spin.

Conclusion: Almost all (96%) trials investigating robotic interventions in physiotherapy contained spin. Therefore, most abstracts in robotics do not fairly represent the results of the article it summarises.

Key practice points:

- Abstracts in robotics contain spin however, the impact of this spin on readers is unknown.
- Changes to journal editorial policies or education of submitting authors may prevent the publication of articles with abstract spin.
- Interventions targeting research literacy in consumers of research around spin may also be helpful.

Human interactions remain at the heart of rehabilitation with advanced technology: A practice-embedded qualitative study

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3G: Robotics and technology, Riverbank Room 4, October 23, 2025, 13:40 - 14:25

Aim:

This study explored physiotherapist and other allied health clinician experiences of implementing advanced technologies, such as robotics and virtual reality, within a rehabilitation organisation with a technology centre.

Design:

A longitudinal qualitative study

Method:

Sixty-three interviews were conducted with 25 allied health clinicians across three timepoints within 16 months of the technology centre opening. Interviews were analysed using inductive thematic analysis.

Results:

Most clinicians were physiotherapists or occupational therapists (n=17) across inpatient, outpatient and community settings. Findings include three themes and 12 sub-themes summarised by an overarching finding that human interactions remain at the heart of rehabilitation with advanced technology. Clinicians undertook cognitive and emotional labour to implement technology, including juggling learning demands, navigating patients' high expectations and determining the relevance of technology. Clinicians' technology uptake was influenced by contextual factors ranging from patient characteristics to rehabilitation setting and organisational culture. Finally, technology sustainment requires shared priorities across the organisation, including using technology in conjunction with conventional therapy, designing a comprehensive training model, managing patient expectations and committing to evidence-based practice.

Conclusion:

Findings from this study provide practice-derived insights regarding the implementation, uptake and sustainment of advanced technology in rehabilitation.

Targeted initiatives are required to support clinicians and address contextual barriers while embracing the human elements of rehabilitation.

Key practice points:

- Successful technology implementation in rehabilitation relies upon clinicians championing change within an enabling person-centred context.
- Key initiatives include appointing a technology lead, managerial support, fostering clinician collaboration and developing clinicians' technical, clinical reasoning and interpersonal skills.

Impact of upper limb dysfunction on activity and participation in people with Parkinson's disease

Elizabeth Proud[1], Allison Cheng[1], Mike Conway[1], Mark Merolli[1], Jenny McGinley[1], Jannette Blennerhassett[2,3]

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5E: Symptom management, Hall B, October 24, 2025, 10:35 - 11:20

Aim:

To investigate experiences of upper limb dysfunction in people with Parkinson's disease.

Design:

Descriptive and thematic analysis of online forum posts.

Methods:

Posts from the Parkinson's UK Forum, an online platform where people with Parkinson's disease and their associates share experiences and concerns, were analysed to understand the impact of upper limb involvement. A rule-based Natural Language Processing algorithm was developed to search for applicable posts which were screened using predetermined inclusion/exclusion criteria (individuals with Parkinson's disease or their carers reporting specific upper limb difficulties without involvement of confounding comorbidities). Impairments were quantified, and posts describing activity limitations or participation restrictions are undergoing reflexive thematic analysis in NVivo to identify key themes.

Results:

From 9580 posts, 1069 were retrieved. Following screening, 561 relevant posts were identified (78% written by people with Parkinson's disease and 22% by carers). Included posts described impairments (n=544) and restrictions in activity and/or participation (n=308). Most frequently reported impairments were tremor (89%), rigidity (19%) and reduced dexterity (11%). Continuing analysis will examine experiences of activity limitations and participation restrictions in everyday life.

Conclusions:

Upper limb impairments in Parkinson's disease contribute to significant activity limitations and participation restrictions. Ongoing analysis will provide insight into how

these impairments affect daily functioning, to inform clinical practice and future research.

Key practice points

- Upper limb dysfunction significantly affects functional independence and quality of life for people with Parkinson's disease and their carers.
- Understanding lived experience is important for clinicians and researchers to tailor interventions and support strategies.

Implementing modified constraint-induced movement therapy after stroke in an early-supported discharge service: A process evaluation

Ashan Weerakkody[1]

[1]*Edith Cowan University,* [2]*Cortex Neuro Rehab*

3G: Robotics and technology, Riverbank Room 4, October 23, 2025, 13:40 - 14:25

Aim:

This study aimed to evaluate the process of implementing modified constraint-induced movement therapy (mCIMT) across a large early-supported discharge (ESD) rehabilitation service.

Design:

A single cohort, mixed methods process evaluation of implementing mCIMT using the RE-AIM QuEST framework.

Methods:

Data collection included patient file audits (N = 540), clinician training records, interviews with stroke survivors and carers (N = 25), and focus groups with clinicians and managers (N = 24). Quantitative data were analysed descriptively, and qualitative data were thematically analysed and mapped to the Capability, Opportunity, Motivation-Behaviour model and Theoretical Domains Framework.

Results:

Reach: 31% of stroke survivors admitted to ESD service, including 80% of those with UL impairment, were eligible for mCIMT. Adoption: 17% of eligible stroke survivors were offered mCIMT, and 11% received it. Implementation: Adaptations included booster training, resource refinement, and enhancing stakeholder engagement. Maintenance: 34% of eligible stroke survivors were offered mCIMT, with 26% receiving it.

Conclusion:

mCIMT was successfully integrated into the ESD service, demonstrating that complex interventions can be implemented in resource-constrained health services. Future research should explore sustainability strategies and policy-level changes to ensure stroke survivors consistently receive evidence-based interventions.

Key practice points:

- A higher proportion of stroke survivors were eligible for mCIMT than previously reported, suggesting that many more should receive this evidence-based intervention.
- mCIMT delivery was acceptable and feasible in the ESD service, though challenges to sustained delivery remain.
- Theory-informed behavioural frameworks support the planning, delivery, and evaluation of complex rehabilitation intervention implementation in real-world settings.

The use of self-directed, or carer-assisted, digital resources in inpatient stroke rehabilitation: a scoping review

Dina Pogrebnoy[1], Jennifer Jones[2], Lourdes Joseph[2], Shahad Alsawaf[2], Pak Lau[1], Kelly Bower[2]

[1]Western Health, [2]Melbourne of University

3G: Robotics and technology, Riverbank Room 4, October 23, 2025, 13:40 - 14:25

Aim:

To examine the emerging field of digital technologies and map available evidence on acceptability, feasibility, and effectiveness for using self-directed, or carer-assisted, digital interventions in inpatient stroke rehabilitation.

Design:

A scoping review.

Methods:

Following Arksey and O'Malley's framework, a systematic search of MEDLINE, Embase, CINAHL, and Google Scholar was conducted up to October 25, 2024. Eligible studies included adult stroke survivors undergoing inpatient rehabilitation who have been prescribed a self-directed digital program aimed at enhancing capabilities, opportunities, and/or motivation for engagement. Peer-reviewed English-language publications were included. Data were extracted using a standardised form by one researcher and verified by two others. Results were synthesised narratively.

Results:

Thirteen studies (15 papers), from 10 countries, involving 860 participants, were included (7 pilot randomised control trials, 4 feasibility studies, 1 non-randomised trial, and 1 observational study). Digital interventions varied and included upper limb exergaming/robotics devices (n=4) and tablet/smartphone applications (n=9) with exercise videos. Acceptability and feasibility outcomes were overall positive with high retention rates, good adherence and no reports of adverse events. Facilitators to adoption included timetabling self-management, involving carers and offering additional support to patients with more severe impairments associated with their stroke.

Conclusion:

Findings from this review suggest that self-directed and carer-assisted digital interventions may be feasible and acceptable in inpatient stroke rehabilitation.

Key practice points:

- Clinicians should consider utilising digital interventions to promote patient engagement with self-directed activity on rehabilitation wards.
- Future research should explore most effective implementation strategies and the impact of digital interventions on long-term patient outcomes.

Preliminary testing of the Gait Aid Monitoring Device (GAMD) – A smartphone-based gait assessment tool

Meg Symington[1], Doctor Justin Fong[2], Doctor Scott Starkey[3], Mingrui Sun[2], Alexandra Williams[1]

[1]Neurological Rehabilitation Group, [2]Department of Mechanical Engineering, University of Melbourne, [3]Department of Physiotherapy, University of Melbourne

3G: Robotics and technology, Riverbank Room 4, October 23, 2025, 13:40 - 14:25

Aim:

Determine viability of GAMD's vision-based approach in neurological population through visibility of feet during the gait cycle, and accuracy of foot position measurement.

Design:

Observational cross-sectional study.

Method:

Twenty participants with neurological diagnosis who walked with single-point stick or four-wheel frame were recruited from a neurological physiotherapy practice. Participants walked 20 times along a 7 m walkway with their GAMD-mounted gait-aid while a three-dimensional motion capture system collected ground truth data.

Visibility of feet was calculated as percentage of video frames they were within smartphone camera's view. Accuracy of foot position measurement algorithm was calculated as mean error and standard deviation of each measurement when compared to ground truth.

Results:

In frame users, feet were fully visible 95.62% of time with error in relative foot position of 2.92 cm +/- 3.47 cm on the left and 2.60 cm +/- 3.62 cm on the right. Corresponds to a mean error in step length of -0.19 cm +/- 4.27 cm. In stick users, the contralateral foot was fully visible 83.12% of time and ipsilateral foot 80.71%.

Conclusion:

The GAMD can viably measure the position of the foot using its vision-based approach, resulting in meaningful step length measurements when compared to gold standard gait analysis.

Key practice points:

- Opportunities to examine clinically relevant walking paraments in real-world contexts.
- Discrepancy in visibility between gait-aids may indicate GAMD-mounted frame provides more accurate results.
- Potential role in diagnosis and monitoring of neurological conditions and quantifying responses to physiotherapy pending further validity testing.

Examining the implementation of digital vestibular rehabilitation using the RE-AIM framework: A systematic review

Shalini Jayasekera[1,2], Stephen Quick[1,2], Adam Semciw[1,2], Hazel Heng[1,2]

[1]Allied Health, Northern Health, [2]School of Allied Health, Human Services and Sport, La Trobe University

3G: Robotics and technology, Riverbank Room 4, October 23, 2025, 13:40 - 14:25

Aim: To use the RE-AIM (Reach, Effectiveness, Adoption, Implementation, and Maintenance) framework to evaluate the implementation of digital interventions for vestibular rehabilitation

Design: Systematic Review

Method: Three databases were searched from inception to January 2025. Randomised controlled trials evaluating digital interventions for vestibular dysfunction were included. Data was extracted using a 25-item RE-AIM framework tool across five dimensions: Reach, Effectiveness, Adoption, Implementation, and Maintenance. Associated papers providing additional implementation information were also included.

Results: Five studies with eight associated papers were analysed. Digital interventions included websites (n=3) and telehealth (n=2). Average reporting rates were highest for effectiveness (88%) and reach (77%), followed by adoption (69%), implementation (60%), and maintenance (15%). All studies reported intervention characteristics and clinical outcomes. However, reporting was limited for representativeness, staff expertise, implementation costs, and long-term sustainability.

Conclusion: Despite growing evidence supporting the effectiveness of digital vestibular rehabilitation, significant gaps exist in reporting implementation factors necessary for successful translation into clinical practice. Future research should adopt hybrid effectiveness-implementation designs to address these gaps and provide healthcare organisations with comprehensive information needed for sustainable implementation.

Key practice points:

- It is important to identify and address reporting gaps in studies of digital vestibular rehabilitation.
- Developing strategies to address these gaps will allow for more effective translation of research evidence into routine clinical practice.

A longitudinal cohort study investigating lateropulsion resolution and outcomes up to one year post-stroke

Jessica Nolan[1], Angela Jacques, Erin Godecke, Clinical Michael Bynevelt, Ferry Dharsono, Barbara Singer

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5E: Symptom management, Hall B, October 24, 2025, 10:35 - 11:20

Aim:

To explore resolution of lateropulsion and its relationship with functional recovery and fall incidence up to one-year following stroke.

Design:

Prospective, longitudinal cohort study.

Methods:

Participants were enrolled from a Stroke Rehabilitation Unit. Assessments occurred at admission, discharge, and three, six, nine, and twelve months post-stroke. Outcomes measured included the Four-Point Pusher Score (4PPS), Functional Independence Measure (FIM), and recorded falls. Longitudinal outcomes were analysed using generalised linear mixed-effects models.

Results:

Data from 144 participants were analysed, with 82 (56.9%) exhibiting lateropulsion (4PPS≥1) at admission. The probability of lateropulsion resolution (4PPS=0) progressively increased among those who participated in rehabilitation physiotherapy (OR: 9.7, 28.1, 43.1, 81.3; $p<0.001$ at three, six, nine, and twelve months, respectively). The greatest FIM improvements were observed during inpatient rehabilitation across all 4PPS categories. Participants with 4PPS=1 at three months showed the greatest likelihood of post-discharge falls compared to those with 4PPS=0 ($p=0.022$).

Conclusion:

Lateropulsion resolution can continue up to one-year post-stroke, with early resolution linked to participation in rehabilitation physiotherapy. While people discharged home maintained long-term functional gains, those in residential care showed functional decline after six months. Rehabilitation teams should implement targeted falls prevention strategies. These findings can inform rehabilitation planning to optimise long-term care for people with lateropulsion post-stroke.

Key practice points:

- People with post-stroke lateropulsion benefit from ongoing rehabilitation physiotherapy after discharge from inpatient care.
- Lateropulsion should be routinely assessed and targeted falls prevention interventions should be employed.
- Supporting home discharge, where feasible, may improve long-term outcomes.

Exploring the management of isolated cervical dystonia: a survey of conservative treatment strategies

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5E: Symptom management, Hall B, October 24, 2025, 10:35 - 11:20

Aim:

To investigate the therapeutic use of conservative treatment strategies by people with isolated cervical dystonia.

Design:

Online survey

Method:

An online international survey explored the use and perceived effectiveness of botulinum neurotoxin and conservative treatments in adults living with isolated cervical dystonia, a focal idiopathic dystonia affecting the neck muscles. The data were analyzed descriptively with open-ended questions grouped into similar topics.

Results:

One hundred and twenty-eight people with cervical dystonia from Australia, New Zealand, Europe and America completed the survey. The average age of participants was 59 years, with the majority (77%) being women. Most participants (52%) had mild to moderate neck muscle spasms and their average pain score was 5/10. Two thirds (64%) of participants underwent regular botulinum neurotoxin injections for their dystonia with positive effects. Additionally, participants reported symptoms were improved by physiotherapy treatment, general exercise, heat therapy, massage and relaxation. Getting sufficient rest, support from family and friends and remaining engaged in interesting hobbies were also reported as helpful in coping with this chronic condition.

Conclusion:

In addition to medical treatment, people with isolated cervical dystonia have reported conservative treatment strategies, including physiotherapy, as helpful in managing this chronic condition in the long term.

Key practice points:

- Taking a patient centered approach will help to evolve the management of isolated cervical dystonia.
- The opinions of people with isolated cervical dystonia can guide future research and assist in the development of recommendations for physiotherapy and other conservative treatments to improve outcomes for this lifelong chronic condition.

Safer mobility behaviour assessment and intervention: Implications for people with Parkinson's disease

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5E: Symptom management, Hall B, October 24, 2025, 10:35 - 11:20

Aims: To map out existing assessments and interventions that target safer mobility behaviour for fall prevention in older adults and people with Parkinson's disease.

Design: Scoping review

Method: This study was conducted in accordance with The Joanna Briggs Institute's methodology for scoping reviews. Studies involving older adults (aged ≥65 years) and people with Parkinson's disease living in the community were included. Assessment tools with >50% of items assessing mobility behaviour and interventions with one or more components targeting safer mobility behaviour were included.

Results: Sixty-three publications were included. Ten assessment tools were identified that evaluated behavioural strategies to reduce falls or fear of falling avoidance behaviour. Although no assessments were designed specifically for Parkinson's disease, four were used for this population. In contrast, seven out of 16 interventions were designed for Parkinson's disease. Interventions involved combinations of education, movement strategy training and community practice that varied in dosage and proportion of the overall intervention.

Conclusion: Safer mobility behaviour assessments and interventions have been developed. However, there are no Parkinson's disease specific assessments. Future assessments and interventions should be designed to address the unique impact of Parkinson's disease on mobility behaviour.

Key practice points:

- Safer mobility behaviour assessments should consider the influence of disease specific motor and non-motor impairments on mobility behaviour.
- Interventions for safer mobility behaviour need to be tailored to address the heterogeneity and complexity of Parkinson's disease and delivered by a trained healthcare professional (e.g., physiotherapist).

Implementability of a task-related telerehabilitation hand training program for people with Parkinson's disease

Elizabeth Proud[1], Jannette Blennerhassett[2,3], Kimberly Miller[1,4], Meg E. Morris[5,6], Joy Tan[7], Kelly Bower[1], Andrew Evans[1,8], Jennifer McGinley[1]

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3G: Robotics and technology, Riverbank Room 4, October 23, 2025, 13:40 - 14:25

Aim:

To investigate the implementability of a home-based hand training program for people with Parkinson's disease delivered via telerehabilitation.

Design:

Randomised controlled pilot study.

Method:

We recruited 20 people with Parkinson's disease and associated hand function problems, with no major upper limb comorbidities or cognitive decline. Participants were randomly assigned to a hand training group or usual care group in equal numbers. For four weeks, training group participants were asked to independently complete a tailored, online training program three times a week and to attend a weekly telerehabilitation session. Shorter videoconferencing reviews were also delivered at eight and 12 weeks. The usual care group received no intervention. Blinded assessments occurred at baseline 4, 12 and 24 weeks. Primary outcomes evaluated implementation indices (adherence, fidelity and acceptability).

Results:

Participants' mean age was 65 (SD 10.5) years and they were classified in Hoehn and Yahr stages I-III. Seven of the 10 training participants completed ≥ 75% of the 12 online training sessions. Seven participants attended all planned videoconferences. One participant was lost to follow up after the training. Most participants strongly agreed that the program was enjoyable, convenient and the technology easy to use.

Conclusion:

The results support the implementability of this home-based training program facilitated by telerehabilitation. Further research in a larger sample could evaluate its effects on dexterity and function.

Key practice points

- Hand training for people with Parkinson's disease can be monitored and supported by telerehabilitation
- Telerehabilitation is an acceptable option to increase access to therapy

Mind-body therapies for pain after stroke: Physiotherapists' knowledge, perceptions, use and education

Nicole Prideaux[1,2], Brendon Haslam[3,4], Diana Dorstyn[2], Melissa Oxlad[2]

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5E: Symptom management, Hall B, October 24, 2025, 10:35 - 11:20

Aims:

To examine Australian physiotherapists' who work with client's post-stroke: (a) perceived knowledge, (b) perceptions (c) use, including perceived competence and barriers/enablers, and (d) education regarding mind-body therapies for persistent pain post-stroke.

Design:

Mixed-methods cross-sectional survey.

Methods:

Australian physiotherapists (n=102; working with client's post-stroke) completed an online study-specific survey. Descriptive statistics, multiple linear regressions and conventional content analysis were completed.

Results:

Physiotherapists rated their perceived knowledge, usefulness, use and competence in mind-body therapies as low. Despite this, physiotherapists reported having a role regarding providing mind-body therapies for people with pain post-stroke; the greatest barrier being a lack of training, knowledge and skills. Self-practice provided the greatest source of knowledge (with limited related entry-level education reported) and was the only significant predictor of higher knowledge, with perceived knowledge and usefulness predicting greater use. Mind-body therapies were considered beneficial post-stroke, with physiotherapists' perceptions of mind-body therapies most influenced by personal experience and scientific evidence.

Conclusions:

Despite physiotherapists considering mind-body therapies beneficial and a part of their role, overall perceived knowledge, use, and competence were low. Self-practice, rather than formal education, influenced physiotherapists' perceptions and predicted higher knowledge, with perceived knowledge and usefulness predicting greater use. More

scientific literature and experiential learning opportunities during entry-level university education may be warranted.

Key practice points:

- Additional formal and experiential education in mind-body therapies for people with persistent pain post-stroke may increase physiotherapists' knowledge, competence and use, which may, in turn, benefit clients.

"They are not motivated" ……But, is it your approach? Using theory to improve patient adherence

Tamina Levy[1,2]

[1]Flinders University, [2]Flinders Medical Centre

8G: Adherence and dosage of therapy, Riverbank Room 5, October 24, 2025, 15:35 - 16:20

Background:

The Behaviour Change Wheel (BCW) is a synthesis of 19 frameworks which can be used to target clinician or patient behaviour change. Central to the BCW, key concepts of Capability, Opportunity, and Motivation interact to influence Behaviour (COM-B model). The COM-B model has been used extensively to inform interventions that improve patient adherence to a range of evidence-based interventions and to enhance clinician adherence to clinical practice recommendations.

Participants will have the opportunity to apply the learnings to their own clinical example, developing their skills in applying an evidence-based behaviour change model to a 'real life' example.

Objectives:

1. To develop an understanding of the principles and application of the BCW and COM-B model
2. To explore strategies for promotion of behaviour change with consideration of common barriers faced by neurological patients

Approach:

1. Set the scene: Outline of the BCW and COM-B model, plus facilitator example (10 minutes)
2. Application: exploring common barriers and enablers using COM-B – participant's own example or a case provided (5 minutes)
3. Application: selecting strategies to address barriers using COM-B – participant's own example or a case provided (5 minutes)
4. Participants will work through their own scenario to develop a preliminary action plan. Discuss how to promote long term change (5 minutes)
5. Participant engagement: Questions from the audience and opportunity for peer-to-peer learning (5 minutes)

Key practice points:

- This ‘how to’ session’ is aimed at building skills in developing and implementing theory-informed physical activity programs for people with neurological conditions

Feasibility of ultra high-dose community-based mobility training after stroke

Katharine Scrivener[1,2,3], Elisha Ball[2], Catherine Dean[2], Joanne Glinsky[4], Louise Ada[4], Petra Graham[2], Johannah Campbell[2], Karen Felton[2], Natasha Lannin[1,3]

[1]Monash University, [2]Macquarie University, [3]Alfred Health, [4]University of Sydney

8G: Adherence and dosage of therapy, Riverbank Room 5, October 24, 2025, 15:35 - 16:20

Aim: This trial aimed to assess the feasibility of delivering a high-dose mobility booster program (HiWalk) in terms of adherence to the program, safety and dose.

Design: A multi-site, assessor-blinded pilot randomised trial was conducted in two community rehabilitation gyms.

Method: Participants had a stroke 6 months to 8 years prior and were able to walk 10 metres unaided at 0.4–1.0 m/s. The experimental group received HiWalk plus usual care, while the control group received usual care alone. HiWalk consisted of 43 hours of motor training (mobility, balance, and strength) over 3 weeks. Feasibility was assessed through program adherence, safety (adverse events) and dose (repetitions).

Results: Forty-seven people with stroke participated in the trial (age: 58 years [SD 16], time post-stroke: 2.7 years [SD 2.1], baseline fast walking speed: 0.9 m/s [SD 0.4]). Feasibility was demonstrated by high adherence, with participants attending 91% (SD 13) of sessions once commenced. The program was safe, with few minor adverse events (0.4/week). Participants completed 567 (SD 171) repetitions/hour. Mobility training, including overground and treadmill walking, accounted for the highest volume (860 repetitions/hour [SD 420]).

Conclusions: The HiWalk program was feasible, with high adherence, safety, and a very high dose of mobility training.

Key practice points:

- Physiotherapists can deliver short duration, high dose mobility training safely and expect many repetitions to be achieved.
- Physiotherapists should consider including overground or treadmill walking to increase dose in community programs.

Development of a neurological strength testing protocol using handheld dynamometry

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[1]Epworth Healthcare, [2]The University of Melbourne

8H: Physical assessment, Riverbank Room 6, October 24, 2025, 15:35 - 16:20

Aims: To evaluate the safety and feasibility of strength assessment protocol using handheld dynamometry in healthy volunteers and individuals with adult-onset neurological conditions.

Design: Pilot study.

Methods: Ethical approval was obtained from Alfred HREC (92755). A neurological strength testing procedure incorporated existing tests where available and developed new tests based on peak force joint angles for each muscle/muscle group. The protocol assessed the strength of 28 upper-limb and 21 lower-limb muscles, each involving standard and variation positions. Healthy volunteers (n=15) and individuals with an adult-onset neurological condition (n=16) were recruited. Safety, standard/variation test frequency and proportion of pass/failed tests were reported.

Results: There were no adverse events in either group. The healthy volunteers could complete all 73 standard tests. People with a neurological condition completed the standard test between 53% - 100% of trials. Four to seven (24% - 41%) patients could not perform the standard test and required a variation test. This was primarily for the elbow flexors, gluteus maximus, rectus femoris, and ankle tests.

Conclusions: A strength testing protocol was developed and safely applied to healthy volunteers and people with neurological conditions.

Key practice points:

- The strength of upper/lower-limb muscles of people with neurological conditions can be assessed using handheld dynamometry.
- Participants with neurological conditions who couldn't perform standard tests were all able to complete a variation test if required.
- This strength testing protocol may be used to standardise assessment in upper/lower-limb muscles for people with neurological conditions.

Development of a patient decision aid for people with degenerative cervical myelopathy: International mixed-methods study

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8H: Physical assessment, Riverbank Room 6, October 24, 2025, 15:35 - 16:20

Aim:

Develop and user-test a patient decision aid for people with degenerative cervical myelopathy (DCM) considering surgery.

Design:

Mixed-methods study describing the development of a patient decision aid.

Method:

A draft decision aid was developed by a multidisciplinary steering group informed by the best available evidence and existing patient decision aids. People with DCM and health professionals who manage people with DCM were recruited online to provide feedback on the decision aid. Semi-structured interviews and questionnaires were used to gather feedback, refine the decision aid, and assess its acceptability. An iterative cycle of interviews, refining the aid according to feedback and further interviews, was used. Interviews were analysed using reflexive thematic analysis.

Results:

We conducted 32 interviews; 19 people with lived experience of DCM and 13 health professionals who manage people with DCM from 10 countries. Most participants rated the decision aid's acceptability as good-to-excellent.

Conclusion:

Our patient decision aid was rated as an acceptable tool by both health professionals who treat DCM and people with lived experience of DCM. This decision aid can be used by clinicians and patients to help with shared decision making following a diagnosis of DCM.

Key practice points:

- Participants highlighted a need to increase awareness of DCM, early diagnosis and effective monitoring.
- 89% of people with DCM indicated the decision aid would have made their management decision easier.
- We encourage the use of the decision aid in daily clinical practice, while a larger study evaluating its potential benefits is being planned.

Exploring physical activity and non-motor symptoms in Parkinson's using ecological momentary assessments

Amanda Still[1]

[1]*University of Otago*

8H: Physical assessment, Riverbank Room 6, October 24, 2025, 15:35 - 16:20

Aim: This study aimed to explore the use of Ecological Momentary Assessment (EMA) to examine relationships between non-motor symptoms and physical activity behaviors in Parkinson's.

Design: Non-motor symptoms exhibit variability within and across days, influenced by the interactions between symptoms and changes in physical activity under free-living conditions. Traditional retrospective measures often rely on proxy rather than direct data. EMA provides a more accurate and real-time approach to assessing these dynamics and their association with physical activity.

Methods: Eligible participants completed EMA via smartphone or paper diaries three times daily over seven days. EMA questions assessed sleep quality, momentary feelings of sleepiness, cognitive difficulties, fatigue, pain, anxiety, depression, apathy, and physical activity. On day seven, participants completed standardised questionnaires covering non-motor symptoms and physical activity levels.

Results: A total of 45 participants with Parkinson's were recruited over 13 weeks. Smartphone users (n = 36) had a 98.94% compliance rate, while paper diary users (n = 9) had a 69.31% compliance rate, with 100% retention. Feedback regarding EMA was positive. Preliminary analyses with Spearman rank correlation revealed significant associations between non-motor symptoms and physical activity. Higher physical activity was correlated with better cognitive function and lower anxiety, depression, and fatigue.

Conclusion: EMA demonstrated feasibility for assessing non-motor symptoms and physical activity in Parkinson's. Physical activity was associated with better cognition and reduced anxiety, depression, and fatigue. Future research using EMA may inform personalised treatment strategies.

Key practice points:

- Encouraging and supporting regular physical activity in people with Parkinson's may help manage non-motor symptoms

Lessons learned: Clinicians' perspectives, knowledge, and attitudes towards a stroke-integrated cardiac rehabilitation program

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9E: Stroke /Acquired brain injury, Rooms E2&E3, October 25, 2025, 10:35 - 11:35

Aim:

To evaluate the perspectives, knowledge, and attitudes of clinicians towards a stroke-integrated cardiac rehabilitation research program embedded within a rehabilitation unit.

Design:

A qualitative study based on a phenomenological approach.

Method:

One-on-one, semi-structured interviews were completed with fourteen multidisciplinary clinicians (i.e., physiotherapists, occupational therapists, psychologists, speech therapists, cardiac nurses, and a physician) working in usual care neuro- and cardiac-rehabilitation. Two independent researchers completed line-by-line coding and thematic analysis and derived relevant themes and subthemes addressing the research question.

Results:

Three main themes emerged with several relevant subthemes. The first theme was the clinicians' knowledge. Participants were aware of stroke exercise guidelines, but their content knowledge varied. The second theme was the clinicians' attitudes and beliefs towards the program. All participants believed the stroke-integrated cardiac rehabilitation program was a good idea. The third theme was program barriers and suggested adaptations, which included greater awareness of the stroke-integrated cardiac rehabilitation program, and a more flexible and adaptable program.

Conclusion:

Stroke-integrated cardiac rehabilitation was considered acceptable to most clinicians. A more flexible program may aid uptake and future implementation.

Key practice points:

- All participants believed the stroke-integrated cardiac program was a promising concept that might increase the prescription of cardiorespiratory fitness training to people with stroke.
- Barriers to future implementation of the program included the patients' fatigue levels, clinicians' knowledge of the program, program structure and hospital resources.
- A program structure and content that is more adaptable to the patients' needs may facilitate greater uptake and implementation success.

A guide to the modified tardieu scale: Implementation and evaluation of a spasticity assessment website

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9E: Stroke /Acquired brain injury, Rooms E2&E3, October 25, 2025, 10:35 - 11:35

Aim:

To develop, disseminate and evaluate a freely available spasticity assessment website using the Modified Tardieu Scale.

Design:

Implementation study

Method:

Using the Australian Physiotherapy Association 2023 Pitchfest funds, the previously published hardcopy manual titled 'A guide to the modified Tardieu Scale' (ISBN 978-0-646-80588-7) was converted into a digital resource in the form of a website. Photos and videos of the most commonly assessed upper and lower limb muscle groups were completed on both healthy individuals and patients with a neurological condition. The anatomy of each muscle group as well as the assessment protocol and additional measurement considerations were outlined. A clinical case study was developed.

Results:

A comprehensive freely available spasticity assessment website was developed (https://spasticityassessment.com/), outlining the Modified Tardieu Scale assessment protocol for 20 upper-limb and 17 lower-limb muscle groups. The website was disseminated nationally and internationally via industry, educational and special interest groups. Within the first month of release the website was viewed >15,400 times across 150 different countries.

Conclusion:

This website represents the first freely available, electronic resource that exists to outline and standardize the assessment of upper and lower limb spasticity using the Modified Tardieu Scale.

Key practice points:

- This website will assist in improving the reliability of spasticity assessment, through standardisation of assessment using the Modified Tardieu Scale.
- The digital and freely available nature of this resource may have a global impact on spasticity assessment and treatment decision making.
- This resource has the potential improve practice across teaching, research and clinical practice settings.

Optimising physiotherapist decision-making when considering tracheostomy decannulation for patients with severe acquired brain injury

Eric Dorflinger[1], Treena Seeto[1], Maeve O'Neill[1], Allison Blunt[1,2]

[1]Princess Alexandra Hospital, [2]Australian Catholic University

9E: Stroke /Acquired brain injury, Rooms E2&E3, October 25, 2025, 10:35 - 11:35

Aim:

Low levels of consciousness and difficulty measuring cough effectiveness in patients with severe acquired brain injury contribute to uncertainty around decannulation readiness. The aim of this activity was to develop and refine a pre-decannulation educational package for physiotherapists working with severe acquired brain injury.

Design:

Literature Review and Quality Activity

Methodology:

Stage one consisted of a search of the literature via databases (CINAHL, PEDro, PubMed) and grey literature for relevant reviews or clinical trials. Search terms included 'Tracheostomy decannulation OR decannulation outcomes, AND brain injury OR disorder of consciousness.' Stage two consisted of developing an educational package consisting of an evidence based, standardised pre-decannulation decision making guide, and a procedure guide for the assessment of induced peak expiratory flow.

Results:

Thirty-nine articles met search criteria for full text review, with seven considered relevant to the project aim. Literature reported that induced peak expiratory flow measured via tracheostomy was an accurate predictor of decannulation readiness, and that the Coma Recovery Scale – Revised is a more accurate predictor of decannulation readiness than the Glasgow Coma Scale. Thus, these two tools were emphasised in the education package.

Conclusion:

A pre-decannulation educational package has potential to enhance decision making and optimise outcomes for tracheostomised patients with severe acquired brain injury

Key practice points:

- Induced peak expiratory flow is an objective measure of decannulation readiness in this population.
- If considering neurological status prior to decannulation, the Coma Recovery Scale - Revised has greater prognostic value compared to the Glasgow Coma Scale.

Pathways from acute hospital for adults who remained non-ambulant one month post-brain injury

Shylie Mackintosh[1], Simon Mills[1,2], Maayken van den Berg[3]

[1]University of South Australia, [2]South Australian Brain Injury Rehabilitation Service, [3]Flinders University

9E: Stroke /Acquired brain injury, Rooms E2&E3, October 25, 2025, 10:35 - 11:35

Aim: Describe characteristics and discharge destinations from acute hospital for adults who were non-ambulant at one month post-acquired brain injury (ABI).

Design: Longitudinal, observational study.

Method: One hundred non-ambulant adults one month post-ABI were recruited from acute and sub-acute metropolitan hospitals. Clinical data, including demographics, type of ABI, discharge pathways, alertness and assistance to stand, were analysed descriptively.

Results: Participant median (IQR) age was 66 (54.5,76.3) years and 54% was male. Most ABIs related to stroke (81%) or traumatic brain injury (14%). Median (IQR) acute length of stay was 31 (20.0,44.5) days. All but 12 participants (88%) transferred from acute care to subacute rehabilitation. Remaining destinations included: care awaiting placement (n=5), transitional ward awaiting subacute rehabilitation (n=2), residential aged care (n=2), family home (n=1), disability accommodation (n=1), and one participant deceased without acceptance for rehabilitation. All participants not offered subacute rehabilitation (n=10) had a stroke diagnosis. Compared to those discharged to rehabilitation, this group were older (median age 79 / 65), had similar alertness (80% / 83%), were more likely to require lifter transfers (70% / 48%), and a similar percentage were unable to stand (20% / 17%).

Conclusion: People with complex needs after ABI are not universally provided access to rehabilitation, particularly those with stroke diagnoses. Characteristics of those who transferred to rehabilitation did not consistently differ from those who did not.

Key practice points:

- Stroke diagnosis may disadvantage assessment for rehabilitation services.
- Managing severe mobility impairment without subacute rehabilitation continues to occur for some ABI survivors.

Co-designing video resources to support self-management outside of structured therapy during inpatient rehabilitation after stroke

Dina Pogrebnoy[1], Jane Tillyard[1], Anthony Rawlings[1], Zarina Hau[1], Anna Matthews[1], Sharon Neale[1], Ellen Druce[1], Mary De Gori[1]

[1]*Western Health*

10F: Co-design and self management, Panorama Room 1&2, October 25, 2025, 11:40 - 12:40

Background:

Clinical practice guidelines recommend for stroke survivors to continue with active task practice outside of scheduled therapy. Existing, paper-based resources, have poor uptake with patients undergoing inpatient rehabilitation after stroke. Adapting current resources to digital formats fosters the potential to improve motivation and patient engagement. This "how to" session steps through the development of DigiRaS (Digital Resources after Stroke).

Objectives:

1. To outline the iterative development of the DigiRaS intervention including tips on stakeholder engagement.
2. Explore staff training needs and ways to overcome perceived and actual barriers to implementation.
3. Demonstrate the value add of a digital intervention from both the patient and staff perspective.

Approach:

1. Set the scene: Evidence for digital interventions in an inpatient setting after stroke as well as evidence for adapting existing resources utilising principles from Banduras Theory of Motivation to improve self-efficacy and self-management. (5minutes)
2. Highlight patient and staff involvement in the iterative co-design process. (5 minutes)
3. Share protocol for the intervention including type of content, prescription decision matrix, monitoring adherence and role of clinician in supporting ongoing patient engagement. (5minutes)
4. Demonstrate created content including content for patients from a non-English speaking background. (10 minutes)

5. Discuss protocol for a Bayesian optimal Phase 2 'promise of efficacy' trial. (5 minutes)

Key practice points:

- This "how to" session will showcase the process undertaken to adapt existing paper-based resources into accessible digital resources for staff to use in supporting patients to be more active during inpatient rehabilitation after stroke.

The adherence counselling toolkit: Supporting health professionals to support survivors of stroke to self-manage

Tamina Levy[1,2]

[1]Flinders University, [2]Flinders Medical Centre

10F: Co-design and self management, Panorama Room 1&2, October 25, 2025, 11:40 - 12:40

Aims: To determine the preliminary effectiveness of the ACT now Toolkit in a rehabilitation setting for (1) promoting adherence to exercise in survivors of stroke (SS) and (2) improving self-efficacy in both SS and health professionals (HP).

Design: Prospective pilot study.

Methods: The ACT now Toolkit was implemented with SS by HPs at the Flinders Medical Centre. Recruitment occurred until a sample of 30 SS and associated HPs had received the ACT now Toolkit. Adherence was measured through the use of a SS diary and HP focus groups. Confidence levels were measured using the Self-Efficacy for Exercise (SEE) for SS and Evidence-Based Practice Confidence Scale (EPIC) for HPs, at baseline and after 1 month.

Results: Preliminary analysis of available data was undertaken. SS on average adhered to 74% of their exercise programs and showed a significant improvement in their SEE scores (pre: 49.39±10.05, post: 56.44±11.15, $p<0.001$). The findings from the focus group with HPs demonstrated that the ACT now Toolkit was feasible and acceptable, facilitating conversations, shared accountability, goal setting and exercise adherence.

Conclusion: Preliminary analyses of available data demonstrates that the ACT now Toolkit is effective in a rehabilitation setting for promoting exercise adherence in SS.

Key practice points:

- The ACT now Toolkit supports exercise adherence in SS in a rehabilitation setting.
- The ACT now Toolkit supports HP with starting conversations, sharing accountability and goal setting.
- Preparation for a randomised controlled trial is underway to investigate the use of the ACT now Toolkit in individuals >6 months post-stroke.

A tailored implementation intervention sustains a regional stroke circuit class

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[1]Macquarie University, [2]University of Sydney, [3]Grampians Health Ballarat

10F: Co-design and self management, Panorama Room 1&2, October 25, 2025, 11:40 - 12:40

Aims: Despite guidelines recommending circuit classes to improve mobility for people with stroke, they were not routinely conducted in regional settings. This study aimed to develop, deliver and evaluate a tailored implementation intervention to sustain a circuit class in a regional healthcare service.

Design: An implementation study was conducted and guided by the Knowledge to Action framework with four distinct phases.

Methods: First, a retrospective audit of current circuit class practice was undertaken. Second, focus groups (based on the Theoretical Domains Framework) and a survey (based on the Normalisation Measure Development Questionnaire) were conducted to identify healthcare professionals' barriers and facilitators to circuit class delivery. Third, tailored implementation interventions were designed and delivered over six months. Fourth, sustainability outcomes were evaluated.

Results: Health professional participants (n=21) identified key barriers to circuit class delivery including a lack of training and confidence. The implementation intervention involved role modelling and training of health professionals. The average circuit class attendance per month increased and was maintained at follow-up (n=22 pre-intervention, n=32 during intervention, n=33 post-intervention). Health professionals' confidence in conducting the circuit class increased (43% pre-intervention to 92% post-intervention).

Conclusion: A tailored implementation intervention increased health professionals' confidence in conducting circuit classes and increased circuit class attendance. Sustainability was maintained six months after the intervention ceased.

Key practice points: Conducting circuit classes is sustainable in a regional setting. This methodology provides a framework that could be replicated in other regional services.

Biofeedback in Parkinson's disease: a systematic review with meta-analysis

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[1]University of Canberra, [2]University of Sydney

12G: Neurological conditions and clinician perspectives, Hall A, October 25, 2025, 14:30 - 15:15

Aim: To determine whether the addition of biofeedback to task practice is effective in improving activity limitations compared with task practice alone for people with Parkinson's disease.

Design: Systematic review with meta-analyses of randomised trials.

Participants: Adults with idiopathic Parkinson's disease.

Intervention: Biofeedback delivered concurrently during practice of sitting, standing up, standing and/or walking compared with the same amount of practice without biofeedback.

Outcome measures: Measures of activity congruent with the activity trained such as Berg Balance Scale (BBS), Timed Up and Go test (TUG), and walking speed.

Results: Twenty trials were included, involving 814 participants. Biofeedback during the practice of standing increased BBS score by 1.5 out of 56 (95% CI 0.7 to 2.3), biofeedback during the practice standing and walking decreased TUG time by 0.2 s (95% CI -1.4 to 1.8), and biofeedback during the practice of walking decreased walking speed by 0.02 m/s (95% CI -0.06 to 0.1). The quality of the evidence was high for balance, moderate for mobility, and low for walking.

Conclusion: This systematic review provides evidence that the addition of biofeedback to practice of lower limb activities is no more effective than practice alone in people with Parkinson's disease.

Key practice points:

- The addition of biofeedback to practice of standing and walking does not provide an additional benefit to practice alone in people with Parkinson's disease.

Vestibular rehabilitation in Australia and New Zealand: A survey of clinical practice

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12G: Neurological conditions and clinician perspectives, Hall A, October 25, 2025, 14:30 - 15:15

Aim:

To investigate vestibular rehabilitation practices in Australia and New Zealand, focusing on self-perceived competence, experience, education, referral pathways, clinical assessments, equipment, knowledge of benign paroxysmal positional vertigo and canalith repositioning manoeuvres.

Design:

Cross-sectional survey, using a comprehensive instrument designed, piloted and utilised in a large-scale European investigation, with permission from the original authors.

Methods:

Data were collected online through five professional practice and special interest groups in Australia and New Zealand. Analysis was descriptive and inferential.

Results:

of 130 respondents 87.7% were physiotherapists. Reported competence levels were 13.1% novice, 60.8% competent, and 26.2% expert, with 17 years median clinical and six years vestibular experience. Post-registration training was reported by 94.6%, and 83.8% of referrals came from healthcare professionals. The Clinical Test of Sensory Interaction and Balance (45.4%) and Dizziness Handicap Inventory (77.7%) were the most used physical and self-report measures, respectively. High-density foam was the most frequently used equipment for assessment (57.6%). Knowledge of benign paroxysmal positional vertigo assessment (99%) and canalith repositioning manoeuvres (98%) were nearly universal.

Conclusions:

Reported competence, years of clinical practice, vestibular rehabilitation experience, and use of outcome measures varied for Australian and New Zealand clinicians. Inexpensive equipment was most commonly used, and patients were most often referred for vestibular rehabilitation by healthcare professionals.

Key practice points:

Within an Australia and New Zealand cohort:

- Most clinicians had completed post graduate vestibular education
- Diverse assessments and equipment were used in practice
- Benign paroxysmal positional vertigo assessment and canalith repositioning manoeuvres were nearly universal

Untangling the 'web' of complex workplace injuries. Physiotherapists as leaders in return-to-work planning

Katia Gould[1]

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5F: The web of RTW, Panorama 3, October 24, 2025, 10:35 - 11:20

Background:

Clinical practice guidelines encourage physiotherapists to explore and resolve both physical and psychosocial factors when supporting injured workers to safely return to work.

However, the guidelines fall short regarding how to manage the multi-factorial nature of complex injuries.

This ‘how to’ session explores the “web” of interconnected factors that can influence workplace injury recovery and how physiotherapists can utilise their skills in negotiation, education, and problem-solving to proactively develop collaborative RTW interventions.

Objectives:

1. To develop an understanding of the inter-related factors, and competing agendas, of multiple stakeholders in workplace injury.
2. To identify pivotal opportunities when physiotherapists can influence worker recovery.
3. To explore practical strategies, emphasising pro-active collaboration with all stakeholders, to positively influence RTW outcomes.

Approach:

- Barrier Mapping: Explore the multiple domains which inter-relate in an injured worker’s recovery using a diagramatic “map” to identify where barriers may arise and key areas where physiotherapists can positively influence recovery trajectories.
- Why physiotherapists are well-positioned to identify and manage psychosocial factors in workplace injury management.
- ‘How to’ of practical conversation tools, and factors to consider, when navigating ‘tricky’ conversations with key stakeholders.
- Using non-confrontational language, motivational interviewing principles and participants’ existing skills to align goals.

- Case studies to explore unhelpful attitudes and set expectations to optimise recovery pathways.

Key practice points:

- This how-to session aims to help participants to “untangle the web” of interconnected factors that can influence recovery and provide practical skills to identify and resolve barriers in complex workplace injury.

Social network analysis: Safety communication and safety performance, does gender impact Australian mining crews?

Charlotte Gerner[1], Jodi Oakman[1]
[1]*UniSA*

5F: The web of RTW, Panorama 3, October 24, 2025, 10:35 - 11:20

Aims: To examine whether a correlation exists between communication patterns and safety performance in the mining industry, and the impact of gender on communication patterns.

Design: Observational cross-sectional study

Methods: All-male and mixed-gender mining crews, undertook surveys on safety communication patterns for providing and receiving safety information. Social network and statistical analyses were used to explore crew networks to compare communication patterns of crews and individuals and safety performance.

Results: of the 14 crews eligible for the study, nine crews were included. No discernible link was identified between safety communication patterns or crew gender mix and safety performance. Mixed-gender crews were more reliant on informal safety communication. From the 43 individuals from mixed-gender crews included in analysis, women were found to provide significantly less formal safety communication than men, 0.26 ($p<0.05$) less out-degree centrality and 0.14 ($p<0.05$) out-closeness centrality, meaning they are less active in providing safety information and information takes longer to reach crew members.

Conclusions: Gender does not appear to affect safety performance and reliance on informal communication methods rather than formal ones can place minority groups at risk of missing critical safety details. Supervisors must provide all workers with the opportunity to share feedback and safety ideas.

Key practice points:

- To improve health and safety in mining, supervisors need to ensure all crew members have equal access to safety information.
- Promoting women into supervisory roles and treating each crew member equally are essential steps toward fostering inclusion, improving safety, and protecting health.

Assessing planetary health in healthcare: A theoretical domains framework-guided survey of beliefs, knowledge, and motivation

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7H: Global perspectives, Riverbank Room 4, October 24, 2025, 14:15 - 15:00

Aim:

To explore planetary health and sustainability beliefs, knowledge, and motivation of healthcare professionals and students.

Design:

Cross-sectional survey.

Method:

A cross-sectional online survey based on the Theoretical Domains Framework was distributed to Australian healthcare professionals and students from June to August 2024. The survey explored attitudes, barriers and enablers to sustainability behaviours, current knowledge levels, topics of interest, and preferred education delivery modes. Data were analysed descriptively, and differences between groups were examined using independent t-tests.

Results:

A total of 1267 respondents completed the survey. The majority (82%) were interested/very interested in planetary health. Key enablers for sustainability were ‘social/professional role / identity’ and ‘optimism’. Several barriers were identified including ‘knowledge/skills’ and ‘environmental context and resources.” Knowledge of planetary health and sustainability concepts was average across the cohort with ~59%

correctly responding to knowledge questions. It was identified that the association between climate and health was a key topic of interest, and workshop and practical-based learning were the preferred methods of education delivery for the majority (65%).

Conclusion:

The healthcare community recognises the importance of planetary health but struggles with implementing behaviour change into their professional practice. Key interventions to target in future work include enhancing knowledge, practical skill training and rewarding/recognising those who successfully implement sustainable behaviours in everyday practice.

Key practice points:

- There is a strong interest in planetary health and sustainability education amongst Australian healthcare professionals and students.
- Increasing sustainability knowledge and practical skills are required to empower the health workforce to address climate challenges.

The development of Australian occupational health physiotherapy practice from 1970-1990: A qualitative descriptive study

Lee Curtis[1], Rose Boucaut[2], Steve Milanese[3], Caroline Adams[2]

[1]PhysioFresh Solutions, [2] University of South Australia, [3]Swinburne University of Technology

7H: Global perspectives, Riverbank Room 4, October 24, 2025, 14:15 - 15:00

Background:

The specialty of occupational health and ergonomics within physiotherapy was established for over 40 years within the Australian Physiotherapy Association.

Purpose:

To investigate how this discipline developed and gain insight into the Australian context in which OHP formed. The study aimed to capture and record historical information from pioneers in this field.

Methods:

A qualitative descriptive approach was taken to explore OHP practice history with eight occupational health physiotherapists registered and working in OHP in Australia during the 1970-1990 period.

Physiotherapists participated in semi-structured interviews via videoconference. Interview questions were informed by the seven Australian Physiotherapy Association Professional Practice Standards in Occupational Health and Safety Physiotherapy (2012). Interview transcripts were inductively analysed to derive themes and sub-themes.

Results:

Four main themes emerged from the data. First, the significance of the repetitive strain injury epidemic. Second, the ineffective medical response to repetitive strain injury (RSI). Third, the barriers of conventional physiotherapy education and practice, and legislation. Finally, the opportunity for an alternative approach created by physiotherapists' willingness and ability to engage, and legislative reforms.

Conclusion:

To the best of our knowledge this is the first primary study to identify the contextual factors that influenced the development of Australian occupational health

physiotherapy in the formative years. Future study to capture information from practitioners working in the subsequent 35 years seems timely (1990 - present).

Key practice points:

- Our pioneers were brave in their ambitions.
- They worked in uncharted territory with practical solutions in a health crisis.

Reflections from the International Federation of Physiotherapists working in Occupational Health and Ergonomics (IFPOHE)

Rose Boucaut[1]
[1]University of South Australia

7H: Global perspectives, Riverbank Room 4, October 24, 2025, 14:15 - 15:00

Aim:
To present reflections on involvement in the World Physiotherapy specialty group in occupational health and ergonomics (IFPOHE).

Design:
Autoethnography is a research method using personal experience to understand social phenomena. This method is useful to make sense when investigating organisational practices and discourse.
Method: Using Driscoll's model of reflection: "what?, so what? and what now?" this deliberation is conducted with a story telling approach to describe how specialty group formation came about, subsequent development, and future aspirations.

Results:
The voyage towards World Physiotherapy specialty group formation in occupational health and ergonomics began with conversations in Vancouver, 2007. The journey was arduous with twists and turns, coming to fruition in Geneva, 2019. With formation came the running of the group which continues as work in progress, with highlights along the way. In the future, our goals and ambitions embrace wanting to be inclusive and diverse, while global inequalities abound.

Conclusion:
There are opportunities for OHPA members to be part of international conversations and to help shape practice.

Key practice points:
- The APA is a member organisation of World Physiotherapy, and OHPA is a member organisation of IFPOHE, so through OHPA members have an international voice
- Opportunities abound for Australian OHPs interested in expanding their horizons beyond our national borders to share knowledge and skills.

The future of people handling from weightlifters to robots

Susan Mitchell[1]

[1]*Pinnacle Workplace Consultants*

9F: Workplace innovation and design, Riverbank Rooms 7&8, October 25, 2025, 10:35 - 11:35

Background: As Physiotherapists working in People Handling we are responsible for recommending equipment that facilitates a patient's recovery but also maintains the health and safety of workers. This session will briefly review the history of people handling equipment and techniques and introduce innovative technologies that will reduce effort and improve safety. It will include consideration of the use of robots - and reference work currently progressing in Japan where robotics are being developed to assist with transfers such as sit to stand. Whilst the idea of robots performing physical tasks seems to have potential, the reality is that it may not be the panacea it is claimed. There is also an increase in the use of exo-skeletons in a range of workplaces, so these will be discussed in the context of people handling.

Aims/Objectives: Physiotherapists need to understand the range of available equipment to reduce effort and improve safety of transferring people. It is useful to understand developments in people handling equipment as well as moves towards exo-skeletons as risk control strategies.

Participants will consider a common task (sit to stand) and determine range of controls showing progression from manual assistance to equipment.

Approach: Small group work (depending on audience numbers), lecture, Q&A discussion

Key practice objectives:

Following the session, the audience will:

- Be able to recognise a range of control strategies to minimise risk of injury
- Identify how evolution of equipment has benefitted Physiotherapists working with people
- Understand limitations of equipment including automation/exoskeletons in healthcare

The experience of work-related musculoskeletal disorders in Australian fly-in fly-out and drive-in drive-out workers

Damian Cribbin, Rwth Stuckey
[1]*Serco (clinical Role) / Latrobe Alumni*

10G: Hazardous manual tasks and MSD, Panorama 3, October 25, 2025, 11:40 - 12:40

Aim:
Fly-in fly-out or drive-in drive-out employment remains the predominant work arrangement in Australian mining. To date, research has focused on mental health outcomes of these workers; however, the impact on work-related musculoskeletal disorders remains unknown. This study aimed to identify risk and protective factors associated with these injuries to inform preventative interventions.

Design:
Study design was phenomenological. Qualitative methods were utilised to convey lived experience, acquire rich data and capture the complexity of the issue.

Methods:
12 participants were recruited using purposive and snowball sampling. An online questionnaire and semi-structured interview were undertaken, and data thematically analysed.

Results:
Several themes emerged. ‘Organisational culture’: psychosocial risk factors were prominent and included injury stigma, misogyny, bullying and poor leadership; leading to injury underreporting and mismanagement. ‘Unique work demands’: physical risk factors were influenced by extended shift durations and included confined spaces, vibrations and extreme climate. ‘Valuing community and camaraderie’ represented a clear protective factor.

Conclusion:
Fly-in fly-out/drive-in drive-out workers are vulnerable to musculoskeletal disorders with underreporting potentially obscuring the extent of the issue. Leadership must address both physical and psychosocial risk factors within this isolated environment by improving workplace culture, work design, rostering, and injury management systems. Lastly, interventions fostering community and camaraderie are valued and should be prioritised.

Key practice points

- Controlling both physical and psychosocial hazards is essential to prevent work-related musculoskeletal disorders.
- Consider the limitations of injury metrics such as lost-time injuries where underreporting is common.
- Organisations should adopt group-based interventions to mitigate psychosocial hazards such as isolation.

The cost of epicondylalgia among Queensland workers: a retrospective analysis of the WorkCover database

Bridie Webber[1], Brooke Coombes[1], Leanne Bisset[1]
[1]*Griffith University*

10G: Hazardous manual tasks and MSD, Panorama 3, October 25, 2025, 11:40 - 12:40

Aim: To summarise costs and workdays lost for epicondylalgia and explore factors influencing costs.

Design: WorkCover Queensland data retrospective analyses.

Method: Claim data was extracted from WorkCover Queensland for elbow 'Epicondylitis' between 2017 and 2021. Total cost, healthcare and indirect costs were calculated. Univariate and multivariate generalised linear models explored how age, sex, occupation and mechanism of injury impacted costs.

Results: 2,726 claims cost $37,200,000 with an average 43 workdays lost per claim. Claims were predominant for males, workers aged 45 to 59 years, manual workers and a non-traumatic mechanism. Healthcare costs ($12.1M, 33% of total costs) were expended on medical practitioners (85% claims; 34% healthcare costs), physiotherapy (62% claims; 17% healthcare costs; 6% of total costs) and other rehabilitation (e.g., massage, work assessment; 56% claims). Almost half of claimants had diagnostic imaging. Indirect costs ($22.6M; 61% of total costs) were for salary compensation (44% claims) and pharmacy (19% claims). Total and healthcare costs were higher for manual workers ($p = 0.003$), while individually, healthcare costs were higher for women, workers aged 25-59 years and manual workers ($p < 0.001$ to 0.02).

Conclusion: Clinical guidelines recommend physiotherapy as first-line management, yet only 62% of workers received physiotherapy which reflected 6% of total costs. These findings have implications on policy development to ensure workers receive cost-effective evidence-based care for epicondylalgia.

Key practice points:

- Not all workers receive low-cost physiotherapy care.
- The WorkCover Queensland diagnostic label 'Epicondylitis' should be updated.
- WorkCover treatments do not reflect best-practice guidelines.

Pre- and post-operative clinical outcomes in reverse shoulder arthroplasty patients

Anna Thomson[1]

[1]*Queensland University of Technology*

1G: Innovation in shoulder rehabilitation and service delivery, Riverbank Room 4, October 23, 2025, 11:05 - 11:50

Aim:

To investigate how pre-operative shoulder pathology affects clinical range of motion (ROM), strength, and patient-reported outcome measures (PROMs) in patients undergoing reverse shoulder arthroplasty (RSA), and to evaluate how pre-operative factors may influence post-operative outcomes.

Design: A prospective case series examining clinical and patient-reported outcomes before RSA and six months post-operatively.

Method:

Participants were recruited from a private orthopaedic clinic between July 2024- April 2025. Clinical ROM (forward elevation, lateral elevation, external rotation), muscle strength (handheld dynamometry), and PROMs (VAS, ASES, SST, UCLA, Constant) were recorded pre-operatively and will be reassessed post-operatively.

Paired t-tests compared surgical and non-surgical shoulders; subgroup analyses examined differences between osteoarthritis (OA) and cuff tear arthropathy (CTA) Groups. Cohort includes 44 participants (mean age 72.35 years; 22 female, 22 male): 20 with CTA only, 11 with OA only, and 13 with other/combined pathologies.

Results:

Pre-operative data showed significantly reduced ROM ($p < 0.001$), strength ($p < 0.05$), and PROM scores ($p < 0.001$) in affected vs. non-affected shoulders. CTA patients demonstrated significantly greater ROM than OA patients ($p < 0.05$), with no significant subgroup differences in strength or PROMs. Post-operative data collection continues.

Conclusion:

Shoulder pathology contributes to reduced pre-operative function. Variations in ROM between diagnostic groups may guide surgical planning and rehabilitation. Longitudinal data will improve recovery prediction and guide rehabilitation.

Key practice points:

- Pathological shoulders show reduced pre-operative ROM, strength, and function.
- ROM differs by pathology; strength and PROMs do not.
- Longitudinal tracking will guide outcome prediction and rehab strategies.

Delivering fracture care in a virtual setting: A qualitative study of clinician experiences

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1G: Innovation in shoulder rehabilitation and service delivery, Riverbank Room 4, October 23, 2025, 11:05 - 11:50

Aim:

To explore the experiences of clinicians delivering fracture care in a virtual setting and elicit solutions for optimal implementation of virtual fracture care addressing sustainability of hospital resources.

Design:

Qualitative interview study

Method:

Semi-structured interviews with 29 clinicians: Physiotherapists (n=24), Orthopaedic doctors (n=4) and Nurses (n=1) across three countries (Australia, the UK and Canada) involved in the delivery of virtual fracture care. Participants were purposively sampled to ensure a range of clinician types, level of experience, and practice locations. Interviews were audio recorded, transcribed verbatim and analysed thematically using Framework analysis.

Results:

Interviews ranged from 20-65 minutes duration. The main themes identified were broad acceptance of virtual fracture models of care; virtual fracture clinics improving the sustainability and longevity of hospital resources for management of patients with fractures; and the influence of Orthopaedic consultants and health facility strategies on clinic framework development. Barriers identified were the varied training and resource requirements evident across hospitals.

Conclusion:

We found overall acceptance that fracture care was both safe and effective when delivered virtually with appropriate training and frameworks in place and that this model of care optimised the use of hospital resources.

Key practice points:

- Sustainability of the orthopaedic fracture service is aided by the addition of virtual fracture clinics where physiotherapists can take on a primary role.
- Learnings from established virtual fracture clinics will shape the protocols and training requirements when implementing future services.

Improving consumer osteoarthritis knowledge through eLearning: RCT findings

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1G: Innovation in shoulder rehabilitation and service delivery, Riverbank Room 4, October 23, 2025, 11:05 - 11:50

Aim:

Evaluate the effects of an eLearning course about osteoarthritis (OA) on OA knowledge and pain self-efficacy for people with knee/hip OA.

Design: RCT

Methods:

124 community volunteers with knee and/or hip OA were randomised to i) 4-week self-directed eLearning or ii) electronic OA pamphlet (control). Primary outcomes: OA knowledge (Osteoarthritis Knowledge Scale (OAKS), score range 11-55) and pain self-efficacy (Arthritis Self-Efficacy Scale (ASES pain subscale), 1-10) over 5 weeks. Secondary outcomes: fear of movement, exercise self-efficacy, OA illness perceptions, OA management and care seeking intentions, physical activity levels, and use of physical activity/exercise, weight loss, pain medication, and care seeking to manage joint symptoms.

Results:

117 (94%) participants (mean (SD) age, 67.1 (8.8) years; 91 (77.8%) female) provided 5-week primary outcomes. At 5 weeks, eLearning showed greater improvements in OA knowledge (mean difference 5.3 (95% CI 2.5, 8.2), <0.001), which was sustained at 13 weeks (4.6 (2.1, 7.0), <0.001). No evidence of between-group differences in pain self-efficacy at 5 or 13 weeks. Secondary outcomes: between-group differences for exercise self-efficacy and OA illness perceptions at 5 weeks, and fear of movement and use of weight loss to manage joint symptoms at 13 weeks, favoured eLearning group.

Conclusions:

Interactive self-directed eLearning led to immediate and sustained improvements in knowledge about OA and its recommended management but not pain self-efficacy when compared to an electronic information pamphlet (typical OA education intervention).

Key practice point:

- The free eLearning is a useful and time efficient method of providing comprehensive and consistent patient education for hip/knee OA.

Contraindications for self-directed rehabilitation following elective total hip replacement: an e-Delphi study

Ben Glenwright[1,2], Trevor Russell[2,3], Michelle Cottrell[2,4], Ben Parkinson[1,5], Shaun O'Leary[2,4]

[1]Cairns Hospital, [2]University of Queensland, [3]RECOVER Injury Research Centre, [4]Royal Brisbane and Women's Hospital, [5]Cairns Orthopaedic Clinic

5G: Rehabilitation barriers post THR / ACLR techniques and outcomes, Riverbank Rooms 2&3, October 24, 2025, 10:35 - 11:20

Aim:

To establish expert consensus on patient characteristics and clinical indicators that contraindicate self-directed rehabilitation following Total Hip Replacement (THR).

Design:

A consensus-building method using multiple rounds of electronic surveys to refine expert opinions.

Methods:

A two-round e-Delphi study (Oct–Dec 2024) engaged Australian orthopaedic surgeons and physiotherapists. Round 1 collected participant demographics and ratings for 24 patient characteristics and 16 clinical indicators, sourced from a scoping review with open text for additional input. Round 2 refined and re-rated these items, incorporating eight new indicators. Consensus was pre-defined as ≥50% agreement on categorisation into “Unimportant,” “Potentially Contraindicates,” or “Contraindicates.”

Results:

Seventy-four participants (9 orthopaedic surgeons, 65 physiotherapists) completed Round 1, and 53 (3 surgeons, 50 physiotherapists) completed Round 2, with a 70.6% response rate. Consensus was achieved on six definitive contraindications: cognitive impairment (98% consensus), uncontrolled systemic disease (60%), non-independent mobility (58%), significant postoperative (83%), and intra-operative complications (75%), and non-weight-bearing orders (60%). Additionally, 22 patient characteristics and nine clinical indicators, such as metastatic disease, inflammatory arthritis, and extended hospital admissions, were identified as potential contraindications.

Conclusions:

Key stakeholders reached consensus on factors contraindicating self-directed rehabilitation following THR in Australia. The identified factors emphasise the importance of assessing individual risk to ensure safe and effective care.

Key practice points:

- The study identified key patient characteristics and clinical indicators that contraindicate self-directed rehabilitation following THR in the Australian healthcare context.
- Future research should include patient perspectives and evaluate implementation of these findings to ensure equitable and effective rehabilitation services.

"I dismissed home rehab": Qualitative exploration of joint replacement rehabilitation in the private hospital setting

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5G: Rehabilitation barriers post THR / ACLR techniques and outcomes, Riverbank Rooms 2&3, October 24, 2025, 10:35 - 11:20

Aim:

At a large private hospital, utilisation of inpatient rehabilitation remains high after elective hip or knee replacement despite the prevailing evidence regarding its lack of superiority and clinical need. This qualitative sub-study aimed to explore the influence of a nudge letter on patients' decision-making around rehabilitation pathways.

Design:

Qualitative study nested within a randomised controlled trial.

Methods:

Using behaviour-change principles, we designed, user-tested and evaluated a 'nudge letter' sent pre-operatively to patients that encouraged a Rehabilitation-at-Home pathway. Individual semi-structured interviews were conducted 3 months post-surgery. Interviews were recorded and transcribed, with descriptive codes assigned to text segments and grouped into main themes.

Results:

Three themes emerged from the interviews with 25 participants (20 knee, 5 hip replacements, mean age 72): 1) Little impact of the 'nudge' on their rehabilitation pathway due to their established decisions and amid the volume of information received pre-operatively; 2) Patients reacted positively or negatively towards the letter depending on their discharge preference; 3) Patients wanted the "full treatment" and "psychological support" provided by inpatient rehabilitation, and did not want to be left "high and dry" at home.

Conclusion:

Our findings highlight the difficulty in improving the uptake of Rehabilitation-at-Home programs after joint replacement in private hospital settings, given pre-existing patient preferences.

Key practice points:

- Identifying and testing innovative ways of reducing the use of inpatient rehabilitation where there is no clear clinical need remains a key priority
- Discharge planning discussions that highlight the appropriateness of home-based rehabilitation should commence as early as practicable.

Incidence of orthostatic intolerance-type events after hip and knee arthroplasty: a prospective observational feasibility study

Marie March[1,5], Jarrod York[2], William Du[2], Jett Ho[2], Deshitha Hewawasam[1], Mitch Wolden[3], Nick Vertzyas[2,4], Sean Mungovan[1]

[1]St Vincent's Private Hospital Sydney Allied Health Services, [2]School of Medicine, University of Notre Dame Sydney, [3]Physical Therapy Department, University of Jamestown, [4]Department of Orthopaedics, St Vincent's Private Hospital Sydney, [5]Faculty of Medicine and Health, University of Sydney

9G: Improving knee outcomes with or without arthroplasty, Panorama Room 1&2, October 25, 2025, 10:35 - 11:35

Background:

Successful enhanced recovery pathways for elective arthroplasty require safe, early mobilisation post-operatively. Orthostatic intolerance-type events often limit achievement of early mobilisation goals. Continuous blood pressure measurement may allow real-time detection of orthostatic hypotension and understanding of orthostatic intolerance-type events.

Aims:

To determine feasibility of continuous blood pressure measurement in a peri-operative hip or knee arthroplasty cohort using a standardised mobilisation protocol.

To determine incidence of orthostatic intolerance-type events and orthostatic hypotension.

Methods:

Prospective observational feasibility cohort study. Sociodemographic and continuous blood pressure data were collected before surgery during an active stand test and standardised mobilisation using the Finapres NOVA. Incidence of orthostatic intolerance type-events and continuous blood pressure data was collected during standardised mobilisation with physiotherapy on the same-day and first day after surgery. Feasibility data was also collected. Descriptive analysis is presented with consensus definitions used for orthostatic hypotension sub-types.

Results

Data from 36 participants was analysed, participant retention 84%; data validity was >80% at all time points bar one.

THA participants: mean age 68 (SD 9), mean BMI 27 (SD 5), 55% male. TKA participants: mean age 74 (SD 6), mean BMI 28 (SD 5), 74% female.

Incidence of orthostatic intolerance during baseline active stand testing was 33%. Incidence of orthostatic hypotension was 37-44% (3 subtypes).

During same-day mobilisation, incidence of orthostatic intolerance-type events was 40% and orthostatic hypotension 24-63%.

During first day mobilisation, incidence of orthostatic intolerance-type events was 26%, and orthostatic hypotension 18-46%.

Conclusion

It is feasible to use continuous blood pressure measurement in arthroplasty.

The Addition of a Lateral Extra-Articular Procedure to Anterior Cruciate Ligament Reconstruction Improves Clinical Outcomes.

Adrian Kan[1,2], Tayla English[1], Allanah Penny[1], Jordan Franic-Smith[1], Francois Tudor[2], Larissa Sattler[1]

[1]Bond Institute of Health and Sport, [2]Gold Coast Hospital and Health Service

5G: Rehabilitation barriers post THR / ACLR techniques and outcomes, Riverbank Rooms 2&3, October 24, 2025, 10:35 - 11:20

Aim:

To evaluate whether the addition of a Lateral Extra-Articular Procedure (LEAP) to Anterior Cruciate Ligament Reconstruction (ACLR) yields superior outcomes compared to isolated ACLR.

Design:

Systematic literature review and meta-analysis

Methods:

Five databases were systematically searched for randomized controlled trials (RCTs) comparing ACLR with the addition of a LEAP versus isolated primary ACLR. Studies were included in meta-analysis when comparable outcome measures at equivalent time points were reported in at least two studies.

Results:

Fifteen RCTs were included in this review with ten eligible for meta-analysis. Meta-analysis demonstrated the addition of a LEAP significantly reduced rotatory instability (RR 1.45 [95%CI 1.17, 1.79]; p=0.0006) and graft rupture rates (RR 0.21 [95%CI 0.08, 0.55]; p=0.001). Short-term postoperative morbidity, including heightened pain, joint stiffness, and reduced muscle strength in the LEAP group, resolved by 6-12 months post-surgery. No association between LEAPs and accelerated knee osteoarthritis was identified.

Conclusion:

ACLR with the addition of LEAPs demonstrates superior clinical outcomes compared to isolated ACLR. Although early postoperative outcomes favoured isolated ACLR regarding pain and function, these effects resolved within 6-12 months. Current evidence remains insufficient to establish a relationship between LEAPs and accelerated knee osteoarthritis.

Key practice points

- The addition of LEAPs to primary ACLR reduces graft rupture rates and rotatory instability.
- Early post-operative morbidity from LEAPs resolves by 6-12 months post-surgery.
- For ACLR patients with the addition of a LEAP, rehabilitation should address increased pain, stiffness, and muscle weakness during the first 6-12 months.

Quadriceps versus hamstring and patellar tendon autografts for ACL reconstruction: A systematic review and meta-analysis

Ty White[1], Matthew Castro[1], Lucas Antonio[1], Wayne Hing[1], Francois Tudor[2], Larissa Sattler[1]

[1]Bond Institute of Health and Sport, [2]Gold Coast University Hospital, Department of Orthopaedics

5G: Rehabilitation barriers post THR / ACLR techniques and outcomes, Riverbank Rooms 2&3, October 24, 2025, 10:35 - 11:20

Aim:

To compare quadriceps tendon (QT) autografts with hamstring tendon (HT) and bone-patellar tendon-bone (BPTB) autografts for primary anterior cruciate ligament reconstruction.

Design:

Systematic review and meta-analysis.

Methods:

Databases were searched for RCTs comparing QT with HT, and BPTB autografts in primary anterior cruciate ligament reconstruction (ACLR). Study selection followed the PRISMA guidelines, with methodological quality assessed via the Cochrane risk-of-bias tool and the GRADE for certainty of evidence. Outcomes included graft failure, donor site morbidity, complications, clinical measures, functional outcomes, and PROMs. Meta-analysis determined pooled effects on eligible outcomes.

Results:

Twelve RCTs (636 patients) showed no differences in graft failure rates (RR, 1.00 [95% CI, 0.97 to 1.04]; $p = 0.83$). QT demonstrated lower donor site morbidity compared to HT and BPTB autografts (RR, 1.45 [95% CI, 1.24 to 1.70]; $p < 0.001$). For strength outcomes, QT showed superior hamstring strength and hamstring:quadriceps ratio, while HT demonstrated greater quadriceps strength. Joint laxity and most PROMs were comparable between groups, with the exception of KOOS at 12 months, which favoured HT and BPTB autografts.

Conclusions:

QT autografts demonstrate equivalent graft failure, laxity, and most PROMs compared to HT and BPTB autografts, while offering significantly lower donor site morbidity and better hamstring strength preservation in primary ACLR.

Key practice points:

- All three autograft types (QT, HT, BPTB) yield comparable ACLR outcomes despite specific complications and strength differences.
- Standardised reporting of graft failure and post-operative complications is needed in future research.
- Patient-specific factors and rehabilitation goals should guide individualised graft selection.

The Early pain intervention after knee replacement model of care: Qualitative study exploring stakeholders' views

Navneet Chadha[1,2], Joshua R. Zadro[1,2], Sam Adie[3], Ian Harris[1,2,3], Ilana Ackerman[4], Deanne Jenkin[3], Giovanni E. Ferreira[1,2]

[1]Sydney School of Public Health, Faculty of Medicine and Health, The University of Sydney, [2]Institute for Musculoskeletal Health, Sydney Local Health District, [3]Faculty of Medicine & Health, School of Clinical Medicine, The University of New South Wales, [4]Musculoskeletal Health and Wiser Health Care Units, School of Public Health and Preventive Medicine, Monash University

9G: Improving knee outcomes with or without arthroplasty, Panorama Room 1&2, October 25, 2025, 10:35 - 11:35

Aim:

To understand stakeholders' views of the 'Early Pain Intervention after Knee replacement' model of care which we are adapting from the United Kingdom 'Support and Treatment After Replacement' care pathway to the Australian context.

Design:

Qualitative study

Method:

Semi-structured individual interviews were undertaken with Australian-based physiotherapists (n=20), orthopaedic surgeons (n=15), general practitioners (n=14), patients with persistent post-operative pain (n=9), health-fund managers (n=2) and a nurse practitioner (n=1). A pre-interview screening questionnaire captured demographic and professional characteristics which were used to purposively sample participants. Interviews were audio-recorded, transcribed, and analysed using inductive thematic analysis.

Results:

Themes identified included stakeholders' acceptability of the model of care in terms of its benefits and challenges; clinicians' preparedness to recognise and manage persistent knee pain post knee replacement; patient's post knee replacement journey; and an opportunity to incorporate the patient's voice.

Conclusion:

The stakeholders' feedback has been positive and widely accepting of the 'Early Pain Intervention after Knee replacement' model of care; however, identified challenges

including motivation for participation, the need for greater clinician readiness and complexities of patient's pain management that will need to be addressed.

Key practice points

- There are currently no coordinated models of care for persistent pain management after knee replacement in Australia.
- The 'Early Pain Intervention after Knee replacement' will be the first model adapted to improve care coordination, including for people living in rural areas.
- By addressing key barriers, this model has the potential to create an open, efficient system that optimizes patient-centred care and informs Australia-wide implementation.

Enhanced recovery pathways reduce length of stay and improve outcomes in hip and knee arthroplasty

Larissa Sattler[1], Elizabeth Puze[2], Kendal Sands[2], William Talbot[2]

[1]Bond Institute of Health and Sport, [2]Gold Coast Hospital and Health Service

9G: Improving knee outcomes with or without arthroplasty, Panorama Room 1&2, October 25, 2025, 10:35 - 11:35

Aim:

To synthesize evidence from randomized controlled trials (RCTs) comparing Enhanced Recovery After Surgery (ERAS) protocols with standard care for primary hip and knee arthroplasty.

Design:

Systematic review of randomized controlled trials.

Method:

A comprehensive search of four databases identified RCTs comparing enhanced recovery pathways with standard care in hip and knee arthroplasty. Primary outcome was length of stay, with secondary outcomes including patient-reported outcomes, functional measures, and complications. Assessment of methodological quality was performed using the Cochrane risk-of-bias tool. Narrative and tabular synthesis was utilised for all individual studies and comparisons between ERAS and standard care pathways were grouped and reported on.

Results:

Five RCTs (710 patients) met inclusion criteria. ERAS pathways reduced length of by an average of 4.7 days compared to standard care. Patients in ERAS protocols demonstrated superior early functional recovery, particularly in the first postoperative week, with improved performance in mobility tests and daily activities. Patient-reported outcomes generally favored ERAS protocols, though measurement heterogeneity limited synthesis. No studies reported increased complications with ERAS implementation.

Conclusion:

ERAS pathways significantly reduce length of stay following primary hip and knee arthroplasty while improving early functional recovery and without compromising patient safety. While early functional benefits were evident, standardisation of outcome measures is needed to improve comparability across studies.

Key practice points

- Enhanced recovery pathways reduce hospital length of stay without increasing complications.
- Early postoperative mobility and function are improved with enhanced recovery.
- Further research is needed to refine protocols and standardise outcome measures.

Incidence of orthostatic intolerance-type events after hip and knee arthroplasty: a prospective observational feasibility study

Marie March[1,5], Jarrod York[2], William Du[2], Jett Ho[2], Deshitha Hewawasam[1], Mitch Wolden[3], Nick Vertzyas[2,4], Sean Mungovan[1]

[1]St Vincent's Private Hospital Sydney Allied Health Services, [2]School of Medicine, University of Notre Dame Sydney, [3]Physical Therapy Department, University of Jamestown, [4]Department of Orthopaedics, St Vincent's Private Hospital Sydney, [5]Faculty of Medicine and Health, University of Sydney.

9G: Improving knee outcomes with or without arthroplasty, Panorama Room 1&2, October 25, 2025, 10:35 - 11:35

Background:

Successful enhanced recovery pathways for elective arthroplasty require safe, early mobilisation post-operatively. Orthostatic intolerance-type events often limit achievement of early mobilisation goals. Continuous blood pressure measurement may allow real-time detection of orthostatic hypotension and understanding of orthostatic intolerance-type events.

Aims:

- To determine feasibility of continuous blood pressure measurement in a peri-operative hip or knee arthroplasty cohort using a standardised mobilisation protocol.
- To determine incidence of orthostatic intolerance-type events and orthostatic hypotension.

Methods:

Prospective observational feasibility cohort study. Sociodemographic and continuous blood pressure data were collected before surgery during an active stand test and standardised mobilisation using the Finapres NOVA. Incidence of orthostatic intolerance type-events and continuous blood pressure data was collected during standardised mobilisation with physiotherapy on the same-day and first day after surgery. Feasibility data was also collected. Descriptive analysis is presented with consensus definitions used for orthostatic hypotension sub-types.

Results:

Data from 36 participants was analysed, participant retention 84%; data validity was >80% at all time points bar one.

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During first day mobilisation, incidence of orthostatic intolerance-type events was 26%, and orthostatic hypotension 18-46%.

Conclusion: It is feasible to use continuous blood pressure measurement in arthroplasty.

Pain catastrophising and resilience influence outcomes following total knee arthroplasty

Isabelle Kris[1], Adrian Kan[1,2], William Talbot[2], Wayne Hing[1], Larissa Sattler[1]

[1]Bond Institute of Health and Sport, [2]Gold Coast Hospital and Health Service

11H: Challenging knee arthoplasty patients - origin and opportunity, Hall B, October 25, 2025, 13:40 - 14:25

Aim:

To examine correlations between pre-operative pain catastrophising and resilience with post-operative outcomes in primary total knee arthroplasty (TKA) patients.

Design:

Systematic review

Methods:

Five databases were systematically searched from inception until July 2024. Cohort studies investigating correlations between pre-operative pain catastrophising or resilience and post-operative outcomes in TKA patients were included. Methodological quality was assessed using the Joanna Briggs Institute Critical Appraisal Checklist. Results of individual studies were extracted and described through narrative and tabular synthesis. Study comparisons between pre-operative psychological measures and post-operative outcomes were grouped and reported on.

Results:

Fourteen studies (2,506 patients) of overall moderate methodological quality were included. Pain catastrophising showed statistically significant correlations with post-operative pain intensity and self-reported functional outcomes in 8/10 and 7/9 studies, respectively. Lower pre-operative resilience was associated with reduced post-operative self-reported function and physical performance in 2/3 studies. However, neither pain catastrophising nor resilience demonstrated consistent correlations with objective physical performance measures, analgesic requirements, other psychometric outcomes, or length of hospital stay.

Conclusion:

Pre-operative pain catastrophising consistently influences post-operative pain and functional outcomes following TKA, while resilience's impact was less conclusive.

Key practice points:

- Pre-operative psychological screening, particularly for pain catastrophising, may identify patients at risk of suboptimal outcomes who could benefit from targeted psychological interventions before undergoing TKA.
- Patients with high pain catastrophising may require additional support during rehabilitation, as their heightened pain perception can lead to avoidance behaviours that limit functional recovery and compromise surgical outcomes.

Curriculum for paediatric physiotherapy professional entry-level education: An international delphi survey of expert physiotherapists

Nikki Milne[1,3], Margarita Tsiros[2], Jessica Farley[1], Dianne Reidlinger[1], Kirstin Macdonald[1,3], Donna Cech[3]

[1]Bond University, [2]University of South Australia, [3]International Organisation of Physiotherapists in Paediatrics

2J: Advancing paediatric physiotherapy: Education and innovative care models, Riverbank Rooms 7&8, October 23, 2025, 11:55 - 12:40

Aim:

To achieve international consensus regarding critical paediatric content, delivery modes and assessment for professional entry-level physiotherapy programs.

Design:

4-round Delphi survey.

Method:

Forty-eight international paediatric physiotherapist experts participated to reach consensus via Qualtrics®. Consensus was defined a-priori as mean ≥4 (5-point Likert scale) or ≥70% agreement (agree/strongly agree OR disagree/strongly disagree). Rounds-1/2 identified Curriculum Content Areas (CCA). Rounds-2/3, expert panellists identified best modes of delivery and assessment. Round-4 offered barriers and facilitators to implementing curriculum content areas. Number of consensus items (n) are reported descriptively.

Results:

CCA consensus was achieved for: Typical Development (n=11 items); Atypical Development (Cardiorespiratory (n=6); Musculoskeletal (n=11), Neurological (n=13), Other (n=6)); Age-appropriate Examination Techniques (n=33), Outcome Measures (n=9); Diagnostic Scales and Classification Systems (n=3); Intervention Techniques (n=16); Family-Centred Care (n=6); Culturally-competent Care (n=6); Age- and Ability-Appropriate Care (n=2); Typical Development: Language and Communication (n=2); Atypical Cognitive and Social-emotional Development (n=4); Laws and Regulations (n=5); Health Promotion, Wellness, Fitness, and Injury Prevention for Children (n=7); Inter-professional Practice and Delegation (n=4). Consensus was achieved for modes of delivery (n=8) and assessment (n=3).

Conclusion:

International consensus regarding critical paediatric curriculum content and, modes of delivery and assessment have been reached and should guide future paediatric physiotherapy curriculum development and review globally.

Key practice points:

- Large variability exists in paediatric curriculum in physiotherapy entry-level programs internationally.
- Not all graduates of entry-level programs are trained to safely and effectively manage infants, children and adolescents.
- CCA consensus items provide guidance for curriculum development in physiotherapy entry-level programs internationally.

An advanced practice physiotherapy-led model of care is appropriate for managing children with orthopaedic variants

Emily Lean[2], Bronwyn Thompson[1], Chelsea Schultz[1], Emma Pendlebury[1], Leanne Johnston[1,2]

[1]Children's Health Queensland And Hospital Health Service, [2]University of Queensland

2J: Advancing paediatric physiotherapy: Education and innovative care models, Riverbank Rooms 7&8, October 23, 2025, 11:55 - 12:40

Aim:

To evaluate the appropriateness of an advanced practice physiotherapy-led model of care for children with orthopaedic variants attending a tertiary children's hospital.

Design:

Retrospective longitudinal observational study of clinical concordance

Methods:

Electronic medical records were reviewed for 739 children (zero to 17 years) who were referred between 2019 and 2023 for orthopaedic assessment of orthopaedic variants at a tertiary children's hospital and attended an advanced practice physiotherapy-led clinic. Appropriateness of physiotherapy-led management pathways were examined by clinical concordance, measured by the percentage of appropriate versus inappropriate discharges or orthopaedic referrals, along with the surgical conversion rate.

Results:

of 739 children, 89.4% presented with nil findings or received physiological diagnoses which typically self-resolves over time. of children presenting with orthopaedic alignment conditions such as in-toeing, out-toeing, flat feet or foot postures, over 85% were managed by physiotherapy alone. Physiotherapy-led management pathways were appropriate for over 98.5% of children; with 82.4% either discharged or monitored without orthopaedic intervention, and 16.1% referred for orthopaedic care with a surgical conversion rate of 21%.

Conclusion:

An advanced practice physiotherapy-led model of care for children with orthopaedic variants showed high appropriateness for correct discharges and correct referrals from physiotherapy to orthopaedics and a higher surgical conversation rate compared to community-based referrals.

Key practice points:

- Advanced practice physiotherapists can effectively manage children with orthopaedic variants in the absence of clear pathology at the time of referral.

Listening to children and community: Allied health services for children in country South Australia

Georgia Gosse[1], Saravana Kumar[1], Helen Banwell[1], Joshua Pate[2]

[1]University of South Australia, [2]University of Technology Sydney, Graduate School of Health

3I: Community health in paediatrics, Riverbank Room 5, October 23, 2025, 13:40 - 14:25

Aim:

To understand, from a strengths-based perspective, the experiences of allied health professionals (AHPs), parents/carers and children with developmental needs in rural and remote South Australia.

Design:

Qualitative, appreciative inquiry (AI) approach.

Methods:

AHPs and parents/carers from across rural and remote South Australia participated in semi-structured interviews and focus groups, while children shared their experiences through drawing and play-based methods. Participants represented a range of disciplines, levels of rurality, experience and diagnoses. An AI framework guided questioning and thematic analysis.

Results:

Findings were organised into the four AI domains. In “Discover,” participants described the value of multidisciplinary teams and adaptive clinicians. In “Dream,” they envisioned greater access to specialists, improved physical resources and education opportunities. “Design” highlighted existing community strengths and the need for more structural support. In “Destiny,” participants called for genuine inclusion in service decision-making.

Discussion:

This study brings together, for the first time, strengths-based perspectives of AHPs, families and children across rural South Australia. It highlights what is working, what is possible, and what communities could co-create. Community-led recommendations include access to specialist advice, tailored professional development, and adequate clinical spaces. Embedding AHPs in policy design, improving training pathways, and expanding community education were also recommended. These findings provide a

roadmap for strengthening workforce sustainability, enhancing service design, and building more responsive and equitable rural health systems.

Key practice points:

- Include AHPs, parents/carers and children to understand context for service redesign.
- Multidisciplinary care, clinical infrastructure and community education are central to future rural AHP services.

Implementing spine health and ergonomics education for students in schools

Alison Reynolds[1]
[1]ACT

3I: Community health in paediatrics, Riverbank Room 5, October 23, 2025, 13:40 - 14:25

Background:

The increasing prevalence of spinal discomfort among school-aged children correlates with increased screen time and device use, poor postural habits and ergonomic practices. Despite evidence supporting early intervention, Australian schools do not incorporate structured spine health education into the curriculum. This initiative attempts to address this gap through a pilot program implemented across ACT schools.

Objectives:

This session is intended to provide physiotherapists with a practical framework for developing school-based spine health programs.

Participants will:

1. Understand developmental considerations specific to children's spine health education.
2. Master strategies for engaging school communities effectively.
3. Acquire assessment tools for measuring program outcomes.

Approach:

1. Program Development: Overview of the evidence-informed development process and educational content (5 min).
2. Practical Implementation: ACT School case study featuring classroom activity demonstrations (10 min).
3. Building Partnerships: Techniques for effective collaboration with teachers, parents and students (5 min).
4. Measuring Impact: Assessment strategies and outcome indicators to evaluate program effectiveness (5 min).
5. Q&A: Adaptation of the program to meet specific needs of diverse school environments (5 min).

Participants will learn techniques to:

1. Expand their practice into preventative community health by addressing spinal wellbeing at foundational stages of development.
2. Create evidence-based spine health curricula tailored to educational settings.
3. Communicate ergonomic principles effectively to teachers, parents and students.
4. Evaluate program impact on knowledge retention and behaviour modification.

Physical activity of children and adolescents after kidney transplant

Kerry West[1,2], Sheridan Collins[1], Deidre Hahn[1]

[1]The Children's Hospital At Westmead, Sydney Children's Hospitals Network, [2]Institute of Musculoskeletal Health, Sydney School of Public Health, Faculty of Medicine and Health, The University of Sydney

4I: Inclusive physical activity for children: Overcoming challenges and building skills, Riverbank Room 4, October 23, 2025, 14:30 - 15:15

Aim: To describe the physical activity levels of children and adolescents after kidney transplant, identify barriers to physical activity and explore associations between BMI, strength, fitness, quality of life and levels of physical activity.

Design: Cross-sectional study design

Method: We recruited children and adolescents (5 – 16 years) more than 12 months after renal transplant. Data collection included participant-reported physical activity, objective measurement (activPAL) and surveys of barriers to physical activity and health-related quality of life (PedsQL). Functional measures of fitness (6-minute walk), strength (30 second chair rise test) and anthropometric measures were compared to physical activity levels.

Results: Twenty participants were recruited. Demographics: average age 11 years 8 months; 60% male; mean BMI: 20.39. Physical activity measures (Mean (SD)): 6-min walk 477.6 (72.23) metres; 30 sec sit to stand 17.35 (3.44) reps; Steps per day 8371 (3258). Self-reported physical activity below peer average. Barriers reported: time, limitation of condition, risk of kidney damage, sedentary preferences, fatigue, other priorities. Facilitators to physical activity: desire to improve health and weight, safe environment nearby.

Conclusions: Overall physical activity, strength and fitness are reduced compared to peers. Despite understanding of physical activity importance children remain sedentary after kidney transplant. There are potentially modifiable barriers which could inform an intervention to improve physical activity in this population.

Key practice points

- Physical activity is challenging for young people after kidney transplant.
- There are barriers and facilitators for physical activity which could be used in a coaching intervention to improve physical activity levels.

Swimming for children with disabilities: Experiences of rehabilitation and swimming professionals in Australia

Karen Graham[1], Doctor Katarina Ostojic[2], Leanne Johnston[3,1], Doctor Iain Dutia[4,1], Elizabeth Barnes-Keoghan[5], Doctor Georgina Clutterbuck[1]

[1]The University of Queensland, [2]The University of Sydney, [3]Queensland Children's Hospital, [4]Australian Catholic University, [5]St Giles Society

4I: Inclusive physical activity for children: Overcoming challenges and building skills, Riverbank Room 4, October 23, 2025, 14:30 - 15:15

Aim:

Physical activity participation is a protective health factor for children with disabilities. As the most popular sport for children in Australia, swimming is a common goal for children with disabilities. This study aimed to explore swimming and rehabilitation professionals' perceptions of swimming for Australian children with disabilities.

Design:

Survey - Swimming Participation: Linking Australian Swimming and Health sectors.

Method:

The survey was completed by rehabilitation and swimming professionals with recent experience working with children with disabilities. Quantitative data from binary and Likert-scale questions were analysed descriptively. Qualitative data was evaluated using reflexive thematic analysis and mapped to the family of participation-related constructs.

Results:

Ninety-one swimming and 55 rehabilitation professionals (n=146) were surveyed. Most reported being confident/very confident supporting children with disabilities with swimming goals (rehabilitation =71.6%, swimming=73.8%) but poor knowledge of para-swimming eligibility and classification (neutral-very low knowledge: rehab=75%, swimming=77.7%). Thirty-four themes were developed and mapped to all core elements of the family of participation-related constructs. Barriers/facilitators included pool accessibility (physical and sensory); program availability, affordability, acceptability (of content and culture) and accommodating professionals and programs. Professionals reported programs should develop confidence while addressing water-safety, swimming skills and fitness.

Conclusion:

Further research is needed to obtain insights from individuals with lived experience of childhood-onset disability and create an action plan to improve swimming participation for Australian children with disabilities.

Key practice points:

- Rehabilitation and swimming professionals should review programs to ensure they meet the needs of children with disabilities.

Swimming and water safety skills for children with disabilities: A systematic review

Karen Graham[1], Doctor Katarina Ostojic[2], Leanne Johnston[3,1], Doctor Georgina Clutterbuck[1]

[1]The University of Queensland, Kellevie, Australia, [2]The University of Sydney, Sydney, Australia, [3]Queensland Children's Hospital, Brisbane, Australia

4I: Inclusive physical activity for children: Overcoming challenges and building skills, Riverbank Room 4, October 23, 2025, 14:30 - 15:15

Aim:

To evaluate the evidence for swimming interventions for children with disabilities.

Design:

Systematic Review, with results reported according to PRISMA guidelines.

Method:

Seven databases were searched using terms for population (children with disabilities), intervention content (swimming, i.e., not hydrotherapy) and outcomes (swimming and/or water safety) for full-text, original, peer-reviewed studies, without language/date restrictions. Evidence level and conduct were examined by two raters, using GRADE.

Results:

Forty-eight studies (five randomized controlled, six non-randomized controlled, 37 uncontrolled) met criteria. Studies included children with Autism (n=25), cerebral palsy (n=13), Developmental Coordination Disorder (n=2), Down Syndrome (n=2), Intellectual Disability (n=2), Neuromuscular Disorders (n=1), visual impairment (n=1), or varied diagnoses (n=2). Programs were led by swimming teachers (n=24), physiotherapists (n=10), specialist educators (n=3), multi-disciplinary teams (n=6), occupational therapists (n=1), kinesiologists (n=1), or unspecified professionals (n=3). Programs included swimming training (n=44), water safety development (n=35), breathing techniques (n=15), strengthening (n=7), and sensory strategies (n=5). Swimming skills were measured by custom tools (n=19), standardised swimming scales (Water Orientation Test Alyn n=12, Humphries Assessment of Aquatic Readiness n=6, Swimming Classification Scale n=2, Aquatic Independence Measure n=1, Stochl Scale n=1), or speed/distance (n=3). All but one study reported improved swimming skills, and while level of evidence quality was variable, GRADE of studies provides moderate positive evidence overall.

Conclusion:

There is moderate evidence to support a range of swimming interventions for children with disabilities.

Key practice points:

- Robust study design using standardised outcome measures is needed to strengthen evidence, determine essential elements and optimal dose.

Falls in children with neurological physical disability: A 6-month prospective observational study

Rachel Kennedy[1,2,3], Jennifer McGinley[3], Neil Wimalasundera[1,4], John Carlin[2,5], Kerry Britt[6], Kate Carroll[1,2]

[1]The Royal Children's Hospital, Parkville, Australia, [2]Murdoch Children's Research Institute, Parkville, Australia, [3]University of Melbourne, Parkville, Australia, [4]Victorian Paediatric Rehabilitation Service, Royal Children's Hospital, Parkville, Australia, [5]Clinical Epidemiology & Biostatistics, Murdoch Children's Research Institute, Parkville, Australia, [6]Children's Therapy Services, Geelong, Australia

5H: Addressing falls and balance challenges in children, Riverbank Room 4, October 24, 2025, 10:35 - 11:20

Aim:

To determine the incidence of falls in children with neurological physical disability.

Design:

A prospective six-month observational study

Method:

Ambulant children aged 4–18 years with a diagnosis of cerebral palsy (CP), Charcot-Marie-Tooth disease (CMT) and Duchenne muscular dystrophy (DMD) and unaffected typically developing (TD) children were recruited from The Royal Children's Hospital Neuromuscular Clinic, Victorian Paediatric Rehabilitation Service, a regional private practice and the general community. Children completed a daily falls diary with parent support for six months recording falls frequency. An annual incidence rate was calculated (Total number of falls/Total calendar days reported)*365. Descriptive statistics included mean (standard deviation, SD) and geometric mean (95% confidence interval, CI) accounting for skewness of falls data. A cumulative distribution function plot and scatterplot visualised falls incidence rate for disease and age.

Results:

Ninety-seven children enrolled and 76 completed a falls diary (78.4%), 15/23 children with CP (mean age 9.3 (SD 3.7) years), 24/30 with CMT (11.5 (3.7) years), 11/14 with DMD (9.2 (2.7) years) and 26/30 TD children (11.5 (3.7) years). Falls incidence rate per year for children with CP was 11.4 (95% CI 4.2, 31.2), CMT 9.6 (4.3, 21.2), DMD 10.8 (3.9, 30.2) and TD 1.8 (1.2, 2.6) respectively. Falls and age were weakly negatively associated.

Conclusion:

Children with neurological physical disability fall more often than their unaffected peers with younger age predicting more falls.

Key practice points:

- Physiotherapists need to consider factors concerning falls and the impact on function and physical activity for children with neurological physical disability.

Balancing act: a systematic review of associations between adiposity and balance in children and youth

Jack Wilde[1], John Arnold[2], Helen Banwell[1], David Thivel[3], Margarita Tsiros[1,2]

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5H: Addressing falls and balance challenges in children, Riverbank Room 4, October 24, 2025, 10:35 - 11:20

Aim:

Obesity impacts many areas of children's physical function and wellbeing, with increasing research examining balance. This review examined relationships between adiposity and instrumentally evaluated standing balance in children and youth.

Design:

Systematic review

Method:

The protocol was prospectively registered with PROSPERO and followed PRISMA reporting. Grey literature and six databases were searched from inception to January 2025/November 2024 respectively. Eligible studies analysed relationships between an adiposity measure and instrumentally assessed standing balance in 2-19 year olds. Title, abstract, full text and critical appraisal (McMaster tool) were done independently in duplicate, and the FORM framework used to guide narrative synthesis.

Results:

of 5631 articles identified, 53 were eligible, comprising of 8509 children/youth. Higher adiposity was consistently associated with impaired postural control (31/53 studies, 58%), with 'satisfactory' evidence on the FORM framework. When examining more challenging balance tests in studies reporting weight status groupings, 54/68 tests (79%) showed adiposity-related balance decrements.

Conclusion:

Overweight and obesity may be linked with impaired balance in children and youth, particularly during more challenging balance tasks.

Key practice points

- Physiotherapists should assess balance in children with overweight/obesity, prioritising more challenging test conditions.
- Children with overweight/obesity may have additional safety considerations when engaging in tasks that challenge their balance.

Game on: Insights on Biodex BioswayTM balance games from children, parents, and physiotherapists

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5H: Addressing falls and balance challenges in children, Riverbank Room 4, October 24, 2025, 10:35 - 11:20

Aim:

To evaluate the usability and acceptability of the Biodex BioSway™ balance games by examining child, parent and physiotherapist views.

Design:

Mixed methods

Method:

Participants were recruited via flyers/social media. Children played four Biodex Biosway™ balance games, observed by their parent; both completed questionnaires (System Usability Scale or Abbreviated Acceptability Rating Profile) and a semi-structured interview. Physiotherapists attended a workshop and completed questionnaires (System Usability Scale, Technology Acceptance Model Scale). Quantitative and qualitative questionnaire data were analysed via descriptive statistics and content analysis, respectively. Qualitative interview data were analysed via thematic analysis.

Results:

Twenty-two individuals (eight child/parent pairs, six physiotherapists) participated. Children and physiotherapists indicated average levels of usability (mean total scores: children 70.94±8.55; physiotherapists 71.67±8.01). Parents reported very high levels of acceptability (mean = 41.12±8.55). Additionally, positive levels were seen among physiotherapists (mean dimension scores: Ease of Use 4.91±0.55 out of 7; Usefulness 6.03±0.55; Applicability 5.58±0.51). Participants discussed potential barriers surrounding child engagement and performance, however, a wide variety of enablers for acceptability and usability were explored.

Conclusion:

The Biodex BioSway™ gaming protocols may have appropriate levels of acceptability/usability for use in paediatric populations, as perceived by parents, children and physiotherapists. Hence, the next steps would be to evaluate the effectiveness of these games for improving postural control in children.

Key practice points:

- Parents and children demonstrated high levels of enthusiasm and interest in the games.
- Physiotherapists were intrigued but reserved about functionality of the games, based on their individual caseloads.

Contributors to combined anterior cruciate ligament and meniscal injuries in children and adolescents

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8I: Paediatric knee injuries: Predictors, outcomes, and rehabilitation strategies, Panorama Room 1&2, October 24, 2025, 15:35 - 16:20

Aim:

To quantify the risk factors for concomitant paediatric meniscal tears and anterior cruciate ligament rupture.

Design:

Prospective observational cohort study nested within a single-centre longitudinal clinical registry.

Methods:

Intra-operative meniscal status for 350 consecutively performed surgeries was compared to demographic (age, sex, ethnicity), physical (body mass index, leg dominance, hypermobility, instrumented anteroposterior laxity, skeletal maturity), injury, and temporal factors. Binomial logistic regression assessed for independent and combined predictors of meniscal pathology.

Results:

58.5% of patients had meniscal pathology with 53.7% being lateral meniscus, 26.1% medial meniscus, and 20.2% both. Univariate analysis revealed increasing age, female sex, increasing body mass index, Māori and/or Pacific Islander ethnicity, and skeletal maturity as individual predictors. Multivariate analysis demonstrated that adolescents of the aforementioned ethnicity were 2.3 times more likely to experience lateral tears and trended toward an increased risk for any tear (OR:2.07, p=0.08).

Increasing body mass index was associated with medial tears (OR:1.12, p=0.001) and combined tears (OR:1.13, p=0.001). Sporting injury was not an independent predictor but when combined with body mass index explained 16.6% of the variation. Across all models less than 20% of the variance was explained and approximately 70% of tears were predicted.

Conclusions:

The high incidence of meniscal pathology in this population is concerning considering its contribution to early onset osteoarthritis. The identified modifiable and non-modifiable risk factors provide initial insights into causality.

Key practice points:

- Females, the Māori and/or Pacific Islander community, adolescents, and individuals with body mass index should be targeted for sporting injury prevention programs.

Predictors of secondary meniscal pathology following paediatric anterior cruciate ligament reconstruction

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8I: Paediatric knee injuries: Predictors, outcomes, and rehabilitation strategies, Panorama Room 1&2, October 24, 2025, 15:35 - 16:20

Aim: Failure of meniscal repair, and/or development of new pathology is a known complication following anterior cruciate ligament reconstruction. This study aims to determine contributory baseline, surgical, and post-operative factors to secondary meniscal pathology in children and adolescents.

Design: Prospective observational cohort study nested in a single-centre longitudinal clinical registry.

Methods: Data for patients with an intact graft who underwent secondary meniscal surgery (meniscal cohort) was matched with a comparison cohort. Variables of demographics, injury mechanism, physical assessment, instrumented laxometry, skeletal alignment, peri-operative findings, and surgical techniques were examined.

Results: of the 319 patients identified, 19 comprised the meniscal cohort. Mean age at initial injury was 14.0 (range 8.4 - 16.3) with median time from index surgery to re-injury 12.5 months (range 2.8-45.0). They had a higher proportion of females (68.4%) relative to the comparison cohort (44.7%) X2 (1, N=319)=4.06, p=0.04). Meniscal pathology at index surgery was greater in the meniscal group (89.5%) compared to the comparison group (54.9%) (p=0.03) with the proportion of medial or both menisci approximately double. Absolute anterior-posterior knee laxity was higher in the meniscal cohort at the twelve-month post-operative timepoint (5.6mm vs 4.5mm, p=0.02) as was side-to-side difference (2.3mm vs 1.3mm, p=0.08).

Conclusion: A better understanding of incidence and risk factors for this complication may minimize the progression to premature post-traumatic osteoarthritis in young people.

Key practice points:

- Adolescent females who present with anterior cruciate ligament rupture and meniscal tears should be considered at risk for worsening meniscal health, especially those with medial menisci pathology.

Quantifying the burden of paediatric anterior cruciate ligament injury using patient reported outcome measures

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8I: Paediatric knee injuries: Predictors, outcomes, and rehabilitation strategies, Panorama Room 1&2, October 24, 2025, 15:35 - 16:20

Aim:

Patient Reported Outcome Measures provide valuable information in both research and clinical settings, but are poorly used in orthopaedics, particularly paediatrics. This study aims to investigate relationships between scores and demographic, physical, and temporal factors following anterior cruciate ligament rupture.

Design:

Prospective observational cohort study nested in a single-centre longitudinal clinical registry.

Methods:

Extraction of registry data was performed for independent variables and three instruments; (A) Pediatric International Knee Documentation Committee Subjective Knee Evaluation Form, (B) Knee Injury and Osteoarthritis Outcome Score for Children, and (C) Pediatric Functional Activity Brief Scale. Between-group differences and correlations were tested by inferential statistics.

Results:

282 complete datasets were available for analysis. Median time from injury was 107.5 days. Patients with concomitant meniscal pathology scored worse on (B) domains of Symptoms ($p=0.04$), Activities of Daily Living ($p=0.04$), Sport ($p=0.03$), and Quality-of-Life ($p=0.03$). Spearman's rank correlation revealed positive but weak relationships between time from injury and scores from (A) ($p<0.01$) and all domains of (B) ($p<0.01$) except for Quality-of-Life. The cohort also scored considerably lower than population norms across all instruments but particularly in (B) Quality-of-Life and Sports domains.

Conclusions:

A large sample of paediatric patients with anterior cruciate ligament injury scored worse in multiple Patient Reported Outcome Measures when they presented with meniscal injury. For all patients, most domains improved with time except for Quality-of-Life.

Key practice points:

- Patient perceptions should be considered following anterior cruciate ligament injury, with psychosocial and sporting concerns, and individuals with meniscal pathology demanding particular attention.

Prevalence of probable developmental coordination disorder in Brazilian children: Are age and sex predictors?

PhD Cibelle Kayenne Martins Formiga[1], Jorge Lopes Cavalcante Neto[2], PhD Thailyne Bizinotto[3], PhD Meyene Duque Weber[4], PhD Thiago Weyk de Oliveira Beliche[4], Ana Carolina Campos[4], Lucio Fernandes Ferreira[5], Eloisa Tudella[4]

[1]State University of Goias, [2]Universidade do Estado da Bahia, [3]Universidade Federal de Goias, [4]Universidade Federal de São Carlos, [5]Universidade Federal do Amazonas

10H: Enhancing developmental outcomes, Riverbank Rooms 2&3, October 25, 2025, 11:40 - 12:40

Aim: To estimate the prevalence of probable Developmental Coordination Disorder (p-DCD) in Brazilian children, considering age and sex as predictors.

Design: A cross-sectional study.

Method: One thousand and three children (50.5% boys), aged 7-10 years (8.40 ±1.31), from the five regions in Brazil participated in the study. The Movement ABC-2 and DCD Questionnaire were used to identify p-DCD, meeting the diagnostic criteria A and B of the DSM-5 TR, respectively. Logistic regression analyses explored the relationship between pDCD as dependent variable and age and sex as predictors.

Results: The prevalence of p-DCD was 16.50% in Brazilian children. Younger children (≤8 years) had a higher risk of p-DCD (OR: 1.89; 95% CI: 1.33-2.69; p=0.02). No significant association was found with sex.

Conclusion: The high prevalence of p-DCD in Brazil, highlights it as a public health issue. Age was a predictor for pDCD in Brazil, while sex was not, suggesting potential gaps in movement activities offered to school-age children.

Key practice points:

- Developmental Coordination Disorder (DCD) is a prevalent condition among Brazilian children, exceeding international prevalence estimates.
- Younger children have nearly twice the risk of pDCD compared to their older peers.
- Tailored interventions that address motor skill deficits across different domains and consider age differences are crucial for children with DCD.

Can early childhood educators perform developmental screening to identify children at-risk of motor delay?

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10H: Enhancing developmental outcomes, Riverbank Rooms 2&3, October 25, 2025, 11:40 - 12:40

Aim:

Determine the feasibility of early childhood educator-led Targeted Motor Control (TMC) screening to identify four-year-old children 'at-risk' of motor delay.

Design:

Mixed methods.

Method:

Educators attended TMC training (two hours) which included education, and a demonstration and scoring video that educators watched and scored, respectively. The 11-item TMC assesses motor performance (score <9/11 indicates 'at-risk' of motor delay). Educators screened four children aged four years using TMC. Final TMC was co-scored by a TMC-trained physiotherapist.

Feasibility of the training and use of TMC was assessed using an online survey across five feasibility themes: acceptability, demand, practicality, implementation and integration. Educators completed the survey after performing all TMC assessments.

Quantitative data was analysed descriptively. Level of agreement in TMC scores between educators and physiotherapists was determined using Bland-Altman analysis. Qualitative data was summarised according to feasibility themes. Joint display of quantitative and qualitative data allowed for integrative data analysis.

Results:

Thirteen educators assessed four children each and completed the survey. Merging of quantitative and qualitative data demonstrated convergence for acceptability, demand, and implementation with 100% agreement between educator and physiotherapist scoring. Divergence of findings occurred for practicality and integration.

Conclusion:

It is feasible for educators to perform TMC screening, but some modifications to the training and resources may enhance the success of educator-led screening.

Key practice points:

- Educators can perform developmental screening if equipped with training, resources and support by physiotherapists.
- Children identified as 'at-risk' of motor delay on screening can be referred to a physiotherapist for management.

Move and play: educational videos to support parents of infants at risk for developmental delays

PhD Cibelle Kayenne Martins Formiga[1,3], Natalia Guimarães Melo[1], Vanessa Cordeiro de Sousa[1], PhD Nayara Rodrigues Gomes de Oliveira[1,2], Alicia Spittle[3]

[1]State University of Goias, [2]Federal University of Goias, [3]University of Melbourne

10H: Enhancing developmental outcomes, Riverbank Rooms 2&3, October 25, 2025, 11:40 - 12:40

Aim: To describe the construction of the 'Move and Play' Program support parents/caregivers of at-risk infants participating in follow-up and early intervention programs.

Design: This was a technological development study.

Method: The study was conducted in five stages: 1) literature review, 2) script of skills for infants from 0 to 12 months, 3) recording videos with the participation of volunteer model infants, 4) organizing, editing, and dubbing the videos, and 5) final review of the videos and their publication on the YouTube platform.

Results: The recording and editing phases took 20 and 90 hours, respectively. In total, 59 educational guidance videos were produced, totaling 107 minutes of content. Specifically, the videos aimed to support gross motor skills, fine motor skills, visual stimulation skills, auditory skills, language skills, and skills related to caring for the baby such as carrying, bathing, sensory stimulation, and sleep positions.

Conclusion: The work resulted in 59 short videos providing 107 minutes of accessible, low-cost educational content to guide parents and families in promoting and providing early activities for infants in the home environment. This resource has the potential to be used as a complementary strategy in early intervention programs for at-risk infants.

Key practice points:

- 59 educational videos totalling 107 minutes were produced to stimulate various skills in at-risk infants from birth to 12 months.
- The videos use easy-to-understand language to guide parents/caregivers in a family-centered approach.
- This video resource provides a low-cost, accessible therapeutic strategy for early intervention of at-risk infants for developmental delay.

Exploring the effectiveness of Cuevas Medek Exercises (CME) in paediatric populations: A systematic scoping review

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10H: Enhancing developmental outcomes, Riverbank Rooms 2&3, October 25, 2025, 11:40 - 12:40

Aims:

1. Define CME
2. Determine the therapeutic claims of CME
3. Identify the effects of CME
4. Outline the perceptions and beliefs surrounding CME
5. Investigate adverse events associated with CME.

Design:

Systematic scoping review.

Method:

A systematic search of eight databases (PubMed, ProQuest, Web of Science, CINAHL, Medline, Cochrane Library, Embase, Google-Scholar), using pre-defined search-terms was completed March 2024. Critical appraisal tools: MMAT and JBI. Relevant quantitative and qualitative data were extracted, descriptively synthesised, thematically analysed and reported following PRISMA-ScR guidelines.

Results:

From 238 records screened, 110 were included; 17 research articles/reviews and 93 grey literature items. Four case reports and a single non-randomised controlled trial with poor methodological-quality ratings (20-40%) provided CME intervention and reported associated outcomes.

CME was defined as intensive therapy intervention using specialised equipment to prevent developmental delay in patients with various conditions, and claims to improve motor skills, motor control, posture, gait, and mobility. There was a paucity of reporting of adverse events from CME in the empirical literature.

Conclusion:

At the present time, there is a lack of high-quality evidence to support the effectiveness of CME.

Key practice points:

- Clinicians who continue to use CME without evidence of effectiveness, should work with researchers to establish evidence and transparently report adverse events to their registration body.
- Clinicians should meet their clinical practice obligations to utilise evidence-informed practice and share with parents, the lack of evidence for effectiveness of CME during shared decision-making conversations about treatment.

In their own words: How people with chronic low back pain experience specialist musculoskeletal physiotherapy

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6I: Engaging the person with pain, Riverbank Room 6, October 24, 2025, 11:25 - 12:10

Abstract

Aim: Despite advances in understanding and managing chronic low back pain (CLBP), it remains a significant health and socioeconomic issue. People with CLBP often consult Specialist Musculoskeletal Physiotherapists (SMP) after multiple unsuccessful treatments with other professionals. This research explored an SMP-led model of care for recovery from CLBP.

Design: Mixed methods convergent design (qualitative data presented here).

Methods: Using a purposive sample (n = 4), people with CLBP participated in semi-structured interviews conducted by an independent researcher. Following verbatim transcription, data were analysed using thematic analysis, and strategies for rigour and trustworthiness were followed.

Results: Themes identified included: person-centred care, cultivated positivity and confidence, fostered resiliency, compassionate care, facilitated engagement with valued life activities and catalysed motivation to become fit and healthy. These themes emphasised recovery over symptom management. Quantitative data further supported the impact of the SMP model.

Conclusions: Integrating person-centred care, addressing pain complexity, and fostering a strong therapeutic relationship significantly improved patients' well-being and functionality.

Key practice points:

- Timely access to an SMP benefits the health and well-being of people with CLBP.
- Recognizing individual motivators and capabilities fosters empowerment, self-directed recovery, and adaptive behaviour change.
- Training in psychologically informed practice can enhance physiotherapists' care.

Injured workers who engage with an APA titled pain physiotherapist benefit substantially

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6I: Engaging the person with pain, Riverbank Room 6, October 24, 2025, 11:25 - 12:10

Aim: WorkSafe Victoria introduced a program utilising APA-titled pain physiotherapists to work with injured workers recognised as being at risk of poor health and work outcomes within the first six months of their claim. The aim of this study is to evaluate the outcomes for these injured workers, as well as the experience of all stakeholders.

Design: 50 sets of matched outcome measures from workers in the pilot were analysed and a series of interviews were undertaken with stakeholders.

Results: Workers valued support and community while participating in the program and some reported it was lifesaving. Workers felt APA-titled pain physiotherapists went above and beyond to support them. Over 80% of workers reported that their situation was better after the program.

Questionnaire results indicated that after the program, workers experienced statistically significant differences with large effect sizes in average pain intensity (P=0.002, Cohen's d=2.241), pain interference with daily activities (P=0.002, Cohen's d=2.606), and sleep (P=0.05, Cohen's d=3.187). There were also statistically significant differences with small to medium effect sizes in pain self-efficacy (P=0.003, Cohen's d=-0.492), overall psychological distress (P=0.01, Cohen's d=0.414), anxiety (P=0.05, Cohen's d=0.343) and depression (P=0.01, Cohen's d=0.503).

Conclusions: Outcomes were substantially positive. Barriers and facilitators to implementation were identified and will be addressed in future iterations of this worthwhile intervention.

Key practice points:

- Pain education by suitably credentialled physiotherapists often results in clinically important outcomes for injured workers.
- Stakeholders can successfully work together to promote high value care that meets the needs of injured workers.

Meaningfully engaging physiotherapists and consumers in research: co-designing resources to improve pain science education implementation

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8J: High value care in pain management, Room E1, October 24, 2025, 15:35 - 16:20

Aim:

To involve physiotherapists and people with chronic pain in the co-design of resources to improve the integration of pain science education into practice.

Design:

An iterative co-design approach, based on an integrated conceptual framework for co-design planning/evaluation, involving physiotherapists, people with chronic pain, and researchers as equal partners (co-researchers).

Method:

Private practice physiotherapists (registered, ≥5years experience) and people with chronic pain (≥3months) were recruited as co-researchers. Three workshop rounds (in-person/online) were conducted.

Workshop 1 used storyboarding activities to brainstorm opportunities for pain science education integration. Workshop 2 used design toolkits to develop ideas into prototypes. Workshop 3 refined these into tangible outputs. Small group collaborative activities ensured a non-hierarchical space for idea-sharing. Insights from co-researcher-led and researcher-led analyses informed subsequent workshops.

Results:

Twenty co-researchers (n=6 physiotherapists without chronic pain, n=5 physiotherapists with chronic pain, n=9 patients with chronic pain; 75% female; mean age 47.6[SD13.5]) participated. Co-researchers reached consensus on four key opportunities to integrate pain science education into physiotherapy practice. Resource formats linked to these opportunities were developed into prototypes and refined into two main ideas. Design priorities included individualisation, affordability, accessibility,

time suitability, and active learning facilitation. The final resource features a personalised action plan builder and infographic sheets.

Conclusion:

Authentic co-design led to the development of a novel, adaptable resource for pain science education clinical integration.

Key practice points:

- Co-design ensured end-user needs/preferences were captured at all stages of resource design/development, enhancing acceptability/uptake.
- This work established valuable priorities for improving pain science education integration in physiotherapy settings.

Prospective relationship between neck pain and depressive symptoms, and the moderating effect of physical exercise

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9H: Pain and exercise, Panorama 3, October 25, 2025, 10:35 - 11:35

Aim:

Chronic neck pain is common, and causes significant individual and societal burden. This research aimed to explore the relationship between chronic neck pain and depressive symptoms, and investigate whether physical exercise moderates their association.

Design:

Observational cohort.

Method:

The 1958 British Cohort provided self-reported data on chronic neck pain at age 45 years, and depressive symptoms at ages 45 years (Clinical Interview Schedule–Revised) and 50 years (Short Form–36). Cross-sectional and prospective relationships were analysed by fitting logistic regression models adjusted for sex, and fully adjusted for multiple covariates. All models incorporated chronic neck pain, exercise and an interaction term.

Results:

Chronic neck pain was associated with depressive symptoms cross-sectionally (full model OR = 1.67; 95% CI 1.19, 2.35, N = 7493; p = 0.003) and prospectively (full model OR = 1.54; 95% CI 1.11, 2.16; N = 6341; p = 0.011). No moderating effect of exercise was observed. Both full models had a binary classification accuracy of approximately 70%, even when CNP or the exercise x CNP interaction were removed as predictors.

Conclusion:

Individuals with CNP are at higher risk of concurrent and future depressive symptoms; we did not find exercise to have a moderating effect on this relationship. Further research in larger cohorts is recommended.

Key practice points:

- Individuals experiencing chronic neck pain have a significantly greater chance of developing concurrent depressive symptoms, or developing such symptoms later in life.
- Routine screening for depressive symptoms amongst individuals with chronic neck pain is recommended.

A Wheely good time: Virtual reality (VR) enhances exercise in people with knee osteoarthritis

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9H: Pain and exercise, Panorama 3, October 25, 2025, 10:35 - 11:35

Aim:

Evaluate the effect of VR-enhanced cycling on exercise engagement, enjoyment, and pain intensity in people with knee osteoarthritis, relative to no-VR cycling.

Design:

Randomised cross-over experimental study.

Methods:

Participants with knee osteoarthritis of moderate pain and disability attended two sessions, 1-week apart (order counterbalanced, randomised). Both sessions involved self-paced cycling (maximum 30 minutes), differing only in the use of an immersive VR cycling experience (head mounted display with nature/city virtual environment).

Exercise enjoyment (101-point numerical rating scale [NRS]), engagement (time cycling [minutes]; total work [kilojoules]), and pain intensity (every 2-minutes while cycling, 101-point NRS) were recorded. Paired t-tests (or equivalent non-parametric tests) were conducted for between-condition comparisons, and linear mixed models evaluated pain intensity.

Results:

Twenty-five people with knee osteoarthritis (n=17 female, mean age 67.1(SD=9.21) years) participated. VR-cycling resulted in greater exercise enjoyment (U=0.82, p<0.001) and engagement (MD cycling time=3.1 minutes, 95% CI 0.57 to 5.64, Cohen's d=0.51, t(24)=2.53, p=0.02, greater work, MD=5.62 x 104 kilojoules, 95% CI 1.84 x 104 to 1.10 x105, Cohen's d=0.43, t(24)=2.13, p=0.04) relative to no-VR cycling. VR cycling also reduced the rate at which pain intensity increased during exercise relative to no-VR exercise (beta=-0.21, 95% CI -0.38 to -0.03, t(634)=-2.30, p=0.022).

Conclusion:

VR-cycling demonstrated short-term efficacy, improving exercise engagement, enjoyment, and pain compared to no-VR cycling.

Key practice points:

- People with knee osteoarthritis rode for longer and worked harder when cycling with VR, while maintaining high levels of enjoyment.
- VR can attenuate pain intensity increases during exercise in people with knee osteoarthritis.

How to assess people at low/high risk of poor outcome after whiplash; a clinical guide

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10I: Assessment and pain outcomes, Riverbank Room 5, October 25, 2025, 11:40 - 12:40

Introduction:

People with whiplash have different presentations and recovery pathways. The approach to assessment varies between and within health professions. This results in inconsistent diagnoses and treatments. To address this, we convened a multidisciplinary panel, conducted a systematic review, then followed the GRADE evidence-to-decision framework to produce a clinical guideline for the assessment of whiplash.

Aims and objectives:

Physiotherapists will:

- Understand the key recommendations from the assessment guidelines in order to arrive at a diagnosis.
- Understand and gain clinical skills in key assessment domains for people at risk of poor outcome.

Approach:

The session will commence with an interactive presentation of the assessment recommendations from the new clinical guidelines for whiplash including how the approach differs based on prognostic risk profile. Participants will have the opportunity to reflect on current practice and identify key gap in their approach to assessment. (10 minutes)

Participants will then view brief videos and practice two key assessment techniques appropriate for people at risk of poor outcome after whiplash. These may include one technique to assess sensori-motor control (e.g smooth pursuit neck torsion test) and one technique to assess pain sensitivity (e.g ice pain test). (10 minutes)

The session will conclude with a facilitated discussion and Q and A on how results of assessment may inform treatment. The link to treatment guidelines and key resources (mywhiplash.com.au) for whiplash will be made. (10 minutes)

Key practice points:

- Participants will gain new skills and understanding in how to assess people with whiplash with differing presentations.

Quantitative sensory testing does not consistently predict treatment outcomes in lower-limb osteoarthritis

Myles Murphy[1,2], Andrea Mosler[3], Ebonie Rio[3], Molly Coventry[1], Isaac Selva Raj[1], Kristian Kjær-Staal Petersen[4], Dana Hince[2]

[1]Edith Cowan University, [2]The University of Notre Dame Australia, [3]La Trobe University, [4]Aalborg University

10I: Assessment and pain outcomes, Riverbank Room 5, October 25, 2025, 11:40 - 12:40

Aims:

Our objective was to determine if measures of quantitative sensory testing (QST) at baseline are related to treatment outcomes (at any time-point) for pain and disability in lower-limb osteoarthritis.

Design:

Systematic review with an individual participant data (IPD) meta-analysis.

Methods:

Searches were conducted in nine databases until 5th May 2023 for intervention studies that measured baseline QST and longitudinal measures of participant-reported pain and disability.

We performed a two-stage approach to analyse longitudinal data. Individual models were fitted to each study and combined using random effects multivariate meta-analytic models. Study quality and overall judgements of the evidence informed the certainty of each result.

Results:

We identified 3,082 records, and included 1 hip and 28 knee datasets consisting of 2,522 participants from 40 studies. Local warm detection thresholds (p=0.024) predicted knee osteoarthritis pain outcomes (very-low certainty). Local warm detection thresholds (p=0.030), remote cold detection thresholds (p=0.05), and remote pressure tolerance thresholds (p=0.007) predicted knee osteoarthritis disability outcomes (very-low certainty).

Other QST variables were associated with hip and knee osteoarthritis pain and disability levels (e.g., pressure pain thresholds) but did not predict pain and disability outcomes.

Conclusions:

An IPD meta-analysis can assess the predictive value of data on outcomes at the individual level, offering a potential tool for developing personalized pain management. However, this review finds mechanism-based QST methodologies do not consistently predict pain or disability in hip or knee osteoarthritis.

Key practice points:

- In hip and knee osteoarthritis, QST provides little clinical value in predicting pain and disability treatment responses.

Experiences of using smartphone ecological momentary assessment for reporting knee osteoarthritis pain and symptoms

Mark Overton[1], Carrie Falling[2], Nicola Swain[2], David Gwynne-Jones[2], Roger Fillingim[3], Ramakrishnan Mani[2]

[1]University of Technology Sydney, [2]University of Otago, [3]University of Florida

10I: Assessment and pain outcomes, Riverbank Room 5, October 25, 2025, 11:40 - 12:40

Aim:

The aim of this study was to explore participant experiences and perceptions of using smartphone ecological momentary assessment (EMA) as a way of communicating knee OA pain and symptoms following participating in a 2-week smartphone EMA study.

Methods:

Using a maximum variation sampling method, participants were invited to share their thoughts and opinions in semistructured focus group interviews. Interviews were recorded and transcribed verbatim before thematic analysis using the general inductive approach.

Results:

A total of 20 participants participated in six focus groups. Three themes and seven sub-themes were identified from the data. Identified themes included: user experience of smartphone EMA, data quality of smartphone EMA, and practical aspects of smartphone EMA.

Conclusion:

Overall, smartphone EMA was deemed as being an acceptable method for monitoring pain and symptoms associated with knee OA. These findings will assist researchers in designing future EMA studies alongside clinicians implementing smartphone EMA into practice.

Key practice points:

- Smartphone EMA is an acceptable method for capturing pain-related symptoms and experiences of those with knee OA.

Heightened pain facilitation is associated with chronic moderate/severe pain following concomitant mTBI and whiplash injury

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10I: Assessment and pain outcomes, Riverbank Room 5, October 25, 2025, 11:40 - 12:40

Aim:

To examine the temporal changes in inhibitory and facilitatory pain modulation responses from the acute stage to 12 months following a concomitant mild traumatic brain injury (mTBI) and whiplash injury.

Design:

Prospective observational study

Method:

177 participants (mean age ± SD: 37.38 ± 11.84 years; 44.6% female) with concomitant mild traumatic brain injury (mTBI) and whiplash injury were recruited within 24 hours of a road traffic crash. Their inhibitory and facilitatory pain modulation functions were assessed within 72 hours of injury using conditioned pain modulation (CPM) and temporal summation of pain (TSP) and reassessed at 6 and 12 months.

Participants were classified based on their head and/or neck pain ratings at 12 months into three groups: recovered (numeric rating scale [NRS] = 0/100), mild pain (NRS >0/100 & ≤50/100), and moderate to severe pain (NRS >50/100).

Results:

All groups showed efficient CPM at baseline, 6 months, and 12 months, with no significant differences between groups. The moderate to severe pain group had significantly higher mechanical TSP across all three timepoints compared to the recovered group. No significant differences were found for electrical TSP across the three timepoints.

Conclusion:

Increased mechanical pain facilitation, instead of impaired pain inhibition, may contribute to the chronicity of pain in patients with a concomitant mTBI and whiplash injury.

Key practice points:

- Early assessment of signs of altered nociceptive processing, specifically facilitated mechanical temporal summation of pain, may be helpful to identify patients at risk of chronic pain following concomitant mTBI and whiplash injury.

Pain protection: Exploring experiences of people living well with pain and those who have recovered

Niamh Moloney[1], Darren Beales[1], Nhat-Nghi Le[1], Yui Wong[1], Martin Rabey[1]
[1]*Curtin University*

10I: Assessment and pain outcomes, Riverbank Room 5, October 25, 2025, 11:40 - 12:40

Aim:

Strengths-based approaches to pain-care, which explicitly focus on individual's inherent positive/protective biopsychosocial traits to aid recovery and promote well-being, are relatively uncommon in the literature. Study of protective biopsychosocial factors that promote positive outcomes has been limited to a narrow range of variables. This study aimed to explore individuals' perceptions and experiences of factors possibly protective against pain.

Design:

A qualitative study involving people living well with pain and those recovered from pain.

Methods:

Twelve people (26-79 years old, eight females, various musculoskeletal pain disorders, four recovered) were recruited through multi-media advertisements. Semi-structured interviews were recorded and transcribed. Data were analysed through Reflexive Thematic Analysis.

Results:

Five themes were derived:

"Allure of the deficits-based model" revealed difficulty, for some, in shifting mindset to a strengths-based model of care.

"Finding a team" highlighted the importance of nurturing a supportive environment and personal network.

"Lifestyle" involved explicit decision-making regarding sleep, diet and (particularly strengthening) exercise.

"Get off my #@$%!" captured participants self-driven persistence and discipline regarding rehabilitation and activity involvement.

"It's just a knee!" encapsulated diverse psychological factors including mindfulness, acceptance, optimism, hope, spirituality, impermanence, purpose, being non-judgmental, psychological flexibility, self-compassion and health literacy.

Conclusion:

Participants discussed a broad range of biopsychosocial factors protective against pain, whilst highlighting the ongoing dominance of deficits-based pain-care.

Key practice points:

- People who live well with pain, or recover from pain, harness a broad range of protective biopsychosocial factors to promote positive outcomes.
- Clinicians may facilitate this through a strengths-based approach to pain-care.

How to search PEDro to answer clinical questions

Joshua Zadro[1]
[1]University of Sydney

1J: Research methods and technological innovation, Panorama 3, October 23, 2025, 11:05 - 11:50

Background:

Evidence-based practice starts with asking a clinical question then navigating the large volume of published articles to acquire high-quality clinical research that answers the question. Unfortunately, clinicians exhibit difficulty with both of these steps.

An analysis of 1.3 million PEDro searches indicated that only 50% of searches specified two or more of the key elements of a clinical question (PICO elements: Population, Intervention, Comparator, Outcome), 4% used features that improve the efficiency of searching (e.g. truncation), and 13% contained errors (e.g. Boolean operators).

Aims:

This session aims to facilitate evidence-based practice by developing participants' knowledge and skills in asking clinical questions and acquiring evidence using PEDro.

Learning objectives:

1. Devise a PICO question from a clinical scenario
2. Generate search terms for each element of the PICO question
3. Conduct a PEDro search to identify high-quality clinical research to answer the clinical question.

Approach:

This session involves demonstrations and will promote audience engagement through:

- participants nominating clinical scenarios that will be used to generate PICO questions
- exploration of search terms for the elements of the PICO questions
- designing initial search strategies for PEDro
- refining the search strategies to identify high-quality clinical research to answer the questions.

Key practice points:

- Following this session, participants will be confident in asking the 'right' clinical question, and designing and adapting a search strategy in PEDro to find the answer.
- These learning outcomes will contribute to physiotherapists' ability to apply strategies to systematically access high-quality clinical research.

Comparative analysis of human and machine-learning approaches to identifying trials in the field of physiotherapy

Venisa Wing Kwok[1,2], Philip Hodgson[3], Junior Fandim[4], Geraldine Wallbank[1,2], Julia Scott[1,4], Catherine Sherrington[1,2], Adrian Traeger[1,2]

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1J: Research methods and technological innovation, Panorama 3, October 23, 2025, 11:05 - 11:50

Aim:

To compare the agreement, speed, and reliability between manual screening and machine-learning approaches to identify relevant physiotherapy trials.

Design:

A comparative study evaluating the performance of two screening approaches.

Methods:

We screened 525 articles from ten databases conducted over three days using human screening and a machine-learning model using Document Classification and Topic Extraction Resource (DoCTER). Human screening involved two reviewers independently assessing titles/abstracts for eligibility, with a third resolving disagreements.

The machine-learning model used previously indexed articles as training data with training sizes of 25, 50, 100, 150, 200, 250, and 300 records. We evaluated precision (true positives accuracy), recall (sensitivity to identify true positives), F1 score (harmonic mean of precision and recall) and time spent.

Results:

Agreement between two approaches ranged from fair to moderate. When comparing human screening with the prediction from a training dataset of 25 records, Cohen's kappa was 0.32 ($z=8.4$, $p<0.0001$), indicating fair agreement. The highest agreement was with 300 records (kappa 0.49). Precision (0.51) and F1 score (0.64) were highest with 300 records. The training datasets with 150 and 200 records had the best recall score (0.94). The human screening took 12 hours, whereas preparing 150 or 300 records took 29% and 57% of that time, respectively.

Conclusion:

Fair to moderate agreement between human and machine-learning screening. The machine-learning approach shows potential in identifying relevant records and reducing manual screening workload.

Key practice points:

- Machine-learning approaches could substantially reduce the workload for screening trials for systematic reviews.
- Balance between filtering irrelevant and missing relevant articles must be carefully considered.

Le taualuga o tausiga: The Samoan epitome of culturally safe care in physiotherapy

Oka Sanerivi[1,2], Leigh Hale[1], Faumuina Fa'afetai Sopoaga[1], Byron Seiuli[3], Chris Higgs[1]
[1]University of Otago, [2]Mātai Medical Research Institute, [3]Alpha Consultancy Solutions

4J: Transforming practice: Education, culture, and innovation, Riverbank Room 6, October 23, 2025, 14:30 - 15:15

Aim: To explore how Samoan cultural knowledge could enhance the theory and practise of physiotherapy when engaging Samoan families.

Design: Individual and group interviews utilising Pacific research methodologies.

Method: Participants were 26 individuals, arranged into five groups: 1) Samoan physiotherapists living in New Zealand (NZ); 2) Samoan families who had received physiotherapy living in NZ; 3) Physiotherapists living in Samoa; 4) Samoan families, health officials and traditional healers living in Samoa; 5) Samoan elders living in Samoa and NZ. Interviews were conducted using the Talanoa method. Recorded interviews were transcribed, translated and relevant data coded. Thematic analysis was conducted as guided by the Fa'afaletui methodology.

Results: The analysis rendered five key themes: Aiga and Tamāliiaga (Family and Genealogy), Teu le vā (Protect/nuture the relational space), Holistic healthcare, Traditional healing, and Health systems. These themes were synthesised and presented as a theoretical framework named the Fau'olo framework, based upon the Samoan traditional dance known as the taualuga.

Conclusion: Drawing from the metaphor of the taualuga, the Fau'olo framework is firmly grounded in the fa'asamoa (the Samoan way) and thus critically advocates for the provision of Physiotherapies with Samoan aiga (families) that are founded upon Indigenous Samoan cultural values, philosophies, and customs.

Key practice points:

- Samoan families welcome health services that prioritise and nurture holistic relational spaces.
- Samoan families recognise traditional healers as culturally safe practitioners.
- The Fau'olo framework presents a novel guide for health care workers on the important elements required for culturally safe engagements with Samoan families.

Implementation and adoption of My Therapy self-management program by physiotherapists at Royal Melbourne Hospital rehabilitation

Jennifer Langford[1], Casey Peiris[1,2], Annie Lu[1], Celeste Trussell[1], Elika Loughnan[1], Anita Ayling[1]

[1]Royal Melbourne Hospital, [2]LaTrobe University

4J: Transforming practice: Education, culture, and innovation, Riverbank Room 6, October 23, 2025, 14:30 - 15:15

Aim:

Evaluate the implementation of My Therapy self-management program by physiotherapists at Royal Melbourne Hospital.

Design:

Observational study

Method:

The study had three phases: (1) baseline audit, (2) implementation including establishment of change champions, online training, development of resources, staff education and feedback sessions, and (3) post-implementation audit. Success of implementation was evaluated using RE-AIM framework in terms of Reach (% patients with a program), Adoption (staff uptake), and Implementation (adherence to four pillars of My Therapy proven to improve independent practice efficacy: (i) provision of written program; (ii) documentation of program in medical record; (iii) provision of activity completion tick sheet; and (iv) program monitoring and progression). Chi-squared tests assessed for significant change in dichotomous variables.

Results:

During the audit periods, 188 out of 189 patients on rehabilitation ward received physiotherapy. All six ward physiotherapists (100%) adopted the My Therapy program. There were no changes in proportion of patients prescribed an independent program (baseline=60%, post-implementation= 57%, p=0.695) or programs provided in written format (baseline=87%, post-implementation=92%, p=0.408).

Provision of activity completion sheets rose from 25% to 86% ($p<0.001$) and documentation improved from 75% to 98% ($p<0.001$). Physiotherapist monitoring and progression of programs increased from 84% to 98% (p=0.013).

Conclusion:

While there was no increase in volume of programs prescribed, behaviour change strategies delivered during implementation phase improved how physiotherapists prescribe programs in terms of monitoring, progression and documentation.

Key practice points:

- Delivery of behavioural change strategies assisted successful implementation and adoption of My Therapy amongst physiotherapists working in rehabilitation.

Evaluating the implementation of a new graduate program in a neurological physiotherapy private practice setting

Meg Symington[1], Jill Kentish[1], Heidi Maccanti[1], Jan Quiney[1], Tamica Sturgess[1], Katie Davies[1]

[1]*Neurological Rehabilitation Group*

4J: Transforming practice: Education, culture, and innovation, Riverbank Room 6, October 23, 2025, 14:30 - 15:15

Aim:

Evaluate implementation of new graduate education and training program on organizational culture, support structures and fiscal efficiency.

Design:

Convergent parallel mixed-methods study.

Methods:

A mixed-methods survey using both open and closed response questions was completed by practice staff (n=16) and new graduates (n=4) after 12-months. Descriptive statistics and thematic analysis were used to report results.

Fiscal efficiency was calculated as return on investment to the business through revenue generation of the program which was tracked through a retrospective cost analysis completed at the end of the two-year program.

Results:

62.5% (n=10) of staff reported the program had improved organizational culture while 37.5% (n=6) reported no change. Themes included a more collaborative environment with increased opportunities for teaching and learning.

100% (n=4) of new graduates rated their perceived level of support as 10/10 with a preference for collaborative treatment sessions and group education over one-on-one supervision and peer mentoring.

A retrospective cost-analysis demonstrated the program started generating revenue after 18 months.

Conclusion:

The introduction of a new graduate program had positive effects on organizational culture and new graduates reported high satisfaction with varied support structures. There was a net financial benefit to the business after 18 months of investment.

Key practice points:

1. Inclusion of new graduates can further foster a culture of teaching and learning amongst existing staff.
2. New graduate physiotherapists value group-based learning opportunities to develop clinical reasoning skills and intervention ideas.
3. Structured new graduate program was financially feasible if employees were retained beyond 18 months.

Implementation of a state-wide peer supervision program for vestibular physiotherapists: engagement, outcomes and impact

Gretta Palmer[1], Ann Rahmann[2], Kelly Costa[3]

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4J: Transforming practice: Education, culture, and innovation, Riverbank Room 6, October 23, 2025, 14:30 - 15:15

Aim:

This quality improvement project aimed to enhance support for physiotherapists treating patients with vestibular dysfunction, particularly in rural and regional Queensland. It sought to connect clinicians with shared learning goals through peer supervision groups, addressing the limited availability of experienced mentors.

The primary objective was to evaluate the program's feasibility, perceived benefits, and its impact on professional development and patient care.

Design:

A statewide pilot program was developed based on established peer supervision models, tailored to the needs of the Queensland Vestibular Network (QVN). Participants were grouped by self-identified learning objectives and supported by experienced mentors. The program was evaluated through pre- and post-implementation surveys.

Method:

Fifty-six physiotherapists from diverse clinical settings participated in nine peer supervision groups over eight months. Groups met regularly via videoconferencing, guided by a mentor. Feedback surveys assessed program engagement, learning outcomes, and satisfaction.

Results:

Ninety percent of participants reported the program met their learning goals, and 94% would recommend or rejoin. Mentors received high ratings (4.7/5), and participants highlighted improved confidence and skills in managing vestibular patients. Challenges included scheduling difficulties and competing priorities, particularly for private-sector participants.

Conclusion:

The program demonstrated the feasibility and value of peer supervision in addressing learning gaps and supporting clinicians in remote areas. It has since been adopted as a regular initiative within the QVN.

Key practice points:

- This peer supervision framework can be adapted for other clinical networks, providing valuable professional development opportunities, particularly for individuals in rural areas with limited access to local support.

Unravelling the complexity of persistent pelvic pain through multidisciplinary Specialist Physiotherapy: expanding the clinician's approach.

Alisa McLachlan[1], Angela James[1,2], Darren Doherty[1,3], Jenny Hynes[1,4,6,7], Paula Peralta[1,5]

[1]Australian College of Physiotherapists, [2]Sydney Pelvic Clinic, [3]Gold Coast Persistent Pain Centre, [4]Keilor Road Physiotherapy, [5]Australian Sports Commission, [6]Physioeducators, [7]Spine and Pelvis Physiotherapy

5J: Women's Health, Riverbank Room 6, October 24, 2025, 10:35 - 11:20

Background:

Pelvic pain in women in Australia has a reported prevalence of 47%. Physiotherapists in many clinical settings will need to assess and manage this patient group. Postgraduate education in this field can be focussed on specific discipline areas rather than understanding the multifactorial nature of this condition.

A recent systematic review and meta-analysis demonstrated multimodal physiotherapy is effective in women with chronic pelvic pain with high certainty of evidence. This "how to" session will equip clinicians with knowledge and strategies improve management of this patient population.

Objectives:

1. Outline the broad diagnostic categories in pelvic pain.
2. Highlight clinical approaches (what & why) to assessing and managing pelvic pain through a panel of Specialists – Pain, Musculoskeletal, Women's Men's Pelvic Health and Sports and Exercise.
3. Increase clinician awareness of the multifactorial nature of pelvic pain and expose the clinician to strategies (how) for both a broad and targeted approach to management of pelvic pain.

Approach:

1. A panel of four Specialist physiotherapists in facilitated discussion.
2. Overview of prevalence and disability burden of pelvic pain and diagnostic categories.
3. Clinical case example with input from each Specialist outlining their approach to assessment and management. Facilitated discussion to highlight practical in-clinic strategies for honing diagnosis, and highlighting current evidence base for best practice management.

4. Participant engagement: Questions from audience.

Key practice points:

- This session will expand clinicians understanding of the complexity of pelvic pain and increase their ability to manage in best practice multimodal manner.

Active women over 50 remotely-delivered physical activity program. An effectiveness-implementation randomised controlled trial

Geraldine Wallbank[1], Abby Haynes[1], Heidi Gilchrist[1], Marina Pinheiro[1], Karen C. Lee[1], Courtney West[1], Catherine Kirkham[1], Betty Ramsay[1], Giane Caon Camara[1], Jennifer Baldwin[1], Susan Bowman[1], Shannon Colley[1], Kadja Gomes Benicio[1], Lotte Verkuijlen[1], Samuel Wallbank[1], Michelle Zeng[1], Ruby Tiedemann[1], Jo Dawson[1], Trish Starling[1], Juliana Oliveira[2], Dominika Kwasnicka[3], Leanne Hassett[1], Nehmat Houssami[1], Georgina Luscombe[1], Grace McKeon[4], Catherine Sherrington[1], Philayrath Phongsavan[1], Raaj Kishore Biswas[1], Susan Linney[5], Trish Stabback[6], Adrian Bauman[1], Kirsten Howard[1], Simon Rosenbaum[4], Anne Tiedemann[1]

[1]The University of Sydney, [2]Gold Coast University Hospital, [3]University of Melbourne, [4]University of New South Wales, [5]Consumer representative, [6]Country Women's Association

5J: Women's Health, Riverbank Room 6, October 24, 2025, 10:35 - 11:20

Aims:

Test the impact of a remotely-delivered behaviour change intervention on midlife women's physical activity compared to a waitlist control; investigate program participation factors; evaluate cost-effectiveness, key factors for implementation and scale-up.

Design:

Hybrid type 1 effectiveness-implementation randomised controlled trial.

Methods:

One-thousand community-dwelling women across NSW Australia, half living in rural/regional areas, will be recruited via community newsletters, websites, mainstream/social media, organisations and health promotion services. Eligible women are aged 50+, wanting physical activity support and not meeting WHO guideline recommendations. Intervention is two telephone health coaching sessions; behaviour-change messages; program-specific website; and private Facebook group.

Outcomes include device-measured daily steps at baseline and 6-months post-randomisation (primary), physical activity, falls, quality of life, action and coping planning, cost-effectiveness, process and implementation measures. Subgroup analyses will be conducted by participant and geographical characteristics.

Results:

Recruitment commenced March 2024. There have been 836 expressions of interest recruited mostly via email, word of mouth, Facebook, newspaper/radio. of those screened, 83% are eligible. of 472 randomised, 60% live in urban areas and 40% in rural/regional areas.

Conclusions:

The Active Women over 50 program has potential to empower midlife women to manage their health through physical activity, ultimately reducing their healthcare service use.

Key practice points:

The Active Women over 50 program could:

- Provide a scalable solution to the burden that physical inactivity places on individuals and health systems.
- Be implemented at the population level, including isolated women and those living in diverse settings, to promote physical activity, healthy aging, and independence—if effective.

'Acting it out really makes it stick in your brain': educating students for patient portrayal

Narelle Dalwood[1], Prue Morgan[1]
[1]*Monash University*

7J: Clinical Education, Riverbank Room 6, October 24, 2025, 14:15 - 15:00

Introduction/background: Peer simulation, whereby students portray the patient role for each other during simulation-based education (SBE), is gaining traction as a unique, scalable and sustainable learning approach. In addition to providing opportunities for practicing clinical skills, portraying the patient role accurately for peers enhances understanding of patient perspectives, fostering development of communication and empathy. Additionally, students report that peer simulation, unlike role-play, is unexpectedly realistic and a valuable and engaging learning experience. Peer simulation may have fewer financial constraints than other SBE approaches and potentially address declining clinical placement availability. This how-to session will outline evidence around key design features and provide a method of educating students to portray patient roles for their peers.

Aims/objectives

1. To develop understanding of the benefits of peer simulation.
2. To demonstrate the utility and identify design features of a successful peer simulation program – when, where, who, how?
3. To discuss and provide strategies for implementing a peer simulation program.

Approach:

1. Set the scene: evidence for peer simulation as an SBE approach (5 mins).
2. Describe the key design features of a peer simulation approach embedded within two entry-to-practice physiotherapy programs (10 mins).
3. Provide strategies for educating students to portray the patient role, with resource and video demonstration (10 mins).
4. Participant engagement to discuss context specific barriers and enablers to implementing a peer simulation program (5 mins).

Key practice points:

- This how-to session is aimed at building educator capacity, knowledge and skills in implementing and delivering a peer simulation program.

Helpful placement strategies identified and utilised by physiotherapy students from culturally and linguistically diverse backgrounds

Stephen West-Newman[1], Martin Sale[1], Roma Forbes[1], Stacie Attrill[2]
[1]The University of Queensland, [2]The University of Adelaide

7J: Clinical Education, Riverbank Room 6, October 24, 2025, 14:15 - 15:00

Aim:
To investigate helpful strategies identified by physiotherapy students from culturally and linguistically diverse backgrounds during clinical placements to inform future students' and educators' practice.

Design:
Experiential qualitative investigation via semi-structured zoom interviews to explicitly reflect students' perspectives.

Method:
Cognitive Load Theory provided an interpretive framework to explore student-led strategies under the high cognitive demands expected during clinical placements. Thirteen students from five universities across three Australian states were recruited through convenience and snowball sampling. Data underwent inductive, reflexive thematic analysis.

Results:
Three key themes were developed:

1) Clarity is king: explicit instructions and guidance provides focus in learning and clinical practice,
2) Gaining cognitive control: cognitive overload can be reduced through preparation for upcoming responsibilities, and
3) Acculturation through initiative, immersion and the help of others: to navigate through the sociocultural milieu of placements.

Conclusion:
Students from culturally and linguistically diverse backgrounds use a variety of strategies to manage communication challenges and other cognitive demands during placements. Key strategies identified centered on preparation, establishing clarity and adapting culturally to the setting, with clinical educators crucial in supporting these efforts.

Key practice points:

Students from culturally and linguistically diverse backgrounds identify the following strategies as helpful in navigating clinical placements:

1. Fostering clarity through orientations, quality feedback and frequent, open communication with educators.
2. Rehearsal strategies (scripting and practice) and planning for upcoming clinical practice (including contingencies) to manage their cognitive demands.
3. Supporting acculturation through shadowing educators and peers, authentic communication practice, reflection and speech simplification.

Implementing generic behaviour change strategies in physiotherapy practice

Brea Kunstler[1]

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9I: Behaviour and organisation change, Riverbank Room 4, October 25, 2025, 10:35 - 11:35

Introduction/Background: Behaviour change is essential in physiotherapy to enhance treatment outcomes. This session will introduce generic behaviour change models and frameworks, such as the EAST (Easy, Attractive, Social, Timely) framework, and its application in physiotherapy. Participants are assumed to have a basic understanding of patient interaction and therapeutic exercises.

Aims/Objectives: The aim of this session is to equip physiotherapists with practical strategies to change a variety of patient behaviours, such as physical activity behaviours. By the end of the session, participants will: Understand the principles of the EAST (Easy, Attractive, Social, Timely) framework, learn how to apply these principles to encourage positive patient behaviours, and acquire the skills to integrate behaviour change strategies into their daily practice.

Approach: This session will employ a lecture-style format supplemented with interactive polls and case studies. Participants will be guided through the EAST (Easy, Attractive, Social, Timely) framework, with specific examples illustrating its application in physiotherapy settings. Interactive discussions will be encouraged to facilitate understanding and practical application.

Key practice points:

- Integrating behaviour change techniques into practice can enhance the overall effectiveness of physiotherapy interventions.
- The EAST (Easy, Attractive, Social, Timely) framework provides a structured approach to behaviour change, making it simple for physiotherapists to implement.
- Generic behaviour change models can be applied in part or as a whole, and within one consultation or across many consultations, making them practical for clinical application.

Beyond the individual: Exploring clinicians' delivery of trauma-informed physiotherapy through a systems approach

Peter Window[1], Simon Kilner[2], Rachel Almaw[1,3], Miriam Dillon[4], Joanna Hargreaves[1], Ciaran Fitzgerald[5], Laurelie Wishart[6,7], Laura Freeburn[8], Natalie Barthel[9], Sophie Heywood[10,11], Sam Bunzli[1,12]

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9I: Behaviour and organisation change, Riverbank Room 4, October 25, 2025, 10:35 - 11:35

Aim:

Physiotherapists work within complex healthcare systems that affect their ability to apply principles of trauma-informed care. This study aimed to identify system factors (individual, organisational and environmental) that influenced physiotherapists' capacity to apply principles of safety, collaboration, empowerment, trust, and choice.

Design:

Ethnographic observational study.

Method:

Seventeen observations of physiotherapist-patient interactions were conducted in a tertiary hospital in Queensland, Australia. Observations were purposively sampled to represent a range of clinical areas and physiotherapists of varying experience. Field notes were analysed inductively and considered in relation to the trauma-informed principles.

Results:

Observations revealed that the relationship between physiotherapists' knowledge, skills, and their ability to apply trauma-informed principles in practice was influenced by education, leadership, collaboration, and environment. While physiotherapists recognised the importance of trauma-informed principles, a lack of formal training

limited their capacity to advocate for patient safety. Strong leadership that promoted professionalism and patient respect fostered trust within the team through top-down influence. Where siloed approaches to care were evident, physiotherapists were disempowered to apply trauma-informed principles. Environmental requirements such as physical spaces that lacked privacy threatened principles of choice and safety.

Conclusion:

Trauma-informed care extends beyond individual physiotherapist practice, requiring a systems approach to identify enablers and barriers at individual, organizational and environmental levels.

Key practice points:

- Trauma-informed education helps physiotherapists identify and respond to signs of distress among patients.
- Organisations should support leadership and collaborative practices that promote trauma-informed principles.
- Implementation approaches should consider environmental barriers to trauma-informed care.

Effectiveness of a home-based, tailored intervention for reducing falls after stroke (FAST): a randomised trial

Catherine Dean[3], Katharine Scrivener[1,2,3], Natasha Lannin[1,2], Louise Ada[4], Sally Day[4], Ingrid Lin[3], Elisabeth Preston[5], Lindy Clemson[4]

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9J: Clinical reasoning for optimal patient outcomes, Riverbank Room 6, October 25, 2025, 10:35 - 11:35

Aim:

This study aimed to evaluate the effectiveness of a home-based falls prevention program, delivered by physiotherapists and occupational therapists, in reducing fall incidence among people after stroke compared to usual care.

Design:

The FAST trial was a multi-state, Phase III randomised trial that utilised concealed allocation, blinded outcome assessment, and an intention-to-treat analysis.

Method:

The FAST trial evaluated an intervention combining habit-forming exercise, home safety modifications, and community mobility training, tailored to walking speed (slow <0.4 m/s, medium 0.4–0.8 m/s, fast >0.8 m/s) against usual care. Ambulatory individuals within five years post-stroke who had transitioned to community living were randomly assigned to either the experimental or control group. The primary outcome was the fall rate over 12 months, while secondary outcomes included community participation, physical activity, and health-related quality of life. A sample size of 370 participants provided 80% power to detect a clinically significant 30% reduction in fall rates between groups.

Results:

The trial concluded in December 2024, with 370 participants enrolled (46% female, mean age 76 years, and a median of 28 months post-stroke at recruitment). Findings will be available for presentation at the conference.

Conclusions:

The FAST trial results identify an effective fall prevention intervention for people after stroke, contributing to the enhancement of community-based post-stroke rehabilitation.

Key practice points:

- Currently, no physiotherapy intervention has demonstrated effectiveness in preventing falls after stroke.
- This groundbreaking trial provides physiotherapists with an effective solution that can be seamlessly integrated into clinical practice.

Developing clinical reasoning skills in neurological physiotherapy education and practice

Jill Garner[1,2], Belinda Lange[2], Sheila Lennon[2], Maayken van den Berg[2]
[1]SA Health, [2]Flinders University

9J: Clinical reasoning for optimal patient outcomes, Riverbank Room 6, October 25, 2025, 10:35 - 11:35

Introduction:

The doctoral studies presented in this session explore assessment and clinical reasoning (CR) in neurological physiotherapy, as applied in physiotherapy pre-registration education. A theoretical framework for neurological physiotherapy has yet to be agreed. Based on the outcomes and identified gaps, these studies offer insights into current practices and potential areas for improvement in CR in pre-registration education and practice.

Aims/learning outcomes:

To increase participants' understanding of student and educator perspectives of teaching and learning CR in neurological physiotherapy within Australia.

Learning outcomes:

1. To identify key components of CR recommended within the physiotherapy practice thresholds of AusNZ (2023)
2. To understand educators' perspectives on developing CR.
3. To understand students' perspectives on developing CR.
4. To explore the barriers and enablers influencing CR in practice.
5. To identify strategies for improving clinical reasoning skills in education and practice.

Approach:

- Setting the scene: evidence for CR in neurological physiotherapy from a scoping review extracting common components from 25 frameworks mapped to physiotherapy threshold standards AusNZ (2023) (10 minutes).
- Content: Engagement of educators (educator interviews) and pre-registrations students (student interviews) in defining barriers and enablers for defining CR (10 minutes).
- Participant Engagement: Brainstorming strategies for improving CR; questions from the audience (10 minutes).

Key practice points:

The participants will:

- Have an increased understanding of the integration of educator & student perspectives compared to practice threshold standards on CR
- Be able to identify enablers & barriers influencing CR in practice
- Be able to identify strategies for developing CR skills

Motivational interviewing to facilitate person-centred goal setting in physiotherapy: A feasibility study

Elizabeth Wintle[1,2], Nichloas Taylor[1,2], Katherine Harding[1,2], Paul O'Halloran[2], Made Rimayanti[1,2], Andrew Rank[1], Casey Peiris[2,3]

9I: Behaviour and organisation change, Riverbank Room 4, October 25, 2025, 10:35 - 11:35

Aim:

To investigate the feasibility of using embedded motivational interviewing (MI) to elicit person-centred goals in physiotherapy rehabilitation.

Design:

A mixed-methods, prospective single cohort feasibility study using Bowen's feasibility framework.

Method:

Sixty adults attending community rehabilitation physiotherapy and four MI trained physiotherapists participated. Physiotherapists used MI to facilitate person-centred goal setting discussions. Feasibility domains of acceptability (numerical rating scale out of ten), demand (uptake), implementation (including MI fidelity), practicality (time taken) and limited efficacy (number and outcome of person-centred goals) were evaluated using a mixed methods approach including focus group discussions with physiotherapists to inform the feasibility domains of practicality and acceptability.

Results:

Over the 14-month recruitment period, 70 patients were eligible and 60 agreed to participate (mean 68 years, 60% female, 86% uptake). Patient participants reported high levels of acceptance (mean 9.4, SD 1.0) and identified two to three person-centred goals each, of which 69% were achieved at discharge.

Physiotherapists were able to practically and proficiently embed MI into routine goal setting discussions, and qualitative data indicated high levels of acceptability. Physiotherapists perceived that MI helped elicit more meaningful goals that patients were ready and motivated to work towards, and supported the ongoing application of MI within routine rehabilitation goal setting.

Conclusion:

Embedding motivational interviewing into physiotherapy goal setting was a feasible way to elicit meaningful person-centred rehabilitation goals, which were accepted by patients and physiotherapists.

Key practice points:

- Physiotherapists can proficiently embed MI into usual practice to facilitate collaborative person-centred goal setting discussions that patients and physiotherapists valued.

The workforce evolution: Strategies to fostering a sustainable and productive workforce in your organisation

Healthcare Humanist Rhea Mercado[1]

[1]The Intelligent Rebellion, [2]Threesticks Training & Development

10J: The physiotherapy workforce and broadening our current role, Hall A, October 25, 2025, 11:40 - 12:40

Background:

Australia faces a shortage of allied health professionals, with the Australian Institute of Health and Welfare projecting a shortfall of over 200,000 full-time workers by 2050. Demand for services outpaces workforce growth, creating challenges in recruitment and retention. Organisations must pivot to cultivate engaged teams, build strengths-based cultures, and harness employees' superpowers to remain sustainable, resilient, and agile amid flux.

Objectives:

1. Present the latest workforce research, trends, and challenges in allied health.
2. Define the essential elements of a Culture of Engagement and a Strengths-based Culture.
3. Explore the tangible benefits of fostering these cultures within organisations.
4. offer practical, easily implementable strategies for managers to embed a Culture of Engagement in their teams.

Approach:

1. Setting the Scene (5 minutes): Review current workforce data, highlighting key trends and challenges.
2. Content (10 minutes): Examine core principles of Responsible Leadership, a Culture of Engagement, and a Strengths-based Culture, emphasising the advantages of integrating these concepts into organisational practices.
3. Delivery (10 minutes): Present a series of practical strategies and actions managers can adopt to foster engagement and harness employees' strengths.
4. Participant Engagement (5 minutes): Invite audience questions and opportunity for peer-to-peer learning.

Key practice points:

- This "how to" session equips managers and business owners with practical tools and insights to develop a sustainable, productive and dynamic workforce.

- Participants will gain strategies for unlocking the full potential of their teams leading to increased productivity, increase profits, lower employee attrition and increased employee enthusiasm, motivation and commitment.

Workforce integration support program - Supporting the transition to practice for new graduate physiotherapists

Thao Nguyen[1], Laura Sparkes[1]
[1]*The Royal Melbourne Hospital*

10J: The physiotherapy workforce and broadening our current role, Hall A, October 25, 2025, 11:40 - 12:40

Aim: To optimise the transition to practice for New Graduates physiotherapists through targeted learner-led near peer supported activities.

Design: Mixed methods study.

Method: New Graduates to a major public hospital service were provided with four hours of weekly support for a month by another Grade 1 physiotherapist (near peer). Both parties completed diary entries describing activities conducted within the program. Supervisors and Team Leaders were surveyed to explore the impact of the program on onboarding of New Graduates into the service.

Results: Nine New Graduates and five near peers participated over a two-year period. The predominant activities conducted were co-treating (n = 26), debriefing (n = 21) and caseload management (n = 15). New Graduates overall found the support to be valuable, facilitated better integration into their new roles and grew their confidence and development of specific skills in clinical areas. Peers reported developing skills in communication, role-modelling and facilitating reflections. Additional benefits for the peers included developing educator identity, demonstrating leadership and improving existing onboarding processes. Supervisors and Teams Leaders noted successful transitions for New Graduates and considered the program appropriate.

Conclusion: The transition to practice for New Graduate physiotherapists can be eased with a short period of support provided by a near peer, with benefits for individuals as well as the service.

Key practice points:

- Targeted learner-led activities for four weeks supported by a near peer had a positive impact for New Graduate physiotherapists.
- Similar activities in other transitions of physiotherapy career development could be considered.

Can physiotherapists play a bigger role in supporting weight loss? The POWER randomized control

Kim Allison[1,2], Sarah Jones[3], Rana Hinman[3], Jesse Pardo[3], Peixuan Li[4], Anurika DeSilva[4], Jonathan Quicke[5], Priya Sumithran[6], Jodie Prendergast[7], Elena George[8], Melanie Holden[9], Nadine Foster[5], Kim Bennell[3]

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10J: The physiotherapy workforce and broadening our current role, Hall A, October 25, 2025, 11:40 - 12:40

Aim:

To assess if physiotherapists can effectively and safely deliver a protocolized very low energy diet (VLED) alongside exercise for individuals with knee osteoarthritis (OA) and overweight or obesity.

Design:

Randomized controlled trial comparing VLED plus exercise (intervention) to exercise only (control), delivered via six videoconference sessions over 6 months.

Methods:

88 participants with knee OA and body mass index (BMI) >27 kg/m² were randomized to intervention (n=42) or control (n=46) groups. Primary outcome was percentage change in body weight at 6 months. Secondary outcomes included BMI, waist circumference, pain, function, satisfaction, and physical performance.

Results:

The intervention group lost a mean 8.1% (SD 5.2) body weight compared to 1.0% (3.2) in the control group (mean between-group difference 7.2% [95%CI 5.1, 9.3], p<0.001). Intervention group showed greater reductions in BMI and waist circumference. More intervention participants (76%) achieved ≥5% weight loss than controls (12%). Global knee improvement was reported by 71% of intervention participants versus 48% of controls (p=0.02). No serious adverse events occurred.

Conclusion:

Physiotherapists can deliver a VLED that resulted in significant weight loss and was safe for individuals with knee OA and overweight or obesity. Results have potential implications for future service models of care for OA and obesity. Further implementation research beyond trial settings is warranted.

Key practice points:

- Physiotherapist-delivered VLED plus exercise reduces body weight and improves knee pain and function.
- Patients receiving VLED plus exercise were more satisfied than the exercise-only group.
- Physiotherapists may have a role in weight loss support.

Examining international physiotherapists' self-rated competence, attitudes, and training needs in LGBTQ+ healthcare

Megan Ross[1], Calum Neish[1]
[1]*The University of Queensland*

10J: The physiotherapy workforce and broadening our current role, Hall A, October 25, 2025, 11:40 - 12:40

Aim: To explore physiotherapists' self-identity, training and work experience with lesbian, gay, bisexual, transgender, queer and other related identities (LGBTQ+) communities, and their influence on, self-reported knowledge, attitudes, competence and perspectives about professional development.

Design: Cross-sectional observational survey.

Method: An online survey was used to collect quantitative data about international physiotherapists' LGBTQ+ identity, training on LGBTQ+ topics and experience working with LGBTQ+ people and their agreement with statements about knowledge, attitudes, competence and professional development. Data were explored descriptively and using ordinal regression with odds ratios, 95% confidence intervals reported.

Results: of 606 eligible participants, 356 completed the questionnaire. Most participants felt competent to provide physiotherapy to LGBTQ+ individuals (88%; 313/356), but only 20% (71/356) agreed their training adequately addressed LGBTQ+ health needs. Preliminary analyses suggest that physiotherapists with LGBTQ+ training were more likely to recognise specific health needs (2.91, 1.92-4.39), the importance of gender identity (2.19, 1.47-3.25) and to support the diverse make-up of families (3.43, 1.93-6.11). Those with training were more supportive of the importance of education and developing attitudes and skills for inclusive and effective care.

Conclusion: While most physiotherapists feel competent in providing care to LGBTQ+ people, there is a significant gap in training on LGBTQ+ health needs.

Key practice points:

- Integrating LGBTQ+ education into physiotherapy training is important for enhancing inclusive and effective care, and may influence awareness and self-reported competency to work with LGBTQ+ populations.
- Physiotherapists with LGBTQ+ health knowledge and training are more likely to identify and address specific health needs.

How to develop PhD opportunities for physiotherapists within health services

Alexandra Edmondson[1,2], Gustavo Machado[2,3], Danielle Coombs[2,3], Bethan Richards[2], Ruth Perrott[1], Sarah Whitney[1], Christopher Maher[2,3]

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11J: Careers in hospitals, Riverbank Room 6, October 25, 2025, 13:40 - 14:25

Introduction/Background: Pursuing doctoral research is often an unattractive option for physiotherapists due to the time commitment and the impact on job security, income, and clinical responsibilities. This session shares practical approaches used to create fully funded clinician-researcher roles within the Australian public health system. It focuses on the steps, funding models, and stakeholder strategies used to establish these roles. While adaptable to private settings, the primary focus is on public sector implementation. This session is relevant to anyone interested in building clinician-researcher roles that support both research and clinical service delivery.

Aims/Objectives: This session provides practical guidance on designing and implementing clinically embedded PhD models for physiotherapists. Drawing on two successfully implemented examples, it outlines how five physiotherapists were supported to undertake a PhD while retaining their full-time salary and permanent roles. Key elements covered include funding mechanisms, stakeholder engagement strategies, and actionable steps to support implementation across health service settings.

Approach: The session includes two parts. The first is a lecture-style presentation featuring real-world examples and an overview of key enablers and challenges. The second part adopts a tutorial-style format and discussions allowing attendees to identify on how the model could be adapted to their workplace.

Key practice points:

- Understand practical steps to develop clinician-researcher roles in health services.
- Learn about funding strategies and stakeholder engagement approaches that supported implementation.
- Explore how these roles can contribute to staff development, research capacity, and service innovation.

Evaluation of a tailored training program to promote evidence-based practice amongst physiotherapists

Dragana Ceprnja[1,2], Melani Boyce[1], Tracey Clark[1], Katherine Maka[1], Tiffany Ellis[1,2], Cassandra Wong[2]

[1]WSLHD, [2]USYD

11J: Careers in hospitals, Riverbank Room 6, October 25, 2025, 13:40 - 14:25

Aim: This study aimed to investigate the knowledge and practice of evidence-based practice (EBP) and to develop, implement and evaluate a tailored training program to address the barriers identified by physiotherapists.

Design: A mixed-methods observational pre-post study.

Method: Participants were physiotherapists who completed the Health Sciences Evidence Based Questionnaire (HSEBP), which consists of five domains: beliefs and attitudes, results from scientific research, development of professional practice, assessment of results, and barriers and facilitators. The results from the initial survey were used to develop a targeted education and training plan.

Results: Physiotherapists (N=33) scored highest on the beliefs and attitudes domain. The two lowest scoring domains of the HSEBP, results from scientific research and barriers and facilitators, were the focus of six targeted training sessions. Following the training, average improvements of 6.5 points (95%CI 2.8-10.1) and 7.1 points (95%CI 1.0-13.1) were reported for the domains of results from scientific research and barriers and facilitators respectively. Qualitative feedback from participants identified strategies to support further growth of EBP in clinical practice.

Discussion: While physiotherapists report positive scores for beliefs and attitudes towards EBP, the findings suggest a bespoke program focussed on addressing the identified barriers is needed to further embed EBP in a clinical setting.

Key practice points:

- Targeted education and training program was effective in improving scores for EBP using a validated questionnaire.
- Physiotherapists seek quick and easily digestible information to assist EBP.
- Exploring local barriers with a solution focus was successful in changing EBP amongst physiotherapists.

Greater prefrontal cortex activity and sway in older people than younger people during balance-cognition dual-tasks

Chris Jin Won Kang[1], Jodie Marquez[1], Wei-Peng Teo[2], Sarah J Blyton[1], Nathan D Nuzum[3], Riad Akhundov[1], Frini Karayanidis[1], Suzanne J Snodgrass[1]

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12J: Rehabilitation, Riverbank Room 5, October 25, 2025, 14:30 - 15:15

Aim:

Cortical mechanisms underpinning age-related balance decline aren't well understood. This study aimed to determine the effect of age on brain activity during balance-cognition dual-tasks.

Design:

Cross-sectional laboratory study.

Method:

Thirty healthy participants (19-73 years) performed static balance tasks (feet together, tandem) while simultaneously performing digit span tasks (ordered control 1-2-3-4, random forward, random backward).

Functional near-infrared spectroscopy measured oxyhaemoglobin change (ΔHbO, µmol) in the prefrontal (PFC), primary motor and somatosensory cortices, while posturography quantified body sway (mm) by the centre of pressure from ground reaction forces. General linear mixed models examined relationships between brain activity, sway parameters, tasks (foot position, cognitive task) and age groups (≤55, >55).

Results:

For both age groups, there was greater PFC activity in tandem compared to feet together (EMM difference 1.66 (95% CI 0.81 to 2.51), p = 0.001). The younger group had less motor cortex activity for feet together than tandem (EMM difference 1.49 (95% CI 1.77 to 2.81), p = 0.026), whereas the older group had similar activity across both tasks.

The older group had greater body sway for most sway parameters than the younger group, with medial-lateral sway distance in tandem reaching significance (EMM 110.53 (95% CI 43.71 to 177.35), p = 0.049).

Conclusion:

Older people use greater cortical resources and exhibit larger body sway than younger people during balance-cognition dual-tasks.

Key practice points:

- Older people exhibited greater body sway with cognitive loading.
- Clinicians may consider balance tasks with cognitive load during assessment to further challenge balance in adults over 55.

The evolution of rehabilitation solutions: Novel technologies in physiotherapy clinical rehabilitation: a systematic review

Mahmoud Alkyam[1], Jodie Marquez[1,2], Luke Wakely[1,3]

[1]University of Newcastle, [2]Hunter Medical Research Institute, [3]University of Newcastle Department of Rural Health

12J: Rehabilitation, Riverbank Room 5, October 25, 2025, 14:30 - 15:15

Aim:

This review explored the literature on the efficacy of implementing novel technology in physiotherapy rehabilitation clinical practice.

Design:

Systematic review with meta-analysis and qualitative synthesis.

Methodology:

A search of MEDLINE, Embase, and CINAHL used terms related to innovative rehabilitation technologies and neurological disorders, without restrictions on methodology or time. Data were aggregated in meta-analyses, and qualitative findings synthesised narratively.

Results:

The search identified 1,789 studies, of which 143 were included. The main modalities explored in the studies were robotics and virtual reality.

Robotics significantly improved upper-limb function (MD = 3.62, p = 0.009), independence (SMD = 0.32, p = 0.04), quality of life (MD = 8.64, p = 0.0008), and pain (MD = 1.91, p = 0.02). Robotics did not significantly improve; upper-limb spasticity , lower-limb function or balance (p > than .05).

Patients valued the chance to use robotics, mentioning that it enhanced their motivation and provided benefits. Clinicians were optimistic about the outcomes but expressed concerns regarding the costs, training requirements, and integration challenges.

Virtual reality significantly improved upper-limb function (SMD = 0.42, p = 0.004) but did not enhance independence (p > than .05). Patients appreciated the immersive and engaging experience. Clinicians acknowledged its potential to improve outcomes.

Conclusion:

Novel rehabilitation technologies can be valuable, effective, and feasibly implemented into clinical rehabilitation.

Key practice points:

- Robotics and virtual reality significantly improved some functional outcomes of people with neurological conditions.
- Rehabilitation therapists agreed there were therapeutic benefits but had concerns about cost, training and ease of use.

Symptom profiles and health related behaviours in adults with Meniere's disease: a cross-sectional study

Dakota Mutch[1], Ann Rahmann[2], Sjaan R Gomersall[3], Katrina Williams[1]

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12J: Rehabilitation, Riverbank Room 5, October 25, 2025, 14:30 - 15:15

Aim: To explore symptom profile, behaviours of physical activity and sedentary behaviour, and the correlations between these symptoms and behaviours.

Design: Cross-sectional study

Method: Thirty-two adults with Meniere's disease completed a comprehensive digital survey using outcome measures to capture dizziness severity, hearing dysfunction, balance confidence, fatigue, sleep, physical activity, and sedentary behaviour. Descriptive statistics were used to analyse participant characteristics, symptoms, physical activity, and sedentary behaviour. Pearson's and Spearman's correlations were used to examine associations between these variables.

Results: Participants reported moderate level of dizziness, fatigue, hearing dysfunction and participation restrictions due to hearing loss. Hearing Handicap was severe and balance confidence low (<67%) indicating risk of falls. Physical activity was lower than normative values and physical activity guidelines, and significantly correlated with dizziness (r=-0.52), fatigue (r=-0.51) and balance confidence (r=0.38). Finally, sedentary behaviour was higher than normative values and significantly correlated with hearing dysfunction only (r=-0.39).

Conclusions: Adults with Meniere's disease reported moderate levels of symptoms, did not meet physical activity guidelines, and had higher levels of sedentary behaviour.

Key practice points:

- Symptom profiles may assist in developing more targeted treatment options for adults with Meniere's disease
- Increasing physical activity and lowering sedentary behaviour may have beneficial effects on vestibular symptoms and in adults with Meniere's disease.

Beyond the University: supporting graduates for workplace readiness

Rosa Virgara[1], Anna Phillips[1], Michelle Guerin[1]
[1]*University of South Australia - Allied Health and Human Performance*

12J: Rehabilitation, Riverbank Room 5, October 25, 2025, 14:30 - 15:15

Aim: To determine placement and workplace readiness of Physiotherapy Students for manual handling.

Design: A cross-sectional survey.

Method: An online survey, informed by a 2024 scoping review, was emailed to Clinical Educators of UniSA physiotherapy students in September 2024. Clinical Educators were asked to rate their perceptions of student readiness, knowledge and confidence with manual handling on a 5-point scale from not at all ready to new graduate ready. Open-text responses were sought regarding manual handling competencies and areas for development. Descriptive and summative content analysis was used.

Results: 58 Clinical Educators responded (19% response rate). Perceptions of student readiness for manual handling ranged from not ready or almost ready for 2nd year students, to ready or new graduate ready for 4th year students. Areas consistently rated as new graduate ready included gait aid prescription, and simple transfers, with use of lifting equipment rated consistently as not ready. Key themes from open- text responses included safety, practice / experience and clinical reasoning.

Conclusion: Clinical educators perceived students to be ready or new graduate ready by their final year. Areas identified for further development included practice opportunities with attachments, use of lifting equipment and clinical reasoning.

Key practice points:

- Clinical educators perceived students to be ready and new graduate ready for the majority of manual handling tasks by final year
- Additional practice and training may support student readiness for using equipment.
- Current new-graduates are likely to need support to develop manual handling skills involving complex transfers and equipment.

Allied Health STEP Tool: Real-time data informed response to daily demand and capacity challenges

Johan Van Aardt[1], Shelley Boyley, Steven Kamper, Sidney Takacs

[1]*NSW Health*

12J: Rehabilitation, Riverbank Room 5, October 25, 2025, 14:30 - 15:15

Aim: To develop and evaluate a real time data driven tool (Short-Term Escalation Process - STEP) to respond to daily demand and capacity for Physiotherapy in a major hospital. STEP aims to improve patient care through efficient staff allocation.

Design: Pre and post staff surveys informed development, assessment and refinement of STEP including creation of individual ward specific triggers to quantify demand and capacity. STEP triggers are completed daily on Teams prior to the team meeting, requiring approximately 2 minutes.

Method: Initially STEP was developed across three wards and scaled to 19 wards across Nepean Hospital. Impact on patient care was assessed by measuring patients receiving assessment within 24 hours of referral in three months pre implementation and at monthly intervals post. Physiotherapists completed a survey after implementation about perspectives on STEP.

Results: Following implementation, proportion of patients receiving intervention within 24 hours, improved from 60% to 70%. All surveyed Physiotherapists agreed STEP addressed efficient and transparent staff allocation. Analysis of daily data has informed subsequent funding briefs and service planning across the hospital.

Conclusion: STEP improved patient access to timely care through real-time, objective assessment of ward-level clinical caseloads enabling equitable workload distribution across the physiotherapy team. The customisable nature of the triggers allows for adaptation to any specialty/discipline.

Key practice points:

- Quantification of ward-level workload via a 2-minute daily process improved patient care and staff satisfaction by better allocating staff resources
- The STEP tool can be customised to suit staff allocation needs in different clinical contexts

Similar return-to-sport rates and activity levels following management with anterior cruciate ligament reconstruction versus rehabilitation-alone

Stephanie Filbay[1], Garrett Bullock[2], Scott Russell[1], Frances Brown[1], Wilson Hui[1], Thorlene Egerton[1]

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2K: Clinical trials in ACL injuries, Riverbank Rooms 2&3, October 23, 2025, 11:55 - 12:40

Aim:

To compare return-to-sport and activity levels following anterior cruciate ligament (ACL) rupture managed with ACL reconstruction (ACLR) versus rehabilitation alone.

Design:

Systematic review and meta-analysis.

Method:

Seven electronic databases were systematically searched. Eligible articles assessed return-to-sport and/or activity levels in ACLR versus rehabilitation-alone treatment groups. Random effect meta-analyses synthesised findings. The protocol was pre-registered, risk of bias was assessed, and level of certainty was evaluated with GRADE.

Results:

of 18 eligible articles, 10 had high risk of confounding bias that favoured ACLR, including biases in group allocation (e.g., performed ACLR on people who wanted to return-to-sport) and differences in return-to-sport advice between groups (e.g., advised rehabilitation-alone group not to return-to-sport). Despite this, ACLR was not associated with higher return-to-sport rates [odds ratio (95% CI) 1.5 (0.8-3.0)] compared with rehabilitation-alone.

A small difference favouring ACLR was observed for Tegner Activity Scores [mean difference (95% CI) 0.7 (0.2-1.2)] that did not exceed the minimal detectable change. No difference between groups remained after excluding studies with high risk of confounding bias favouring ACLR. The evidence is low or very low certainty due to heterogeneity in results and high risk of bias.

Conclusion:

There were no differences in return-to-sport rates or activity levels, when comparing ACLR with rehabilitation-alone for the management of ACL injury.

Key practice points:

- To enable informed treatment decisions, physiotherapists should explain to patients that based on existing research, return-to-sport rates and the level of activity that people return to, are similar irrespective of management with ACLR or rehabilitation alone.

Physiotherapist-led treatment to reduce the burden of post-traumatic knee osteoarthritis: The SUPER-Knee randomised controlled trial

Adam Culvenor[1], Andrea Bruder[1,2], Thomas West[1,2], Christian Barton[1,2], Ewa Roos[3], Edwin Oei[4], Steven McPhail[5,6], Richard Souza[7], Jusuk Lee[8], Brooke Patterson[1], Michael Girdwood[1], Jamon Couch[1], Mark Scholes[1,2], Kay Crossley[1]

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2K: Clinical trials in ACL injuries, Riverbank Rooms 2&3, October 23, 2025, 11:55 - 12:40

Aim:

Evaluate effectiveness of a SUpervised exercise-therapy and Patient Education Rehabilitation program (SUPER) compared with minimal intervention on knee symptoms and cartilage health in young adults with early post-traumatic osteoarthritis following anterior cruciate ligament reconstruction (ACLR).

Design: RCT

Method:

Young adults (18-40yrs) with early post-traumatic osteoarthritis (ie. <80/100 Knee injury and Osteoarthritis Outcome Score [KOOS4]) 9-36 months post-ACLR were randomly assigned to: i) 4-month twice-weekly physiotherapist-supervised strengthening/neuromuscular program with education (SUPER); or ii) minimal intervention (one-off physiotherapist-delivered education/exercise advice). Primary outcome: KOOS4 change at 4-months (secondary-endpoint 12-months). Secondary outcome: 4- and 12-month change in MRI-derived cartilage thickness.

Analysis: Intention-to-treat using linear-mixed-models adjusted for baseline score and referral source (ie. private/public healthcare).

Results:

184 participants (63% male, mean±SD age 30±6years, time post-ACLR 2.3±0.7years) enrolled (92 SUPER, 92 minimal intervention). 178 (97%) and 174 (95%) completed 4- and 12-month outcomes, respectively. At 4-months, KOOS4 scores improved more in SUPER compared to minimal intervention group (14.1 vs 9.3; adjusted mean difference 4.8 [95%CI 1.4, 8.2]). The between-group difference was attenuated at 12-months (adjusted mean difference 1.4 [95%CI -2.0, 4.8]). There were no between-group differences in cartilage thickness.

Conclusion:

A supervised 4-month exercise-therapy/education program was more effective than minimal intervention for knee symptoms in young adults with early post-traumatic osteoarthritis. Structural trajectory of knee osteoarthritis did not differ between interventions.

Key practice points:

- First RCT of an exercise-based intervention to alter trajectory of post-traumatic osteoarthritis symptoms.
- Implementing a progressive physiotherapist-led exercise/education program could reduce the (inter)national burden of post-traumatic osteoarthritis.

Does improved strength or reduced kinesiophobia mediate outcomes for young adults with early-onset osteoarthritis symptoms?

Thomas West[1,2], Andrea Bruder[1,2], Kay Crossley[1,2], Jamon Couch[1,2], Michael Girdwood[1,2], Christian Barton[1,2], Ewa Roos[3], Brooke Patterson[1,2], Adam Culvenor[1,2]

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2K: Clinical trials in ACL injuries, Riverbank Rooms 2&3, October 23, 2025, 11:55 - 12:40

Aim:

Determine if increased quadriceps strength or reduced kinesiophobia mediates the effect of exercise-therapy and education on knee symptoms in young adults with early-onset osteoarthritis symptoms, following anterior cruciate ligament reconstruction (ACLR).

Design:

Secondary analysis of an RCT

Method:

Participants (randomised to exercise-therapy/education intervention or minimal intervention control) were 9-36 months following ACLR, aged 18-40 years, and reported early-onset osteoarthritis symptoms (i.e., <80/100 averaging four subscales of the Knee injury and Osteoarthritis Outcome Score [$KOOS_4$]). We analysed participants with complete follow-up data (n=148/184). Baseline and 4-month assessments recorded peak quadriceps strength, Tampa Scale of Kinesiophobia-11 and primary outcome ($KOOS_4$). Mediation analyses evaluated the effect of the intervention on change in $KOOS_4$, mediated by change in quadriceps strength or kinesiophobia, adjusted for baseline scores. Mean group difference in $KOOS_4$ and proportion of treatment effect mediated was reported.

Results:

RCT results found the intervention more effective than control for $KOOS_4$ (4.9, [95%CI 1.7 to 8.1]). Reduced kinesiophobia (1.9, [95%CI 0.3 to 3.5]) but not increased quadriceps strength (0.8, [95%CI -0.2 to 1.7]) mediated the effect of the intervention on $KOOS_4$. Reduced kinesiophobia accounted for approximately 38% of the difference in $KOOS_4$ improvement.

Conclusion:

In young adults with early-onset knee osteoarthritis symptoms, following ACLR, reduced kinesiophobia mediated the effect of exercise-therapy/education, whereas increased strength did not.

Key practice points:

- Beyond typical ACLR rehabilitation timeframes, increasing quadriceps strength appears less important than reducing kinesiophobia to improve symptoms of early-onset knee osteoarthritis.
- Understanding causal mechanisms driving change in knee-outcomes helps clinicians identify important rehabilitation targets.

Gender/sex-specific considerations for sport-related injury: Female, woman and/or girl Athlete Injury pRevention (FAIR) consensus

Melissa Haberfield[1], Kay Crossley[1], Andrew Ross[2], Libby Gracias[1], Andrea Bruder[1], Jackie Whittaker[3], Araba Chintoh[4], Jane Thorton[5], Margie Davenport[6], Margo Mountjoy[7], Melanie Hayman[8], Brooke Patterson[1], Carolyn Emery[9], FAIR Consensus Extended Author Group[11], H. Paul Dijkstra[10], Alex Donaldson[1]

[1]La Trobe University, [2]Victoria University, [3]University of British Columbia, [4]University of Toronto, [5]Western University, [6]University of Alberta, [7]McMaster University, [8]CQUniversity, [9]University of Calgary, [10]Aspetar Orthopaedic and Sports Medicine Hospital, [11]IOC Female, woman and/or girl Athlete Injury pRevention (FAIR) consensus

3K: Sex/gender considerations in sports injury management, Room E1, October 23, 2025, 13:40 - 14:25

Aim:

Gather and represent experts' perspectives on gender- and/or sex-specific factors relevant to injury risk for female/woman/girl athletes.

Design:

Mixed-methods concept mapping

Methods:

Sixty-six global experts including (i)athletes/coaches/carers, (ii)clinicians, (iii)sports science/high-performance professionals, (iv)administrators, and (v)researchers brainstormed statements to a prompt ("What gender- and/or sex-specific factors do you think contribute to injury risk among female, woman and girl athletes?") before thematically sorting and rating the statements for importance and modifiability (5-point Likert scales).

Results:

Ten clusters were constructed from 101 unique statements. The clusters (number of statements) include: (i) Inequitable organisational funding and support (n=17); (ii) Athletes' lack of, and access to, resources (n=7); (iii) Lack of knowledge and expertise among support staff (n=6); (iv) Lack of evidence for, and implementation of sex- and gender-appropriate injury prevention (n=20); (v) Sex-related factors (n=14); (vi) Gendered health (n=8); (vii) Gendered expectations to conform to athletic ideals and norms (n=10); (viii) Gendered harassment (interpersonal violence) and social biases (n=9); (ix) Gendered sport environment (7); (x) Gendered communication (n=3). 'Lack

of knowledge and expertise among support staff' was rated the most important and modifiable cluster to address gender- and/or sex-specific factors relevant to injury prevention for female/woman/girl athletes.

Conclusion:

Gender- and/or sex-specific factors, ranging from organisational to biological considerations, and societal expectations, could influence female/woman/girl athlete injury risk.

Key practice points:

- A concerted multi-level approach is required to reduce female/woman/girl athlete injuries including prioritising research, leadership and policy initiatives from sporting organisations across all levels of sport, and equitable funding and resources.

Expanding the scope of sports, musculoskeletal, women's health, and oncology physiotherapy into breast health

Deirdre McGhee[1]

[1]*Breast Research Australia, University of Wollongong*

3K: Sex/gender considerations in sports injury management, Room E1, October 23, 2025, 13:40 - 14:25

Background:

Breast health is a relatively new focus within women's health that allows physiotherapists to extend their scope of practice in sports, musculoskeletal, women's health, and oncology physiotherapy. Many breast-related issues, such as breast pain, upper torso musculoskeletal pain, bra discomfort, and bra-related chafing, can be alleviated or resolved by improving bra design and fit. Assessment and management of bra design and fit should be integral to physiotherapy treatment for upper quadrant pain/dysfunction, promoting female physical activity and optimising female athletes' performance.

Aim:

To educate physiotherapists on common breast-related issues experienced by female patients managed within various specialties of physiotherapy and provide the knowledge, clinical skills, and evidence-based resources to assess and treat these issues.

Objectives:

- Understand the research regarding breast-related issues experienced by female patients.
- Develop the skills to assess bra design, fit, and the level of support that bras provide.
- Identify strategies and resources to educate female patients and female sports teams about bra design and fit.

Approach:

- Presentation on common breast-related issues.
- Visual and simulated learning of bra design, bra fit, and level of breast support assessments, followed by active participatory learning to practice these assessments.

- Open discussion of strategies and challenges to educate specific groups of female patients.
- Learning materials: assessment sheets and free patient educational resources.

Key practice points:

- Upskill physiotherapists with the knowledge and resources to expand their scope of practice to manage breast health issues within various specialty areas of physiotherapy.

Circus-specific extension of the 6th international consensus statement on concussion in sport

David Munro[1]

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5K: Sports-related concussion, Rooms E2&E3, October 24, 2025, 10:35 - 11:20

Aim: To provide a circus-specific extension statement to the 6th international consensus statement on concussion in sport

Design: Observational study

Method: This extension statement was informed by the SIRC working group previous publication of a circus-specific extension of the International Olympic Committee 2020 consensus statement for methods of recording and reporting of epidemiological data on injury and illness in sport, and as an extension to the 6th International CISG consensus statement. This included three stages: 1) SIRC convention meeting to review and collate known data, 2) First draft reviewed by four expert clinicians, 3) Final draft reviewed by six further clinicians, researchers and circus industry experts.

Results: This extension statement includes circus-specific recommendations for, 1) baseline testing; 2) immediate post-injury management including adapted Maddocks questions; 3) a criterion-based return-to-circus progression including guidance by circus discipline; 4) prognostic considerations; and 5) risk reduction/prevention.

Conclusion. This guideline informs clinicians to assist their understanding of the unique aspects and demands of circus arts to provide tailored clinical care in the rehabilitation of circus artists as they return to training and performance following SRC.

Key practice points:

- The SIRC working group developed an extension statement to be used in conjunction with the CISG 6th International consensus statement.
- A discipline specific progression for return to circus post-concussion is presented to capture the breadth and diversity of circus arts practice to guide the healthcare professional in the safe return to training and performance.

Surgery or not for anterior cruciate ligament injury? Empowering patients to make informed treatment decisions

Stephanie Filbay[1]

[1]*Centre for Health Exercise and Sports Medicine, Department of Physiotherapy, The University of Melbourne*

7K: Athlete-centred care and collaborative treatment planning, Panorama 3, October 24, 2025, 14:15 - 15:00

Background:

In Australia, most physiotherapists do not provide a balanced and accurate overview of the evidence related to ACL injury treatment options, limiting the ability for patients to make an informed treatment decision. Physiotherapists would benefit from enhanced knowledge and resources to inform ACL injury treatment discussions.

Aims/objectives:

1) Summarise the latest evidence on surgical and non-surgical treatment for ACL injury;
2) Describe ACL injury treatment decision-making experiences and barriers to informed decision-making, from the perspective of patients and physiotherapists in Australia;
3) Provide practical recommendations for facilitating informed decision-making in clinical practice;
4) Demonstrate how to use an online patient decision aid for ACL injury treatment to guide clinical practice.

Approach:

This session will encourage participants to reflect on and evaluate their own knowledge, beliefs and practices, and question long-held assumptions about ACL injury treatment strategies. Participants will be provided with practical recommendations and resources to improve their own clinical practice and management of people with ACL injury.

Key practice points:

Learning outcomes will contribute to participants' practice by:

- Enhanced knowledge of the evidence for surgical and non-surgical ACL injury treatment options

- Improved confidence in presenting a balanced and research-informed overview of ACL injury treatment options
- Motivating participants to critically appraise and evaluate the trustworthiness of information sources related to ACL injury treatment
- Awareness of barriers and challenges to eliciting informed decision-making, and strategies to overcome these in clinical practice
- Access to resources, including an online patient decision aid, to facilitate informed ACL injury treatment decisions in clinical practice

Lived experiences and healthcare perspectives of people with Femoroacetabular Impingement syndrome: A qualitative systematic review

Elsie Hibbert[1], Mark Scholes[1], Christian Barton[1], Michael O'Brien[1], Charlotte Ganderton[2], Diogo Almeida Gomes[1], Joanne Kemp[1]

[1]La Trobe University, [2]RMIT

7K: Athlete-centred care and collaborative treatment planning, Panorama 3, October 24, 2025, 14:15 - 15:00

Aim:

Synthesise qualitative evidence on lived experiences and healthcare perspectives of people with FAI syndrome to guide patient-centred care.

Design:

Systematic review of qualitative studies (CRD42024581726).

Method:

Embase, CINAHL, MEDLINE, PsycINFO and Cochrane Library from inception to 08.11.24. Inclusion criteria: i) English-language qualitative and mixed methods studies exploring the experiences, beliefs, attitudes, perspectives, and/or needs of individuals aged ≥12 years with FAI syndrome; ii) ≥5 participants. Eight studies (four qualitative, four mixed methods) with 409 participants were included. The Critical Appraisal Skills Program qualitative and mixed methods checklist assessed methodological quality. A hybrid framework synthesis and thematic analysis was conducted using the Common-Sense Model of Self-Regulation. Certainty of findings was assessed using the GRADE-Confidence in the Evidence from Reviews of Qualitative research framework.

Results:

Four themes were identified: (1) Physical and psychosocial effects of FAI syndrome and its care; (2) Preference for surgery based on pathoanatomical and biomechanical beliefs; (3) Unmet needs and expectations; (4) Varied perceptions of physiotherapy.

Conclusion:

Physical and psychosocial burden exists in those with FAI syndrome. Some individuals reported positive experiences with physiotherapy. Negative perceptions stemmed from reports of a lack of individualised treatment and difficulty conceptualising exercise's role in managing symptoms patients believed to have a structural cause.

Key practice points:

- Providing guidance and reassurance to patients might mitigate psychological challenges and build confidence for return to activity.
- Education about the role of physiotherapy for managing FAI syndrome may help set realistic treatment expectations.
- Collaborative goal setting may facilitate individualised treatment and optimise return-to-activity timeframes.

Reduced proprioceptive acuity is predictive of pain catastrophizing and reduced self-efficacy in lower limb tendinopathy

Jack Mest[1,2], Andrew Flood[1,3], Peter Preston[4], Gordon Waddington[1,5], Peter Malliaras[6], Angie Fearon[1,3]

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8K: Pain cognitions and sensorimotor retraining in tendinopathy, Riverbank Rooms 7&8, October 24, 2025, 15:35 - 16:20

Aim:

To determine whether proprioception is predictive of pain-related cognition in adults with lower limb tendinopathy.

Design:

Cross-sectional study.

Method:

Seventy-three participants with a clinically diagnosed lower limb tendinopathy (confirmed on ultrasound), following a three-phase eligibility screening process, were recruited into the study. Self-report measures of pain-related cognition - kinesiophobia (Tampa scale of kinesiophobia), fear of pain (Fear of pain questionnaire), pain catastrophizing (Pain catastrophizing scale) and self-efficacy (Pain self-efficacy questionnaire) - and proprioception (Active movement extent discrimination apparatus) were taken during a single laboratory visit. Relationships between proprioception and pain-related cognition were assessed via separate linear and non-linear multiple regressions, controlling for age and sex.

Results:

Seventy-three participants (60% female) of mean (SD) age of 44.1(10.6) with gluteal, proximal hamstring, quadriceps, patellar, Achilles tendinopathy and plantar fasciopathy were included. Tendinopathy site did not influence findings, so data were analysed collectively. Reduced proprioceptive acuity on the affected side was found to predict higher pain catastrophizing ($p = 0.02$) and lower pain self-efficacy ($p = 0.03$) but not kinesiophobia ($p = 0.46$) or fear of pain ($p = 0.53$).

Conclusion:

Proprioceptive abilities predict pain-related cognition but not those associated with fear. These findings suggest that the interaction between diminished proprioceptive acuity and pain-related cognition varies across cognitive domains.

Key practice points:

- Whilst the temporal relationship between pain-related cognition and somatosensory impairments remains unclear, clinicians should consider somatosensory impairments in those with lower limb tendinopathy.
- Cognitive-behavioural models of pain, like the fear-avoidance model, may be applicable to lower limb tendinopathy.

Integrating graded sensorimotor retraining and exercise rehabilitation

Mervyn Travers[1]
[1]*Optimise Rehab*

8K: Pain cognitions and sensorimotor retraining in tendinopathy, Riverbank Rooms 7&8, October 24, 2025, 15:35 - 16:20

Background:

Graded sensorimotor retraining has been demonstrated to produce long-lasting and clinically meaningful improvements in pain and disability when compared to a credible sham in a cohort of people with persistent low back pain.

However, resources that guide clinicians in the delivery of this highly promising treatment are scarce. Furthermore, there are no examples in the literature demonstrating its application for other pain conditions.

This session outlines the integration of graded sensorimotor retraining as part of a comprehensive rehabilitation plan for an elite football player with persistent Achilles tendinopathy.

Objectives:

- To demonstrate the administration of graded sensorimotor retraining in a clinical practice.
- To demonstrate region-specific modifications for a patient with Achilles tendinopathy.
- To emphasise elements of clinician delivered care and self-management strategies.

Approach:

This interactive session will use videos of a real patient to illustrate key practical skills in both assessment and treatment. The case-study allows for the discussion of clinical reasoning and real-world clinical decisions.

Evidence:

Summary of the evidence for Graded sensorimotor retraining (5 mins).

Our patient: A brief clinical story including videos of key assessment features (5 mins).

Graded sensorimotor training in action: Video-based demonstration of sensory precision training, motor imagery and motor precision training (10 mins).

Integration with exercise rehabilitation: Video-based demonstration of precision focussed feedback enriched movement (10 mins).

Key practice points:

- This 'how to' session aims to introduce practical components of graded sensorimotor retraining in a real patient case study.
- Key clinical recommendations and modifications will be shared with specific reference to Achilles tendinopathy.

Testing and optimising multiple strength qualities as part of exercise rehabilitation for achilles tendinopathy

Mervyn Travers[1]

[1]*Optimise Rehab,* [2]*The University of Notre Dame Australia,* [3]*Curtin University*

9K: Musculoskeletal health and performance, Riverbank Rooms 2&3, October 25, 2025, 10:35 - 11:35

Background:

Traditionally, strength testing in clinical settings for Achilles tendinopathy has been limited to simple tests like the calf raise endurance test. But calf raise endurance only gives a very small snapshot of the overall strength profile which should include metrics like peak force, rate of force development and maximal dynamic strength.

Force plates and other technologies are becoming common in physiotherapy practices. Many clinicians are using devices these devices, but are unsure of what tests to choose, what the results mean and how the findings should direct their rehab.

Objectives:

- To highlight a range of strength qualities to establish a more comprehensive understanding of a patient's capacity.
- To outline the key tests that give insights into those specific strength qualities.
- To guide clinicians in what training methods are most likely to effect positive change in those strength qualities.

Approach:

Evidence: Summary of strength qualities – maximal isometric strength, explosive strength, reactive strength, heavy dynamic strength and maximal dynamic strength (5 mins).

Our patient: A brief clinical story to introduce case study (5 mins).

Testing and interpretation:

Video-based demonstration of strength tests and discussion of results. (10 mins).

Directing exercise rehabilitation: Video-based demonstration of specific exercises chosen to target different strength qualities and performance deficits (10 mins).

Key practice points:

This interactive 'how to' session will use videos of a real patient to illustrate key practical skills in strength testing, interpretation of findings and targeted exercise prescription for rehabilitation of Achilles tendinopathy.

Socioeconomic disparities in first-line treatment for femoroacetabular impingement: Register-based cohort study before arthroscopy

Frederik Foldager[1,2,3], Inger Mechlenburg[1,3,4], Bjarne Mygind-Klavsen[1], Bo Martin Bibby[5], Signe Kierkegaard-Brøchner[2,3], Josefine Beck Larsen[1,2], Pia Kjær Kristensen[1,3]

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10K: Hip pain treatments, Riverbank Room 6, October 25, 2025, 11:40 - 12:40

Aim:

This study aimed to examine the utilization and frequency of physiotherapy visits in the year preceding hip arthroscopic surgery for femoroacetabular impingement syndrome (FAIS) patients in Denmark, exploring their association with socioeconomic position (SEP), given international guidelines recommending physiotherapy as first-line treatment since 2019.

Design:

A retrospective cohort study was conducted using nationwide registry data to assess physiotherapy use and socioeconomic disparities, aligning with the need to evaluate guideline adherence.

Method:

The study included 5,739 FAIS patients undergoing hip arthroscopy (2012-2024) from the Danish Hip Arthroscopy Register, linked to national registries. Physiotherapy utilization (yes/no) and visit counts in the year preceding the surgery were collected. SEP was divided into low, medium, and high based on education, income, and employment. Data was analyzed using adjusted binomial and negative binomial regressions to calculate relative risks (RR) and incidence rate ratios (IRR) with 95% confidence intervals (CI).

Results:

Physiotherapy was used by 35.1% of patients, with lower rates in low SEP (29.3%) versus high SEP (36.0%) groups (RR=0.83 [95% CI: 0.70-0.98]). Visit frequency was lower among low SEP (IRR=0.85 [95% CI: 0.63-1.15]). Utilization dropped from 38.9% before 2019 to 30.1% after 2019 (RR=0.77 [95% CI: 0.72-0.83]), with visits decreasing from 3.95 to 2.59 annually (IRR=0.64 [95% CI: 0.56-0.74]).

Conclusion:

Physiotherapy remains underutilized before hip arthroscopy, with a decline after 2019 and SEP disparities, suggesting barriers to guideline implementation. Enhanced access strategies are needed.

Key practice points:

- Promote physiotherapy as first-line treatment for patients with FAIS.
- Address SEP-related access barriers.

Exercise rehabilitation to improve hip pain and function in circus performers: a pre-post intervention trial

Charlotte Ganderton[1,2,5], Michael O'Brien[3,6], Joshua Farragher[1,6], Carlos Fort-Novoa[3], Alesha Coonan[6], Andrew Wallis[6], David Munro[4], Matthew King[3,7]

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10K: Hip pain treatments, Riverbank Room 6, October 25, 2025, 11:40 - 12:40

Aim:

To examine the effect of a 12-week rehabilitation program on pain, function, quality of life, and hip strength in circus students with hip-related-pain.

Design:

A non-randomised pre-post intervention trial. Ethics approval granted by Swinburne University (Ref:20226645-11217).

Method:

Circus students with hip-related-pain completed a progressive four stage 12-week education and exercise rehabilitation program. Patient-reported outcomes measures were collected at baseline, three, six and 10-months. Secondary outcome hip strength data was assessed at baseline and 3-month follow up. Linear mixed effect models explored the efficacy of the rehabilitation program on outcomes.

Results:

28 students were included. Participants showed significant improvements in the Hip and Groin Outcome Score, with better sport subscale scores at three ($p=0.015$) and six months ($p=0.023$), symptom improvement at 10-months ($p=0.019$), and enhanced quality of life at six ($p=0.001$) and 10-months ($p=0.001$). The International Hip Outcome Tool-12 improved across all timepoints ($p<0.001$), and kinesiophobia decreased at 10-months ($p = 0.034$). Hip strength measurements across sagittal, coronal and transverse planes significantly increased at three months, except for internal rotation.

Conclusion:

Improvements in self-reported hip pain, function and quality of life, and hip strength were seen in response to the hip rehabilitation program. This study demonstrates initial clinical utility which should be explored in a fully powered RCT.

Key practice points:

- A rehabilitation program for hip-related pain should include postural education and progressive loading in all directions of hip motion
- Physical and patient reported outcome measures are more likely to improve during the active rehabilitation phase, than post-intervention.

Are women less likely to return to sport compared to men following hip arthroscopy?

Matthew King[1], Pim van Klij[2,3], Fan Hoak[1,4], Signe Kierkegaard-Brøchner[5], Thomas West[1], Mark Scholes[1], Joshua Heerey[1], Adam Semciw[1,4], Charlotte Ganderton[6], Rachael McMillan[7], Andrea Bruder[1]

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10K: Hip pain treatments, Riverbank Room 6, October 25, 2025, 11:40 - 12:40

Aim:

Compare females/women/girls and males/men/boys return-to-sport outcomes following hip arthroscopy and explore the influence of social and structural determinants of health on these outcomes.

Design:

Systematic review with meta-analysis and meta-regression

Method:

Studies were included if they assessed return-to-sport after hip arthroscopy and provided sex/gender stratified return-to-sport outcomes or analysed the influence of sex/gender on return-to-sport outcomes. Random effects models with pooled odds ratios and meta-regressions were used to compare return-to-sport outcomes between males/men/boys and females/women/girls.

Results:

The review included 45 studies, resulting in 2,046 females/women/girls and 3,454 males/men/boys. Females/women/girls had worse return-to-sport outcomes at the same/higher level between 1 to 3 years post-operatively (0.53, 95%CI 0.34 to 0.81, P=0.004), and at any level of sport at >3 years post-operatively (0.46, 95%CI 0.25 to 0.86, P=0.014). Return-to-sport deteriorated over time, with ~5.5% to 10% lower rates observed in females/women/girls compared to males/men/boys. Determinants of health were poorly reported, precluding further evaluation.

Conclusion:

Females/women/girls demonstrate inferior return-to-sport outcomes, especially over longer follow-up periods, than males/men/boys.

Key practice points:

- The review allows clinicians to set realistic pre-operative expectations that may improve post-operative success in RTS and other patient-specific outcomes.
- Outcomes and data from male/man/boy dominated cohorts of post-operative outcomes may not be applicable to female/woman/girl athletes.
- Social and structural determinants such as caregiving responsibilities and employment are poorly reported and may influence RTS outcomes, warranting further investigation.

Dissemination and implementation of injury prevention interventions for female, woman, and/or girl athletes: scoping review

Brooke Patterson[1,2], Carly McKay[3,4], Meghan Critchley[5], Destiny Lutz[5], Sallie Cowan[1,2], Allison Ezzat[1,6], Andrew Ross[7], Ass Eva Ageberg[8], Assistant Clare Ardern[1,6], Marc-Olivier Dube[1,2], Libby Gracias[1,2], Hanna Lindblom[9], Merete Moller[10,11], Christine Moseid[11], The FAIR Consensus Extended Author Group[13], Carolyn Emery[5], Kay Crossley[1,2], Oluwatoyosi Owoeye[14]

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11K: Injury prevention in women athletes, Riverbank Room 5, October 25, 2025, 13:40 - 14:25

Aim:

Describe the level of dissemination and implementation (D&I) of sport injury prevention (IP) interventions, factors associated with D&I, and best practice strategies for female, woman, and/or girl (female/woman/girl) athletes.

Design:

Scoping review (part of International Olympic Committee female/woman/girl injury pRevention—FAIR Consensus)

Methods:

Nine databases were searched (inception-December 2023). Eligibility: original data research with ≥25% female/woman/girl athletes, any age, or people working with them

(e.g. coaches); report D&I outcomes (e.g. adoption, fidelity) related to an IP intervention and/or a factor (e.g. athlete beliefs, age) associated with D&I outcomes.

Results:

220 papers with 419,494 participants [mostly athletes (96,790) and coaches (277,923 coaches)] across 81 sports were included. Interventions were training strategies (n=113), personal protective equipment (n=41), policy/rules (n=5), or other (n=61, e.g. multimodal). Adoption was commonly explored and generally high, whilst fidelity and sustainment of interventions were less explored, and poor. Key facilitators of D&I were previous injury experience, higher competition levels, and positive perceptions/attitudes. Athletes/coaches desire more support, particularly from health/exercise experts. Interventions must also be adaptable, sport-specific, engaging, and supported by education and/or workshops (in-person or online) and/or policies.

Conclusion:

Engaging people across the socioecological system (e.g., parents, teachers, health professionals, administrators) and prioritising D&I-focused trials may enhance implementation and reduce injury risk in female/woman/girl athletes.

Key practice points:

- Individuals with (or access to) the appropriate knowledge/skills (e.g. physiotherapists) have a role to address knowledge gaps and drive high-fidelity sustained implementation of sports IP interventions.
- Health professional bodies can support D&I through advocacy, education, and curriculum development.

Rates and risk factors for concussion in female youth athletes participating in contact/collision sports

Laura Ernst[1], Nikki Milne[1], Jessica Farley[1]
[1]Bond University

11K: Injury prevention in women athletes, Riverbank Room 5, October 25, 2025, 13:40 - 14:25

Aim: identify the incidence and risk factors for sport-related concussion (SRC) in female youth playing contact/collision invasion sports (CCIS).

Design: Systematic review with meta-analysis

Methods: A search of five electronic databases was conducted on May 2024. Studies reporting incidence or risk factors for SRC among female youth playing CCIS were included. Meta-analyses were performed.

Results: of 4,509 articles, 66 were included. Pooled SRC incidence for female youth across all CCIS was 0.50/1000 match and practice hours (95% CI 0.34-0.66). SRC incidence was 0.12/1000 hours for contact invasion sports (95% CI 0.03-0.21) and 2.08/1000 hours for collision invasion sports (95% CI 0.90-3.25). In subgroup analysis, soccer had the highest SRC incidence among contact sports (0.89/1000 hours, 95% CI -0.19-1.97), and rugby union had the highest incidence among collision sports (4.04/1000 hours, 95% CI 3.03-5.05). SRC risk factor data was reported in 45 studies. Female youth sustained over 7.5 times more SRC in matches compared to practice (IRR 7.52, 95% CI 6.32-8.95, $p < 0.01$), with considerable heterogeneity ($I^2 = 84.98\%$). No significant differences were found in SRC rates between lacrosse players wearing versus not wearing headgear ($p = 0.07$) or between athletes competing in younger versus older age groups (IRR 0.91, 95% CI 0.52-1.61, $p = 0.48$, $I^2 = 0.00\%$).

Conclusion: SRC rates in female youth CCIS athletes were higher (in match and practise) than previously reported.

Key practice point:

- Further collaboration between sport-based clinicians and researchers is needed to explore SRC risk factors in female youth athletes in CCIS.

Making Australian football safer for women and girls: a hybrid-type 3 stepped-wedge randomised controlled trial

Brooke Patterson[1,2], Nicole White[3], Sallie Cowan[1,2], Matthew King[12], Michael Makdissi[1,4], Alex Donaldson[2,5], Steven McPhail[3,6], Melissa Haberfield[1,2], Sarah Lampard[1,2], Eliza Roughead[1,2], Libby Gracias[1,2], Andrea Mosler[1,2], Andrea Bruder[1,2], Christian Barton[1,2], Adam Culvenor[1,2], Karla Hemming[7], Martin Hagglund[8], Natasha Lannin[9], Ilana Ackerman[10,11], Kay Crossley[1,2]

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11K: Injury prevention in women athletes, Riverbank Room 5, October 25, 2025, 13:40 - 14:25

Aim:

Determine if a physiotherapist-led supported implementation strategy can increase uptake of an injury prevention program (Prep-to-Play) and reduce injuries in women's and girls' community Australian Football.

Design:

Hybrid type-3 stepped-wedge, cluster RCT.

Methods:

165 teams (U16, U18, senior, n=2715 players) were randomised. Ten clusters began in the unsupported (online resources) and transitioned to supported intervention (physiotherapist-led workshops, support visits) in 2021/2022 (random allocation to one-of-five dates). Prep-to-Play includes (i) eight warm-up activities, (ii) three contact football skills, (iii) three strength exercises, and (iv) education. Team representatives reported Prep-to-Play use and injuries each week via a mobile app. Teams were categorised as 'using' Prep-to-Play each week (yes/no), if they used ≥75% of the program elements (≥6/8 warm-up, ≥1/3 skills, ≥2/3 strength), ≥two-thirds of the time. Prep-to-Play use (odds ratio (OR)) and injury incidence per 1000 match hours (incident

rate ratio*) was compared between supported and unsupported phases, adjusted for clustering, weekly period, age-group, region and competition-level (*not reported, but would be presented).

Results:

Prep-to-Play use increased (OR 3.60 95%CI 2.34, 5.53) following support, from 12.9% in the unsupported (201/1565 weekly periods) to 38.2% (712/1864 weekly periods) in the supported phase.

Conclusion:

A physiotherapist-led supported implementation strategy increased the odds of using Prep-to-Play three-fold, compared to access to online resources.

Key practice points

- Physiotherapists have an important role to play to increase the implementation of evidence-informed exercise-based injury prevention interventions in community Australian Football.
- Implementation strategies must consider social behaviour change theories and innovative delivery models to optimise uptake.

How prevalent are injuries in 1475 field hockey players in Australia? A retrospective survey

Emily Bell[1,2], Madeline Hannington[1], Jackson Burke[2], Erin Smyth[3,4], Matthew King[1]

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12K: Impact injuries in sport, Panorama 3, October 25, 2025, 14:30 - 15:15

Aim:

To identify the body location and frequency of injuries in field hockey in Australia during 2023.

Design:

We conducted an anonymous survey of field hockey players aged 14+.

Methods:

Domains included were demographics, participation and facilities access, previous injury history, and 2023 injuries. Results were reported as counts and percentages (of respondents) with 95% confidence intervals stratified by sex (assigned at birth) as well as primary competition age bracket (Junior ≤18, Senior any age, Masters ≥35).

Results:

1475 players responded to the survey from all Australian states and territories. Masters were the least common competition group to complete a warm-up or structured injury prevention program. Previous ACL ruptures were reported by 7.6% of participants and previous major and minor concussions were reported by 12.5% and 34.4% of participants, respectively.

Over half of participants (52.8%) reported at least one injury during the 2023 winter season. Knees were the most common injured body part reported (14.4%), head impact was reported in 10.2%. Insidious/overuse was the most common injury mechanism reported followed by ball contact.

Conclusion:

Injury prevention needs to be prioritised in Australian hockey. Strategies should initially focus on the knee and head.

Key practice points

- Load management strategies may be required to address the high frequency of insidious/overuse injuries.
- Injury prevention strategies should focus on high frequency injury locations such as the knee.
- Protective equipment use is currently unknown and may assist with reducing ball contact injuries.

The real-world impact of physiotherapist-supervised exercise in a gestational diabetes service

Hannah Graetz[1,2], Sky Holland[1], Andrew Bisits[1], Helen Barrett[1,2]
[1]Royal Hospital For Women, [2]University of New South Wales

3L: Postnatal physiotherapy, Panorama 3, October 23, 2025, 13:40 - 14:25

Aim: To evaluate the implementation and effectiveness of an exercise program for gestational diabetes.

Design: Hybrid effectiveness-implementation study

Methods: Pregnant women at an Australian Maternity Hospital diagnosed with or at higher risk of gestational diabetes (GDM) were invited to join the GDM gym. Gym attendance, birthing and neonatal outcomes and referrals to the program between April 2023 and March 2024 were assessed using the RE-AIM framework. Comparisons using chi-squared tests were made between 153 gym-goers and 582 non-participants to evaluate effectiveness.

Results: Nearly 20% of women diagnosed with GDM attended the program, with an average of 8 sessions each, and 50 at risk women prevented a diagnosis. Gym-goer characteristics were similar for parity, BMI and endocrine history to gym non-attenders. More gym-goers were aged over 35 (61% v 44% p=0.002). Compared to non-attenders, less gym-goers gave birth before 37 weeks (RR 0.34 95%CI 0.2,0.7), by caesarean section (RR 0.80 95%CI 0.7,1.0) and had low birth-weight infants under 2500g (RR 0.41 95%CI 0.2,0.8). The program was delivered over seven sessions per week, with a maximum of 25 minutes of vigorous intensity exercise, including safety screening. All diabetes team staff referred patients and self-referral within the weekly diabetes education session was most common.

Conclusion: The GDM Gym program has adequate reach, is clinically effective and demonstrates implementation and adoption within a maternity service gestational diabetes model of care.

Key practice points:

- Supervised exercise was regularly attended, readily adopted by staff and effectively reduced adverse birthing and neonatal outcomes associated with gestational diabetes.

Concurrent validity of a patient reported outcome measure for women with mastitis

Emma Heron[1,2], Md Nazmul Karim[3], Adelle McArdle[4], Ching Tat Lai[2], Donna Geddes[2], Leanda McKenna[1]

[1]Curtin University, [2]University of Western Australia, [3]Monash University, [4]Monash University

3L: Postnatal physiotherapy, Panorama 3, October 23, 2025, 13:40 - 14:25

Aim: To, primarily, establish the concurrent validity of the Breast Inflammatory Symptom Severity Index (80-point scale) and secondarily, establish internal reliability, item weighting, ability to indicate severity and concurrent validity of one Index item indicating size of affected area.

Design: Validity study comparing the Index to reference outcome measure.

Method: Forty-three women seeking physiotherapy care for mastitis had Index scores compared to breastmilk sodium:potassium levels, via Bland-Altman analysis, at day one, three and 10. Internal reliability was determined via internal consistency, item weighting via factor analysis, severity via receiver operating characteristic curve analysis and individual item validity via Pearson correlation.

Results: Validity between the Index and breastmilk levels was established on day three and 10, with >90% of measures within two standard deviations of mean difference. Additionally, internal consistency was high (a = 0.898 and 0.843, respectively). Weighting was similar for six items. Ability to determine severity was highest on day three (82%). Size of affected area item was strongly related to physiotherapist's area measurement on day two (r = 0.617), three (r = 0.727) and 10 (r = 0.549).

Conclusion: The Index has concurrent validity, internal reliability and can indicate severity after day one of clinical care. Use on day one is still warranted, for baseline measurement.

Key practice points:

- Breast Inflammatory Symptom Severity Index is valid and reliable for women with mastitis after day one clinical care.
- Clinicians can have confidence in the Index, including its ability to indicate symptom severity and reflect their affected area measurement.

Benchmarking pessary care for pelvic organ prolapse

Caitlin Broger[1], Elise Fraser[1], Robyn Brennan[1, 2]

[1]University of Melbourne, [2]Department of Physiotherapy, The University of South Australia

4L: Topical Issues in pelvic health, Riverbank Room 5, October 23, 2025, 14:30 - 15:15

Aim:

To identify pessary clinical practice in a metropolitan tertiary setting, benchmarking against international guidelines.

Design:

Design methodology approach using mixed methods to assess stakeholder perceived and expressed needs and comparative analysis to international guidelines.

Method:

All local gynaecologists (n=51) and women's health physiotherapists (n=12) were invited to participate in purpose-designed surveys and audits. Eleven physiotherapists completed the survey, and 40 gynaecologists completed the audit and/or survey.

Results:

Half of the gynaecologists and two-thirds of the physiotherapists provided prolapse management.

of the 20 gynaecologists providing prolapse management, 20% did not stock pessaries and 50% stocked ring pessaries only. The remaining 30% stocked various pessaries. Some taught patients pessary self-management.

of the 8 physiotherapists providing prolapse care, 62.5% stocked various pessaries and taught self-management.

In contrast with international guidelines, many providers were not utilising pessaries, not utilising pessary self-management, or not using a range of pessary types.

Most participants identified a need for further training in pessary management. This was less commonly identified by providers who had undertaken formal competency-based training.

Conclusion:

Providers having limited stock of different pessary types may limit their capacity to provide individualised pessary management suitable to patient's individual prolapse presentation.

Practitioners perceived a need for further pessary training, mirroring established guidelines.

Key practice points:

- Pelvic health physiotherapists are ideally placed to provide pessary care, including teaching pessary self-management.
- Pessary providers should undertake training to be confident with a range of pessary types, and have these in stock, to be able to adhere to international recommendations

"Working rurally is 100% different" Women's and men's health physiotherapy in regional and rural Australia

Kerstin McPherson[1,2], Irmina Nahon[3]

[1]Australian Catholic University, [2]Charles Sturt University, [3]University of Canberra

4L: Topical Issues in pelvic health, Riverbank Room 5, October 23, 2025, 14:30 - 15:15

Aim:

There is an inequity in access to health care for people living in regional and rural Australia. There is poorer access to health services and specialists and uncoordinated health services, negatively affecting the overall health of those living in rural areas. The aim of this study was to explore the experiences of women's and men's health physiotherapists (WMHP) in regional and rural Australia.

Design: Semi structured interviews were used to explore individual insights, in-depth understanding, and perspectives.

Methods:

There was purposeful sampling of registered physiotherapists who provide WMHP in regional and rural areas of Australia, from both public and private sectors. Semi structured, one to one interviews were conducted online via Zoom, between November 2023 to January 2024, the data was explored using content analysis. Ethics was obtained from Charles Sturt University (H23875).

Results:

There were ten participants from inner regional to rural areas of Australia. Barriers to providing WMHP services include a lack of funding, the distances patients and therapists may need to travel, a lack of reliable internet for Telehealth, low health literacy and a lack of knowledge of symptoms, conditions and of the healthcare and physiotherapy services that are available. Recruitment of experienced clinicians, developing and succession planning of skills are also challenging.

Conclusion:

While rural practice offers numerous rewards, it also poses unique challenges for physiotherapists. Strategic planning is urgently required to enhance the capacity of rural physiotherapists and to support the development of clinical skills in WMHP.

Trauma-informed management of patients with prior sexual trauma in pelvic health physiotherapy clinical practice

Angela James[1]
[1]Sydney Pelvic Clinic, Bondi Junction, Australia

11L: Pelvic pain, Panorama Room 1&2, October 25, 2025, 13:40 - 14:25

This study explored the role of physiotherapy in the multidisciplinary team providing trauma-informed care for a patient with Genito-Pelvic Pain/Penetration Disorder (GPPPD)

Discussion paper with an integrated case study of a patient with GPPPD on a background of sexual trauma.

Unstructured interview of PH Physiotherapists guided central themes for investigation through an extensive literature search. The paper explores how to work safely in clinical practice with individuals who have endured sexual trauma, both for the patient and the pelvic health physiotherapist.

Results:
A trauma-informed care approach underpins the following strategies when working with patients with sexual trauma:

- Use of screening tools
- Sensitive enquiry
- Building capacity
- Identifying compliance
- Regulating the body's reaction to trauma

There is the risk of developing vicarious trauma when treating sexual trauma patients, and safety of the therapist must also be prioritised. Safe work practices are outlined at an individual and practice level.

A skilled use of the above strategies, allow a patient to develop autonomic flexibility and promote appropriate and adaptive responses. Pelvic physiotherapists are uniquely placed to orchestrate a shift to feeling safety in one's body, improving capacity for emotional regulation.

Key practice points:

- The development of clinical practice guidelines would benefit PH physiotherapists confidence and competence in treating patients with a history of sexual trauma.
- Prioritisation of the physiotherapist's psychological safety is paramount to managing the risk of vicarious trauma.
- Fostering a sense of safety is key in restoring balance within a patient's autonomic nervous system.

Pelvic floor muscle training with or without biofeedback for female anal incontinence – systematic review

Kaitlin Christmas[1], Claudia Douglas, Kirsty Hassett, Madeleine Markson, Robyn Brennen

[1]*The University of Melbourne*

5L: Bowel function, Room E1, October 24, 2025, 10:35 - 11:20

Aims: To review research literature on the effectiveness of pelvic floor muscle training, with or without biofeedback, on improving anal incontinence for community-dwelling adult females.

Design: Systematic review.

Method: Five databases were searched from inception to September 2024. Studies were included if participants were community-dwelling females with anal incontinence and received pelvic floor muscle training, with or without biofeedback. Data extraction and risk of bias assessment was completed by two independent reviewers. Narrative synthesis was used to report symptom improvement and quality-of-life outcomes.

Results: Ten articles (total 1026 participants) were included. The overall methodological quality of studies was poor. Findings were mixed across studies. No significant differences were found between pelvic floor muscle training with biofeedback and: lifestyle and medication management, electrical stimulation, and anal injections. Three out of four studies favoured pelvic floor muscle training with biofeedback over minimally active comparators. However, there was considerable variability in programs, treatment duration, and length of follow-up. One study reported mild adverse effects when using an anal sensor.

Conclusion: Pelvic floor muscle training with biofeedback had similar effectiveness to other active conservative interventions and may be more effective than minimally active interventions. Further high-quality research is warranted to improve the certainty of the findings and define parameters for an effective protocol.

Key practice points:

- Pelvic floor muscle training with biofeedback is safe and may be effective in improving anal incontinence.
- Clinicians should consider offering pelvic floor muscle training with biofeedback as an option to treat anal incontinence in community-dwelling female patients.

Preoperative video about bowel function and supportive care in colorectal cancer

Carol Kin Yin Chan[1,3], Michael Suen[2,3], Jess Yanlan Lin[2], Susan Coulson[3], Janindra Warusavitarne[4], Janette Vardy[1,3]

[1]Concord Cancer Centre, Concord Repatriation General Hospital, [2]Colorectal Department, Concord Repatriation General Hospital, [3]Faculty of Medicine and Health, University of Sydney, [4]St.Mark's Hospital

5L: Bowel function, Room E1, October 24, 2025, 10:35 - 11:20

Aims:

Educational videos can effectively share health information in time-constrained clinical settings. This study aimed to assess the feasibility and acceptability of our videos on bowel function recovery and supportive care for colorectal cancer (CRC) surgery patients, focusing on their impact on patients' understanding and self-efficacy regarding potential changes in bowel function.

Design:

A non-randomised, single-arm pilot study

Methods:

Eligibility criteria: stage I-III or limited IV CRC; scheduled elective resection +/- temporary stoma, >7 days after referral; English fluency. Study intervention: view 4 educational videos (each ~ 6-10 minutes) at home pre-surgery. Assessments: electronic surveys before and after viewing. Primary outcome: acceptability. Secondary outcomes: knowledge change via quiz, satisfaction. Descriptive analysis and Chi-squared test were used.

Results:

21 of 28 eligible patients were recruited. 20/21 (95%) viewed all 4 videos, and 18/21 (85%) completed all surveys, resulting in 95% adherence. 28% watched the videos more than once, with an 11% increase in quiz scores indicating improvement in knowledge (95%CI -16.5 to –5.06, $p<.001$). 82%-94% of participants praised the videos' content, presentation, and information. Self-efficacy was high: 88% felt their ability to understand information and seek help improved, and 98% valued empowerment in CRC management.

Conclusion:

Educational videos are feasible in disseminating information to CRC patients pre-surgery. It may improve their knowledge of bowel function and self-efficacy in managing surgery's potential impact.

Key practice point:

- Prehabilitation education with video watching on the pelvic floor is crucial for patients before undergoing CRC surgery. More research on educational videos is needed.

A pelvic floor rehabilitation program for low anterior resection syndrome after colorectal cancer surgery

Carol Kin Yin Chan[1,3], Sarah Ratcliffe[3], Gemma Collett[3], Susan Coulson[3], Janindra Warusavitarne[4], Janette Vardy[1,3]

[1]Concord Cancer Centre, Concord Repatriation General Hospital (SLHD),[2] Colorectal Department, Concord Repatriation General Hospital, [3]University of Sydney,[4] St. Mark's Hospital

5L: Bowel function, Room E1, October 24, 2025, 10:35 - 11:20

Aims:

Low Anterior Resection Syndrome (LARS) is prevalent after colorectal cancer (CRC) surgery and treatment. This study sought to understand how bowel symptoms affect daily activities, the impact of a structured pelvic floor rehabilitation (PFR) program on LARS and quality of life, overall satisfaction with the PFR program, and factors influencing PFR outcomes.

Design: An inductive qualitative study was conducted.

Methods:

Following participation in a physiotherapist-led structured PFR program, people experiencing LARS related to colorectal cancer surgery and/or chemoradiotherapy were recruited for semi-structured interviews. The interviews explored people's experiences with pelvic floor rehabilitation, were transcribed verbatim, and thematically analysed using a framework mapping approach.

Results:

Fourteen people who completed PFR were interviewed. Themes developed related to LARS's impact on daily life, LARS information and expectation, barriers and enablers for PFR, and the physical, psychosocial, and behavioural impacts of multimodal PFR. Analysis determined key features of living with LARS and PFR align with Symptom Management Therapy and the Capability, Opportunity, Motivation, Behaviour (COM-B) model.

Conclusion:

LARS significantly impacts an individual's well-being. Structured and supervised multimodal PRF is beneficial for people living with LARS after colorectal cancer surgery and treatment.

Key practice points:

- There is a need for clear and detailed information about LARS for colorectal cancer patients. Physiotherapists can support and manage LARS after colorectal cancer surgery and treatment. Standard of care in colorectal cancer management should include pelvic floor rehabilitation, with a well-defined referral pathway for seamless service access.

The effectiveness of physiotherapy interventions for pain and quality of life for women with endometriosis

Phoebe Walker[1], Kasey Collins[1], Emily Gasson[1], Sheri Ghodrati[1], Annie Fotheringham[1], Peter Stubbs[1]

[1]*University of Technology Sydney*

8L: Endometriosis and pelvic pain, Hall A, October 24, 2025, 15:35 - 16:20

Aim: To investigate the effectiveness of physiotherapy interventions compared to other interventions such as usual care, placebo, or no intervention for pain in women with endometriosis-related chronic pelvic pain.

Design: A systematic review and meta-analysis using the PRISMA-2020 guidelines. Pre-registered in OSF (https://doi.org/10.17605/OSF.IO/MXUNF).

Methods: Four databases were searched from inception to June 2024 for randomised controlled trials reporting on physiotherapy interventions with outcomes related to pain. Title/abstract screening, full-text screening, and data extraction were performed independently by two people. Quality assessment was performed using the PEDro scale for the pain outcome and short-term timepoint. For pooling, a common 0 to 100 pain scale was used. A meta analysis was performed using a random effects model. The smallest clinically worthwhile effect was 15 points.

Results: From 6,817 records, 14 studies (consisting of 18 reports) were included and 12 studies contributed usable data for the meta-analyses. PEDro scores ranged from 3/10 to 9/10, with 6/12 studies achieving ≥6/10 (classified as high quality). Pain was significantly reduced in the short-term (mean difference: -11.26, CI: -17.11 to -5.42, n = 497 participants, 12 studies, I2 = 74%).

Conclusion: Physiotherapy interventions were statistically significant for short-term pain reduction; however, these results may or may not be clinically meaningful. The quality was low for 50% of studies, highlighting the need for further research.

Key practice points:

- Physiotherapy interventions improved pain for women with endometriosis-related chronic pelvic pain, although some of the evidence was low quality.
- Some physiotherapy interventions should be included in the Australian Endometriosis Guideline.

Effectiveness of conservative therapies in women with endometriosis-associated pain: a systematic review and meta-analysis

Marie-Pierre Cyr[2], Elise Fraser[1], Thorlene Egerton[1], Hazel Anderson[1,3], Lauren Clarke[1,4], Danica Fitzgerald[1,5], Rachel Nelligan[1], Melanie Morin[6], Emily Harman[1], Helena Frawley[1,7,8]

[1]The University of Melbourne, [2]The University of Queensland, [3]The University of Adelaide, [4]Grow Physiotherapy, [5]Thrive Physiotherapy, [6]The University of Sherbrooke, [7]Royal Women's Hospital, [8]Mercy Hospital for Women

8L: Endometriosis and pelvic pain, Hall A, October 24, 2025, 15:35 - 16:20

Aim:

Non-pharmacological conservative therapies include a range of biological, psychological or social interventions and have a growing evidence-base in the treatment of persistent pain conditions, yet are under-investigated in people with endometriosis. This review synthesises the existing evidence on conservative therapies in the treatment of women with endometriosis-associated pain (EAP).

Design:

Systematic review and meta-analysis.

Methods:

Five electronic databases were searched (January 2025). Studies with a comparator arm that evaluated the effectiveness of conservative therapies in women of reproductive age with a surgical or imaging diagnosis of endometriosis who reported pain were included. Two reviewers performed study screening, data extraction and risk of bias appraisal. This protocol was prospectively registered in PROSPERO.

Results:

Twenty-six studies provided pain outcome data from 1,346 women. Conservative therapy interventions included: acupuncture (6), electrotherapy (3), exercise (3), manual therapy (2), mindfulness (2) virtual reality (2), hypnotherapy (1), sensate focus (1), psychotherapy with somatosensory stimulation (1), hammam baths (1), online self-management (1), environmental-enrichment (1), ohnut device (1) and dietary changes (1).

Results of the effectiveness of different types of conservative therapies in treating endometriosis-associated pain and GRADE findings will be available after May 2025.

Conclusion:

This systematic review will highlight the wide range of conservative therapies aimed at reducing pain in women with EAP and synthesise the study findings in order to determine effectiveness and clinical practice recommendations.

Key clinical application points:

- Findings will inform clinical practice recommendations to guide clinicians in providing conservative therapies for women with endometriosis-associated pain

Scoping review and stakeholder analysis of guidelines, barriers, and enablers in endometriosis management

Sophie Alderslade[1,2], Robyn Brennen[1], Elise Fraser[1]

[1]The University of Melbourne, [2]Thrive Physio Plus

8L: Endometriosis and pelvic pain, Hall A, October 24, 2025, 15:35 - 16:20

Aim:

The 2018 Australian Government National Action Plan for Endometriosis emphasised the need for improved management and care. This project aimed to review best practice recommendations for management and identify barriers, enablers, and gaps in current clinical practice in metropolitan Adelaide.

Design:

Scoping literature review and stakeholder needs analysis.

Methods:

Four databases and grey literature were searched, and focus groups were conducted with general practitioners and surveys of local allied health providers and people with endometriosis.

Results:

The scoping review identified nine articles and one national guideline. A multidisciplinary team model of care is recommended but literature highlights systemic barriers to implementation. Thirty general practitioners, 15 allied health providers and 66 people with Endometriosis participated in the stakeholder needs analysis. Findings revealed substantial diagnostic delays, insufficient multidisciplinary care, and underutilised Team Care Arrangement plans. Additionally, data showed varying beliefs and practices amongst doctors for diagnosis and management of endometriosis despite clinical practice guidelines. Early diagnosis, general practitioner education, a patient-centred biopsychosocial approach, interdisciplinary collaboration and use of Team Care Arrangement plans were identified as enablers to patients experiencing a positive healthcare journey.

Conclusion:

Despite recommendations supporting multidisciplinary care as the most desirable endometriosis management model of care, gaps persist in practitioner knowledge and clinical practice.

Key practice points:

- Multidisciplinary management is recommended for endometriosis.
- Improving general practitioners knowledge to diagnose endometriosis and encouraging use of Team Care Arrangements plans may be needed to facilitate more effective management of endometriosis.

The global prevalence of chronic pelvic pain in women: a systematic review

Stacy Larcombe[1,2], Annette Briley, Victoria Toogood[4], Kathy Lynch[5], Elizabeth Lynch[1]

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9L: Pelvic pain, Riverbank Room 5, October 25, 2025, 10:35 - 11:35

Aim:

To identify and summarise the prevalence of chronic pelvic pain in women worldwide.

Design: A systematic review

Method:

Studies with original data, published between 2012–2024 were identified by searching five electronic databases, grey-literature and citation review. Studies were included if they reported prevalence data of chronic pelvic pain in healthy women; studies that only reported pelvic inflammatory disease or recruited pregnant or postnatal women were excluded. Two reviewers screened titles and abstracts and selected full-text articles.

Data extraction was completed by two reviewers for 40% of articles, the remainder extracted by one reviewer and checked for accuracy by a second reviewer. Chronic pelvic pain was grouped by their condition and classified as cyclical or non-cyclical pain. Data were summarised narratively.

Results:

From 1,856 abstracts, 190 full-text articles were reviewed and 51 studies (recruiting >17million participants) from 22 countries were included. Non-cyclical pain (38 studies, mean=1.13%) was more prevalent than cyclical pain (13 studies, mean=0.84%). The most prevalent conditions were dysmenorrhea (8.9-92.9%, 13 studies, mean=58.81%); generalised pain (2.2-72.8%, 10 studies, mean=23.29%); and dyspareunia (3.9-69.6%, 6 studies, mean=12.56%).

Heterogeneity existed in prevalence rates, definitions of conditions, measurement tools, population included and study quality.

Conclusion:

Prevalence of chronic pelvic pain ranges between 0.8-92.9% in healthy women. Future work is required to improve reliability and consistency of chronic pelvic pain assessment.

Key practice points:

- Chronic pelvic pain is a worldwide issue.
- Importance of definition consensus, standardised and valid methods for assessment that are relevant to women to ensure holistic and patient-centered treatment.

Physiotherapy for persistent pelvic pain: A systematic review and meta-analysis

Ruth Schubert[1]
[1]Bond University

9L: Pelvic pain, Riverbank Room 5, October 25, 2025, 10:35 - 11:35

Aim: To evaluate the effectiveness of physiotherapy for reducing pain and improving function and quality of life (QoL) in women with symptoms of persistent pelvic pain.

Design: Systematic review and meta-analysis of randomised controlled trials (RCTs).

Methods: RCTs comparing physiotherapy to control/standard-care or other treatments were included. Primary outcome: pelvic pain intensity. Secondary outcomes: health-related QoL; physical function; perceived improvement and adverse events. Meta-analyses were conducted using change scores from studies with homogenous interventions and outcomes. Data unable to be meta-analysed was narratively summarised. The quality and strength of evidence was assessed using PEDro, Cochrane Methods RoB-2 tool, and Cochrane GRADE assessment.

Results: of 2684 records retrieved, 61 RCTs including 1569 women (mean age: 28.28±5.6 years) were included. Meta-analyses revealed multimodal physiotherapy resulted in significantly lower pain intensity compared to control/standard care in the short-term for dyspareunia (MD -2.16, 95% CI -3.18, -1.15, $p<0.001$, $I2=53\%$), and persistent pelvic pain/endometriosis (SMD -0.94, 95% CI -1.33, -0.55, $p<0.001$, $I2=44\%$). Exercise resulted in lower pain intensity in the short-term for dysmenorrhoea compared to control for both high intensity (SMD -2.01, 95% CI -3.13, -0.90, $p<0.001$, $I2=92\%$) and low intensity (SMD -1.77, 95% CI -2.70, -0.84, $p<0.001$, $I2=90\%$) exercise but heterogeneity was high. Multimodal physiotherapy resulted in significantly better sexual function compared to standard pharmaceutical care (SMD 5.10, 95% CI 3.52, 6.68, $p<0.001$,$I2=0\%$).

Conclusion: Multimodal physiotherapy is effective for reducing pain in dyspareunia and persistent pelvic pain/ endometriosis and improving function in dyspareunia. Exercise interventions may be effective in reducing pain associated with dysmenorrhoea.

The use of pelvic floor muscle relaxation audio files for physiotherapy management of pelvic pain

Sonia Scharfbillig[1], Rolf Scharfbillig[2]

[1]Pelvic Floor Health, [2]University of South Australia

9L: Pelvic pain, Riverbank Room 5, October 25, 2025, 10:35 - 11:35

Aim: To evaluate the effect of pelvic floor muscle relaxation audio files on pelvic pain. It was hypothesised that audio files guiding pelvic floor muscle relaxation exercises (PFMRE) would result in less self-reported pain on digital examination of the pelvic floor muscles.

Design: A retrospective study of patients from a private pelvic health physiotherapy practice.

Method: Patient files were retrospectively assessed for reports of pain during pelvic floor muscle examination, pre and post-PFMRE, between August 2020 and August 2022. All patients had chronic pelvic pain, were examined by the same practitioner and used the same audio files. A numerical rating scale (NRS) was used to rate pain.

Results: 58 patients were eligible to be part of this study. There was a significant decrease in self-reported pain post-PFMRE treatment in both the superficial (mean pain score 2.21 (SD 2.33), $p<0.001$) and deep pelvic floor muscles (mean pain score 1.12 (SD 1.99), $p<0.001$).

Conclusion: Pelvic floor muscle relaxation audio files appear to be a useful treatment modality to reduce self-reported pain during examination of the pelvic floor muscles. This provides initial insight into how relaxation strategies may fit into multi-modal physiotherapy management for chronic pelvic pain. Limitations include: patients were adhering to other treatment advice from the treating practitioner and management advice from other health professionals in their team at the same time.

Key practice point:

- Audio files for pelvic floor muscle relaxation exercises may be a useful inclusion in the multi-modal physiotherapy management program for patients with chronic pelvic pain.

Intersecting voices - provider and patient experiences of trauma sensitive care in pelvic physiotherapy

Janine Stirling[1], Rita Shackel[2], James Elliott[1,3]

[1]University of Sydney, Faculty of Medicine and Health, School of Health Sciences, [2]The University of Sydney Law School, [3]The Northern Sydney Local Health District, The Kolling Institute

9L: Pelvic pain, Riverbank Room 5, October 25, 2025, 10:35 - 11:35

Aim:

To explore the lived experience of pelvic physiotherapists in providing trauma sensitive care to women disclosing history of adult sexual assault or childhood sexual abuse. Participants with sexual trauma history were also recruited to better understand healthcare interventions and care qualities that support patient wellbeing.

Design:

Qualitative design with in-depth semi-structured interviews.

Method:

This qualitative research study used purposive sampling to recruit pelvic physiotherapists via word of mouth, social media and flyers distributed to pelvic physiotherapy practices across geographically diverse parts of Australia (Ethics approval: 2023/ETH00039). Patients with sexual trauma were recruited from two sites in Sydney, Sydney Pelvic Clinic and Alana Healthcare (Ethics: 2022/ETH01074). Ten interviews were conducted, they were audio recorded and transcribed verbatim. The data was coded and thematically analysed using interpretive phenomenological analysis.

Results:

The cohort comprising of sexual trauma participants shared healthcare experiences of pelvic ultrasound, post-operative care, general practitioner interactions, in-patient hospital experiences through to pelvic physiotherapy. Themes emerged that captured what participants found helpful and supportive in a trauma sensitive healthcare approach. Pelvic physiotherapist themes showcased the complexity and knowledge gained while working with survivors of sexual trauma.

Conclusion:

The intersection of these voices from two sides of the patient-provider relationship brought a rich tapestry of lived experience together. Raising awareness of what works

well in shaping positive trauma-informed care outcomes for patients with sexual trauma.

Key practice points:

- Sharing the discourse offered by patients and providers relating to challenges and care qualities that improve patient wellbeing, deepens professional knowledge and understanding.

Multidisciplinary treatment compared to single discipline treatment for chronic pelvic pain: systematic review with meta-analyses

Helena Frawley[1,2,3], Danielle McReynolds[1], Rebekah Shiraz[1], Mary-Anne Tangey[1], Thorlene Egerton[1]

[1]The University of Melbourne, [2]Royal Women's Hospital, [3]Mercy Hospital for Women

11L: Pelvic pain, Panorama Room 1&2, October 25, 2025, 13:40 - 14:25

Aim: To compare the effects of multidisciplinary (≥ two of medical, psychology, physiotherapy, nursing, or nutrition disciplines) versus single discipline treatment for females ≥ 13 years with chronic pelvic pain.

Design: Systematic review and meta-analyses.

Method: Six electronic databases were searched in February 2025 for trials that included: participants with chronic pelvic pain ≥ three months; comparison of multidisciplinary to single discipline treatment(s); reported pain, quality of life, sexual function, anxiety and depression, pelvic floor dysfunction, analgesia use and/or adverse events. Data selection, extraction and risk of bias assessments were completed independently by two reviewers.

Results: Eight studies were included in the syntheses. Meta-analysis found lower post-treatment pain (mean difference -2.28, 95% CI -3.18 to -1.38) and greater improvements in sexual function (mean difference in change 2.55, 95% CI 1.00 to 4.11) with multidisciplinary care, but no difference between groups for quality of life (standardised mean difference -0.16, 95% CI -0.51 to 0.20), or the other outcomes.

Conclusion: Multidisciplinary treatments may lead to lower pain and greater sexual function improvements than single discipline treatments, however due to the low to very low certainty in all findings, multidisciplinary care cannot yet be recommended as the optimal model of care. This may change with future high-quality studies specifically designed to answer this question.

Key practice points:

- Multidisciplinary treatment of chronic female pelvic pain may lead to greater improvements in pain and sexual function.
- Clinicians should carefully weigh the potential benefits of multidisciplinary treatments against the resources available in their practice setting.

The experience of diagnostic uncertainty with persistent pelvic pain: a reflexive thematic analysis

Tanvi Supekar[1], Jane Chalmers[1], Lorimer Moseley[1], Amelia Mardon[1,2]
[1]UniSA, [2]Western Sydney University

11L: Pelvic pain, Panorama Room 1&2, October 25, 2025, 13:40 - 14:25

Aim: To investigate the intersections between persistent pelvic pain and diagnostic uncertainty.

Design: This qualitative descriptive study employed a reflexive thematic analysis to describe the experiences of diagnostic uncertainty associated with pelvic pain.

Methods: Individual semi-structured interviews were carried out with 14 adults presumed female at birth living in Australia with pelvic pain. Nine participants had a pelvic pain diagnosis (e.g., endometriosis and adenomyosis); five participants did not have a diagnosis. Qualitative data were analysed using an inductive critical realist reflexive thematic analysis.

Results: This study generated four themes that describe how people with pelvic pain experience diagnostic uncertainty: 1) 'Is it all in my head?' described how normalisation of pelvic pain led to participants' feeling uncertain about whether their pain was real; 2) 'Have to be seen to be believed' described how 'normal' scans led to feelings of invalidation and increased uncertainty about the cause of their pain; 3) 'When even the 'experts' are uncertain' highlighted that healthcare professionals lack knowledge about pelvic pain, which contributed to participants' uncertainty; 4) 'The only thing certain is uncertainty' described how uncertainty prevails post-diagnosis, particularly tied to the prognosis of some pelvic pain conditions.

Conclusion: This qualitative study highlights how diagnostic uncertainty exists along the entire trajectory of the pelvic pain diagnostic journey; uncertainty also persists after a diagnosis has been made.

Key practice points:

- Diagnostic uncertainty has wide-ranging impacts on people with pelvic pain
- Clinicians should provide reassurance and education to reduce the impacts of diagnostic uncertainty

Non-invasive electrical stimulation for chronic primary pelvic pain syndrome: A systematic review with meta-analysis

Jodie Chapman[1], Fiona Gathercole[1], Christina Lathouras[1], Elise Fraser[1], Thorlene Egerton[1]

[1]*The University of Melbourne*

11L: Pelvic pain, Panorama Room 1&2, October 25, 2025, 13:40 - 14:25

Aim: To determine the effectiveness of non-invasive electrical stimulation on pain, sexual function and quality of life (QoL) in females with chronic primary pelvic pain syndrome (CPPPS).

Design: Systematic review with meta-analysis.

Method: Databases were systematically searched (March 2024). Articles reporting randomised controlled trials (RCTs) of non-invasive electrical stimulation (e-stim) for females with CPPPS were included.

Results: Twenty-nine studies were included. Transcutaneous electrical nerve stimulation (TENS) was investigated in 73% of the included studies. Meta-analysis showed a significantly greater improvement with non-invasive e-stim for pain (22 studies, mean between-group difference -2.35 points on 0-10 scale, 95% CI -3.31 to -1.38, $p < 0.001$) and for sexual function (five studies, 2.44 units on Female Sexual Function Index, 95% CI 0.98 to 3.90). There was also a greater improvement specifically in primary dysmenorrhea (14 studies -2.80 points, 95% CI -3.92, -1.69, $p < 0.001$). Narrative synthesis indicated QoL was positively impacted by non-invasive e-stim. All findings were very low certainty. E-stim appears to be safe with few and only minor adverse events reported.

Conclusion: Non-invasive e-stim may be an effective conservative treatment for reducing pain and improving sexual function and QoL in females with CPPPS, in particular for primary dysmenorrhea. This recommendation is based on very low certainty findings. Further research is also required to determine the impact of different e-stim modalities.

Key practice point:

- Clinicians could consider offering non-invasive e-stim to females with CPPPS for pain management given it appears to be safe, and it may be effective.

Trauma-informed management of patients with prior sexual trauma in pelvic health physiotherapy clinical practice

Angela James[1]
[1]Sydney Pelvic Clinic

11L: Pelvic pain, Panorama Room 1&2, October 25, 2025, 13:40 - 14:25

This study explored the role of physiotherapy in the multidisciplinary team providing trauma-informed care for a patient with Genito-Pelvic Pain/Penetration Disorder (GPPPD)

Discussion paper with an integrated case study of a patient with GPPPD on a background of sexual trauma.

Unstructured interview of PH Physiotherapists guided central themes for investigation through an extensive literature search. The paper explores how to work safely in clinical practice with individuals who have endured sexual trauma, both for the patient and the pelvic health physiotherapist.

Results:
A trauma-informed care approach underpins the following strategies when working with patients with sexual trauma:

- Use of screening tools
- Sensitive enquiry
- Building capacity
- Identifying compliance
- Regulating the body's reaction to trauma

There is the risk of developing vicarious trauma when treating sexual trauma patients, and safety of the therapist must also be prioritised. Safe work practices are outlined at an individual and practice level.

A skilled use of the above strategies, allow a patient to develop autonomic flexibility and promote appropriate and adaptive responses. Pelvic physiotherapists are uniquely placed to orchestrate a shift to feeling safety in one's body, improving capacity for emotional regulation.

Key practice points:

- The development of clinical practice guidelines would benefit PH physiotherapists confidence and competence in treating patients with a history of sexual trauma.
- Prioritisation of the physiotherapist's psychological safety is paramount to managing the risk of vicarious trauma.
- Fostering a sense of safety is key in restoring balance within a patient's autonomic nervous system.

Pelvic floor symptoms and perceived impact of obstetric anal sphincter injuries at long-term follow-up

Tegan Henderson[1], Grace Rheinberger[1], Hannah Graetz[1]
[1]*The Royal Hospital For Women*

3L: Postnatal physiotherapy, Panorama 3, October 23, 2025, 13:40 - 14:25

Aim: To determine the medium to long-term outcomes and acceptability of existing follow up in women sustaining Obstetric Anal Sphincter Injury (OASI).

Design: Cross-sectional study

Methods: Women diagnosed with OASI between January 2022 and July 2024 were invited to complete a long-term symptom survey after completing clinic follow-up. The survey combined validated questionnaires: the Wexner Scale, International Consultation on Incontinence Questionnaire – Urinary Incontinence Short Form (ICIQ-UI SF), Short Form-20 (SF-20), Female Sexual Function Index-6 (FSFI-6); with custom questions about fears, impact of OASI and clinic follow-up. Primary outcomes anal incontinence and follow-up satisfaction, and secondary outcomes pelvic floor symptoms and quality of life (QoL) were presented descriptively.

Results: One in three women responded and approximately half were more than two years postpartum. Most women felt they had enough follow-up after an OASI, 3% reported no follow up at all. Anal incontinence, UI and sexual dysfunction were reported by 28%, 46% and 39% of respondents and scored as mild, mild-moderate and moderate-severe, respectively. Nearly 30% were entirely asymptomatic. Participants reporting symptoms on the Wexner, ICIQ-UI SF or FSFI-6 more frequently reported QoL impact compared to those without symptoms (OR 3.2 95%CI 1.3, 7.8). Two thirds of respondents reported fears of subsequent birth and 25% requested further consultation.

Conclusion: Most women reported anal continence at two years postpartum and felt that they receive enough follow up for OASI.

Key practice points:

- Long-term follow-up is valued following OASI. Pelvic floor symptoms, although predominantly mild, are associated with QoL impact.

How to assess and treat breast injuries in women's contact and collision sports

Deirdre McGhee[1]

[1]*Breast Research Australia, University of Wollongong*

12K: Impact injuries in sport, Panorama 3, October 25, 2025, 14:30 - 15:15

Background:

Breast injuries are a female-specific sports injury caused by a direct impact to the breast that results in breast pain, bruising, and swelling. The prevalence of breast injuries is higher in contact and collision sports. The intensity and duration of pain, and extent of bruising and swelling may necessitate treatment, and potential consequences include breast fat necrosis and breast deformity. Sports physiotherapists working in women's contact and collision sports require the knowledge and skills to assess and manage these female-specific soft tissue injuries.

Aims:

To provide physiotherapists with the knowledge and skills to assess and treat breast injuries in female athletes and contribute to breast injury prevention and surveillance.

Objectives:

- Gain an understanding of the pathology of breast injuries, including potential long-term consequences, classification, and mechanisms of injury.
- Develop clinical skills to assess and treat acute breast injuries, on-field and off-field, and injuries with a delayed presentation.
- Review research evidence to inform the development of strategies to prevent breast injuries, e.g., breast protective equipment, sports bras, and sport-specific skills training.
- To understand the challenges with breast injury surveillance.

Approach:

- Presentation on breast injury pathology, potential long-term consequences, classification, and mechanism of injury.
- Presentation of breast injury assessment and treatment, with practical demonstration of equipment kit for on-field treatment of breast injuries.
- Interactive discussion on breast injury prevention strategies and to address challenges in breast injury surveillance across various sports.

Key practice points:

- Skills and knowledge to assess and treat breast injuries

SECTION 5: SYMPOSIA

Matching multidisciplinary care to patients' needs in Queensland's Musculoskeletal Physiotherapy Screening Clinic and Multidisciplinary Service

Shaun O'Leary[1,2], Peter Window[2], Andrew Hislop[3], Maree Raymer[2], Michelle Cottrell[2], Sonia Sam[2], Tracy Comans[4], Nadine Foster[5,6]

[1]University of Queensland, School of Health and Rehabilitation Sciences, Brisbane, Australia, [2]Royal Brisbane and Women's Hospital, Physiotherapy Department, Brisbane, Australia, [3]The Prince Charles Hospital, Physiotherapy Department, Brisbane, Australia, [4]University of Queensland Centre for Health Services Research, Brisbane, Australia, [5]University of Queensland Clinical Trials Centre, Brisbane, Australia, [6]STARS Education and Research Alliance, Brisbane, Australia

Summary and rationale of the symposium:

Multidisciplinary non-surgical management is recommended for patients with complex or chronic painful musculoskeletal conditions. Multidisciplinary care must be appropriately matched to the patients' needs and supportive of the patient's engagement with care.

This symposium describes a project addressing matched multidisciplinary care in the Musculoskeletal Physiotherapy Screening Clinic and Multidisciplinary Service (MPSC&MDS) across Queensland. Specifically the objectives were to; identify potential gaps in the services approach to matched multidisciplinary team (MDT) care by exploring MDT usage in a statewide audit (presentation 1), better understand audit findings regarding MDT usage (referral, patient uptake) with a statewide survey (presentation 2); and use survey findings to prioritise focus group (patients and clinicians) recommendations for service redesign to better match MDT care to patients needs in the service (presentation 3).

The focus of the symposium is directly relevant to those working with MDTs particularly in the management of musculoskeletal conditions.

ABSTRACT 1

Title: Exploring multidisciplinary team usage in the MPSC&MDS: a service audit.

Presenting Author: Peter Window

Aim: To explore MDT usage in the service statewide including patient referrals to the MDT, congruence between identified clinical indicators and discipline referrals, patient uptake of referrals, duration and quantity of MDT care, service outcomes.

Design: Retrospective audit with data linkage.

Method: Service and activity data were linked. Data concerning referral acceptance and uptake, duration of MDT care, and service outcomes, were analysed descriptively, with only data concerning patient accepted referrals (not offered referrals) available. Clinical indicators that would reasonably warrant referral to specific disciplines were determined from variables available in the service database.

Results: Referrals across disciplines ranged from 4.3% (Occupational Therapy) to 96% (Physiotherapy). Congruence between identified clinical indicators and accepted referrals ranged from 9.9%-30.2%. Attendance to the initial MDT appointment following an accepted referral ranged from 75.9-90.3%, with patients attending a median [IQR] of 5[3,9] times over the duration of their management period (Median 149[95, 238] days).

Conclusion: Findings suggested potentially inadequate matching of multidisciplinary care to patients' needs and lower than expected patient attendance to accepted referrals suggesting a need for service refinement to optimise patient engagement with care.

Key practice points:

- Factors influencing offered and accepted referral to the services' MDT needs exploration, particularly for disciplines other than physiotherapy.
- Potentially more robust/appropriate clinical indicators is required to direct referral.
- Factors influencing patient engagement with multidisciplinary care within the service needs to be better understood.

ABSTRACT 2

Title: Understanding multidisciplinary team usage in the MPSC&MDS: A state-wide stakeholder survey.

Presenting Author: Andrew Hislop

Aim: To understand factors that influence (1) referral of patients to the services MDT, (2) patient uptake and engagement with the MDT and (3) discharge from the service.

Design: Statewide survey.

Methods: Relevant service stakeholders (patients, Advanced Musculoskeletal Physiotherapists [AMPs], MDT Clinicians) were surveyed across 15 MPSC&MDS facilities. Stakeholders were asked about factors influencing (1) if referral(s) to the MDT are offered and accepted, (2) factors influencing patient attendance and engagement with the MDT care and management strategies, and (3) review appointment(s) and discharge processes.

Results: 64 patients,39 AMPs and 61 MDT Clinicians completed the survey. Themes emerged that influenced offered and accepted referral and patient uptake of the MPSC&MDS including (1) expectations of benefit, (2) capacity to participate, (3) experience of collaborating with the health professionals, (4) individual health professional disciplines factors, and (5) access to services. All stakeholders indicated that a patients' expectation of benefit is underpinned by their beliefs, previous experiences, readiness and/or willingness to change and/or engage with the MDT.

Conclusion: For people managed by the MPSC&MDS the factors that lead to referral, and subsequent uptake and engagement with the MDT referral are multifactorial.

Key practice points:

- All stakeholder groups nominated that factors additional to direct clinical indicators can strongly influence if a patient is offered, or accepts a referral to the MDT.
- Patient and service-related factors may influence if a patient engages (or sustainably engages) with MDT care even following an accepted referral.

ABSTRACT 3

Title: Recommendations to better match MDT care to patient's needs in the MPSC&MDS.

Presenting author: Shaun O'Leary

Aim: To engage patient and clinician focus groups to review and prioritise survey findings in the form of future service redesign recommendations to better match MDT care to patient's needs, as well as better engage patients with that care.

Design: Nominal Group Technique (NGT) consensus meetings.

Methods: Patient and clinician focus groups (n = 45 participants in total) used a NGT approach to deliberate over survey findings and reach consensus as to priority recommendations for future service redesign. Specifically, participants were asked to consider service features, other than just direct clinical indicators, that would address potential barriers influencing referral and patient engagement.

Results: Both patient and clinician focus groups recommended future service refinement needed to address potential patient-related (eg. expectations, readiness, validating of medical history, consistent communication) and service-related (eg. service location and access, accessible information regarding professions, time burden) barriers to better match MDT care to patient's needs in a manner that would optimally engage patients in MDT care.

Conclusion: To appropriately match and engage patients with MDT care in the MPSC&MDS, service refinements will need to address a range of patient and service-related features of the service that are potential barriers to effective care.

Key practice points:

- Multidisciplinary services need to consider patient and service-related barriers to care.
- Some barriers may be potentially addressed prior to the patient's initial contact with the service.
- Matching care is not only about the right treatment at the right time but also facilitating patient engagement with that care.

Cerebral palsy: A lifespan approach to health and wellbeing

Carlee Holmes[1,2,3], Prue Morgan[3,4], Georgia McKenzie[1,3,5]

[1]St. Vincent's Hospital Melbourne, Fitzroy, Australia, [2]The University of Melbourne, Parkville, Australia, [3]Murdoch Children's Research Institute, Parkville, Australia, [4]Monash University, Frankston, Australia, [5]La Trobe University, Bundoora, Australia

Summary and rationale:

Adults with cerebral palsy (CP) experience signs of ageing earlier than the non-disabled population. Falls, pain, fatigue, reduced bone health and associated increased fracture risk, and functional decline all impact their health, wellbeing and participation as they age.

The constructs of physical and mental health are closely interrelated, yet poorly understood with a high degree of diagnostic overshadowing impeding appropriate diagnosis and management. Increased knowledge and awareness of the common physical and mental health concerns of people with CP will raise the awareness for appropriate monitoring and interventions.

Falls are a major concern for adults with CP contributing to decreased confidence, fear, and reduced participation. People with CP experiencing falls often present to emergency departments yet may not require emergency care, potentially indicative of lack of trust in primary healthcare providers' knowledge relating to CP. Clinical gait assessment enables early detection of mobility decline and implementation of falls prevention strategies.

ABSTRACT 1:

Title: Physical and mental health in young adults with cerebral palsy

Presenter: Carlee Holmes

Aim: To examine the self-reported prevalence, correlates, and interrelationships between physical and mental health among young people with CP.

Design: Cross sectional study of young people with CP aged between 10 to 30 years living in Australia.

Method : Data on pain, fatigue, sleep, anxiety and depression using standardised outcome measures were collected through a national survey. Descriptive statistics were used to report participant demographics. Relationships between physical and mental health outcomes were assessed using parametric analysis (Pearson correlations). Health related outcomes were further analysed across GMFCS levels using non-parametric analysis (Chi square tests of independence)

Results: Seventy-two participants completed the survey, mean age (SD) of 21.81 years (5.94), 55.6% female and with representation across all levels of the CP classification systems. of the 72 respondents, 69.4% (n =50) reported pain, 79.1% (n = 57) reported fatigue and 65.3% (n = 47) reported sleep disturbances, 100% (n=31) reported depression ranging from mild to severe and 100% (n=31) reported anxiety ranging from non-clinical to severe. Strong relationships existed between most outcomes measured ($r \geq 0.50$).

Conclusion: Strong correlations exist between many physical and mental health outcomes in people with CP. Increased awareness and holistic lifespan management is required.

Key practice points

- Pain, fatigue, disturbed sleep, anxiety, and depression are experienced by people with cerebral palsy
- Strong relationships exist between physical and mental health outcomes in people with cerebral palsy
- Health, wellbeing, and participation of people with CP is complex and multifaceted

ABSTRACT 2:

Title: Emergency presentations of falls and associated injuries in people with cerebral palsy: A cohort study

Presenter: Prue Morgan

Aim: People with cerebral palsy (CP) experience reduced mobility and balance resulting in elevated falls risk, frequently associated with early ageing. This study investigated emergency service use, injury cause and characteristics, and whether injury type changed with ageing.

Design: Retrospective cohort study

Method: Data from a single health service was interrogated to identify participants with CP who accessed Emergency Department (ED) services over a five-year period. Presentation frequency, urgency, injury diagnoses, and cause were identified. Comparison between age groups was undertaken.

Results : From 1239 ED admissions, 127 injury-related visits were identified; median age 36 years (range 2 to 97). Falls were identified as injury cause in 60% of admissions, and 26 fractures resulted. Fifty-eight visits (46%) were categorised as not emergency or not urgent. Individual attendance frequency ranged from 1 to 7 times, with 36/127 visits attributed to 8 individuals. Most frequently injured were lower limb (n=55), followed by head (n=40) and upper limb (n=24). There was no significant difference in urgency categorisation, injury cause, nor injury location relative to age ($p>0.05$).

Conclusion: Falls and resultant injuries prompting ED care are experienced across the lifespan in people with CP. The high proportion of lower urgency reasons for seeking care may suggest reduced access to primary healthcare, or lack of confidence in primary care providers.

Key practice points

- Falls are experienced by people with CP across the lifespan
- Injury cause and location are not age-specific in CP
- People with CP experiencing frequent falls require targeted attention to address falls risk.

ABSTRACT 3:

Title: Clinical gait assessment in adults with cerebral palsy

Presenter: Georgia McKenzie

Aim: To describe clinical gait assessment and management for young adults with cerebral palsy (CP).

Design: Clinical documentation audit of gait assessment within a specialist adult CP service.

Method: Ethics approval was obtained to audit patient files for adults with CP who completed a gait assessment appointment in the previous 18 months. Gait analysis was completed using a wearable inertial motion sensor (BTS G-Walk), and video analysis using the 'Edinburgh Visual Gait Scale' (EVGS) to provide temporo-spatial and kinematic data. Information on reason for referral, falls, orthotics and physical activity history, key findings from the EVGS and G-Walk, and primary interventions were extracted and analysed using descriptive statistics.

Results: Data relating to 27 young adults with CP (mean age 22 years) were analysed. Reasons for referral included; review of orthotic need, gait deterioration, pain or increased falls. 93% of participants had worn ankle-foot orthoses (AFO's) in childhood however less than half continued use into adulthood. Gait deviations were highest at the ankle and foot during initial contact, the pelvis and trunk in midstance, knee flexion at terminal stance and foot clearance in swing phase. Interventions included orthotic prescription, fall management and education around pain and fatigue.

Conclusion: Gait concerns were self-identified by adults with CP earlier than reported in literature. Although AFO use declined in adolescence, they were often indicated for community participation goals of adults with CP.

Key practice points

- Multi-disciplinary, low tech gait analysis provides useful clinical information to support therapist and patient decision making.

Implementing Pathways of Care for Musculoskeletal (PACE_MSK) disorders in Australian primary care: patient and clinician outcomes.

Trudy Rebbeck[1,2], Robyn Fary[4], Kerrie Evans[1,3], Johnny Kang[1]

[1]Sydney School of Health Sciences, Faculty of Medicine and Health, University of Sydney, Camperdown, Australia, [2]Kolling Institute, Northern Sydney Local Health District, St Leonards, Australia, [3]Healthia Limited, Bowen Hills, Australia, [4]Curtin University, Bentley, Australia

Summary and rationale

Traditional care pathways for musculoskeletal disorders are expensive and utilise low value and unnecessary care (eg imaging, opioids, multiple medical referrals) thereby delaying appropriate care (eg exercise and advice). Primary care clinicians find providing care for people at risk of poor outcome particularly difficult, citing lack of time or expertise to implement the complex care needs.

We designed and implemented PACE-MSK as a solution, whereby people at risk of a poor outcome are referred to specialist MSK physiotherapists, who work collaboratively with primary care clinicians.

In this symposium, we report on the outcomes of this Australia wide implementation research programme by;

1) exploring the referral practices, trust and collaboration required between primary care clinicians and specialists,
2) reporting on the acceptance and adoption of PACE-MSK by both primary care and specialist clinicians and finally i
3) describing the patient experience.

The symposium will commence with an overview of the research programme (Rebbeck), presentation of 3 papers (Evans, Kang, Fary), then Q and A.

ABSTRACT 1

Title: Communication and trust: Foundations for effective care pathways for people with musculoskeletal conditions

Presenting author: Kerrie Evans

Aim: Care pathways that match treatment to a person's risk of poor outcome can improve patient self-efficacy, satisfaction with care and health outcomes. Implementation of these pathways depends on effective intra-and inter-professional collaboration (IPC). This presentation will discuss key findings from three studies evaluating factors that influence IPC in primary care.

Design/Method: We explored referral practices amongst 58 allied-health and medical professionals in primary care and barriers and facilitators of referral to specialist physiotherapists. Embedded within a study evaluating a new care pathway for 767 people with MSK conditions (PACE-MSK), we assessed IPC using the Interprofessional Practices Questionnaire (IPQ) and conducted thematic analysis of qualitative data.

Results: Referral practices were influenced by trust in colleagues, pre-existing professional networks, perceived expertise, financial considerations, and patient-specific factors (e.g., clinical presentation). A significant barrier to referral was lack of awareness of, and access to, specialist physiotherapists. Even within PACE-MSK, when there was an established network between primary healthcare professionals and specialist physiotherapists, IPC only occurred 40% of the time. Scores on the IPQ varied (i.e., 1.6/10-10/10) but mean score was 7.4/10 indicating positive collaboration overall.

Conclusion: Implementation of new care pathways relies on effective inter- and intra-professional communication and trust between healthcare providers. Promoting professional confidence in shared-care relationships, particularly within physiotherapy, may strengthen referral networks and help improve patient outcomes.

Key practice points:

- Physiotherapists are critical in implementing new care pathways for MSK conditions
- Intra-professional collaboration is critical
- Establishing trust and professional networks facilitates better patient outcomes

ABSTRACT 2

Title: Adoption of a new PAthway of CarE for musculoskeletal (PACE-MSK) conditions by primary healthcare clinicians and specialist physiotherapists in Australian primary care.

Presenting Authors: Trudy Rebbeck, Johnny Kang.

Aim: Stemming from findings in Paper 1, we designed and evaluated a strategy to implement PACE-MSK with primary healthcare clinicians and specialist physiotherapists in Australian primary care. This study aims to evaluate acceptance and adoption of PACE-MSK by clinicians. PACE-MSK involves early referral of people at high risk of poor outcome to specialist physiotherapists as an alternative to traditional models of care.

Design: Implementation outcomes from a multi-centre randomised controlled trial.

Method: Participants were primary care clinicians (n=146) and specialist physiotherapists (n=50), providing care to 500+ patients in a multi-centre RCT. Clinicians providing care in the "usual care group" received a passive implementation strategy (phone call + written information). Those in the PACE-MSK group received a multi-faceted strategy including interactive education focussed on the key behaviours to change.

Results: Clinicians in the PACE-MSK group referred fewer patients for imaging (MD: -14.5 % (95% CI -26.7 to -1.9) and to medical specialists (MD: -8.1% (95%CI -18.3 to -2.1) compared with usual care. Both groups provided the recommended care (e.g., advice, exercise) in similar proportions (>80% of the time). Specialists chose collaborative care pathways less frequently than anticipated (35% of the time), citing barriers to collaborative care including lack of ability to contact clinicians, complexity of presentation and patient preference.

Conclusion: Implementation of PACE-MSK reduced low value care (imaging and surgical referrals) whilst retaining high value care (advice and exercise). Collaborative care could be improved.

Key practice points:

- Specialist physiotherapists involved in care pathways can improve adoption of aspects of best practice for musculoskeletal disorders by primary care clinicians.
- Collaborative care needs to improve.

ABSTRACT 3

Title: Specialist musculoskeletal care pathway for those at risk of poor outcomes. What do patients think?

Presenting author: Robyn Fary

Aim: Finally, we aimed to investigate acceptance of specialist musculoskeletal care within PACE-MSK by patients. Patient acceptance of new care pathways is critical for widespread implementation.

Design: A convergent parallel mixed-methods design referencing the Theoretical Framework of Acceptability was used. Together qualitative and quantitative data enabled a deeper understanding of patient perspectives.

Method: Twenty-nine participants, at risk of poor outcomes from the intervention arm of the Pathway of CarE for common musculoskeletal conditions (PACE-MSK), were enrolled. One-to-one semi-structured interviews were conducted at completion of the intervention (three months). Patient self-reported outcomes (including pain self-efficacy, global perceived change and acceptance of care) were collected at baseline and three months. Reflective inductive thematic analysis was used to analyse qualitative data. Descriptive statistics were used to summarise self-reported outcomes. Qualitative and quantitative findings were deductively mapped to the Theoretical Framework of Acceptability.

Results: Five themes (expectations and beliefs shaped patient experience; clinical expertise and competence influence acceptance; person-centred care; mechanisms facilitating beneficial responses to care; gaps in care pathway implementation) were identified. The proportion of participants reporting improvement in self-reported outcomes ranged from 28% (pain self-efficacy) to 66% (global perceived change). Integrating qualitative and quantitative data, complementary meta-inferences in the constructs of ‘ethicality’, ‘intervention coherence’, ‘self-efficacy’ and ‘affective attitude’ were identified. Divergence was identified in ‘perceived effectiveness’.

Conclusion: Specialist physiotherapists’ care was accepted and perceived as a positive addition to usual care.

Key practice points:

- Specialist physiotherapist care is accepted as an added service
- Participants liked the comprehensive and holistic approach

Moving forward together: Improving physiotherapy care for Indigenous Peoples with musculoskeletal conditions

Robyn Fary[2], Scott Willis[3], Sarah Large[1], Rachel Toovey[1], Brooke Conley[1], Ivan Lin[4], Jane Linton[5], Josifini Tuiloma[6]

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Summary and rationale

Improving musculoskeletal health of Indigenous Peoples internationally is an important priority for the physiotherapy profession yet remains inadequately addressed. In this symposium, we draw on work from the "Moving forward together" editorial series invited by the Journal of Orthopaedic and Sports Physical Therapy involving 33 Indigenous and non-Indigenous authors from the colonised countries of Australia, Aotearoa New Zealand, Canada, Fiji and Samoa, led by Ngiyampaa woman, physiotherapist and post-doctoral research fellow Brooke Conley.

We outline: the importance of physiotherapists understanding musculoskeletal health of Indigenous Peoples; present current initiatives in Indigenous musculoskeletal health in clinical practice, research and education; highlight key priorities in which to advance the profession; and offer suggestions of how physiotherapists can contribute to positive change through allyship and advocacy.

This symposium will help drive the contributions of our profession in this field with the goal of better and fairer musculoskeletal health outcomes for Indigenous Peoples.

ABSTRACT 1

Title: Moving forward together: enhancing physiotherapy care for Indigenous peoples with musculoskeletal pain

Presenting author: Scott Willis

Aim: To share best practice skills and knowledges for physiotherapists and considerations for health care services to enhance care for Indigenous peoples with musculoskeletal pain.

Design: A collaborative process as part of an editorial series.

Method: A group of eight Indigenous and non-Indigenous physiotherapy clinicians and clinician-researchers of the colonised countries of Aotearoa, Australia, Canada and Samoa came together to share experiences, knowledges and wisdom related to musculoskeletal physiotherapy practice with Indigenous Peoples. The process was led by Ivan Lin, non-Indigenous physiotherapist and researcher with extensive experience in Indigenous health care.

Results: Self-reflection is a critical first step for physiotherapists to examine and understand their own cultural perspective and how this perspective influences clinical practice. Learning about Indigenous culture, beliefs and values of Indigenous Communities and clients in the place in which they practice is also important. Further, understanding trauma-informed care, effective communication, self-care and allyship are key skills for physiotherapists. Finally, health system support is crucial to culturally safe care.

Conclusion: Physiotherapists can play an important role in reducing the burden of musculoskeletal pain by developing strong relationships with Indigenous people and Communities. The considerations described can guide physiotherapists and health services to provide high-value, culturally informed care for Indigenous peoples.

Key practice points

- An understanding of cultural practice and critical general skills and how to apply them is critical for effective clinical practice
- Individual actions as an individual clinician, researcher or educator can influence health services to improve Indigenous musculoskeletal health care and outcomes

ABSTRACT 2

Title: Moving forward together: strengthening physiotherapy and musculoskeletal research with Indigenous peoples

Presenting author: Rachel Toovey

Aim: To explore best practices and future priorities for musculoskeletal research with Indigenous Peoples

Design: A collaborative process as part of an editorial series

Method: A group of nine Indigenous and non-Indigenous authors of the colonised countries of Aotearoa, Australia, Canada and Fiji came together to share experiences, knowledges and wisdom related to musculoskeletal research with Indigenous Peoples. The process was led by Jane Linton, Gumbaynggirr physiotherapist and early career researcher living on Country in NSW, Australia.

Results: Best practice and future priorities can be described at three levels - individual (researcher and research teams), organisational (academic and research institutions, publishing organisations) and systems (governance structures and funding bodies). Each level has responsibilities for sustaining good research practices, resulting in positive outcomes for Indigenous peoples with musculoskeletal conditions.

Conclusion: It is critical for musculoskeletal research with Indigenous peoples to be Community-driven, Indigenous researcher-led with awareness of and commitment to Indigenous research ethical and governance guidelines. It needs support and funding at a systems level to be achievable and sustainable. Future musculoskeletal research can benefit from recognising, respecting and applying these perspectives, shifting the deficit discourse often associated with Indigenous health research. Through this there is potential for Indigenous flourishing and benefit for the wider community.

Key practice points

- An understanding of musculoskeletal research with Indigenous Peoples is necessary to progress meaningful research to improve musculoskeletal burden in Indigenous peoples.
- Individual researchers, institutions, governments and funding bodies have responsibility working together to improve Indigenous musculoskeletal health research and outcomes

ABSTRACT 3

Title: Moving forward together: strengthening physiotherapy education for Indigenous musculoskeletal care

Presenting authors: Robyn Fary and Sarah Large

Aim: To explore best practices in physiotherapy education to improve musculoskeletal care for Indigenous peoples

Design: A collaborative process as part of an editorial series

Method: A group of nine Indigenous and non-Indigenous authors, of the colonised countries of Aotearoa, Australia and Canada came together to share experiences, knowledges and wisdom related to Indigenous cultural safety learnings in musculoskeletal physical therapy curricula. The process was led by Robyn Fary, Gunditjmara woman, physiotherapist, and teaching and research academic.

Results: It is important that students graduate with the attributes of reflexivity and cultural humility to provide culturally safe care to all people with musculoskeletal conditions. Students need support at all levels including individual educators, universities, regulatory bodies and government to succeed. Embedding Indigenous learning within musculoskeletal content is critical as tokenistic 'add-ons' make neither logical nor pedagogical sense. Privileging Indigenous scholarship, where possible, and modelling Indigenous ways, such as yarning, facilitates learning. University relationships with Indigenous communities can provide students with contextual clinical learning in Indigenous community health services. Health policies, frameworks and standards at systems level underpin this initiative.

Conclusion: Cohesive and aligned support from individual educators, organisations, regulatory bodies and government is necessary for physiotherapy students to graduate with the capabilities required to provide culturally safe, person-centred musculoskeletal care to Indigenous peoples.

Key practice points

- Meaningful cultural safety education embedded in musculoskeletal curricula helps students develop the skills required for reflective, strengths-based, person-centred care.
- Support through health policy, frameworks and standards at systems level is crucial.

Advances in the management of focal muscle spasticity: Patient experiences, clinical practices and surgical candidates

Edwina Sutherland[1,2], Emma Campagna[1,2,3]

[1]Epworth Healthcare, Melbourne, Australia, [2]University of Melbourne, Melbourne, Australia, [3]Alfred Health, Melbourne, Australia

Author: Edwina Sutherland

Paper Type: Symposium

Stream group: Neurology

Theme:

The implementation of evidence-based recommendations for focal muscle spasticity management into clinical practice is inconsistent, and its impact on patient outcomes remains unclear. These studies examine this issue from three perspectives: the patient, the spasticity clinics and who may be appropriate to consider for surgery.

Objectives:

This symposium integrates qualitative insights, a clinical audit and scoping review to provide an evaluation of effective strategies for improving outcomes for people with focal muscle spasticity. More specifically, the aims are to:

1. Explore the experiences of people attending focal muscle spasticity clinic appointments
2. Examine the components of 'usual care' in Victorian spasticity clinics and evaluate key factors contributing to better patient outcomes
3. Identify evidence-based recommendations for people with lower-limb spasticity who may benefit from muscle tendon surgery.

ABSTRACT 1

Title: Understanding the experiences of people attending focal muscle spasticity clinic appointments: A qualitative study

Presenting author: Edwina Sutherland1,2

Co-authors: Gavin Williams1,2, Fiona Dobson1, Bridget Hill2,3, Alice Johnston2, Belinda Lawford1.

1. School of Physiotherapy, The University of Melbourne, Australia.
2. Department of Physiotherapy, Epworth Healthcare, Australia.
3. Epworth Monash Rehabilitation Medicine Unit, Australia.

Aim: To describe the experiences of people attending focal muscle spasticity clinic appointments in Victoria.

Design: A qualitative study based on a phenomenological approach.

Methods: Individual semi-structured interviews were conducted with adults who had 1) a focal muscle spasticity diagnosis and 2) attended a spasticity clinic appointment within the last six months. Reflexive thematic analysis was conducted using the Braun and Clarke six step method by two independent reviewers, with themes and subthemes inductively derived.

Results: Six key themes emerged; 1) Patient expectations of the initial appointment varied greatly; 2) Patient management was generally tailored to individual needs; 3) Effective communication between clinic clinicians and therapists was important; 4) There was a need for more educational resources to support patient learning; 5) Limited time was a barrier to goal setting and therapy planning; and 6) Patients placed high value on staff consistency and familiarity.

Conclusion: Overall, people attending spasticity clinic appointments in Victoria have positive experiences. These findings underscore the importance of patient education, effective communication between therapists and tailoring care to target patient-centred goals.

Key practice points:

1. Focal muscle spasticity clinic appointments should be tailored to meet the individual needs of the person
2. Effective communication between clinicians is essential for a positive patient experience

3. Time constraints can hinder goal setting, patient education and establishing patient expectations

ABSTRACT 2

Title: A prospective multi-site audit of focal muscle spasticity clinics: A preliminary analysis

Presenting author: Edwina Sutherland1,2

Co-authors: Fiona Dobson1, Bridget Hill2,3, Gavin Williams1,2

1. School of Physiotherapy, The University of Melbourne, Australia.
2. Department of Physiotherapy, Epworth Healthcare, Australia.
3. Epworth Monash Rehabilitation Medicine Unit, Australia.

Aims: To 1) identify which components of spasticity management constitute 'usual care' in Victorian clinics, and 2) determine aspects of care contributing to better patient outcomes.

Design: A prospective observational study.

Method: 'Usual care' was observed in spasticity clinic appointments with respect to 26 clinical practice guideline recommendations for focal muscle spasticity management. Data was collected at both the initial assessment and follow up review, to determine if patient goals were 1) achieved, 2) partially achieved, or 3) not achieved.

Results: A preliminary analysis was conducted for an initial cohort (n=100) recruited from 12 clinics. Participants attended primarily public services (n=52) in metropolitan areas (n=78). Outcomes included all goals achieved (n=23), partial goals achieved (n=72), no goals achieved (n=5). Factors associated with higher rates of goal attainment include multidisciplinary management (95%), referral to a specialised therapist (91%), development of SMART goals with patients and caregivers (100%), assessment including >1 domain of the ICF (96%) and review timeframes <4 months (96%).

Conclusion: SMART goal setting, multidisciplinary care, utilising the ICF framework to guide assessment and timely follow-up reviews contributed to better patient outcomes as defined by patient goal attainment.

Key practice points:

1. A collaborative approach from a multidisciplinary team is important in the management of focal muscle spasticity
2. Goal-driven management enhances the likelihood of successful treatment outcomes

3. Impairment, activity and participation domains of the ICF should be considered when assessing a person with focal muscle spasticity

ABSTRACT 3

Title: Lower-limb muscle-tendon surgery for adults with neurological conditions: A scoping review

Presenting author: Emma Campagna

Co-authors: Alice Johnston, Cassie McDonald, Tandy Hastings Ison and Gavin Williams

Aim: To map the available evidence for adults with spasticity who may require lower-limb muscle-tendon surgery.

Design: Systematic scoping review

Method: The Joanna Briggs Institute methodology for scoping reviews was applied. A systematic and comprehensive search was conducted across six databases, guideline websites, and gray literature sources. Studies were included if the population was adult or adolescent onset neurological conditions who might require muscle-tendon surgery to manage lower-limb spasticity. Two independent reviewers screened titles, abstracts, and full text sources, and extracted data from the included studies.

Results: From a yield of 6566, 77 papers were included. of these, 51 (66%) studies reported on muscle-tendon surgery of the ankle and/or foot. Stroke was most common neurological condition, followed by traumatic brain injury. Only 19 (24%) of studies reported prehabilitation prior to surgery, with only two of these studies having a specific prehabilitation program. Post-surgery 51(66%) studies reported rehabilitation methods. However, only 13 (25%) of these studies had a specific rehabilitation protocol, and there was little consistency with treatment approaches, and intensity of rehabilitation.

Conclusion: Substantial evidence gaps currently exist to guide patient selection and physiotherapy management of adults who may require lower-limb muscle-tendon surgery to manage lower-limb spasticity. Further research in this area is required to inform clinical practice.

Key practice points:

1. There is a lack of evidence on the optimal timing of surgery
2. Pre- and rehabilitation requirements to optimise surgical outcomes are unknown
3. Limited recommendations exist for ongoing management and care in this population

Advancing clinical management of lateropulsion after acquired brain injury

Simon Mills[1], Jessica Nolan[2], Melissa Birnbaum[3]

[1]SA Brain Injury Rehabilitation Service, Adelaide, Australia, [2]Curtin University, Perth, Australia, [3]St. Vincent's Hospital, Melbourne, Australia

Symposium Summary and Rationale

Objectives: This symposium aims to

1. Summarise aetiology, assessment, and intervention strategies, providing a comprehensive clinical framework.
2. Integrate practical and theoretical insights into the management of lateropulsion following varied acquired brain injury.

Relevance: Lateropulsion is prevalent, affecting approximately half of stroke survivors, and is associated with poor rehabilitation outcomes. Evidence regarding resolution of lateropulsion in acquired brain injuries of non-stoke aetiologies is emerging and will be addressed in this symposium. Despite its prevalence and associated challenges, lateropulsion is not addressed in any evidence-based clinical practice guidelines. This symposium will offer evidence-based strategies to enhance clinical decision-making in physiotherapy practice by presenting:

- theoretical and clinical evidence summarised in a Clinical Roadmap to guide decision-making for lateropulsion rehabilitation,
- evidence examining postural control associated with lateropulsion
- longitudinal data on outcomes for people with lateropulsion due to acquired brain injury of varying aetiologies.

ABSTRACT 1

Title: Integrating theory and practice for the management of post-stroke lateropulsion: a realist review

Presenting author: Jessica Nolan

Aim: To generate a realist review outlining theories and practical research surrounding lateropulsion after supratentorial stroke, and to provide a clinical framework to inform clinical management of post-stroke lateropulsion.

Design: A realist review focusing on post-stroke lateropulsion, integrating research on aetiology, sequelae, assessment, and intervention informed development of a practical clinical framework.

Methods: Medline Complete, CINAHL Complete, PEDro, Academic Search Complete, Health and Psychosocial Instruments, Health Source: Nursing/Academic Edition, and Embase were searched until July 2024. Articles, published in English, reporting on people with lateropulsion after supratentorial stroke, were included. Two authors independently extracted data.

Results: Four systematic reviews, one scoping review and 34 non-review articles were included. Lateropulsion theory describes a form of graviceptive neglect and an aberrant perception of body midline. A Lateropulsion Clinical Roadmap, based on realist review findings, was generated. The Roadmap guides assessment protocols and individualises the intervention approach based on clinical findings.

Conclusion: The realist review strategy aligned theory with aetiology, associated short- and long-term outcomes, assessment, and interventions for lateropulsion after supratentorial stroke. Clinical recommendations and a Lateropulsion Clinical Roadmap may guide clinical decision-making.

Key practice points:

- Each person with lateropulsion will bring a unique combination of abilities and impairments. The Clinical Roadmap may guide decision-making, based on individual factors.
- Lateropulsion should be routinely quantified using validated measures.
- Interventions should be tailored to individual needs, considering whether a person responds better to implicit or explicit training of body centring. Intact systems should be identified and leveraged, to minimise sensorimotor processing demands during rehabilitation.

ABSTRACT 2

Title: Recovery of postural control in sitting and standing in individuals with lateropulsion early after stroke

Presenting author: Melissa Birnbaum

Aim: To examine measures of postural control, using centre of pressure measures in sitting and symmetry of weightbearing in standing, in stroke survivors with lateropulsion.

Design: Observational study with repeated measures.

Method: Forty-six individuals with lateropulsion and 35 healthy controls participated. Instrumented measures of static and dynamic sitting balance, and when able, standing balance tasks, were performed using Wii Balance Board/s. For the participants with lateropulsion, instrumented measures were performed initially and fortnightly over eight weeks, along with the Burke Lateropulsion Scale.

Results: Postural control performance varied during static and dynamic sitting balance tasks for individuals at all levels of lateropulsion severity, with some participants demonstrating high levels of variability, while others were within the healthy control range. In standing, individuals with lateropulsion displayed marked weight-bearing asymmetry compared to healthy controls. This asymmetry was predominantly towards their non-paretic leg when standing unsupported, and a mixed presentation of weight-bearing asymmetry directions when standing with arm support. Over the eight-week period, asymmetry when standing with arm support shifted towards the non-paretic leg.

Conclusion: Stroke survivors with lateropulsion display variability in the postural control strategies utilised to sit and demonstrate marked asymmetry in standing tasks.

Key practice points:

- Stroke survivors with lateropulsion use varying postural control strategies to sit and stand
- Individuals with lateropulsion learn to compensate for their verticality impairment in standing by loading their non-paretic leg.
- Careful analysis of task performance in sitting and standing in individuals with lateropulsion is critical to enable treatment to be tailored appropriately.

ABSTRACT 3

Title: Lateropulsion occurs frequently and can resolve over three months in adults with acquired brain injury

Presenting author: Simon Mills

Aim: Describe lateropulsion occurrence and mobility recovery among non-ambulant adults, after acquired brain injury (ABI) of varying aetiologies.

Design: Longitudinal, observational study.

Method: One hundred adults with ABI who remained non-ambulant one month post-injury were recruited from acute and sub-acute hospitals. Data were collected at one month and three months post-injury, including Four Point Pusher Score (4PPS) and

Functional Ambulation Classification (FAC). Side of postural deviation was recorded to identify anomalous postural deviations. Data were analysed descriptively; Wilcoxon signed-rank test analysed changes in FAC.

Results: At baseline, lateropulsion was present in 51 (51%) participants (43% stroke, 5% traumatic injury, 2% brain tumour surgery, 1% hypoxic injury) and 40 (78%) of these were rated as severe (4PPS=3). In this group 24 (60%) were unable to maintain unsupported sitting. All but one participant with lateropulsion showed postural deviation to the more-affected side. At three months post-injury, lateropulsion incidence had decreased to 38%, inability to sit unsupported decreased to 9/40 (23%) and FAC improvement (median (IQR) change from 0 (0) to 0 (2)) was statistically significant ($p<0.001$).

Conclusion: Lateropulsion presentations were frequently observed after stroke and non-stroke ABI aetiologies. Incidence decreased within three months post-injury, accompanied by improved mobility, highlighting the potential for lateropulsion resolution in varied ABI aetiologies.

Key practice points:

- Identifying lateropulsion is relevant after varied ABI aetiologies.
- Atypical postural disorders may be identified during lateropulsion assessment after ABI.
- Significant mobility progress can occur in people with lateropulsion who remain non-ambulant one month post-injury, highlighting potential for recovery in severe cases.

Cervico-vestibular rehabilitation following concussion: Blending cervical and vestibular assessment to inform effective treatment plans

Liz Jemson-ledger[1], Julia Treleaven, James McLoughlin

[1]*Advanced Neuro Rehab, Adelaide, Australia*

Summary:

Clinical practice guidelines recommend the assessment of both the cervical spine and the vestibular system following a concussion. Cervico-vestibular rehabilitation is recommended for those with neck pain, headaches, dizziness or imbalance in both the acute window and if symptoms persist but this should be based on a thorough assessment.

Physiotherapists have a key role in assessing articular, neuromuscular and sensorimotor functions of the cervical spine as well as peripheral and central components of the vestibular system. These assessments should be comprehensive and timely and often identify multiple impairments. Although there is an abundance of literature on managing these impairments in isolation, there is a scarcity of resources that focus on managing multiple co-occurring impairments. There is also a lack of clinician confidence in managing this demographic.

This symposium will teach clinicians how to integrate crucial cervical and vestibular assessments and combine treatment strategies for both cervical and vestibular dysfunctions, ensuring a comprehensive and effective approach to concussion care.

ABSTRACT 1

Title: Prevalence of cervical, vestibulo-ocular and or physiological impairments in symptomatic individuals 4 weeks to 6 months post-concussion

Presenting author: Julia Treleaven

Aim: To evaluate the prevalence of cervical, vestibulo-ocular and or physiological impairment in symptomatic individuals four weeks to six months post-concussion. A secondary aim was to determine if these could be identified using system relevant patient self-reported questionnaires.

Design: Exploratory observational cohort study.

Method: Participants were deemed to have: Cervical impairment if positive on at least 3/13 cervical tests, vestibulo-ocular impairment if positive on at least 2/11 tests and physiological impairment if they failed the Buffalo Concussion Treadmill Test. The Neck Disability Index, Dizziness Handicap Inventory short-form and the Hyperarousal Subscale questionnaire and the Fatigue Severity Scale questionnaires compared cervical, vestibular/ocular and physiological impairment respectively.

Results: Impairment across all three subsystems was detected in 32% of participants, two subsystems in 47%, one in 15% and none in 3%. Ninety-four percent had cervical impairment. The agreement between physical impairment and questionnaires for the cervical, vestibulo-ocular and physiological subsystems were 70%, 50% and 44%, respectively.

Conclusion: There was a high prevalence of multiple subsystem impairments and most had a cervical impairment. Symptom-specific questionnaires have a variable agreement with physical examination measures. Hence, in clinical practice, it is essential to perform a detailed physical examination across all subsystems and consider clinical implications of cervical impairments in the majority of individuals four weeks to six months post-concussion.

Key practice points:

- Understand prevalence of cervicogenic dysfunction in concussion
- Increase awareness of common cervicogenic assessments to include post-concussion
- Understand prevalence of other systems involved in concussion rehabilitation

ABSTRACT 2

Title: Targeted interventions and their effect on recovery in children, adolescents and adults who have sustained a sport-related concussion: a systematic review.

Presenter: James McLoughlin

Aim: To evaluated interventions to facilitate recovery in children, adolescents and adults with a sport-related concussion (SRC).

Design: Systematic review including risk of bias.

Method: 6533 studies were screened, 154 full texts reviewed and 13 met inclusion.

Results: For adolescents and adults with dizziness, neck pain and/or headaches >10 days following concussion, individualised cervicovestibular rehabilitation may decrease time to return to sport compared with rest followed by gradual exertion (HR 3.91 (95% CI 1.34 to 11.34)) and when compared with a subtherapeutic intervention (HR 2.91 (95% CI 1.01 to 8.43)). For adolescents with vestibular symptoms/impairments, vestibular rehabilitation may decrease time to medical clearance (vestibular rehab group 50.2 days (95% CI 39.9 to 60.4) compared with control 58.4 (95% CI 41.7 to 75.3) days). For adolescents with persisting symptoms >30 days, active rehabilitation and collaborative care may decrease symptoms.

Conclusions: Cervicovestibular rehabilitation is recommended for adolescents and adults with dizziness, neck pain and/or headaches for >10 days. Vestibular rehabilitation (for adolescents with dizziness/vestibular impairments >5 days) and active rehabilitation and/or collaborative care (for adolescents with persisting symptoms >30 days) may be of benefit.

Key practice points

- Understand prevalence of vestibular dysfunction in concussion
- Increase awareness of common vestibular assessments to include post-concussion
- Understand when commencement of vestibular rehabilitation is appropriate

ABSTRACT 3

Title: Do physical interventions improve outcomes following concussion: a systematic review and meta-analysis?

Presenter: Liz Jemson-Ledger

Aim: To investigate the effect of physical interventions (subthreshold exercise, cervical, vestibular and/or oculomotor exercises) on symptoms and days to recover in those who have sustained a concussion.

Design: A systematic review and meta-analysis.

Method: Twelve randomised controlled trials were reviewed; 7 on subthreshold aerobic exercise, 1 on vestibular rehabilitation, 1 on cervical therapy and 3 on individually tailored multimodal interventions. The trials were of fair to excellent quality on the PEDro scale. Eight trials were included in the quantitative analysis.

Results: Subthreshold aerobic exercise had a significant small to moderate effect in improving symptom scores (standardised mean difference (SMD)=0.43, 95% CI 0.18 to 0.67, p=0.001, I2=0%) but not in reducing days to symptom recovery in both acutely concussed individuals and those with persistent symptoms (SMD=0.19, 95% CI -0.54 to 0.93, p=0.61, I2=52%). There was limited evidence for stand-alone cervical, vestibular and oculomotor therapies. Concussed individuals with persistent symptoms (>2 weeks) were approximately 3 times more likely to have returned to sport by 8 weeks (relative risk=3.29, 95% CI 0.30 to 35.69, p=0.33, I2=83%) if they received individually tailored, presentation-specific multimodal interventions (cervical, vestibular and oculo-motor therapy). In addition, the multimodal interventions had a moderate effect in improving symptom scores (SMD=0.63, 95% CI 0.11 to 1.15, p=0.02, I2=0%) when compared with control.

Conclusions: Subthreshold aerobic exercise may lower reports of symptoms, but not the time taken to recover. Individualised, multimodal interventions including specific cervicovestibular exercises may result in faster return to clinical recovery and sport, in those with persistent symptoms.

Key practice points

- Understand prevalence of multisystemic dysfunction in those who have sustained a concussion
- Understand the need for an individualised cervicovestibular exercise program as well as take some practical integrative treatment ideas away.

- Understand the concurrent need for adjunct therapies such as a graded return to physical and cognitive exertion, sleep hygiene, fatigue management strategies etc.

Can physiotherapy address the guideline-practice gap with first-line care and reduce surgery for knee osteoarthritis?

Joanne Kemp[1], Juanita Low[1], Christian Barton[1], Ali Gibbs[1,2]

[1]La Trobe University, Melbourne, Australia, [2]Eastern Health, Melbourne, Australia

Symposium summary:

Knee osteoarthritis is associated with persistent pain, alongside substantial joint- and health-related quality of life impairments. Total Knee Replacement (TKR) surgery typically reduces pain and improves health-related quality of life. Yet, up to 1 in 4 patients report unfavourable outcomes, and many do not adequately access first-line care (education, exercise therapy, weight management) prior to undergoing surgery.

Additionally, TKR surgery is only recommended for those with high pain and disability, and moderate-severe radiographic changes.

This symposium will present novel insights findings from the MRFF funded MonitOring The Influence of care in people with kNee osteoarthritis (MOTION), including the characteristics of people with knee osteoarthritis referred for orthopaedic assessment (Juanita Low), the proportion willing to undergo TKR surgery and if enhanced access to physiotherapy-led care reduces surgery rates (Christian Barton), and the acceptability of physiotherapy-led care in the community (Ali Gibbs).

ABSTRACT 1

Title: Characteristics and previous treatment of people with knee osteoarthritis referred for hospital-based orthopaedic assessment

Presenter: Juanita Low

Aim: Describe clinical characteristics and previous first-line care referrals of patients with knee osteoarthritis referred for public hospital-based orthopaedic assessment; and compare potential differences between culturally and linguistically diverse (CALD) and non-CALD patients.

Design: Cross-sectional study

Method: Baseline clinical and self-reported osteoarthritis care data of the MOTION cohort (n=318), between 2022-2024, were evaluated. Clinical characteristics included knee pain intensity, knee-related quality of life, health-related quality of life, and radiographic knee osteoarthritis severity. First-line care referral was measured using items 5 (exercise) and 7 (weight management in those overweight) on the OsteoArthritis Quality Indicator Questionnaire v2 (OA-QIv2). Comparison between CALD (i.e. born in a non-English-speaking country and preferring a non-English language) and non-CALD were made using independent t-tests (continuous variables) and Chi-square tests (dichotomous variables).

Results: Patients self-reported (mean±SD) high knee pain severity (worst: 74±22mm; average: 53±22mm), moderate health-related quality-of-life (EuroQoL-VAS: 63±20mm), and low knee-related quality-of-life (KOOS-QoL: 30±19). Sixty-nine percent (n=220) had moderate-severe radiographic knee osteoarthritis. OA-QIv2 responses showed that 51% (n=160/316) and 31% (n= 63/201) were previously referred to an exercise professional and weight management respectively. Clinical characteristics and first-line care referrals were similar between CALD and non-CALD.

Conclusion: Regardless of CALD background, patients with knee osteoarthritis referred to orthopaedics had clinical findings that may warrant orthopaedic referral. Yet, they may not be referred for first-line care beforehand.

Key practice points:

- People with knee osteoarthritis referred for orthopaedic assessment have high clinical severity.
- Strategies to enhance referral to first-line care prior to orthopaedic assessment are needed.

ABSTRACT 2

Title: Can enhanced access to first-line care reduce total knee replacement surgery rates in patients with knee osteoarthritis?

Presenter: Christian Barton

Aim: (i) Determine the proportion of people with knee osteoarthritis referred for orthopaedic assessment willing to undergo total knee replacement (TKR); and the association of enhanced access to physiotherapy-led first-line care in the community on rates of TKR at 8-months, compared to usual hospital-based care.

Design: Prospective pragmatic implementation trial.

Method: 318 people from the MOTION trial were recruited within 6 weeks of referral for orthopaedic assessment at four Australian public hospitals. Willingness to undergo TKR was determined by answering the question "If you could have total knee replacement surgery within the next week and it was a convenient time for you, would you undergo the procedure?" (yes=willing; no/unsure=unwilling). A subgroup (n=104) living within 10km of a partnering community health service were offered enhanced access to advanced practice physiotherapy assessment and other first-line allied health services.

Results: 61% (n=194/318) were willing to undergo TKR. At 8-months, the proportion of those receiving enhanced access to first-line care who underwent TKR surgery was lower than those receiving usual hospital-based care (1% [n=1/94] v 8%, [n=15/197]: Odds Ratio: 95%CI = 0.13: 0.02, 1.00). Baseline clinical characteristics, including pain and radiographic severity, were similar between groups.

Conclusion: Most people referred for orthopaedic assessment were willing to undergo TKR. Enhanced access to first-line care may reduce rates of unwarranted surgery.

Key practice points:

- Community health services should be supported to implement advanced practice physiotherapy and other first-line allied health services for knee osteoarthritis.
- Policies and funding to implement improved community access to first-line care are needed.

ABSTRACT 3

Title: Acceptability of physiotherapy-led first-line knee osteoarthritis care in community settings: What matters to patients?

Presenter: Ali Gibbs

Aim: To explore patient acceptability of community-based advanced practice physiotherapy assessment and management as an alternative to hospital-based care for people with knee osteoarthritis.

Design: Qualitative semi-structured interview study.

Method: Participants receiving enhanced access to physiotherapy-led first-line care in the MOTION trial were recruited following completion of the intervention, which included attendance to an advanced practice physiotherapy appointment at a community health service, and participation in a physiotherapist-led osteoarthritis-specific education and exercise program (Good Life osteoArthritis:Denmark (GLA:D®)). Interview topic guide was informed by the Theoretical Acceptability Framework. Transcribed interview data were analysed inductively using thematic analysis.

Results: Twenty participants (mean 70 years, 60% female) with knee osteoarthritis identified two main themes: (i) effective communication and confidence in physiotherapists (advanced practice and GLA:D® clinicians) was strongly linked to acceptability and (ii) physiotherapy-led first-line care (including advanced practice) were mostly acceptable, but were frequently not strongly desired, and were often perceived as insufficient to address ongoing knee osteoarthritis management needs. Most participants struggled to continue exercising independently and desired ongoing support. Most participants considered surgery a last resort, but many also believed it to be the optimal management and inevitable.

Conclusion: Community-based advanced practice physiotherapy clinics and physiotherapy-led exercise-and-education-programs were acceptable to most patients. However, uncertainty remained regarding how well these programs addressed their ongoing knee issues, and further support was commonly desired.

Key practice points:

- A strong therapeutic alliance increased acceptability and should be prioritised by clinicians and health services
- Physiotherapists should prioritise and support long-term knee OA management.

Is a running intervention for children with generalized hypermobility feasible in private physiotherapy practice?

Annie Chappell[1], Beverly Jepson[1], Gaela Kilgour[2]

[1]Curtin University, Bentley, Australia, [2]University of Queensland, Brisbane, Australia

Summary and rationale:

Paediatric Generalised Joint Hypermobility (pgGJH) is characterised by excessive joint range of motion and affects 34% of children aged 3-19 years. Children with pgGJH often have difficulty with running, which may limit participation in physical activities and impact health, development, and social engagement.

Despite its importance, there is no evidence regarding running interventions for children with pgGJH. This study investigated the feasibility of delivering a low-load plyometric program at a private paediatric therapy clinic to improve running performance, participation and kinesiophobia in children with pgGJH. The first paper reports the feasibility using domains of acceptability, demand, implementation and practicality.

The second paper reports the findings of efficacy testing, while the third paper presents qualitative data addressing integration of the intervention.

ABSTRACT 1

Title: Running group for children with generalised joint hypermobility in private practice: A feasibility study

Presenting author name: Beverly Jepson

Design: Mixed-methods single subject research design

Methods: Eight children (aged 10-15) with pgGJH participated in a weekly group running intervention and home exercise program (HEP) for 10 weeks. Feasibility of delivery in a private paediatric therapy clinic was determined using physical and self-reported measures for: acceptability, demand, implementation, practicality, and intervention efficacy. Semi-structured interviews with participants, therapists and managers explored integration of the intervention.

Results: 52% of respondents to a demand survey were interested in the program. Recruitment saw 24 participants invited, 10 excluded and 6 declined. The intervention was completed with fidelity to the protocol with minor deviations and one minor adverse event. All children attended ≥90% of sessions. The HEP was completed at least twice per week 72% of the time. Participants and parents reported improved running technique and increased confidence in physical activity. Satisfaction was rated 6.5-9/10 by stakeholders. The intervention was well equipped but expensive to run with a therapist to participant ratio of 1:3. Interventionists perceived the program to fit well within the practice infrastructure and culture.

Conclusion: A running intervention for children with pgGJH was acceptable, in demand, practical to deliver, able to be integrated and implemented in a private clinic.

Key practice points:

- A running intervention for hypermobile children is feasible to deliver in private practice
- Cost may be a barrier to some families

ABSTRACT 2

Title: The efficacy of a low-load plyometric intervention for children with generalised joint hypermobility

Presenting author name: Annie Chappell

Aim: To determine the effect of a low-load plyometric program on motor performance, participation and kinesiophobia in children with paediatric generalized joint hypermobility (pgGJH).

Design: Single subject research design (SSRD).

Methods: Participants with Beighton score ≥6/9 and a goal to improve their running attended weekly group sessions involving individualized exercises with a home exercise program. Primary outcome measure was Goal Attainment Scaling measured weekly through baseline (4-6 weeks), intervention (10 weeks), withdrawal (6 weeks) and follow-up (6-months post-intervention). Secondary outcomes included the Tampa Scale of Kinesiophobia. Visual graphic analysis of SSRD data was undertaken.

Results: Eight participants (aged 10-15 years, 6 male) were recruited. Kinesiophobia was significantly reduced in seven children and five parents at follow-up compared to baseline. Six children had clinically significant kinesiophobia at baseline, but only one at follow-up. 8/10 physical performance goals, 5/5 attendance goals, 7/8 body structure and function goals and 1/1 sense of self goals were achieved or exceeded at some point during intervention or withdrawal, and of these 50% were maintained at follow-up.

Conclusion: A once-weekly intervention reduced kinesiophobia but was not universally effective for sustained motor performance and participation. Future research should investigate a higher dosage program in a larger cohort.

Key practice points:

- A running intervention may reduce fear of movement in hypermobile children
- Most participant goals were achieved during the intervention
- Goal attainment was not sustained at 6 months post-intervention

ABSTRACT 3

'I have always been last one when I was in the race, like the really slow people': An Interpretive description study of children with generalised joint hypermobility participating in a running intervention

Presenting author: Gaela Kilgour

Aim: To understand children with generalised joint hypermobility (pgGJH) and their parents' perspectives on participating in a running intervention, this study explored: "What could children with symptomatic hypermobility tell us about the value of a targeted running intervention programme for their physical performance, participation and kinesiophobia?"

Design: Single subject research design (SSRD) with interpretative description

Methods: Children aged 9 to 18 years with pgGJH were recruited to participate in a weekly, 10 week running intervention conducted at a private therapy practice, in Perth. Children and their parents were interviewed at week 17 and 42 from baseline of a SSRD. Sixteen interviews were coded, analysed, and interpreted.

Results: All eight children (aged 10-15 years, 6 male) who participated in the intervention and their parents were interviewed. Four key themes emerged: (1) "I'm not an athletic person" – past PA experiences limited running participation; following the intervention (2) "Running looks a lot more together … wobbling around less" – improvements in running form; (3) "I can be stretchy" – increased physical activity (PA) confidence when hypermobile; and (4) "I need to do things differently to other kids" – greater understanding and adaptations are needed for future community and school participation in PA.

Conclusion: Children with pgGJH and their parents experienced an improved outlook on running and PA ability following participation in a running intervention.

Key practice points:

- Children with pgGJH may avoid participation in physical activities, including running, due to negative past experiences and kinesiophobia.
- A targeted running intervention can improve participation in community PA.

Nociceptive, Nociplastic or Neuropathic: Does it matter?

Michele Sterling[1,2], Paul Hodges[2], Tim Austin[3]

[1]RECOVER Injury Research Centre, The University of Queensland, Brisbane, Australia, [2]Centre for Innovation in Pain and Health Research (CIPHeR), The University of Qld, Brisbane, Australia, [3]Camperdown Physiotherapy, Sydney, Australia

Summary and rationale:

Musculoskeletal pain conditions are complex with many potential factors being contributors to ongoing pain and disability. Most treatments have small to modest effect at best, including physical, psychological and pharmacological treatments.

The International Association for the Study of Pain (IASP) have developed descriptors and, in some cases, criteria for the identification of pain phenotypes (nociceptive, nociplastic and neuropathic), that infer the presence or not of different mechanisms underlying a person's pain condition.

The most recent and controversial of these is the nociplastic pain descriptor, where central nervous system processes are proposed as the underlying mechanism, and which is relevant to many patients with musculoskeletal pain who consult a physiotherapist. Ultimately, the identification of the phenotype which best fits a patient's clinical presentation is to facilitate treatment targeted toward mechanisms that are presumed to underlie the relevant phenotype.

The objectives of this symposium are to:

1. Understand the definition and criteria for nociplastic pain and discuss its controversies, with relevance to musculoskeletal pain (presentation 1).
2. Understand recent research progressing toward the development of a clinical tool to discriminate the three pain phenotypes in individual patients (presentation 2).
3. Understand how the use of pain descriptors can benefit physiotherapy patient assessment and treatment decisions (presentation 3).
4. Facilitate discussion of the use of the pain descriptors in physiotherapy clinical decision making.

ABSTRACT 1

Title: Criteria and controversies of the nociplastic pain criteria

Presenter: Michele Sterling

Aim: To outline the IASP criteria for nociplastic pain in musculoskeletal pain conditions, discuss the controversies and shortcomings of these criteria with relevance to whiplash injury.

Approach: This presentation will draw on the results of consensus-based study designs, longitudinal cohort studies and randomised controlled trials. Following an expert opinion consensus process by the IASP Terminology Task Force, a set of clinical criteria were proposed to identify nociplastic pain and included patient self-report and clinical testing. Subsequent criticism of these criteria includes the presence of co-morbidities such as sensitivity to sound and light, the lack of validation, and the exclusion of acute pain in the criteria. Support for these criticisms can be found in longitudinal cohort studies of whiplash injury where nociplastic pain features are commonly found in the acute injury stage, with some indications that they may be pre-existing. Further, evidence of small nerve fibre pathology, peripheral neuroinflammation and impaired sensory detection suggest that, in some whiplash-injured people considered to have nociplastic pain, the condition may in fact be more neuropathic.

Key practice points:

- Physiotherapists should assess for the presence of nociplastic pain in patients with musculoskeletal conditions as this can influence treatment decision making.
- Physiotherapists should be aware that these criteria do have short-comings and take this into account in their evaluation of patients.

ABSTRACT 2

Title: Can we discriminate nociceptive, nociplastic and neuropathic pain in patients with musculoskeletal pain?

Presenter: Paul Hodges

Aim: To present work undertaken develop a tool to identify features to discriminate between nociceptive, nociplastic and neuropathic pain for clinical use and initial validation of these features.

Approach: This presentation will draw on results of a systematic review and an extensive multi-disciplinary Delphi consensus process to identify and refine candidate features to discriminate between pain types. Initial validity of these candidate features was evaluated in a cohort of individuals with chronic musculoskeletal pain using cluster analyses.

Results: Consensus was reached for 76 features as unique to nociceptive, neuropathic, or nociplastic pain and 120 features as shared between pairs of pain descriptor categories (78 for neuropathic and nociplastic pain). The results of the cohort cluster analysis showed that data could be best explained by 3 clusters, clusters were characterized by the a priori specified features, and experienced clinician with the cluster delegation with 82% accuracy.

Key practice points

- There are candidate features that can discriminate between nociceptive, nociplastic and neuropathic pain in patients with musculoskeletal pain.
- Further refinement of these features is required, and work is currently being undertaken to achieve this.

ABSTRACT 3

Title: Deciphering nociceptive, neuropathic or nociplastic in the clinic - Does it really matter?

Presenter: Tim Austin

Aim: To discuss a Specialist Pain Physiotherapist's use of nociceptive, nociplastic and neuropathic pain descriptors in clinical decision making.

Approach: Clinically, patients present differently according to the different pain phenotypes, and pain management interventions need to be tailored accordingly. Pain physiotherapy competencies recommend that clinicians be able to determine these phenotypes through their assessment process. This presentation will explore how to integrate the consideration of the 3 pain descriptors and their inferred underlying mechanisms in the clinical assessment and treatment using case studies of patients with musculoskeletal pain. Lively discussion, debate and participation from the audience will be encouraged on the use of this approach in physiotherapy practice.

Reducing symptoms and improving care after concussion through cohesive multi-modal management from injury to recovery.

Katie Davies[1,2], Vicki Anderson[2], Vanessa Rausa[2], Bianca Charles[1,2]

[1]Neurological Rehabilitation Group, Mt Waverley, Australia, [2]Murdoch Children's Research Institute, Parkville, Australia

Summary and rationale:

In Australia 1/7 children have been diagnosed with a concussion. Although 70% of these will recover naturally within a four week window, 30% of them will develop persistent post-concussion symptoms (pPCS). Despite an increase in community awareness of concussion over the last ten years there is still poor understanding amongst parents, schools and sporting clubs on how to access good care and management.

The Take Care team at the MCRI have been working over the past ten years to identify characteristics of children who have protracted recovery and develop an evidence-based approach for treating pPCS that includes multidisciplinary management with physiotherapy and neuropsychology.

Objectives:

The overall aim of this symposium is to present evidence-based interventions for paediatric concussion from time of injury through to recovery of acute - chronic persisting symptoms. We will:

- Outline the problem and introduce early management options
- Present results of a large randomized controlled trial managing children with early pPCS
- Present the results of a pilot study managing children with chronic pPCS ie. beyond three months
- Promote the important role that physiotherapy along with psychology plays in this patient group
- Summarise key learnings from the past 10 years of research and recommendations for future management

ABSTRACT 1

Children and young people with concussion – setting the scene and introducing an early management option from the sideline.

Presenting Author: Vicki Anderson

Aim:

To estimate the prevalence of concussion as well as investigate parental knowledge, confidence and concern about managing their child's concussion.

Design:

The Royal Children's Hospital (RCH) National Child Health Poll is an online survey. Information collected included that of concussion history of the children as well as parental knowledge and concern about the topic.

Results:

1953 parents completed the survey representing 3260 children. 433 of the children (14%) had been diagnosed with a concussion by a health professional. About one in five parents had no confidence in recognizing the signs of concussion or knew how to manage a child's recovery from concussion. For 1,343 (55%) of children aged over 3 years, the risk of concussion affected parental decisions about child sport and activity participation including preventing them from contact sport or recreational play because of parent concern about concussion risk.

Conclusion:

Paediatric concussion is a common injury that raises parental concern. There are implications for child sport and physical activity participation.

Key practice points:

- Concussion is a common injury for Australian children.
- The majority of parents are unsure how to manage their child's concussion, do not know how to access good care and restrict their child's activities.
- The freely downloadable app, HeadCheck, offers a solution to the issues identified in the RCH poll.

ABSTRACT 2

Multimodal Treatment for Children and Young People with Persisting Post Concussion Symptoms: The Concussion Essentials Trial

Presenting Author: Bianca Charles

Aim: There is currently no evidence based management of the 30% of children who develop pPCS. This world first randomized controlled trial explores management of this population with individualised symptom targeted multidisciplinary care.

Design: This was a single site, assessor-blinded RCT. Participants aged 8 – 18 were recruited from the RCH in Melbourne and community referrals. Participants who remained symptomatic at ~3-weeks post-injury were enrolled into the study. Baseline physical and psychological secondary measures were administered, after which participants were randomized into usual care (UC) or Concussion Essentials (CE) treatment group. The CE group received up to 8 weeks of symptom directed multidisciplinary treatment by a physiotherapist and neuropsychologist. The UC participants received symptom monitoring only for the 8 weeks. Primary outcome was the Melbourne Paediatric Concussion Scale (MPCS).

Results: Complete data was collected on 140 participants who were randomized into CE (n=67) or UC (n=73). Mean age was 13.1 years and 56.4% of them were male. MPCS means for the CE group reduced from 36.75 (95% CI 31.03-42.47) to 8.55 (6.66-11.04, p<0.001). In comparison, MPCS means for the UC group reduced from 33.53 (95% CI 28.34-38.72) to 21.89 (95% CI 15.68 – 28.10, p=0.410). Proportions with symptom resolution were: UC: 37% (27/73) , CE: 61.2% (41/67) (adjusted risk difference = 24.3%, 95% CI – 40.3-8.4%).

Conclusion: Individualised multi-disciplinary treatment is effective in reducing symptoms in children and adolescents with pPCS.

Key practice points:

- Education, psychology and physiotherapy delivered concurrently are critical treatment modalities for children with pPCS.
- Treatment should be individualised and tailored to the child or young person with pPCS.
- Implementation of such approaches should be considered in routine clinical care of paediatric concussion.

ABSTRACT 3

Multimodal management of children who present with chronic pPCS: The Concussion Essentials Plus (CE+) Pilot

Presenting Author: Vanessa Rausa

Aim:

To explore if the Concussion Essentials model could be expanded to managing children and young people with chronic pPCS.

Design:

This is a single site pilot study which recruited children aged 8 – 18 who were 3-12 months post concussion and had pPCS. Participants were from community referrals or the UC arm of the Concussion Essentials RCT. All participants attended on site for baseline psychology and physiotherapy secondary measures and then commenced treatment with the MDT of neuropsychology and physiotherapy. Treatment was weekly for up to 12 weeks. The primary outcome measure was the Melbourne Paediatric Concussion Scale.

Results:

19 participants were recruited and completed the CE+ program. CE+ participants, who were on average 5-months post-injury (range = 2.8-10.7 months), demonstrated a reduction in the number of symptomatic items on parent and child MPCS ratings between pre- and post-intervention assessments, Med(IQR) = 20(13-29) to Med(IQR) = 5.0(1-10), and Med(IQR) = 20(16-24) to Med(IQR) = 2(0-9) respectively.

Conclusion:

The Concussion Essentials model of individualised multi-disciplinary treatment can be expanded to treating children and young people with chronic pPCS.

Key practice points:

- Patients with chronic pPCS are slightly more complex than the subacute population, they require more time, a values-based approach and more joint sessions with the team.
- It is important to have an experienced team who work well together when working with pPCS.

LGBTQIA+ inclusion across the care continuum: affirming practice and health promotion

Sjaan Gomersall[1], Calum Neish[1], Megan Ross[1]

[1]*The University of Queensland, Australia*

Summary and rationale:

Providing safe and affirming healthcare for LGBTQIA+ individuals is essential for addressing health disparities and fostering well-being. This symposium explores how values-driven, evidence-based, and patient-centred approaches can enhance care and promote inclusivity across different healthcare settings.

The first presentation examines 24-hour movement behaviours among LGBTQIA+ individuals, highlighting unique health behaviours and the role of tailored health promotion strategies. The second presentation delves into trans and non-binary experiences within affirming physiotherapy, emphasising the impact of inclusive practice on accessibility, trust, and health outcomes. Finally, the third presentation explores core values that underpin safer and affirming care, providing a framework for healthcare providers to integrate critical awareness, lived experience, and meaningful engagement into their practice.

Together, these contributions offer a comprehensive understanding of LGBTQIA+ health needs and actionable insights to foster inclusivity, challenge systemic barriers, and enhance healthcare and health promotion for marginalised communities.

ABSTRACT 1

Title: 24-hour movement behaviours in the LGBTQIA+ community: a systematic review and meta-analysis

Presenting author: Sjaan Gomersall

Aim: To examine adherence to physical activity, sedentary behaviour, and sleep guidelines (24-hour movement behaviours) within these communities; and compare participation and guideline attainment to cisgender and heterosexual adults.

Design: Systematic review with meta-analysis

Method: Seven databases were searched from inception to January 2024. Proportional meta-analyses were performed using random effects models for sexual and gender minority groups meeting guidelines or participating in each movement behaviour, and an odds ratio (OR) summary effect was calculated for binary outcome data from studies with a cisgender or heterosexual comparison group.

Results: of 95 studies included, most were cross-sectional (76%), conducted in North America (76%), and focussed on sexual orientation (80%) and physical activity (77%). Sexual minority women had higher odds of meeting aerobic physical activity guidelines compared to heterosexual women (OR 1.18, 95% CI 1.02 to 1.37), with no significant differences identified between sexual minority and heterosexual men (1.03, 0.86 to 1.23). Gender minority adults had lower odds of participating in aerobic physical activity compared to cisgender adults (0.63, 0.45 to 0.88). Sexual minority women, but not men, had lower odds of meeting sleep guidelines than their heterosexual counterparts (0.85, 0.74 to 0.97).

Conclusion: Movement behaviours varied within sexual and gender minority groups, highlighting the limitation of considering the 'LGBTQIA+ community' a homogenous cohort.

Key practice points:

- One size fits all approaches are inadequate; movement behaviour interventions should be designed to meet the diverse needs of LGBTQIA+ individuals
- Health promotion initiatives must address unique barriers faced by gender minority individuals

ABSTRACT 2

Title: Realising the holistic benefits of gender-affirming physiotherapy for transgender, gender diverse and non-binary people

Presenting author: Calum Neish

Aim: To explore the experiences of transgender, gender diverse, and non-binary (TGDNB)people attending a gender-affirming physiotherapy service and identify aspects they most valued to understand how physiotherapists can provide safe, inclusive, and effective care and promote health and wellbeing for TGDNB people.

Design: Qualitative study underpinned by relativism and queer theory.

Method: Semi-structured interviews were conducted online with current clients of the gender-affirming service at a physiotherapy clinic in Wellington, Aotearoa New Zealand. Qualitative data were analysed using reflexive thematic analysis.

Results: Twenty participants between 18 and 38 years with diverse gender identities participated in the study. Four key themes and five subthemes were formed in the analysis. Themes were: (1) 'Binding and my health'; (2) 'My choice in holistic and person-centered care'; (3) 'Experiencing safe and inclusive care with knowledgeable physiotherapists' through safe communication, practitioners having knowledge on TGDNB health and considering potential discomfort; and (4) 'Inclusive environments help me feel safe' via safe environments and safe and warm referrals.

Conclusion: The gender-affirming service was inclusive, provided by knowledgeable physiotherapists who took a person-centered and holistic approach to care. Addressing binding-related health issues (where appropriate), receiving further training in TGDNB health, fostering autonomy, and ensuring inclusive language and environments are key components of providing gender affirming physiotherapy to TGDNB populations.

Key practice points:

- Gender-affirming physiotherapy has the potential to promote safe, inclusive and holistic healthcare.
- Person-centred approaches, autonomy and TGDNB-specific training should be prioritised for physiotherapists to actively foster positive health behaviours for TGDNB people.

ABSTRACT 3

Title: Being and doing: core values for affirming healthcare for LGBTQIA+ people

Presenting author: Megan Ross

Aim: Health disparities are well documented in people who are lesbian, gay, bisexual, transgender, queer, intersex, asexual or related identities [LGBTQIA+]) and stem from social and structural stigma. The present study examined how health practitioners and service providers deliver affirming care for LGBTQIA+ people.

Design: Qualitative.

Method: Data were collected through semi-structured interviews with 31 health practitioners and service providers working in Australia, including primary and allied health professionals. Data were analysed inductively using a reflexive thematic approach.

Results: For participants, the foundation of affirming care is embodying one's values as a health professional. Participants described ways of being (their inherent values) and doing (enacting safe and affirming care). Key themes emerged including the role of participants' attitudes towards the LGBTQIA+ community, the importance of the provider-patient relationship, the value lived experience and community engagement brought to participants' practices and the participants' critical awareness of LGBTQIA+ marginalisation, both broadly and in current healthcare systems.

Conclusion: Understanding what affirming healthcare practices look like and how to enact them is essential for providing better care for LGBTQIA+ people. Health practitioners and service providers described ways of 'being' and 'doing' that can be used to improve healthcare provision for this population, which is vital to redress the health disparities caused by stigmatising and discriminatory care.

Key practice points:

- Affirming care requires aligning professional values with inclusive attitudes towards LGBTQIA+ people
- Strong provider-patient relationships are central to enacting affirming care
- Understanding LGBTQIA+ marginalisation and integrating lived experience strengthens affirming practice

Hip-related pain: treatments to alter physical activity and functional performance across the disease continuum.

Joanne Kemp[1], Charlotte Ganderton[2], Mark Scholes[1], Matthew King[1]

[1]La Trobe University, Melbourne, Australia, [2]Royal Melbourne Institute of Technology, Melbourne, Australia, [3]Swinburne University, Melbourne, Australia

Symposium summary

Hip-related pain conditions (e.g., FAI syndrome, hip dysplasia, labral tears) may represent the early stages of hip osteoarthritis and expedite its development. Considered movement-related disorders, hip-related pain is associated with time-loss injury, physical impairment during sport and recreation activities, and reduced physical activity. Whilst physiotherapist-led interventions are recommended as first-line treatments, knowledge of their effects on functional performance and physical activity is limited.

This symposium will present current evidence of the effects of physiotherapist-led treatments on movement-related outcomes across the spectrum of hip-related pain through three presentations:

1) the effect of 12-week rehabilitation program on hip range of motion and functional performance measures in circus arts students (Charlotte Ganderton);
2) a comparison of the effects of two 6-month exercise programs on running biomechanics in individuals with FAI syndrome (Mark Scholes); and
3) the feasibility and effectiveness of foot orthoses in people with hip osteoarthritis (Matthew King).

ABSTRACT 1

Title: Exercise rehabilitation to improve hip range of motion and function in people with hip-related pain

Presenter: Charlotte Ganderton

Aim: To examine the effect of a 12-week rehabilitation program on hip range of motion and functional performance measures in circus arts students with hip-related-pain.

Design: A non-randomised pre-post intervention trial

Method: 28 (18F) circus arts students with hip-related-pain completed a progressive four stage 12-week education and strengthening exercise rehabilitation program. Hip range of motion and functional performance were assessed at baseline and 3-month follow up. Linear mixed effect models explored the efficacy of the rehabilitation program on outcomes.

Results: Clinically meaningful increases in hip external rotation (-5.32 [95%CI -9.16,-1.48], p=0.004) and internal rotation (-6.60 [-10.10, -3.12], p<0.001) range of movement in sitting and hip external rotation range of motion in prone (-3.81, -7.10 to -0.51, p=0.017) were observed. Participants showed significant improvements in functional performance, including for the Y-Balance posterior-medial (MD=-5.15 [-9.39,-0.91], p=0.012) and posterior-lateral (-5.30 [-8.59,-2.01], p=0.001) directions, one-leg rise performance (-5.35 [-8.97,-1.73], p=0.002), and side plank endurance (-19.4 [-30.0, -8.82], p< 0.001).

Conclusion: Education and a targeted, progressive strengthening rehabilitation program resulted in increased hip range of movement and improved functional performance in circus artists. This study demonstrates initial clinical utility which should be explored in a fully powered RCT.

Key practice points:

- A 12-week hip rehabilitation program inclusive of education and strengthening exercises has a positive effect on hip range of motion and functional measures.
- Although improvements were noted in the short term, it is unknown if these effects are maintained in the long term, warranting investigation.

ABSTRACT 2

Title: Does physiotherapist-led treatment for FAI syndrome alter running biomechanics? A study of two 6-month interventions.

Presenter: Mark Scholes

AIM: Compare running biomechanics changes over six months in individuals undertaking physiotherapist-led treatment for FAI syndrome, and explore relationships with changes in symptom severity.

DESIGN: Nested biomechanics study within a larger RCT (La Trobe HEC017-080)

METHOD: Forty-two adults with FAI syndrome were allocated into a progressive, targeted strengthening (n=23) or standardised stretching program (n=19). At baseline and six months, Copenhagen Hip and Groin Outcome Score (HAGOS) data were collected and biomechanics during overground running (3-3.5m/s) were captured using a three-dimensional motion capture system and embedded force plates. Two-way mixed ANOVA compared group mean changes in biomechanics. Spearman's rank correlations explored relationships between changes in HAGOS scores and running biomechanics.

RESULTS:

Due to COVID-19 restrictions, 25 participants completed baseline and six-month testing [Strength (n=17, 9F, mean age=37 years); Stretch (n=8, 5F, mean age=41 years]. At six months, participants ran with larger external hip joint moment impulses (*10-2) for adduction (0.036 [0.008,0.063], p=0.01) and external rotation (0.020 [0.005,0.0034], p=0.01), but smaller hip extension impulse (0.013 [0.001,0.025], p=0.032) compared to baseline. Changes did not differ between treatment groups and were not related to HAGOS score changes.

CONCLUSION:

Targeted strengthening in adults with FAI syndrome did not lead to different biomechanical changes during running compared to standardised stretching. Both treatment programs resulted in small increases in hip joint loading, but these alterations were not associated with symptomatic change.

KEY PRACTICE POINTS:

- Multimodal (education and exercise) physiotherapist-led treatments may have a beneficial effect on hip joint loading
- Physiotherapists may align exercise programs with patient preferences.

ABSTRACT 3

Title: HOOT – Hip Osteoarthritis and foot Orthosis Trial: A randomised feasibility trial

Presenter: Matthew King

Aim: Determine the feasibility of foot orthoses for active adults with hip osteoarthritis and conduct limited efficacy testing of hip-related pain severity, quality of life, and physical activity.

Design: Randomised feasibility trial

Method: 27 active adults with hip osteoarthritis were randomised to either prefabricated contoured foot orthoses or flat shoe inserts. Both groups received education about strategies to increase physical activity in hip osteoarthritis. The study primary endpoint was six weeks. Feasibility outcomes included demand, implementation, acceptability, and practicality. Limited efficacy testing outcomes included physical activity (assessed with an activPAL4), Hip Osteoarthritis Outcome Score-12, Brief Fear of Movement Scale, and the Patient Health Questionnaire-9.

Results: Feasibility outcomes met or exceeded our predefined levels with a recruitment rate of 0.88 people/week, adherence at 59%, logbook completion at 93%, and dropout rates at 7%. Participants deemed the intervention acceptable and practical with minimal minor adverse events. Participants wearing contoured foot orthoses significantly increased their steps-per-day (adjusted mean difference=2590 [95%CI 260,4920]) compared to those wearing flat inserts. Change in hip-related quality of life and pain were comparable between treatment groups.

Conclusion: A fully powered RCT to assess the effectiveness of prefabricated contoured foot orthoses in active adults with hip osteoarthritis is feasible and indicated. Contoured orthoses may help increase physical activity in this population.

Key practice points:

- Education plus foot orthoses was deemed an acceptable and practical intervention
- Prefabricated contoured orthoses may facilitate increasing physical activity levels in active adults with hip osteoarthritis, but a fully powered RCT is required

Implementation and effectiveness of a virtual group pelvic floor muscle training program in antenatal care

Hannah Graetz[1,2], Sky Holland[1], Kimia Sharifi Nasab[1], Marissa Joseph[3], Daniel Treacy[2,4], Andrew Bisits[1]

[1]The Royal Hospital for Women, Randwick, Australia, [2]University of New South Wales, Kensington, Australia, [3]Camden & Campbelltown Hospitals, Campbelltown, Australia, [4]Prince of Wales Hospital, Randwick, Australia

Symposium summary

Theme:

In Australian maternity hospitals, there is an evidence-practice gap, with pregnant people not receiving routine physiotherapist-supervised pelvic floor muscle training. Implementation of a virtual group pelvic floor muscle training program, EMBODY, was designed to increase access to best practice pelvic floor exercise to prevent and provide early intervention for urinary incontinence in pregnancy. The program was implemented in a level 6 Maternity hospital in NSW in 2021 and has delivered nearly 10,000 participant sessions.

Objectives:

The overall aim of this symposium is to present the results of the program implementation and effectiveness, with the following specific objectives:

1. To evaluate the real-world impact of EMBODY using the RE-AIM framework (presentation 1);
2. To investigate the relationship between antenatal continence status and EMBODY participation on incontinence after childbirth (presentation 2);
3. To investigate the clinical effectiveness of the program on the hospital acquired complications of perineal trauma and incontinence (presentation 3).

ABSTRACT 1

Title: Evaluating the real-world impact of a virtual group pelvic floor muscle training program in routine antenatal care

Presenting author: Marissa Joseph

Authors: Hannah Graetz, Marissa Joseph, Sky Holland, Andrew Bisits

Aim: To evaluate a virtual group physiotherapy program implemented in pregnancy to optimise pelvic floor muscle training and outcomes, using the Reach, Efficacy, Adoption, Implementation and Maintenance (RE-AIM) framework.

Design: Type 3 effectiveness-implementation study of a pragmatic virtual exercise program delivered by physiotherapists during pregnancy.

Method: Initial implementation occurred in 2021. Data for each dimension of RE-AIM was abstracted from routinely collected program registration, electronic maternity and clinical activity databases between February 2022 to March 2025. Data was analysed descriptively, and chi-squared tests were used to make comparisons.

Results: A total of 2213 women attended 4883 occasions of virtual group physiotherapy during the study period. The highest annual program reach was 51% of the targeted pregnant population in 2024. Participants tended to be older and nulliparous compared to non-attenders. Attending three sessions or more gradually increased from 13% initially to 36% of participants in 2024. No statistically significant difference in perineal trauma was observed between participants and non-attenders (4.3% v 3.3% p=0.71). Sixty-five percent of participants commenced the program by the second trimester, with 85% conversion from registration to attendance. Session duration and frequency was consistent despite program format, content and virtual platform changing iteratively three times before 2024.

Conclusion: Virtual group physiotherapy program implementation is feasible, acceptable, and sustainable.

Key practice points:

- Delivering evidence-based group pelvic floor muscle training is achievable in a public maternity hospital.
- Further evaluation of program effectiveness is warranted given significant differences between participants and non-attenders for age, parity and birthing mode.

ABSTRACT 2

Title: Incontinence after childbirth: the impact of EMBODY on prevention and treatment

Presenting author: Sky Holland

Authors: Hannah Graetz, Kimia Sharifi Nasab, Sky Holland, Daniel Treacy, Andrew Bisits

Aim: To investigate the prevalence and influence of antenatal continence status and group physiotherapy attendance on postpartum urinary incontinence (UI).

Design: Retrospective cohort study

Method: Data from postpartum virtual group physiotherapy program participant surveys completed between August 2022 and July 2023 were analysed, with clinically collected data abstracted from the medical record. Self-reported UI, antenatal continence status and group program attendance were outcome and study factors; and frequency and relative risk were calculated with confidence intervals.

Results: Postpartum UI was reported by 31%. Prior UI was reported by 54% and for 76%, this was in pregnancy. A third of program participants attended in pregnancy, 8% attended three times or more. Postpartum incontinence was more prevalent in women who reported antenatal incontinence (RR 3.2, 95% CI 2.4, 4.3). Adjusted RR for postpartum UI with antenatal incontinence was 3.0 (95% CI 2.2, 4.0) among women who birthed vaginally and 2.6 (95% CI 0.9, 7.2) via caesarean. Regular virtual group physiotherapy attendance in pregnancy reduced the risk of postpartum incontinence (RR 0.57 95% CI 0.3, 1.0). Adjusted RR for postpartum UI with regular attendance was 0.55 (95% CI 0.3, 1.1) among women with pregnancy incontinence and 0.44 (95% CI 0.1, 1.7) among pregnancy continent women.

Conclusion: Postpartum UI is prevalent in virtual group physiotherapy attendees and is associated with incontinence in pregnancy.

Key practice points:

- The association between antenatal continence status and postpartum incontinence is not strongly influenced by mode of birth.
- Regular antenatal group physiotherapy is protective, especially in women continent in pregnancy.

ABSTRACT 3

Title: Regular virtual group physiotherapy attendance in pregnancy reduces hospital acquired complications of incontinence and perineal trauma

Presenting author: Hannah Graetz

Authors: Hannah Graetz, Sky Holland, Andrew Bisits, Deborah Fox

Aim: To investigate the effectiveness of regular virtual pelvic floor muscle training (PFMT) group attendance on pelvic floor outcomes.

Design: Retrospective matched cohort study

Method: Data from electronic maternity and clinical coding databases for program participants, and matched non-attenders were abstracted. One-to-two matching for parity and maternal age was used in women who birthed by March 2025. The prevalence of perineal trauma and clinically coded inpatient incontinence were analysed descriptively and comparisons between the matched groups using risk ratios. Attendance definitions were: “non-attenders”, “occasional”, “regular” or “frequent” for zero, three-, six- or ten-or more sessions.

Results: Program attenders were nulliparous (82%) and of advanced maternal age (Mean 35, SD3.8). The prevalence of intact perineum, major perineal trauma and postpartum incontinence in attenders was 23%, 5.4% and 1.4% respectively. Prevalence of major perineal trauma (RR0.65, 95%CI 0.1, 4.6) and rate of caesarean birth (RR 0.60, 95%CI 0.3, 1.0) were lowest in frequent attenders compared to those attending less frequently. Prevalence of clinically coded postpartum incontinence was lowest in regular attenders (RR 0.40, 95%CI 0.1, 2.9) as was gestational diabetes (RR 0.83, 95%CI 0.5, 1.5) compared to those attending less regularly.

Conclusion: Regular and frequent virtual group PFMT in pregnancy lowers the risk of the hospital acquired complications of incontinence and major perineal trauma, respectively.

Key practice points:

- Virtual group PFMT is effective in reducing hospital acquired complications and adverse pelvic floor outcomes at childbirth.
- Pregnant people should be informed of the relative risk reduction attributable to regular and frequent program attendance.

SECTION 6: ePOSTER PRESENTATIONS

Thirty second sit-to-stand test minimal clinical important difference following prehabilitation before autologous stem cell transplant

Lara Edbrooke[1,2], Marnie Fitzgerald[1,2], Olivia Sevdalis-Fallaw[1,2], Grace Butson[2], Shaza Abo[1,2], Amit Khot[1,2], Linda Denehy[1,2]

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ePoster Session - Thursday Screen 1, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

Sit-to-stand tests are increasingly used to evaluate lower limb muscle strength and physical function. This study aimed to establish the minimal clinical important difference (MCID) for the 30secSTS test following prehabilitation and prior to autologous stem cell transplant (AuSCT) for haematological cancer.

Design:

A retrospective audit using prospectively collected hospital electronic medical data.

Method:

Patients performed the 30secSTS at baseline and pre-AuSCT (following prehabilitation) and completed a global rating of change (GRoC) scale ('Very much worse' to 'Very much better') pre-AuSCT. Both anchor- and distribution-based methods were used. The receiver operating characteristic (ROC) curve and area under the curve determined the optimal change in 30secSTS for detecting a 'much better' GRoC response. Data were analysed using SPSS v29.

Results:

Patients (n=119) were a median (inter-quartile range [IQR]) age of 61.0 (55.5, 67.5) years, 65% (77/119) were male and 66% (79/119) had multiple myeloma. With 85 (43,118) days between tests, the change in 30secSTS following prehabilitation was 2.0 (0.5, 5.0) stands ($p<0.001$). The ROC curve identified a change in 30secSTS cut-off of 2.5 stands (AUC 0.68 [95%CI 0.56 to 0.80], $p=0.004$) had 67% sensitivity and 64% specificity for detecting someone who had improved by the MCID. The MCID using distribution-based methods was 2.3 stands.

Conclusion:

An improvement of at least 3 stands was considered meaningful. Future studies should investigate additional measurement properties of the 30secSTS in this population.

Key practice points:

- Findings can be used to evaluate changes in 30secSTS test performance which are meaningful for patients with haematological cancers.

Physical activity and function, walking cadence, and fitness following bone marrow transplant for haematological cancer

Chris Swain[1,2], Shaza Abo[1,2], Vinicius Cavalheri[3,4], Gerald Yeo[5], Clare O'Donnell[6], Maddie Adair[2], Morgan Smith[2], Olivia Sevdalis-Fallaw[1,2], Lara Edbrooke[1,2], Linda Denehy[1,2]

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ePoster Session - Thursday Screen 1, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

To examine physical activity (PA) levels, walking cadence, fitness and physical function following bone marrow transplant (BMT) for haematological cancer and explore differences between those undergoing allogeneic versus autologous BMT.

Design:

Baseline data from a multi-site, assessor-blinded RCT.

Methods:

At baseline adults 30±14 days post allogeneic or autologous BMT completed the six-minute walk test (6MWT), 30 second sit-to-stand (30secSTS) and wore a Fitbit for one week (steps/day, moderate-to-vigorous PA (MVPA), peak 1 and 30-minute cadence). The strength of associations between variables was classified according to Cohen and differences between allogeneic and autologous participants were explored.

Results:

131 participants were included (Allogeneic: n=43[33%]; age 51±15years; n=18[42%] female. Autologous: n=88[67%]; age 58±11years; n=37[43%] female), a median (IQR) of 34 (28, 40) days post BMT.

Overall, participants performed 4,924±3,135 steps/day (n=103), spent 43±47 min/day in MVPA, and peak 1 and 30-minute cadence were 99±19 and 66±26 steps/min, respectively. Performance in the 6MWT and 30secSTS was 479±116m and 12±4 stands, respectively. PA variables were moderately associated with 6MWT distance (rho range=0.53-0.62). Associations between 30secSTS and PA variables were fair (rho range=0.41-0.47).

Compared to autologous, allogeneic participants performed fewer steps/day (MD =-1427, 95%CI =-2716, -137) and had reduced 6MWT distance (MD =-43m, 95%CI = -86, -1) and 30secSTS (MD =-2 stands, 95%CI =-4, -1).

Conclusion(s):

Daily steps, peak cadence, exercise capacity and physical function after BMT are low and tended to be lower in people who received an allogeneic BMT.

Key practice points:

- Rehabilitation for people with haematological cancers treated with BMT is warranted.

Cancer survivor and family preferences for prehabilitation for cancer surgery program: a discrete choice experiment

Rohan Miegel[1,2], Tim Bright[1,2], David Watson[1,2], Caitlin Davis[1], Rachel Milte[2], Raymond Chan[2], Matthew Wallen[2], Sarah Hunter[2]

[1]Flinders Medical Centre, Bedford Park, Australia, [2]Flinders University, Bedford Park, Australia

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Aim: Prehabilitation ahead of cancer surgery is recommended to include exercise, nutritional and psychological support. However, prehabilitation primarily exists within funded clinical trials and has not been widely or successfully implemented as usual care in Australia. Physiotherapists are uniquely skilled and situated to lead such services. The purpose of this study was to explore patients and family preferences of a model of care.

Design: A discrete choice experiment was chosen to determine preferences and trade-offs of consumers.

Methods: Cancer survivors who received treatment that included a tumour resection (n=87), and family members (n=16) were surveyed. No cancer type exclusion criteria to reflect real-world patient cohorts. Conditional and mixed logit regression model to determine consumer preferences.

Results: Preliminary results include 105 responses. Most patients lived with 30km of the hospital (n=63, 60.6%) were female (n=57, 54.8%) and had a diagnosis of breast cancer (n=40, 38.5%). Frequency and location of prehabilitation appointments influenced participants uptake, indicating that weekly or fortnightly phone calls were preferable. Hospital-based programs were avoided. Higher daily exercise commitment and dietetic support were more likely to promote engagement. Shorter recover to return to normal activities was statistically significant. The risk of dying did not influence choices. Sixty-eight (66%) of respondents were willing to pay for a hypothetical prehabilitation service.

Conclusion: This study gives new insight into the preferences for a prehabilitation for cancer surgery model of care in the Australian context.

Barriers and facilitators to prehabilitation for cancer surgery: a systematic review of qualitative literature

Rohan Miegel[1,2], Raymond Chan[2], David Watson[1,2], Matthew Wallen[2], Sarah Hunter[2]

[1]Flinders Medical Centre, Bedford Park, Australia, [2]Flinders University, Bedford Park, Australia

ePoster Session - Thursday Screen 1, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim: Multimodal prehabilitation for cancer surgery is promising to improve patient outcomes. Many studies report issues with patient uptake and adherence as well as implementation into usual care. This systematic review aimed to investigate the key factors to barriers and facilitators to prehabilitation for cancer surgery, and to make recommendations utilising the iPARIHS implementation framework.

Design: Systematic Review

Methods: MEDLINE, CINAHL, Scopus, PsycInfo were systematically searched for qualitative and mixed-methods studies published from January 2010 to August 2023. The iPARIHS framework was used to synthesis the data into innovation, recipient, and contextual implementation facilitators and barriers.

Results: Thirty-seven studies were included. Major themes identified included information transfer, individual factors, relationships and operational factors. Innovation factors include health professional caution of the quality of evidence but acknowledging an evolving cancer care culture. Within the recipient construct, considerations to maximise implementation and participation included: providing a clear and individualised invitation to a customised and evidence-based program delivered in an acceptable method, active support and monitoring that is based in the patient-health professional relationship. Context based operational factors such as support (funding, resources, staff, time), service promotion, and streamlined clinical pathways were highlighted as sustainable strategies for implementation into usual care.

Conclusion: This review used the iPARIHS framework to highlight implementation frequent barriers and facilitators to improve prehabilitation for cancer surgery acceptance and delivery. Leveraging the patient-health professional relationship to enable a transfer of perceived value should be facilitated by explicit health system promotion and support.

Which is the more effective tool in canine osteoarthritis management; the CBPI or lameness assessment?

Kathleen Lott[1]

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ePoster Session - Thursday Screen 1, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim: To determine whether the Canine Brief Pain Inventory (CBPI) is more effective than veterinary lameness assessment in detecting pain and functional impairment in the management of canine osteoarthritis (OA).

Design: Systematic review (not published).

Methods: Four databases (PubMed, MEDLINE, Scopus, and Web of Science) were searched in May 2024. After returning 682 papers, duplicates were removed, and the remaining studies were manually screened for inclusion. 22 papers were included in this review.

Results: Twelve papers demonstrated that both the CBPI and veterinary lameness assessment detected improvement in pain and functional impairment at certain time points. Three studies found that neither the CBPI nor veterinary lameness assessment detected change. One article revealed that veterinary lameness assessment detected improvement in pain and functional impairment, but the CBPI did not. Conversely, six studies showed that the CBPI detected improvement in pain and functional impairment, but veterinary lameness assessment did not.

Conclusion: The results of this study do not provide strong evidence that the CBPI is more effective than veterinary lameness assessment. However, clinicians should consider its use as a valuable addition to thorough assessment and evaluation of treatment efficacy in canine OA.

Key practice points:

- The CBPI is a freely available, validated outcome measure used to quantify severity of pain and how pain interferes with function in dogs with OA.
- CBPI can be reviewed throughout the treatment process to evaluate the efficacy of the management plan.

Association of anxiety and depression history with Arthrofibrosis following primary anterior cruciate ligament reconstruction

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ePoster Session - Thursday Screen 1, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

To (1) identify patient characteristics and peri-operative variables associated with arthrofibrosis (AF) following anterior cruciate ligament reconstruction (ACLR) and (2) evaluate outcomes following arthroscopic intervention.

Design:

Retrospective cohort study

Methods:

A 10-year, single-surgeon dataset of 50 patients who developed AF following primary ACLR was analysed. Variables included demographics, sporting level, surgical factors, clinical presentation (including anxiety/depression status), and patient-reported outcome measures (PROMs) assessed pre- and post-arthroscopy.

Results:

Among 1491 patients, 50 (3.5%) required arthroscopy for AF following ACLR. The AF cohort had a mean age of 31 years (52% male), with mean BMI of 25.9. Revision arthroscopy occurred at mean 1.2 years post-ACLR. Primary symptoms included extension deficit (52%), catching sensation (38%), and pain (32%). Most procedures (90%) utilized hamstring autograft with tightrope fixation (70%). Concomitant procedures included meniscal repair (58%) and lateral extra-articular tenodesis (24%). Patients primarily participated in recreational running (32%) or national elite sport (22%), with 38% reporting anxiety/depression history. Post-arthroscopy, Lysholm scores improved by 19.7 points, satisfaction by 30%, and pain decreased by 20%.

Conclusion:

Pre-ACLR anxiety and depression prevalence in this cohort exceeded national averages, suggesting a potential risk factor for AF development following ACLR. Arthroscopic intervention demonstrated significant improvements in clinical presentation and PROMs.

Key practice points:

- Anxiety and depression may represent risk factors for AF development following ACLR.
- Arthroscopic intervention consistently improves clinical outcomes and PROMs.
- Further investigation through a matched cohort study is planned.

Evaluating a regional physiotherapy student-led virtual clinic: a stakeholder autoethnography

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ePoster Session - Thursday Screen 2, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

To evaluate the implementation of a student-led telehealth clinical placement

Design:

A mixed method study.

Methods:

Quantitative data on process factors were documented and a collaborative autoethnography gained perspectives from stakeholders responsible for clinic implementation.

Results:

The clinic was established and co-designed with the support of an advisory panel. After 18 months, 44 students had undertaken a five-week clinical placement completing 1548 video-calls. Three themes emerged, firstly the concept of ‘curricula preparing for practice’ which included reflections on the ubiquitous use of telehealth in current physiotherapy practice, and the value of developing this employability trait for students and their practice more broadly.

The second theme focussed on ‘access and equity' with the role of the students in providing access to physiotherapy in a supported self-management practice role for people from a wide geographical area with chronic health conditions.

The third theme ‘investing in partnerships’ acknowledged that leadership and management processes, personnel and technological resources are needed for clinic success. However, multiple partnerships (between staff and students, and students and community) provide connections that drive students’ communication, clinical reasoning and reflective practice, especially through academic staff supervision and feedback.

Conclusion:

A novel telehealth student-led clinic provides authentic learning experiences for students.

Key practice points:

- Telehealth practice placements provide multiple and diverse learning opportunities for student physiotherapists.
- Rural and regional Australian communities can benefit from increased access to services using a student-led telehealth clinic
- Partnerships are necessary and valued in the establishment of new telehealth services

Physiotherapist-delivered motivational interviewing and physical activity behaviour: A systematic review and meta-analysis

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ePoster Session - Thursday Screen 2, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

To determine if physiotherapists can proficiently deliver motivational interviewing (MI) to increase physical activity in adults attending physiotherapy.

Design:

Systematic review and meta-analysis

Method:

Six databases were searched up to August 2023. Randomised controlled trials evaluating physiotherapist-delivered MI and physical activity were included. Internal validity was evaluated using the PEDro scale. GRADE approach was used for each meta-analysis.

Results:

Nine randomised controlled trials involving 909 participants were included. MI was either delivered as a stand-alone intervention compared to minimal intervention; or embedded into routine physiotherapy and compared to routine physiotherapy alone. Physiotherapist-delivered MI likely increased physical activity slightly (SMD 0.21, 95% CI -0.05 to 0.47) when compared to minimal intervention, however, there were no additional effects on physical activity (SMD 0.02, 95% CI -0.37 to 0.41) when combined with and compared to usual care physiotherapy. MI fidelity was confirmed using valid and reliable MI integrity tools, demonstrating that physiotherapists can proficiently deliver MI either as a stand-alone intervention or embedded into usual care.

Conclusion:

Physiotherapist-delivered MI is likely to produce a small improvement in physical activity when compared to minimal intervention. Routine physiotherapy appears to sufficiently address physical activity behaviour, with no additional benefit from MI. The most beneficial application of MI, may be for patients who are not attending routine in-person physiotherapy.

Key practice points:

- Physiotherapists can proficiently deliver MI
- MI produced a small increase in physical activity compared to minimal intervention, however routine physiotherapy appears to sufficiently address physical activity.

Educating students for patient portrayal for their peers during peer simulation: a mixed-methods study

Narelle Dalwood[1], Felicity Blackstock[2], Sze-Ee Soh[1,3], Doctor Udari Colombage[1], Doctor Shane Pritchard[1], Prue Morgan[1]

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ePoster Session - Thursday Screen 2, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

To evaluate two education approaches to prepare students for patient portrayal during simulation-based education.

Design:

Randomised controlled trial and qualitative study

Methods:

Intervention approach was based on evidence for training simulated patients, the control approach reflected traditional 'role-play'. Patient portrayal accuracy (assessed by observers, peers, self), empathy (rated by peers, self) and academic (subject and practical skills) grades were measured. Focus groups explored students' experiences of education approaches. Group differences were examined using one-way analysis of covariance, and linear regression models identified factors associated with academic grades. An interpretivist approach was adopted for focus group analysis.

Results:

Fifty-seven third-year, undergraduate physiotherapy students were randomised into two groups. There were no significant differences between groups on patient portrayal accuracy, empathy or academic grades. Observer-rated accuracy of patient portrayal was significantly associated with overall subject (β=0.3; 95% CI: 0.1, 0.3) and practical skill (β=0.4; 95% CI: 0.2, 0.7) grades. Qualitative analysis suggested preparation for, and engaging in accurate patient portrayal were important components of peer simulation.

Conclusion:

The approach used to educate students for patient portrayal did not impact accuracy, empathy or academic grades. However, the accuracy of patient portrayal through

either education approach was associated with enhanced academic grades. The delivery of formal, multi-modal education with tutor support to improve patient portrayal was valued by students.

Key practice points:

- Immersion in accurate patient portrayal is supported by a multi-modal, scaffolded education approach.
- Optimising time and resources, such as video and tutor-guided rehearsal helps students effectively engage in patient portrayal preparation.

Physiotherapy educator understandings and preparedness to teach using First Nations teaching approaches

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ePoster Session - Thursday Screen 2, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim: Inclusion of Aboriginal and Torres Strait Islander cultural safety within curricula, is an accreditation requirement of physiotherapy programs at Australian universities. This mandate has seen growing momentum for integration of First Nations Ways of Knowing and practices into programs. However, little is known about what academic staff understand of this and what training they require.

Design and Methods: A mixed-methods approach was adopted. Eighteen physiotherapy academics with a minimum of three years teaching experience participated. Participants completed a modified version of the Cultural Capability Measurement Tool (mCCMT) and participated in semi-structured interviews about their current understandings of First Nations teaching approaches and their preparedness to apply them. Inductive, reflexive thematic analysis was used to analyse interview data.

Results:Average mCCMT score was 89.9 (SD 8.2) out of 120, indicating educators perceive limitations in their current cultural capability. Key themes from interviews included 1. Need for support, 2. Trepidation in saying or doing something wrong, and 3. Recognition of the importance of First Nations approaches. Survey and interview data revealed that physiotherapy educators have a limited knowledge of First Nations Teaching approaches.

Conclusion: Physiotherapy educators acknowledge the importance of including First Nations Ways of Knowing in the curriculum and intend to advocate for change. However, they feel unprepared to include First Nations teaching approaches in their curricula and feel they require additional training and ongoing support.

Key practice points:

- Educators recognise the importance of a culturally safe curriculum
- Educators require support to integrate First Nations Knowledge's into curriculum

Reshaping physiotherapy model of care in major abdominal surgery: feasibility and effectiveness of pre-operative physiotherapy

Grace Rheinberger[1], Tegan Henderson[1], Doctor King Man Wan[1,2], Doctor Hannah Graetz[1,2]

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ePoster Session - Thursday Screen 2, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

To examine the feasibility and effectiveness of pre-operative physiotherapy for patients undergoing abdominal surgery for confirmed or suspected gynaecological cancer.

Design:

Mixed methods pre- and post-intervention study

Method:

Data was abstracted from the electronic medical record for 99 participants who underwent major abdominal surgery, 61 pre-intervention in 2022 and 38 post in 2024.

The intervention involved a single pre-operative physiotherapy session and training for nursing staff to implement early post-operative mobilisation. Post-operative pulmonary complication (PPC) assessed by Melbourne Group Score and average length of stay (LOS) in days were primary outcomes. Secondary outcomes were patient experience, predictive risk assessment and physiotherapist patient-contact time (minutes).

Results:

Participant age, theatre duration, co-morbidity and local health district average LOS were similar between groups. The prevalence of PPCs was 6.5% pre- and 2.6% post-intervention (RR 0.41, CI 0.05 to 3.52). The average LOS was 4.6 pre- and 3.8 post-intervention. Prevalence of LOS greater than six was 25% pre- and 16% post-intervention (RR 0.65, CI 0.28 to 1.54).

All surveyed participants reported pre-operative physiotherapy was effective, memorable and beneficial. Pre-admission physiotherapists predicted and planned post-operative care for all patients who developed a PPC or required rehabilitation. Total physiotherapist patient-contact time was lower post-intervention compared to pre-intervention (MD -70, 95% CI -73.0 to -67.0).

Conclusion:

Pre-operative physiotherapy combined with nurse-led mobilisation is feasible within existing resources and may lower risk of PPC.

Key practice points:

- Physiotherapists can predict patients at risk of deterioration post major abdominal surgery.
- Patients remember and perceive benefit from pre-operative education.

Women as leaders in physiotherapy: What is key to driving intersectional equality and opportunity?

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ePoster Session - Thursday Screen 2, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim

To identify perceived barriers and enablers to women's leadership for Australian physiotherapists and understand how physiotherapists conceptualise leadership.

Design

An online mixed-methods survey.

Method

Ahpra-registered physiotherapists were invited to participate via Australian Physiotherapy Association communications and professional networks. The survey collected data about: demographics including intersectional characteristics, sector (e.g., public, private), setting (e.g., metropolitan, regional), and area (e.g., musculoskeletal, paediatric). Participants responded to questions about barriers and enablers, experiences and perspectives on women as leaders in the context of physiotherapy. Quantitative data were presented descriptively. Inductive content analysis was used for qualitative data.

Results

117 physiotherapists completed the survey, 102 (87%) of whom were women, and 85 (72.5%) held leadership roles in physiotherapy. 68 (58%) respondents reported experiencing barriers to gender equality in leadership in physiotherapy. Work culture was seen as the pre-dominant enabler of gender equality in physiotherapy leadership, while unconscious bias was the primary barrier. Participants also identified a lack of career progression opportunities. Leadership could be conceptualised as "creating belonging through change."

Conclusion

Women are valued as physiotherapy leaders, yet they experience barriers to equality including unconscious bias. A professional culture with initiatives that supports intersectional equality of opportunities for women for diverse leadership may effectively transform the physiotherapy profession.

Key practice points

- Initiatives that address unconscious bias and foster workplace and profession-level culture that supports intersectional equality of leadership opportunities are needed.
- Unconscious bias training and developing a culture of belonging may address perceived barriers to gender equality in leadership opportunities.

RESHAP-ED: Lessons from embedding a clinical trial in public hospital emergency departments in NSW, Australia

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ePoster Session - Thursday Screen 3, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

To share insights and challenges from embedding a clinical trial in public hospital emergency departments (EDs) in NSW, Australia.

Design:

Multi-centre, pragmatic, open-label, two-arm, parallel randomised controlled trial.

Methods:

RESHAP-ED was conducted in five NSW hospitals (three metropolitan, two regional). Patients with simple musculoskeletal conditions were randomised to receive care from either a physiotherapist or a physician/nurse practitioner. The primary outcome was ED length of stay, with secondary outcomes including adverse events, pain intensity, quality of life, and satisfaction. To minimise disruption, trial physiotherapists (n=16) were funded through an MRFF grant. ED length of stay was extracted from electronic records, and patient-reported outcomes were collected via text messages and online surveys following ED discharge.

Results:

Pragmatic Approaches: Aligning trial procedures with standard ED practices, such as electronic screening and triage notes, was essential. Written consent was impractical; thus, HREC waiver allowed randomisation without it.

Challenges: Trial setup was particularly difficult in regional hospitals and hospitals with limited previous trial experience.

Trial Progress: Recruitment is complete: 4,215 screened, 1,491 enrolled, with near-complete primary outcome data (99.7%) and a 78.2% response rate for secondary outcomes.

Conclusions: Embedding a trial in EDs is complex. Strategic adaptations facilitated implementation while minimising disruption, providing valuable lessons for future embedded trials.

Key practice points:

- This trial offers insights into embedding clinical research in ED while minimising patient care disruptions.
- It highlights strategies to address ethical and logistical challenges, particularly in regional hospitals, and supports physiotherapists' roles in EDs to inform workforce models and patient management.

Unite –remodelling fracture clinic in a large NSW metro public hospital to address increasing demand

Rachel Parmeter[1], Jackie can der Hout[1], Darnel Murgatroyd[1], Chris Horley[1], Maria Lissa Buenaventura[1], Ian Starkey[1], Joo Young Sunwoo[1], Mathew Yalizis[1], Golo Ahlenstiel[1], Emma Clarke[1]

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ePoster Session - Thursday Screen 3, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

To optimise and streamline care within a large Public Hospital Fracture Clinic (FC) by delivering an effective and efficient service meeting the needs of the community, reducing time to care, and improving clinician and patient experience.

Design:

A mixed method approach was applied using the ACI's Clinical Redesign Methodology.

Method:

Diagnostic data collection included file audits, process mapping, capture of visit duration and qualitative surveys, from 34 clinicians and 225 patients/carers. Three main solutions were implemented, including the creation of a new Model of care (Moc) with two Physiotherapy Led Clinical Streams: Cast removals clinic (CRC); and Physiotherapy Led Fracture Clinic (PFLC). This allowed the Physiotherapist to operate at their full scope of practice.

Results:

The project resulted in a reduced mean total patient time in clinic from 152 minutes to 119 minutes($p<0.0001$); with the shortest time being for the physiotherapy led streams 86 minutes($p<0.0001$) for PLFC and 26 minutes ($p<0.0001$) for CRC. Patient experience improved from one benchmark of 13 criteria to achieving 11 criteria. PLFC also resulted in a reduced orthopaedic activity in FC by 14%.

Conclusion:

Results support the implementation of our MoC, utilising physiotherapists working at top of scope. This has improved patient time to care, improved experience for consumers and staff alike and reduced demand for orthopaedics in clinic.

Key practice points:

- Physiotherapists can play a leading role in FC, with a more cost-effective approach to providing care
- Reducing demand on orthopaedics as clinically appropriate.
- This MoC is scalable.

Keyword: Fracture Clinic, Top of Scope

Physiotherapists injecting the anaesthetic lidocaine in Emergency

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ePoster Session - Thursday Screen 3, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim: To evaluate the service of advanced scope physiotherapists administering lidocaine digital blocks for finger or toe fractures or dislocations at The Prince Charles Hospital Emergency Department.

Design: A prospective cohort study.

Methods: Patients receiving an anaesthetic injection for finger/toe injuries will complete a questionnaire assessing satisfaction and acceptance of physiotherapists performing the procedure. Clinical records will be utilised to evaluate safety and effectiveness (first pass success) of physiotherapists and medical officers. Additionally, length of stay and time to anaesthesia will be compared across three groups: prescribing physiotherapists, medical officers, and non-prescribing physiotherapists (who require another practitioner to administer the anaesthetic).

Results: Data collection is underway and expected to conclude by the end of 2025, with preliminary results available by October. The primary outcome is patient acceptance, measured on a visual analogue scale, summarised as the mean with 95% CI. The intervention will be deemed acceptable if the lower bound of the 95% CI for physiotherapists exceeds five. Preliminary data on first pass success, satisfaction, time to anaesthesia, and adverse events will be compared.

Conclusion: Findings are expected to support the successful implementation of this model. The results could facilitate scaling and spreading this expanded scope of practice across Australia contributing to changing attitudes to non-medical prescribing and provide evidence to advocate for the implementation in other states.

Key practice points:

- The Prince Charles Hospital has implemented a model of care with physiotherapists administering local anaesthetic blocks.
- The service is under evaluation for patient acceptance and service-level metrics.

Comparing blood flow restriction and band tissue flossing for upper extremity potentiation in throwing athletes

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ePoster Session - Thursday Screen 3, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

To evaluate the efficacy of blood flow restriction training (BFRT) and band tissue flossing (BTF) in enhancing upper extremity explosive performance via post-activation potentiation (PAP), thereby improving throwing distance. Additionally, this study compares the effectiveness of pneumatic (BFRT) and non-pneumatic (BTF) occlusion training methodologies.

Design:

Randomized controlled trial (comparative study).

Methods:

Twenty intermediate-level throwers (14 males, 6 females; mean age 18.75 ± 2.51 years) with 1–2 years of resistance training experience were randomly assigned to the BFRT (n = 10) or BTF (n = 10) group. Group A (BFRT) performed complex training under occlusion twice daily whereas Group B (BTF) followed a functional overhead movement protocol once daily.

Work volume was equated across groups. Pre- and post-training throwing distances were analyzed using paired and unpaired t-tests.

Results:

Both groups demonstrated significant improvements in throwing distance after one week of training ($p = 0.03$). BFRT yielded a greater increase (3.0%), outperforming BTF (1.27%).

Conclusion:

BFRT proved to be more effective in eliciting PAP effects but requires precise application, limiting its practicality in field settings. BTF, although slightly less effective, provides a more accessible performance optimization alternative.

Key practice points:

- BFRT enhances upper extremity explosive performance more effectively than BTF but requires precise control and regulation.
- BTF, though slightly less effective, offers a more practical and accessible alternative for field-based training.
- BFRT should complement, not replace, conventional resistance training.
- Selection of an appropriate occlusion training method should be guided by athlete-specific needs, training logistics, and resource availability.

Health behaviours and swimming competency among Bond University medicine and allied health students

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ePoster Session - Thursday Screen 3, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim: To determine the physical activity, sedentary behaviour, muscle strengthening habits and swimming ability in a sample of Bond University medicine and allied health students.

Design: Cross-sectional study.

Methods: Two hundred and eighty-nine first-year students from medicine and allied health programs completed an online survey in May and September 2024.

Results: Students were highly active with 86% meeting or exceeding 500 metabolic equivalent of task (MET) minutes per week. 60% of students reported sitting for less than eight hours per day. Only 5% of the students were inactive and reported high sitting time (more than 8 hours per day). Fewer than half (47%) met the twice weekly muscle strengthening recommendation, with males more likely to do this than females. Students reported that they were very competent or fairly competent in their ability to swim 25 (82%), 100 (69%) and 500 (44%) metres. A high proportion of international students (39%) reported they were not at all confident in being able to swim 500 metres.

Conclusion: A large proportion of Bond University students exhibit healthy physical activity behaviours that are beyond the recommended guidelines, and moderate sitting times. Half of the students surveyed do not meet the muscle strengthening recommendations. International students report the lowest levels of competency for swimming ability across all swimming distances.

Key practice points:

- High activity levels and moderate sitting times mean students are likely to experience associated health benefits.
- Increased focus on strengthening activities especially in females and swimming coaching for international students should be prioritised.

A novel framework for managing co-existing chronic musculoskeletal pain and mental health in young people

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ePoster Session - Thursday Screen 4, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

This study explored the lived experiences of young Australians (aged 16-24) living with co-existing chronic musculoskeletal pain (CMP) and mental health conditions.

Design: Using a Constructivist Grounded Theory qualitative approach, we developed a novel framework to understand the complex interaction of CMP and mental health in young people.

Method:

In-depth one-to-one interviews were conducted with 21 young Australians (5 men, 1 transgender, 1 non-binary, 14 women) who self-reported co-occurring CMP and mental health conditions. The interviews explored their experiences of living with these conditions and seeking care.

Results:

A core category was generated, which informed the grounded theory: "a feedback loop of pain and mental health." This framework illustrates the cyclical nature of co-existing CMP and mental health conditions, shaped by intrapersonal factors (emotions, cognitions, behaviours), interpersonal dynamics (healthcare interactions, relationships, self-identity), and external context (societal stigma, environmental influences). These factors either exacerbated or alleviated the feedback loop.

Conclusion:

The feedback loop framework highlights the urgent need for an interdisciplinary, whole-person approach to managing CMP and mental health in young people during a critical

developmental period as they transition into adulthood. Treatment must be personalised and address both conditions simultaneously, carefully considering the individual's context.

Key practice points:

- Where appropriate and within scope, physiotherapists can intervene by targeting modifiable factors within the feedback loop, concurrently addressing pain and pain-related mental health symptoms.
- Co-care between psychology and physiotherapy may improve patient outcomes for young people with co-existing CMP and mental health conditions.

Optimising spinal alignment and chest wall expansion in adolescents with idiopathic scoliosis using postural correction

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ePoster Session - Thursday Screen 4, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim

Progressive spinal deformity may contribute to impaired pulmonary function over time. This study investigated the extent of correctability of spinal alignment and associated change in chest wall expansion in individuals with idiopathic scoliosis.

Design

A cross-sectional study.

Method

Real-time 3D spinal alignment and chest wall expansion of subjects with idiopathic scoliosis were measured by surface topography and motion capturing system respectively, in natural and corrected postures in sitting.

Spinal alignment in both angular and linear dimensions in coronal plane, and chest wall expansion and its side-to-side symmetry were compared before and after postural correction.

Results

20 young subjects (15F:5M, aged 21.05 years ± 4.03) with idiopathic scoliosis participated in this study. Mean Cobb's angle was 23.5° ± 9.99°, with scoliotic apex at mid-thoracic apex (T6-9, n=7), lower thoracic apex (T10-T12, n=9) and upper lumbar apex (L1-L3, n=4).

The mean change of corrected-to-natural in Cobb's angle equivalent angle, coronal imbalance, pelvic obliquity, and apical deviation were -4.65° (±6.08°), -5.8mm (±9.93), -1.55mm (±5.82), and -5mm (±8.40) respectively. The mean change of tidal volume over concave and convex sides were +24.86ml (±110.34), and +39.56ml (±131.39) respectively. 9 and 6 subjects exhibited improvements in side-to-side symmetry in normal breathing and deep breathing after postural correction respectively.

Conclusion

Spinal alignment and tidal volume but not total lung capacity improved after Schroth correction in young individuals with mild degree of scoliosis.

Key practice points

- Postural correction alone is insufficient to improve total lung volume nor to optimize chest expansion asymmetry in individuals with mild scoliosis.

Perspectives and experiences of people with hypermobile Ehlers Danlos Syndrome regarding treatment: An Australian survey

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ePoster Session - Thursday Screen 4, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

To explore perspectives and experiences of people with hypermobile Ehlers-Danlos syndrome (hEDS)/Hypermobility Spectrum Disorder (HSD) regarding treatment

Design:

Cross-sectional survey

Methods:

An online survey of Australian adults with hEDS/HSD was administered. Descriptive statistics were used to summarise quantitative data and qualitative data was analysed thematically using a grounded theory approach.

Results

143 participants completed the survey. Participants reported consulting with numerous health professionals, trialling different treatments, experiencing limited effectiveness and variable satisfaction with care. Six themes were identified: (1) Recognising hEDS/HSD is variable, complex and difficult to treat; (2) Experimenting with different treatments and modalities; (3) Experiencing more barriers than enablers in accessing effective healthcare; (4) Recognising the need for further education of health professionals; (5) Seeking understanding and empathy from health professionals; and (6) Acknowledging the need for self-care and management.

Conclusion

People with hEDS/HSD achieved limited and variable success with different treatments and management strategies. The highest level of satisfaction and perceived efficacy was achieved with allied health treatment (including physiotherapy). Findings highlight the complex and variable nature of hEDS/HSD; challenges faced by patients identifying, accessing, and affording effective treatments; and the need for additional health professional education, support, and advocacy.

Key practice points:

- There is an urgent need to research effective treatments and to increase support and advocacy for people with hEDS/HSD
- Physiotherapists may be able to provide effective treatments that are well-received by people with hEDS/HSD
- Health professionals should listen and empathise with their patients and extend their understanding of hEDS/HSD

Development of the Low Back Pain Self-Management App Review Tool (LBP-SMART) for consumers

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ePoster Session - Thursday Screen 4, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim: To develop a consumer level co-designed LBP Self-Management App Review Tool (LBP-SMART) to assist consumers in assessing quality, behaviour change and self-management potential of LBP self-management apps to aid in LBP rehabilitation.

Design: Two-phased prospective cross-sectional design.

Method: Four online co-design workshops were undertaken with consumers and health professionals, underpinned by the first three steps of the Co-KT (Co-creating Knowledge Translation) framework. The consumer-level LBP self-management app assessment tool (LBP-SMART) was developed and underwent user evaluation for usability, clarity and sequencing (Co-KT step 4).

Results: Consumer (n=2) and health professional (n=2) stakeholders participated in the co-design workshops under the guidance of researchers (n=3). An additional five consumer participants undertook the user evaluation. Seven categories were included in the developed LBP-SMART: 1) Safety; 2) Download process; 3) Look, function and feel; 4) Customisation; 5) Goals and self-monitoring; 6) Enabling sharing and 7) Additional features. Stakeholder and expert views support the content validity of the LBP-SMART and all participants involved in the user evaluation reported that it had appropriate order/sequencing and was easy to understand/use.

Conclusion: The LBP-SMART can guide LBP self-management app choice of consumers towards features of quality, self-management and behaviour change potential features that may improve rehabilitation outcomes for LBP.

Key practice points:

- Smartphone apps have potential to facilitate LBP rehabilitation via self-management.
- Use of the LBP-SMART can guide consumers and health professionals towards apps with appropriate quality, and self-management and behaviour change potential features that may improve consumer LBP rehabilitation outcomes.

Metabolic syndrome: The hidden condition affecting 37% of clients in physiotherapy private practice

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ePoster Session - Thursday Screen 4, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

1) Establish the prevalence of metabolic syndrome in clients presenting to physiotherapy in private practice and
2) determine the feasibility of physiotherapists conducting metabolic health screening in private practice.

Design: Mixed-methods cross-sectional study.

Method:

Adults presenting to physiotherapy in private practices across Victoria participated in a 30-minute health screen. This involved collection of self-reported physical activity and dietary intake and physical examination of metabolic risk factors including point-of-care testing. Individual interviews were completed with 20 clients and eight physiotherapists to determine feasibility according to five key domains: acceptability, demand, implementation, practicality, and integration.

Results:

Two-hundred and thirty clients participated in a health screen. Metabolic syndrome was present and undiagnosed in 37%. Thematic analysis identified clients perceived the screening as convenient and comfortable; provided important health information; and could be part of usual physiotherapy practice. Physiotherapists saw health screening as a valuable and beneficial add-on service, but had uncertainty about future integration.

Conclusion:

Metabolic syndrome is prevalent and undiagnosed in clients attending private practice physiotherapy. Incorporating metabolic health screening into private practice physiotherapy is feasible and provides an opportunity for physiotherapists to improve the overall health of their clients and contribute to chronic disease prevention.

Key practice points:

- Metabolic syndrome is more prevalent in clients attending private practice physiotherapy than the general population.
- Clients believe that physiotherapists in private practice could offer metabolic health screening.
- Physiotherapists can make an impact by screening for metabolic syndrome and providing physical activity and lifestyle advice.

Describing musculoskeletal presentations for potential physiotherapy consultation in the Victorian Virtual Emergency Department

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ePoster Session - Thursday Screen 5, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

To describe musculoskeletal presentations to the Victorian Virtual Emergency Department (VVED) and identify the potential need for musculoskeletal physiotherapist consultation.

Design:

Audit with descriptive analysis

Method:

Data was collected between 01 July 2022 and 23 June 2023 using the Centre for Victorian Data Linkage, Victorian Admitted Episode Dataset and the Victorian Emergency Minimum Dataset. Australian hospitals including the VVED, use the International Classification of Diseases 10th revision to classify presenting conditions. An expert focus group identified musculoskeletal chapters, codes and sub-codes of registered presentations within a musculoskeletal physiotherapy scope. All presentations to VVED under these codes were included in the descriptive analysis.

Results:

Musculoskeletal cases from two chapters (13, 19) comprised over 10% (11,164) of the total 100,422 presentations to the VVED over this period. Half of these (5,671) were identified as within a physiotherapy scope. The most common musculoskeletal condition presenting to VVED was back pain with 1,318 cases, 10% of all musculoskeletal presentations.

Conclusion:

The findings suggest a demand for musculoskeletal physiotherapy involvement in managing presentations to VVED. Approximately 5% of VVED presentations could

benefit from musculoskeletal physiotherapy screening and triage, although this is likely an under-estimate, given that only presentations within two key chapters were included. These findings provide support for the role of physiotherapists in the VVED.

Key practice points:

- There are significant musculoskeletal presentations attending the VVED which could be managed by physiotherapists and could justify a VVED advanced musculoskeletal clinic.
- Back pain is a key musculoskeletal demographic potentially suitable for VVED physiotherapy management

Clinical outcome measures used by physiotherapists to assess lateral elbow tendinopathy

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ePoster Session - Thursday Screen 5, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

To examine international physiotherapy practises regarding clinical outcome measures for lateral elbow tendinopathy.

Design:

Anonymous online international survey.

Method:

Physiotherapists from 11 countries rated how frequently they use unidimensional and multidimensional patient-reported outcome measures (PROMs), performance-based outcome measures (PBOMs), and clinician-reported outcome measures (CROMs). Frequency was rated using a 5-point Likert scale as ‘never’, ‘rarely’, ‘sometimes’, ‘often’, and ‘always’. To establish clinical practises, the five response categories were dichotomised into routine practice (often, always) and not-routine practice (sometimes, rarely, never).

A response rate of ≥70% for each dichotomy was used to determine whether an assessment item was deemed routine practice or not, with items not meeting either criterion considered neither routine nor not-routine practice.

Results:

Two hundred ninety-nine respondents completed the survey, most from the United States of America. No individual outcome measure met the criteria for routine practice. Nearly half of the multidimensional PROMs (47%), and three quarters of the CROMs (75%) met the criteria for not-routine practice, and no PBOMs met the criteria for not-routine practice.

Conclusions:

The non-routine use of any specific clinical outcome measures may reflect a low perceived value, limited time for implementation, or a lack of knowledge. Alternatively, clinicians may use non-standard or individualised outcome measures based subjective examination findings and patient-specific goals.

Key practice points:

- Current clinical guidelines recommend the use of specific outcome measures in the assessment of lateral elbow tendinopathy; however, it appears that these are not routinely used, and further training may be beneficial to improve uptake.

Pain catastrophising in people with no pain: A latent class analysis

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ePoster Session - Thursday Screen 5, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

Pain catastrophising, which is prognostic for greater pain/disability, has not been thoroughly explored in people with no pain for whom it may be relevant to future pain disorders.

Aim: To use Latent Class Analysis to derive clusters from the three Pain Catastrophising Scale subscales and determine whether clusters differed across fear-avoidance beliefs and demographic variables in people with no pain.

Design:

To explore Pain Catastrophising Scale scores in people with no pain secondary analysis of a cross-sectional study was undertaken.

Methods:

Participants reporting no musculoskeletal pain (n=169) completed the Pain Catastrophising Scale and questions on fear-avoidance beliefs and demographics online.

The three Pain Catastrophising Scale subscale scores were entered into Latent Class Analysis as indicator variables to derive clusters with differing pain catastrophising profiles. Between-cluster differences in fear-avoidance beliefs and demographics were examined using Kruskal-Wallis analysis of variance or chi-squared analysis.

Results:

Latent Class Analysis derived three clusters: Cluster 1 (n=39, 23.1%), Cluster 2 (n=74, 43.8%), Cluster 3 (n=56, 33.1%); characterised by low, medium and high pain catastrophising respectively (across all subscales). Median total Pain Catastrophising Scale scores for low, medium and high-scoring clusters were three, 11 and 24-points respectively. There were no differences between clusters across fear-avoidance beliefs and demographics.

Conclusion:

This study derived three different pain catastrophizing profiles in people with no pain.

Key practice points:

- Those with high pain catastrophising reported a median Pain Catastrophising Scale score comparable to people with persistent pain, possibly putting them at risk of prolonged pain/disability should they develop pain.

PACE-RURAL: managing chronic musculoskeletal conditions in rural, regional and remote Australia using physiotherapy telehealth

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ePoster Session - Thursday Screen 5, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

Musculoskeletal (MSK) conditions are the leading cause of disease burden in Australia, and access to high-value care remains inequitable. In non-metropolitan areas, low-value MSK care (opioids, unnecessary imaging) is more prevalent, whilst specialist physiotherapy services are difficult to access.

This presentation outlines a new pathway of care designed to improve health outcomes in non-metropolitan areas.

Design/Method:

We followed a clinical translation framework to develop, adapt and scale a pathway of care to be suitable for implementation in non-metropolitan regions in Australia. Key stakeholders (allied-health clinicians, patients, and 15+ organisations) co-designed implementation strategies.

Results:

The resulting care pathway, PACE-RURAL, has three components.

1. Embedded risk assessment at the point of care – the Short Form Örebro Musculoskeletal Pain Screening Questionnaire accurately identifies people at risk of poor outcome.
2. Support people at low risk of poor outcome with accessible, credible, guideline-based resources. We collaboratively designed www.MyPainHub for common MSK conditions, with customised information based on risk.
3. Support people at high risk of poor outcome by collaborating with specialist physiotherapists via telehealth.

Conclusion:

A comprehensive and robust pathway, with implementation strategies co-designed with key stakeholders, will now be tested in an Australia-wide trial across eight regions and four states (NSW, QLD, VIC, WA), in both hospital and primary care settings.

Key practice points:

- Learn about health inequities in MSK care in rural/regional/remote Australia.
- Learn how to collaborate effectively via telehealth to deliver high-value care.
- Get involved in the ongoing co-design, clinician training and delivery of the new PACE-RURAL pathway.

Enhancing health professional training in stroke upper limb and shoulder rehabilitation

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ePoster Session - Thursday Screen 6, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

This study evaluated the training levels, confidence, and barriers faced by physiotherapists and occupational therapists in implementing evidence-based interventions for stroke upper limb and shoulder rehabilitation.

Design:

A cross-sectional survey study was conducted between 2022 and 2024 among postgraduate neurological physiotherapy and occupational therapy students at Flinders University.

Method:

Twenty-one health professionals (15 physiotherapists, 6 occupational therapists) completed a structured survey assessing prior training, confidence, perceived importance, and barriers in using 29 best-practice stroke rehabilitation interventions.

Data were analysed to determine trends in training exposure, self-efficacy, and professional dissemination.

Results:

- 41% (12/29) of interventions had only slight confidence levels for use in practice.
- Major barriers included limited time, access to equipment, and lack of supervision.
- Therapists highly valued interventions but lacked structured training opportunities.
- Despite confidence in their own skills, many therapists did not engage in peer training or dissemination.
- Most training occurred in-house, with no therapists involved in national-level training programs.

Conclusion:

Gaps in training and professional development significantly impact the implementation of evidence-based stroke rehabilitation interventions. To improve confidence and utilization, digital and print protocols, increased supervision, and structured peer training programs are recommended. Addressing these barriers could enhance rehabilitation outcomes and improve workforce capability in stroke care.

Key practice points:

1. Structured training and mentorship programs are needed to increase therapist confidence in stroke rehabilitation interventions.
2. Time constraints and access to supervision remain key barriers to implementation.
3. Digital and print-based protocols may facilitate better dissemination of best-practice interventions.

Understanding how cardiorespiratory training is implemented to address fitness following a stroke

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ePoster Session - Thursday Screen 6, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

To systematically review the evidence investigating the implementation of cardiorespiratory training in adults following a stroke and to understand how interventions are prescribed to address cardiorespiratory fitness.

Design:

Systematic review

Method:

Medline, CINAHL, EMBASE, EMCARE, Scopus, PEDro and ProQuest were searched from inception until January 2024. Inclusion criteria were studies that included adults following a stroke, investigated cardiorespiratory training interventions, and used standardised cardiorespiratory fitness assessments. Commentaries, review publications and non-English studies were excluded.

Results:

A total of 8565 studies were identified and 121 met the selection criteria. A broad range of participant demographics, stroke characteristics and clinical presentations were identified. of the included studies, 14% selected only participants within 3-months following stroke and 5% selected only participants requiring assistance to ambulate.

Different standardised assessments were used, and cardiorespiratory training intervention parameters varied (frequency, intensity, type, time, volume and progressions). Three studies included qualitative participant perspectives regarding participation but experiences of participants is not well understood.

Conclusion:

A variety of training interventions and parameters are used to address fitness following stroke, and experiences of participants is not well understood. Future studies should

explore cardiorespiratory training interventions for improving cardiorespiratory fitness, particularly in people requiring assistance to ambulate, or within sub-acute stroke timeframes.

Key practice points:

- progressive training or mixed training is recommended to be provided for at least: 30 minutes, three times weekly, over four weeks.
- Body-weight support treadmill training (with or without robotic gait assistance) can address cardiorespiratory fitness in people requiring assistance to ambulate.

Usability and helpfulness of the ten movement training principles in neurological physiotherapy practice

James McLoughlin[1]

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ePoster Session - Thursday Screen 6, Halls HJ, October 23, 2025, 12:50 - 13:32

Aim:

The Ten Movement Training Principles were introduced to provide a structured framework for movement rehabilitation in neurological physiotherapy. This study evaluates their usability and relevance in practice.

Design:

A cross-sectional survey was conducted among postgraduate neurological physiotherapy students who engaged with the principles in coursework and clinical application.

Method:

Twenty-two physiotherapists completed an 18-question online survey assessing the clarity, applicability, and impact of the Ten Movement Training Principles using a 5-point Likert scale. Key areas included ease of understanding, relevance to clinical reasoning, intervention design, and patient education.

Results:

Participants reported high usability, with 86% finding the principles valuable for clinical reasoning and 82% for intervention design. However, 41% found them lengthy, suggesting the need for modular structuring. Additionally, 37% noted challenges in explaining them to patients, indicating a need for a simplified patient version.

Conclusion:

The Ten Movement Training Principles support clinical decision-making, interdisciplinary collaboration, and innovation in neurological physiotherapy. Refinements, including structured sub-themes and patient-friendly adaptations, could enhance their accessibility and effectiveness.

Key practice points:

1. The Ten Movement Training Principles enhance clinical reasoning and intervention planning.

2. Modular structuring may improve usability.
3. A patient-friendly version could aid education and home exercise adherence.

Evaluating the role of e-resources in teaching whiplash-injury management to physiotherapy students: pilot implementation study

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ePoster Session - Friday Screen 1, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim:

To evaluate the Implementation of My Whiplash Navigator (MWN: a digital learning resource) on physiotherapy students' adoption outcomes when managing whiplash.

Design:

Pilot implementation study using a pre-post design.

Methods:

Under post-graduate physiotherapy students (n=136) participated. They consented to be part of an implementation strategy which involved: i) embedding MWN and teaching resources into existing musculoskeletal coursework Units of Study (UOS) at the University of Sydney, ii) utilising a student implementation champion and iii) reminders. Implementation outcomes assessed were reach, change in knowledge (of diagnosis, prognosis, and management of whiplash (pre-post questionnaire), acceptance and adoption (of the resource during study and clinical placement).

Results:

Reach was greatest with UG students (n=71/47, 66% participating) vs PG students (n =158/89, 56% participating). Knowledge of whiplash significantly improved in regard to understanding the Quebec Task Force (QTF) classification (41.9% (95%CI 22.7-61.0) and awareness of psychosocial factors influencing recovery (44.2% (95%CI 25.3 to 63.1). However, knowledge of when to use the Canadian C-Spine Rule and when to refer did not significantly improve. Acceptance of MWN was high (> 80% agreed on relevance and usability), and adoption was also excellent (78% agreed they would use the resource for study or on clinical placement)

Conclusion:

Implementation strategy effectively improved physiotherapy students' knowledge of key guideline messages for WAD, and the MWN resource was well accepted.

Key practice points:

- Integrating digital tools such as MWN into existing curricula is an effective method of improving student learning and the likely future use of these evidence-based resources in clinical practice.

Do Manual Workers With and Without LBP Show Different Trunk Muscle Activity During Repeated Lifting?

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ePoster Session - Friday Screen 1, Halls HJ, October 24, 2025, 12:20 - 12:55

Background: Advice to keep the trunk muscles engaged during lifting is often given to manual workers to prevent and manage low back pain (LBP), but this recommendation is not based on evidence.

Aim: To explore if manual workers with and without a history of LBP show different trunk muscle activity during repeated lifting.

Methods: This cross-sectional observational study compared peak and average muscle activity between manual workers with LBP (n=21) and without a history of LBP (n=16) during a 100-lift task. A 12-sensor trunk muscle surface electromyography (sEMG) protocol was used to compare peak and average muscle activity over a 100-lift task. Associations between trunk muscle activity, pain and fatigue in manual workers with LBP were explored.

Results: There were no differences in either peak or average muscle activity between groups at any of the three time points in any muscle. There were no consistent associations between muscle activity and pain or muscle activity and fatigue in manual workers with LBP. Peak abdominal muscle activation was consistently low at 15-31% of maximal voluntary contraction (MVC).

Conclusion: At a group level, trunk muscle activity during lifting does not differ between people with and without a history of LBP.

Key practice point:

1. These sEMG results question the importance of trunk muscle activity during lifting in people with lifting-related LBP.
2. For clinicians, this study highlights the complex and individual nature of lifting lifting-related back pain where single parameters such as muscle activity do not differentiate people (at a group level)

Physiotherapist characteristics associated with low back pain beliefs: a secondary analysis of a randomized trial

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Aims:

To investigate the association between physiotherapists' characteristics and their beliefs about low back pain (LBP).

Design:

Cross-sectional study using baseline data from a previously randomised trial (NCT05661968).

Methods:

Physiotherapists who treat patients with LBP were invited to participate. Collected variables included age, years of clinical experience, education level, personal history of LBP, imaging prescription habits, employment setting, academic background, adherence to clinical practice guideline (CPG) recommendations, and the number of LBP patients treated.

Beliefs about LBP were assessed using the Modified Back Beliefs Questionnaire (MBBQ; score range: -50 to 50). Simple linear regression models were used to explore associations between participant characteristics and MBBQ scores.

Results:

119 physiotherapists were included. The mean age was 32 (SD=9) years, and most participants (59%) had fewer than 5 years of clinical experience. Physiotherapists working in their clinic had beliefs more aligned with current evidence (β= 6.5; 95%CI: 0.8, 12.2) than those working in the public sector. Those not following CPG recommendations showed beliefs less aligned with evidence (β= -4.4; 95%CI: -8.1, -0.6).

Participants with over 10 years of experience may present beliefs less aligned with current evidence (β= -3.8;95%CI: -7.8, 0.2) than those with less than 5 years since graduation.

Conclusions:

Adherence to CPGs, work setting, and, potentially, years of clinical experience may influence physiotherapists' beliefs about LBP. Dissemination strategies may need to target those with more clinical experience and working in the public sector.

Key practice points:

- Efforts to promote evidence-based beliefs should include strategies for continuing education and CPG implementation.

Pain-free bite force in a healthy population: Within-session test–retest reliability in different sitting positions

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Aim: Establish the within-session test–retest reliability, standard error of measurement (SEM) and minimal detectable change (MDC) of pain-free bite force in a healthy population for a single and mean of three trials in supported and unsupported sitting.

Design: Test-retest reliability

Method: Thirty healthy participants (50% female, mean age=34.4 years) completed two sessions (30–60 min apart) comprising three pain-free bite force trials on each side. Test–retest reliability for the first trial and mean of three trials in each position were determined using intraclass correlation coefficients (ICC), before calculating the corresponding SEM and MDC for males and females respectively.

Results: Within-session reliability was excellent for a single trial in supported sitting (ICC=0.85; SEM female=84N, male=99N; MDC female=232N, male=275N) and unsupported sitting (ICC=0.91; SEM female=59N, male=72N; MDC female=163N, male=200N), and for a mean of three trials in supported sitting (ICC=0.89; SEM female=79N, male=66N; MDC female=220N, male=182N) and unsupported sitting (ICC=0.92; SEM female=59N, male=64N; MDC female=164N, male=177N).

Conclusion: Single and a mean of three trials in supported and unsupported sitting appear reliable methods to measure pain-free bite force in a healthy population. Testing pain-free bite force using a mean of three trials in unsupported sitting appears superior over other methods though due to higher test–retest reliability, and lower SEM and MDC. Future studies should examine the reliability of pain-free bite force in temporomandibular disorder populations.

Key practice points:

- Pain-free bite force is a new promising measure to evaluate bite function in temporomandibular disorders, particularly conducted as a mean of three trials in unsupported sitting.

Predicting pregnancy-related pelvic girdle pain using machine learning

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ePoster Session - Friday Screen 2, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim:

Pregnancy-related pelvic girdle pain (PPGP) negatively affects women's quality of life. An improved knowledge of risk factors for PPGP can guide the development of screening and prevention programs. This study aimed to compare machine learning (ML) and traditional predictive modelling to predict the clinical diagnosis of PPGP.

Design:

This study re-analysed data collected from 780 pregnant women to assess the predictive performance of ML models to identify PPGP.

Method:

Four ML models, Logistic Regression (LR), Random Forest, Xtreme Gradient Boost (XGBoost), and K-Nearest Neighbours, were employed. Feature selection techniques and cross-validation were used to optimise model performance, with the Area Under the Receiver Operating Characteristic Curve (AUROC) as the primary outcome measure.

Results:

XGBoost and LR demonstrated the highest predictive accuracy (AUROC = 0.70). The most significant predictive factors were a history of low back pain/pelvic girdle pain (LBP/PGP) in previous pregnancies, family history, gestational age, and prolonged standing duration.

Conclusion:

Compared to traditional predictive modelling, ML models enhanced the prediction of PPGP, for identification of factors increasing the risk of developing PPGP. These findings highlight the factors which should be targeted as part of a preventive program to potentially mitigate the burden of PPGP.

Key practice points:

- ML models improve identification of risk factors associated with PPGP.
- Prior LBP/PGP history in previous pregnancies, family history, gestational age, and prolonged standing duration were identified as strong predictors for the clinical diagnosis of PPGP.
- Implementing ML-driven prediction in clinical settings may optimise prevention and intervention strategies.

Low-load endurance exercise versus stretching: effects on pain sensitivity and mechanical properties of upper trapezius

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Background:

Increased pain sensitivity and stiffness of upper trapezius have been reported frequently in chronic neck-shoulder pain. While evidence substantiates the short-term efficacy of stretching, it is suggested trapezius myalgia and perceived tightness may be attributed to overloading and underlying low aerobic capacity.

Therefore, it is hypothesized that endurance exercise may offer superior clinical recovery compared to stretching for individuals with myogenic neck-shoulder pain.

Aim:

This study examined the effectiveness of low-load endurance exercise compared to stretching on pain, pressure pain threshold [PPT] and mechanical properties (tone, elasticity, and stiffness) of the upper trapezius in patients with chronic unilateral neck-shoulder pain with perceived tightness.

Design:

Two-arm, parallel, randomized controlled trial.

Method:

Participants performed low-load endurance or stretching exercises over a five-week period. Pain was assessed using Visual Analogue Scale, while PPT and mechanical properties were measured using algometry and myotonometry, respectively, before and after the exercise programmes.

Results:

Endurance group (n = 10) demonstrated a significantly greater pain reduction (p = 0.01), mechanical pain sensitivity (p = 0.01-0.03) and stiffness (p = 0.04) when compared to stretching group (n = 12).

Conclusion:

Low-load endurance exercise is a safe and more effective intervention in improving muscle stiffness and pain sensitivity compared to stretching in adults with chronic neck-shoulder pain.

Key points:

1. Perceived muscle tightness commonly reported in chronic neck-shoulder pain may be attributed to impaired aerobic capacity.
2. Low-load endurance exercise produced significantly better clinical and physiological outcomes of involved upper trapezius in chronic neck-shoulder patients when compared to stretching.

Rate of force development mediates the relationship between kinesiophobia and chronic low back pain

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Aim:

To investigate whether changes in the Rate of Force Development (RFD) during sit-to-stand and stand-to-sit movements mediate the relationship between kinesiophobia and Chronic Low Back Pain (CLBP) in care workers.

Design:

A cross-sectional study including care workers with and without CLBP.

Method:

Forty-nine care workers participated. Kinesiophobia was assessed using a Task Specific Fear (TSF) numerical rating scale (NRS, 0–10). RFD of ground force was measured at 100 milliseconds after movement initiation during sit-to-stand and stand-to-sit movements using a force platform. CLBP was defined as low back pain persisting for more than three months. Spearman's correlation and mediation analyses using bootstrap resampling (n = 1000) were performed to evaluate the direct and indirect effects of kinesiophobia on CLBP via RFD.

Results:

TSF scores showed a strong positive correlation with CLBP and negative correlations with RFD. Indirect effects were significant for both RFD during sit-to-stand and stand-to-sit movements but accounted for a small proportion of the total effects (6.18% for sit-to-stand and 3.13% for stand-to-sit). Direct effects remained significant, indicating partial mediation.

Conclusion:

These findings suggest that changes in RFD during functional movements partially mediate the relationship between kinesiophobia and CLBP, although the contribution of RFD is relatively small.

Key practice points:

- Psychological interventions targeting kinesiophobia should remain the primary approach for managing CLBP due to the strong direct effect.
- Exposure-based movement interventions focusing on improving RFD may complement psychological approaches.
- Force platform assessment of RFD offers a cost-effective and feasible method for evaluating movement-based interventions.

Protection against pain: a scoping review

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Aim:

This scoping review aimed to identify positive or protective factors associated with lower pain-related disability or better physical function in adults with chronic musculoskeletal pain.

Design:

Scoping review

Methods:

Five databases were searched (MEDLINE, EMBASE, PsycINFO, CINAHL, SportDiscus; 1979-2024). The final search returned 48,521 records. With the aid of an AI assisted tool - Research Screener, 78 articles met the inclusion criteria for this review.

Results:

A range of bio-psycho-social factors were identified to be associated with lower pain-related disability and improved physical function. Most factors were psychological, with self-efficacy being most frequently reported.

Other psychological factors included psychological traits (resilience, optimism), coping strategies (active coping), psychological health (positive affect), acceptance, psychological cognitive factors (competence perceptions), perceptions of control and motivational factors. Identified lifestyle factors included health promotion practices, BMI, mediterranean diet, sleep and physical activity practices.

Various social factors, including socioeconomic factors (income, education) and interpersonal factors (social support, marital status) were also identified. Lastly, biological factors incorporating exercise capacity or physical fitness, walking performance, strength or power and range of motion were shown to be associated with lower disability/higher function.

Conclusion:

These findings highlight the factors that are protective against chronic musculoskeletal pain which could underpin strengths-based assessment and management approaches to pain care.

Key practice points:

- A range of biopsychosocial factors associated with lower pain-related disability, or improved physical function in adults with chronic musculoskeletal pain are reported in the literature
- Specific focus on these factors may promote positive outcomes.

Non-pharmacological management of Parkinson's disease: A systematic review of allied health clinical practice guidelines

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ePoster Session - Friday Screen 3, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim:

Parkinson's disease (PD) is the fastest growing neurodegenerative condition worldwide. The primary aim was to critically appraise the content and quality of higher-quality non-pharmacological clinical practice guidelines (CPGs) for management of people with PD.

Design:

Systematic Review

Method:

CPGs were identified through databases and hand searching. Quality assessment was completed using the AGREE GRS-II and AGREE REX instruments. Recommendations from higher-quality CPGs were synthesised and underwent GRADE-CERQual assessment to determine confidence.

Results:

Database searches yielded 29 guidelines. Nine CPGs were deemed to be of higher quality containing a total of 114 recommendations. of the 40 GRADE-CERQual summary statements, 13 scored "moderate confidence", 26 scored "low confidence" and one scored "very low confidence". Physiotherapy (cueing, dual tasking, exercise), occupational therapy (handwriting, upper limb exercises, driving) and speech pathology (dysphagia, dysphonia) interventions are recommended with moderate confidence.

Conclusion:

Higher-quality CPG recommendations showed moderate confidence for physiotherapy, occupational therapy and speech pathology interventions. Other recommendations lacked adequacy and coherence. Future CPGs should include recommendations from all disciplines to allow readers from any profession access to evidence-based advice and aid in synthesis of findings between CPGs. Guidelines should also include

recommendations for each stage of PD and contain specific advice regarding intervention components and dosage, to aid implementation and therefore more equitable evidence-based care for people with PD worldwide.

Key practice points:

- Physiotherapy, occupational therapy and speech pathology interventions have moderate confidence
- Recommendations lacked specificity around intervention components and dosage
- Future guidelines need to include all disciplines and be targeted to PD stages

Increasing capacity whilst promoting student learning: feasibility of student-led Physiotherapy group intervention in acute stroke

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Aim: To assess the feasibility of a student-led physiotherapy group intervention on an acute stroke ward in an Australian tertiary hospital. Secondary aim is to assess implementation factors from the perspective of participants, students, and clinical staff.

Design: single-group pilot feasibility study.

Method: Under direct supervision of an experienced clinical educator, physiotherapy students on clinical placement provide daily 1-hour group therapy, in addition to usual care, to eligible and consenting participants diagnosed with a stroke. Sessions are led by up to four physiotherapy students, providing evidence-based and individually tailored exercises. Feasibility and implementation are assessed, guided by the Reach, Effectiveness, Adoption, Implementation and Maintenance (RE-AIM) framework. Usual care data is collected for benchmarking.

Results: Quantitative and qualitative outcomes include measures of reach, effectiveness, adoption, implementation and maintenance. Preliminary data indicates that to date 64% of eligible patients were recruited (n=19, mean (SD) 74.9 (11.2) years, 53% male), and 96% intervention delivery on scheduled days. Perceived barriers and facilitators to the group intervention will be explored through a focus group with participating students and a participant survey.

Conclusion: Preliminary analysis suggests feasibility of a student-led physiotherapy group intervention on an acute stroke ward, providing valuable insights into implementation factors from multiple perspectives.

Key practice points:

- Preliminary findings suggest that student-led group therapy sessions under clinical supervision are feasible and can be successfully integrated into acute stroke care.
- Ongoing evaluation of perceived barriers and facilitators is crucial for refining the implementation and ensuring sustainability of group interventions in this setting.

Incidence of postural alignment abnormality during unsupported walking following acquired brain injury

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Aim:

To determine whether the existing Postural Alignment and Dispersion score previously validated in sitting and standing, can be applied to walking in people with acquired brain injury, and quantify incidence of postural alignment abnormality.

Design:

Observational cohort study

Method:

Forty-two adults following acquired brain injury and 34 healthy controls underwent three-dimensional gait analysis. Outcome measures were the Postural Alignment and Dispersion Score (whole-body postural alignment), walking speed (m/s), lateral centre of mass displacement (dynamic postural control), and Gait Profile Score (walking quality). The cohort was dichotomised by walking speed into better and worse walking function. Outcome measures were evaluated for between-group differences (t-tests and Cohen's d effect size) and individual incidence of abnormality.

Results:

Adults with acquired brain injury had significantly higher Postural Alignment and Dispersion Scores compared to healthy controls ($p<0.05$; $ES>0.49$). On an individual level, postural alignment abnormality prevalence (affected 26.2%; unaffected 19.0%) was lower than the abnormality prevalence of the Gait Profile Score (affected 73.8%; unaffected 64.3%) and lateral centre of mass displacement (63.4%).

Conclusion:

Postural alignment was impaired during walking in people with Acquired Brain Injury, however, on an individual level, the abnormality prevalence was relatively low. Further research is required to determine the optimal method for measuring postural alignment during walking.

Key practice points:

- Postural alignment is abnormal in people with Acquired Brain Injury
- Normalisation of postural alignment may be an important factor for mobility restoration
- Objective measurement of postural alignment during walking remains difficult in research and clinical practice.

Balancing Recovery: Vestibular Disorders and Their Impact on Length of Stay in Older Inpatient Rehabilitation

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Aim: To determine the prevalence of vestibular impairment in older adults on a rehabilitation ward, according to head impulse test (HIT) results, and to assess the independent association of HIT abnormalities with rehabilitation outcomes.

Design: Prospective cohort study.

Method: One hundred-and-one inpatient rehabilitation individuals aged ≥60 years were assessed between January - April 2024. Outcome measures included HIT, presence of vestibular symptoms, dynamic visual acuity difference, and gait speed on a 10-meter walk test on admission (into rehabilitation) and discharge. Groups were divided into normal or abnormal HIT. The use of parametric and non-parametric tests was undertaken to analyse the results.

Results: Sample mean age was 82 (+/- 8.40 SD) years; 54% were female, and 58% demonstrated an abnormal HIT. Those with abnormal HIT responses were more likely to; be female ($p = 0.047$); report symptoms ($p = 0.003$); have an abnormal dynamic line difference ($p = 0.002$); slower gait speed on admission ($p = 0.026$). Those with a slower gait speed on admission correlated with an increased length of stay ($p = 0.035$).

Conclusion: More than half of older adult rehabilitation inpatients had vestibular dysfunction, reduced gait speed and increased length of stay. These findings suggest that early screening for vestibular impairment using the simple Head Impulse Test, measuring gait speed, and then implementing targeted vestibular therapy and rehabilitation may improve gait speed, and reduce length of stay.

Posture and working from home are associated with neck pain

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Aim: Neck pain is common, and frequently reported in individuals working from home. This study aimed to determine if self-reported posture and working from home are associated with neck pain.

Design: Online survey

Method: Adults aged 18-65 who worked ≥ 75% of working hours on a computer completed an online survey administered annually from 2020-2022. Multinomial logistic regression determined relationships between neck pain (neck pain, other musculoskeletal pain without neck pain, or no pain), self-reported body posture (categories based on validated illustrations), and work location (office desk at work vs any location at home), accounting for gender (female, male), sleep quality (good/average or poor), and survey year.

Results: Data from 1777 surveys were analysed. Posture was associated with neck pain (sitting with “trunk bent a little forward” vs “straight up-back against backrest”: OR 2.07; 95% CI 1.48 to 2.89; p<.001) even with adjustment for work location (home 3.32; 2.43 to 4.52), gender (female 5.49; 3.99 to 7.56), and sleep quality (poor 4.08; 2.32 to 7.18) each of which related to neck pain (p < .001).

Conclusion: Self-reported posture and working from home are associated with neck pain.

Key practice points

- Posture is problematic for many computer workers with neck pain, regardless of work setting.
- These findings support the use of ergonomic interventions for individuals working on computers, especially in remote or hybrid settings.
- Survey methods can identify potentially valuable information on posture.

Digital technology in physical examination teaching: Clinical educators' perspectives and current practices

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ePoster Session - Friday Screen 4, Halls HJ, October 24, 2025, 12:20 - 12:55

Background

Digital technologies are increasingly prevalent in clinical learning settings, yet little is known about how they influence the relationship between touch and the development of physical examination skills in health professional education. This study aimed to explore how clinical educators describe the role of digital technologies in teaching physical examination.

Method

A qualitative interpretive approach was used. Eighteen clinical educators from medicine, physiotherapy, midwifery, and nursing, in various locations around Australia, participated in in-depth interviews, sharing their perspectives and current teaching practices related to physical examination. Diverse representation was desirable to bring a wide range of perspectives, experiences, and insights, leading to a more comprehensive and inclusive understanding of current teaching practices across professions. In this study, reflexive thematic analysis (RTA) was used to understand and interpret the clinical educator interview data deeply.

Results

Three key themes emerged from the analysis: contrasting views on the use of digital technologies in physical examination teaching, the incorporation of digital tools into teaching practices, and the perceived invisibility of these technologies within physical examination instruction.

Conclusion

While digital technologies are now deeply embedded in physical examination teaching, clinical educators' perceptions have not always kept pace with these changes. This misalignment presents an opportunity for educators to reconsider their assumptions and become more attuned to the evolving relationship between traditional hands-on skills and digital tools in clinical education.

Photobiomodulation reduces fatigue, depression, and pain in young people with inflammatory bowel disease

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ePoster Session - Friday Screen 4, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim:

To determine whether a 10-week protocol of weekly photobiomodulation improves intractable extra-intestinal symptoms of inflammatory bowel disease.

Design:

A prospective, single-arm feasibility study where participants acted as their own controls.

Method:

The study was powered to detect a statistically significant difference ($\alpha \leq 0.05$) in fatigue scores, measured using the FACIT-Fatigue scale.

Twenty-six participants (18–35 years) from a tertiary hospital underwent assessment at baseline, after 10 weeks of no-treatment observation, after 10 weeks of once-weekly photobiomodulation, and after 10 weeks of follow-up.

Outcome measures included fatigue (FACIT-Fatigue), depression (DASS-21), and pain scores (numeric rating scale). Photobiomodulation: 904 nm laser, 700 Hz, 720 mW applied to quadriceps and abdomen (total energy/application: 990.9 J).

Pre- and post-intervention differences were analysed using two-tailed paired sample t-tests with a T(df:25) distribution.

Results:

Fatigue improved significantly from pre-intervention ($M = 19.2$, $SD = 6.1$) to post-intervention ($M = 33.4$, $SD = 7$), $t(25) = 9.3$, $p < .001$, with a large effect size (Cohen's $d = 1.83$). Depression ($p < .001$) and pain scores ($p < .001$) also improved significantly.

Conclusion:

The established Minimum Clinically Important Difference for the FACIT-Fatigue scale (+4 points) confirms the large effect size observed for fatigue improvement in this study. Participant-reported symptoms of depression and pain also improved significantly.

Key practice points:

- Photobiomodulation improved fatigue, depression, and pain in inflammatory bowel disease.
- Physiotherapists could offer photobiomodulation for symptom management for this condition.
- A larger sham-controlled trial is warranted.

Shifting perspectives: how physiotherapy placements inspire a new view on rural practice

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Aim:

To describe strategies that enhance students' rural placement experiences and improve their receptiveness to working rurally.

Design:

A CIPP analysis evaluated the initiative through placement numbers, student feedback, and insights from university and local stakeholders.

Method:

In response to student concerns about placements in rural towns, the University of Newcastle's Department of Rural Health launched support and marketing initiatives, including rural taster experiences, promotional videos, and a social media campaign. They also enhanced local pastoral care, education, and financial support for students. This paper evaluates these initiatives and their outcomes.

Results:

Context: a positive yet realistic approach toward rural health inequities and social challenges was undertaken while emphasising the benefits of rural placements and practice.

Input: the Department of Rural Health's local knowledge, staff and resources were positioned to be a driver in shaping students' perceptions before and during placement.

Process: enhancements included interprofessional education, rural experiences, clinical tutorials, financial support, quality accommodation, and pastoral care.

Product: to date, following these placements, 94% of students have indicated a positive intent towards rural practice, including 44% who changed from a negative intent prior to placement.

Conclusion:

Support structures in rural areas enhance students' interest in rural careers. Future research should examine if these initiatives lead to long-term retention of rural physiotherapists.

Key practice points:

- There is a need for positivity about undertaking student placement in rural areas.
- It is critical to engage students and address concerns before placement.
- It is also essential to foster positive placement experiences locally.

The changing shape of support physiotherapy students receive prior to and during tertiary study

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ePoster Session - Friday Screen 4, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim:

To identify support influencing individuals' engagement in physiotherapy tertiary study. What types of support influence individuals' engagement in physiotherapy tertiary study?

Design:

A retrospective abductive qualitative study design using Grounded Theory. Informants are able to describe the support they received.

Methods:

Retrospective semi-structured interviews with nine physiotherapists and 15 physiotherapy students subjected to Ground Theory analysis. Participants were selected from a south-east Queensland University.

Results:

When entering physiotherapy study, individuals rely on support received from their parents in a standby approach where parents are used as a sounding board. Once students enter physiotherapy study, the support received during this time shifts towards their physiotherapy student colleagues. Peer support provided three distinct levels of advice and support, namely empathy, content support and social support. Parents, friends, university lecturers, and clinical educators provided support, but the level of support varied for a lot of students.

Conclusion:

Individuals relied on their parents to assist in their decision-making from high school to tertiary education. The shift to peer support may be because students are in close proximity which builds cohesion and collegiality. The variation in support provided by university lecturers and clinical educators may be due to the students' perception of

their ability to discuss issues with these groups. This may come down to the perceived lack of openness or the judgement they may receive.

Key practice points:

- Peer support is a critical component to improve study outcomes.
- University lecturers and clinical educators need to provide an open, judgement free pathway for communication.

What influences physiotherapists' use of labels for non-specific low back pain? A qualitative study

Joshua Zadro[1], Daniel Abouzeid[1], Giovanni Ferreira[1], Chris Han[1], David Anderson[1], Hosam Alzahrani[2], Chris Maher[1]

[1]University of Sydney, Camperdown, Australia, [2]Taif University, Saudi Arabia

ePoster Session - Friday Screen 4, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim: To explore what influences physiotherapists' use of diagnostic labels for people with non-specific low back pain (LBP).

Design: Qualitative study with semi-structured interviews.

Methods: We recruited 14 currently practicing physiotherapists who had treated at least one patient with LBP in the previous 6 months. Demographic and professional characteristics were used to purposively sample participants. One-on-one semi-structured interviews explored physiotherapists' views, attitudes, beliefs and approach to diagnostic labelling for LBP, via open-ended questions and vignettes. Interviews were analysed using thematic analysis.

Results: Key themes and sub-themes reflected the role of three key drivers in choice of labels for LBP: the patient, the physiotherapist, and existing guidelines and evidence. The main themes included 'influence of patient-specific factors and the individuality of LBP', 'effect of a physiotherapist's own perspectives, clinical reasoning and experience' and 'the role of evidence and guidelines'.

Conclusion: When choosing diagnostic labels for LBP, physiotherapists are influenced by patient-specific factors, their own professional practice perspectives, and to a lesser degree, existing guidelines and evidence.

Key practice points:

- There is variation in how physiotherapists communicate diagnosis to people with LBP (e.g. some use non-specific labels, others use structural labels)
- Our findings could inform the development of education strategies to improve the appropriate use of diagnostic labels among physiotherapists.
- Appropriate labels may include 'lumbar sprain' and 'non-specific LBP', while labels such as 'arthritis', 'degeneration' and 'disc bulge' should be avoided

Impact of mobilisation dosage in critically ill patients with diabetes: Secondary analysis of PREDICT (PREDICT-DIA)

Ashlea Hills[1], Doctor Michelle Paton[1,2], Natalie Linke[2], Jennifer Liacos[3], Carol Hodgson[2,3]

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ePoster Session - Friday Screen 5, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim: Recent evidence has shown harm when performing higher levels of mobilisation for critically ill patients with diabetes, hence this study aimed to assess the association of mobilisation frequency and intensity performed in ICU on outcomes for this cohort.

Design: Post-hoc secondary analysis.

Methods: Patients ventilated >24hrs from three Victorian ICUs in the PREDICT study (August 2017–January 2019) were included. Mobilisation frequency and intensity (via the ICU Mobility Scale [IMS]) were extracted from medical records. Disability was assessed using the 12-item World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0) at six months with those that died assigned worst-case imputation (WHODAS 2.0 100%).

Results: of 713 patients (mean age 56.1±16.5 years; 63.6% male), 215 (30.2%) had diabetes. The patients with diabetes had slightly higher illness severity (APACHE 69 [55-92] vs 64 [45-86.25]) and longer ICU stay (6.74 [3.64-12.37] days vs 5.85 [3.38-11.15). Patients with diabetes mobilised more frequently (once every 2 days of ICU admission vs. once every 3 days), with more patients sitting out of bed prior to ICU discharge (59.1% vs 51.2%). Death and severe disability (WHODAS 2.0 >50%) at six months was slightly higher in the patients with diabetes (29.8% vs 27.5%).

Conclusion: Although patients with diabetes achieved more mobility in ICU, this did not greatly influence the rate of death and severe disability at six months, although there may be confounders.

Key practice points:

- Early mobilisation of critically ill patients with diabetes did not worsen outcomes. High variability suggests a need for tailored rehabilitation.

Sandy solutions: Physio- and occupational-therapy focus group insights on beach-based therapy for people with disability

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ePoster Session - Friday Screen 5, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim:

To explore how the beach could be used as a platform to implement therapeutic interventions for people with disability, through the perspectives and experiences of physiotherapists and occupational therapists.

Design:

Explorative qualitative design using focus groups.

Method:

Five focus groups were convened, audio recorded, fully transcribed and analysed using Braum and Clarke's thematic analysis to deductively derive key themes.

Results:

A total of 34 physiotherapists and occupational therapists participated in one of five focus groups. Participants provided deep insights into the complexity of delivering therapy in beach environments. Participants agreed that the beach offers substantial health and wellbeing benefits but identified several practical challenges requiring attention. Five major themes related to beach-based healthcare interventions were identified: (1) prescription of therapeutic interventions, (2) outcome measures and benefits, (3) barriers and facilitators, (4) safety and risk management, and (5) stakeholders and support systems.

Conclusion:

Beach-based therapy is widely accepted as a valuable healthcare intervention with significant health and wellbeing benefits. However, further education, funding, and systemic support are required to enable safe and sustainable implementation. Study findings provide an important evidence base for developing beach-based interventions and future research.

Key practice points:

- The beach is recognised as a beneficial healthcare setting, but practical challenges limit its routine use.
- Increased education, resources, and high-quality evidence are needed to support the safe and effective implementation of beach-based physiotherapy and occupational therapy.

Which healthcare professionals provide the best person-centred care for people with multiple sclerosis

Maya G Panisset[1]

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ePoster Session - Friday Screen 5, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim:
To understand healthcare experience of Australians living with multiple sclerosis, surrounding person-centred care and roles played by healthcare professionals.

Methods: an online survey

Results: 186/225 consented, 141/186 completed the survey.

Demographics: age 50+/-13; 76.4% female, 3% non-binary; relapsing-remitting 77.8%, secondary progressive 7.6%, primary 8.3%; NDIS participant 44.4%; metropolitan residence 65.3%, inner regional 26.4%, outer/remote 11.1%;

Person you feel most understood by: healthcare professional 17.4%, peer-support 13.2%, family/friend/other 61.9%, nobody 7.6%.

Has a regular: GP 60.4%; physiotherapist or OT 60.4%. Attends MS clinic: 33.3% yes, 63.9% no.

Feels often or always well-understood by: GP 64.6%; Neurologist 68.8%; MS nurse 46.2% (36.4% not applicable); physiotherapist/osteopath 50.4% (31.5% n/a); OT 27.3% (58.7% n/a); EP 32.9% (58.0% n/a); psychologist 34.1% (52.5% n/a).

Feels never or rarely understood by: GP 15.6%; Neurologist 8.4%; MS nurse 9.8%; physiotherapist/osteopath 2.8%; OT 1.4%; EP 2.1%; Psychologist 5.5%.

People who felt less understood by physiotherapists reported non-significantly higher scores on the Modified Fatigue Impact Scale (49.8 versus 45.1). Sub-item analysis showed significant differences on items relating to motivation for social ($p = 0.0007$) or physical effort ($p = 0.016$), and leaving the home ($p = 0.032$).

Conclusions:

Most people with MS have a regular physiotherapist, and feel well understood by them.

Those feeling less understood by their physiotherapist reported difficulty specifically with motivation for social or physical effort and leaving the home.

Key practice points:

- Physiotherapists treating people with fatigue should take time and effort to listen to patients' experiences and educate themselves about aspects of MS-related fatigue.

Advanced practice Physiotherapy in Victoria's planned surgery reform

Caitlin Farmer[1], Emily Allen[1], Alisha da Silva[1], Alana Jacob[1]
[1]*Royal Melbourne Hospital, Parkville, Australia*

ePoster Session - Friday Screen 5, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim:

To investigate a) the impact of scaling up existing advanced practice physiotherapy services and b) the effect of introducing an in-house management arm to provide evidence-based physiotherapy care.

Design:

Clinical audit

Method:

In late 2022, Royal Melbourne Hospital received Planned Surgery Reform funding to increase existing Advanced Practice Physiotherapy clinics and provide a new management arm. Appointment data were collected directly from electronic medical records from Jan 2021 to Dec 2024 and analysed in Excel using descriptive statistics.

Results:

Advanced Practice completed appointments increased from a median (IQR) of 71 (60, 83) per month to 120 (106, 141) appointments pre- and post-funding implementation respectively. Waiting time to first appointment reduced from median (IQR) of 102 (55,147) to 69 (36, 105) days.

Management arm referrals were made for 20% (n = 483) of patients, ranging from 7% (n = 19) in Neurosurgery screening to 40% (n = 277) of Osteoarthritis Hip and Knee Service patients. Overall there were 3,961 completed appointments, with surgical referral for 5% (n = 210), however this varied between clinicians (range 3-13%).

Waiting times for all patients attending outpatient physiotherapy improved from median (IQR) of 14 (0, 25) to 1 (0,14) days from referral to first appointment.

Conclusion:

Advanced Practice clinic expansion with concurrent management arm utilisation resulted in decreased waiting times for all physiotherapy outpatient services.

Key practice points:

- Advanced Practice Physiotherapy effectively manages most patients referred for specialist review for musculoskeletal conditions
- A management arm is useful and does not impact other physiotherapy outpatients

After the ED, what are the needs of patients with musculoskeletal conditions? A cross-sectional exploration.

Linda Spencer[1,2], Patricia Slapp[2], Nic Saraceni[1,2], Rob Waller[2], Karen Richards[2], Anne Smith[2], Piers Truter[1,3,4]

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ePoster Session - Friday Screen 5, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim:

To explore the rate, mode, and reasons for re-presentations for emergency department (ED) patients with musculoskeletal (MSK) conditions. Then explore patient characteristics associated with re-presentation.

Design:

Cross-sectional study with multivariable analysis.

Method:

Re-presentation patterns (scheduled and unscheduled) for patients with MSK conditions presenting to, and diverted from, the study ED in 2023 were audited. Situated in a secondary hospital in Perth, West Australia, this ED operates an innovative diversion pathway for patients with MSK conditions.

Results:

During 2023, 972 patients with MSK conditions were diverted and provided research consent. of these,143 (14.3%) represented. There were 65 scheduled, and 78 unscheduled, re-presentations. Clinician concern and planned additional support for the patient were the most common reasons for scheduled re-presentation (n=31, 47.7%).

Follow-up enquiries (n=31, 39.7%) and patient concern for symptoms (n=25, 32.1%) explained most unscheduled visits. Unscheduled re-presentation occurred more via telehealth (n=62, 79.5%) than in-person (n=16, 20.5%).

Older age, high pain severity, and lower limb injury were significantly associated with increased odds of re-presentation.

Conclusion:

ED patients with MSK conditions may have unmet care needs post ED discharge. Higher pain severity, older age, and a lower limb injury were independently associated with significantly increased odds of requiring additional care.

Key practice points:

- Supportive outpatient and telehealth discharge options could have value for ED patients with MSK conditions on public hospital care pathways.
- People with MSK conditions presenting to ED who are older, have higher pain levels, or a lower limb injury may be more likely to re-present.

Orthopaedic surgeons' perceptions regarding advanced practice physiotherapists in orthopaedic clinics: A qualitative study

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ePoster Session - Friday Screen 5, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim:

Orthopaedic advanced practice physiotherapists have existed >30-years. However, we lack understanding of orthopaedic consultants' perceptions which impact service implementation. This study explored consultants' perceptions regarding advanced practice physiotherapists.

Design:

Qualitative study.

Methods:

The study employed a qualitative approach with data collected from 13 consultants (Royal Perth Hospital, spinal / peripheral) via individual interviews, analysed using reflexive thematic analysis.

Results:

Five themes, characterised by polarised views:

"Value-adding or trying to gain power" Some consultants were highly supportive of advanced practice physiotherapists, perceiving integration and value-adding to the department. Others were unsure of their role or believe the role an attempt to gain power.

"To triage or not to triage" encapsulated views about physiotherapists practicing similarly to registrars to opinions that physiotherapists should only offer physiotherapy.

"Workload" Some consultants thought advanced practice physiotherapists were ineffective, did not reduce waiting lists, increased demand on clinics and impacted registrars' training. Others valued physiotherapists longer biopsychosocial assessments and non-surgical advice.

"Barriers" included departmental inertia instigating new roles, variance regarding appropriate patient selection, and funding and perceptual issues regarding advanced practice (investigations, general practitioner / patient beliefs).

"Well educated?" revealed few consultants knew the education of advanced scope physiotherapists but perceived excellent basic science knowledge and assessment skills and appropriate referral (investigations / surgical review). Further broadening scope of practice was mooted.

Conclusion:

Orthopaedic consultant perceptions of advanced practice physiotherapists' role, scope, workload and education vary considerably.

Key practice points:

- Orthopaedic departments should collaborate to discuss and define advanced practice roles to facilitate service implementation.

Non-pharmacological therapies to relieve dyspnoea in the intensive care unit: Patient and clinician perspectives

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ePoster Session - Friday Screen 6, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim:

To explore non-pharmacological management of dyspnoea in the intensive care unit.

Design:

Descriptive qualitative

Methods:

An electronic survey regarding the management of dyspnoea was distributed nationally to intensive care clinicians. Survey questions focused on the use of non-pharmacological dyspnoea strategies for patients receiving ventilatory support and clinician's confidence implementing such strategies. Data were analysed descriptively.

Concurrently, patients at a single metropolitan adult hospital were screened for those who experienced dyspnoea during their Intensive care admission. Eligible patients were invited to participate in a semi-structured recorded interview and transcribed data was analysed with inductive qualitative content analysis.

Results:

Survey respondents (n=140 (8%)) reported positioning, high flow therapy, non-invasive ventilation and sitting out of bed (95.6%, 80%, 71.1%, 70%) as top non-pharmacological strategies utilised. Opioids and sedation were considered more effective strategies than cool air and fans in invasive ventilation (50% vs 26.8%).

Simultaneously 20 patient interviews were conducted, mean= 1.6 days post discharge, (female n=11, age=mean 63.4[SD 17.4] years, mean intensive care days 5.8[4.3]).

Factors relieving dyspnoea focused on practical non-pharmacological strategies enacted by staff, self and family including calm, empathic communication and ventilation.

Conclusion:

Intensive care clinicians and patients identified similar non-pharmacological strategies for relieving dyspnoea, with themes emphasising the need for empathic communication and collaborative, simple interventions based on patient experiences.

Key practice points:

- Small, non-pharmacological adjustments to care contribute meaningful relief of dyspnoea.
- Patients have an improved experience when clinician's show empathy, collaborate and build trust.

Experiences of respiratory symptoms in people with chronic diseases: a qualitative systematic review and meta-aggregation.

Juliana De Mendonca[1], Macey Barratt[1], Allyson Flynn[1], Elisabeth Preston[1], Bernie Bissett[1]

[1]*University of Canberra, Canberra, Australia*

ePoster Session - Friday Screen 6, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim: To describe the experiences of people living with respiratory symptoms due to chronic diseases, and the impact of these problems on daily life. Methods: A qualitative systematic review followed Joanna Briggs Institute meta-aggregation and has been reported according to PRISMA guidelines. Six electronic databases were searched against the pre-determined inclusion criteria. Primary qualitative findings with illustrative participants quotes were extracted and synthesised to inform overall synthesised findings.

Results: Fifty studies were identified that met the inclusion criteria. Three major themes were derived from the data: (1) The emotional burden of respiratory symptoms; (2) The functional and physical limitations of daily life; (3) Breathlessness impacts the meaning and quality people place on life.

Conclusion: Across all chronic diseases, respiratory symptoms were multidimensional, having a detrimental impact on physical functioning, emotional wellbeing, social participation and perceived quality of life. A holistic approach to managing respiratory symptoms, which incorporates physical, psychological, and quality of life measures, could enable the community and healthcare professionals to improve intervention programs and inform future clinical recommendations.

Key practice points:

- a deeper understanding of the impact of respiratory symptoms, could help healthcare professionals optimise rehabilitation approaches, support more person-centred care, and inform future clinical recommendations.

Improvement in health outcomes following one-day a week pulmonary rehabilitation in regional New South Wales

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ePoster Session - Friday Screen 6, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim:

To evaluate the impact of a once-weekly pulmonary rehabilitation (PR) program on the physical and mental health outcomes of individuals with respiratory diseases in a regional setting.

Design:

This retrospective study involved participants who attended one-hour per week PR for six to eight weeks at a medical centre in NSW, between January 2021 and December 2024.

Method:

Eligible participants completed pre- and post-rehabilitation assessments; heart rate, blood pressure, oxygen saturation, waist circumference, handgrip strength (HGS), 5-sit-to-stand test (5-STS), the six-minute walk test (6MWT) and the patient health questionnaire-9 (PHQ-9). Paired t-tests were used to analyse pre vs post changes, while one-way ANOVA assessed the influence of enrolment year on these outcomes.

Results:

Ninety-five participants (62.1% female, mean age 68±14 years) were included. Statistically significant improvements were observed post-rehabilitation in PHQ-9 (8.2 vs 6.4, $p < 0.001$), 5-STS (18.1 vs 13.8 secs, $p < 0.001$), 6MWT (307.3 vs 340.9 m, $p < 0.001$), HGS (27.7 vs 28.7 kg, $p = 0.007$) and waist circumference (104.0 vs 103.3 cm, $p = 0.02$). The enrolment year did not significantly influence these changes.

Conclusion:

Despite the limited structure of once-weekly PR program, participants demonstrated significant improvements in physical and mental health outcomes. These findings support the continued implementation and potential expansion of such programs in regional settings.

Key practice points:

- Attending even a once-weekly PR program can yield positive outcomes for participants.
- Sustained funding and expansion of PR services could amplify health benefits for individuals with respiratory diseases in regional areas.

How does haemodynamics change during physiotherapy-led breathing exercises? A feasibility protocol using PhysioFlow®

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ePoster Session - Friday Screen 6, Halls HJ, October 24, 2025, 12:20 - 12:55

Background:

Breathing exercises play a vital role in physiotherapy, particularly in prehabilitation and managing postoperative pulmonary complications. Haemodynamic adaptation during respiratory exercises is crucial for maintaining cardiovascular stability and ensuring the safe prescription and progression of exercise.

However, the underlying mechanisms of this response in healthy individuals remain unclear. This study aims to evaluate the feasibility of using PhysioFlow®, a non-invasive impedance cardiography system, to assess haemodynamic adaptations during deep breathing exercises.

Design:

Protocol for feasibility study

Methods:

A feasibility protocol will assess various haemodynamic responses during breathing exercises in healthy adults using the non-invasive cardiac output measurement technique, PhysioFlow® (PF-05; Manatec Biomedical; Macheren, France).

Participants will undergo a series of standardised breathing exercises to evaluate the acceptability and usability of the system. Primary feasibility outcomes will include protocol compliance, signal integrity, and reliability of data acquisition.

Expected Results:

This study will determine the feasibility of integrating PhysioFlow® into respiratory exercise protocols and identify preliminary trends in haemodynamic responses in healthy adults. The findings will help inform future studies on cardiovascular-respiratory interactions across a range of conditions, including different levels of physical fitness, age groups, and potential cardiovascular risk factors.

Conclusion:

Understanding haemodynamic changes during respiratory exercise is essential, and using PhysioFlow® may enhance clinical applications and ensure the safe progression of breathing exercise prescriptions. This feasibility protocol lays the groundwork for exploring cardiovascular adaptations, with further research needed to investigate haemodynamic compensations in clinical populations, such as those with COPD, heart failure, or post-surgery recovery, to improve patient outcomes.

Improving endometriosis management: Evaluating an educational intervention to facilitate behaviour change amongst general practitioners

Sophie Alderslade[1,2], Robyn Brennen[1], Elise Fraser[1]

[1]The University of Melbourne, Melbourne, Australia, [2]Thrive Physio Plus, Highgate, Australia

ePoster Session - Friday Screen 6, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim: General practitioners play a critical role in timely diagnosis and multidisciplinary management of endometriosis, yet many lack knowledge of relevant endometriosis guidelines. This project aimed to evaluate the impact of an educational presentation on improving general practitioners' knowledge of guidelines and utilisation of Team Care Arrangements to support patients access to multidisciplinary care.

Design: Pre-post educational intervention study

Methods: General practitioners working in primary healthcare settings within 20 km of Adelaide were recruited. Kahoot polls were used to assess changes in knowledge regarding endometriosis diagnosis and management, before and after a one-hour educational presentation on Australian endometriosis guidelines. Referral rates to physiotherapy and use of Team Care Arrangements were tracked for three-months before and after the presentation to evaluate changes in clinical practice.

Results: Sixteen general practitioners from four clinics participated. Participant knowledge to diagnose and manage endometriosis increased and they expressed greater confidence in utilising Team Care Arrangements to facilitate multidisciplinary care. All participants found the session helpful, learnt new information, and indicated it would influence their future practice. Prior to the presentation 2/8 patients (25%) referred to physiotherapy with pelvic pain or endometriosis had Team Care Arrangement plans, improving to 6/11 (55%) after the presentation.

Conclusion: Targeted educational interventions can enhance general practitioners knowledge and promote multidisciplinary care for endometriosis.

Key clinical practice points:

- Physiotherapist-led education can facilitate increased knowledge of clinical guidelines for general practitioners and increase utilisation of Team Care Arrangements for patients with pelvic pain or endometriosis, improving patients access to multidisciplinary care.

Effects of a single dry needling session on range of motion in knee osteoarthritis

Physiotherapist Fatemeh Mirzaie Yazani[1], Sedighe Kahrizi[1]
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ePoster Session - Friday Screen 6, Halls HJ, October 24, 2025, 12:20 - 12:55

Aim: To investigate the impact of dry needling on improving knee range of motion (ROM) in individuals with knee osteoarthritis and to examine the correlation between knee ROM measurements in prone and wall squat positions.

Design: A pre-test/post-test study design assessing the effect of a single treatment session on knee ROM.

Method: Participants included twenty-two patients with knee osteoarthritis and restricted ROM referred for physiotherapy. Knee ROM was measured using a manual goniometer, photographic capture, and smartphone software in both prone and wall squat positions. Dry needling was applied to the quadriceps, gastrocnemius muscles, and surrounding knee tissues. Measurements of ROM were assessed before and after the dry needling intervention.

Results: The analysis showed a significant improvement in knee ROM post-treatment (ANOVA, $p < 0.001$). The improvement was consistent in both measurement positions, with a correlation coefficient of ($r = 0.59$, $p=0.00$) between prone and wall squat assessments. Moreover, manual goniometer measurements were strongly correlated with smartphone software measurements ($r = 0.73$, $p=0.00$).

Conclusion: A single session of dry needling effectively improves knee range of motion in patients with knee osteoarthritis. The wall squat is an accurate position for knee ROM assessment in patients with prone positioning limitations. Additionally, smartphone software can replace manual goniometer.

Key practice points:

- Dry needling provides immediate improvements in knee restricted ROM and is a cost-effective treatment.
- The wall squat position is suggested for assessing knee ROM in patients with difficulty in prone position.
- Smartphone photography improves clinical accessibility and documentations.

Mindfulness-based interventions improve sleep quality, perceived stress, and fatigue in people with chronic musculoskeletal pain

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[1]The University of Sydney, Australia, [2]Royal Melbourne Institute of Technology, Australia

ePoster Session - Saturday Screen 1, Halls HJ, October 25, 2025, 12:50 - 13:25

Aim: To investigate the effect of mindfulness-based interventions on sleep quality, fatigue, quality of life, and perceived and physiological stress in people with chronic musculoskeletal pain.

Design: Systematic review and meta-analysis of randomised controlled trials.

Methods: Eight databases were searched from inception until December 2023. Evidence was synthesised using standardised mean differences with 95% confidence intervals using random-effects models. Risk of bias was assessed using the Revised Cochrane risk of bias tool. GRADE was used to evaluate evidence certainty.

Results: Twenty-three trials were included, all with a high risk of bias. Mindfulness-based interventions reduced perceived stress (4 trials; SMD 1.20, 95% CI 0.37 to 2.04), fatigue (3 trials; SMD 0.51, 95% CI 0.06 to 0.97), and improved sleep quality (4 trials; SMD 0.46, 95% CI 0.06 to 0.85) compared to no intervention. No significant difference in sleep quality was found when comparing mindfulness-based interventions to cognitive behavioural therapy (2 trials; SMD 0.19, 95% CI -0.63 to 1.01). The effect of mindfulness-based interventions on quality of life compared to no intervention was unclear due to imprecision in the effect estimate (4 trials; SMD 0.33, 95% CI -0.62 to 1.29). Data on physiological stress were insufficient for meta-analysis.

Conclusion: Mindfulness-based interventions improved sleep quality, perceived stress, and fatigue compared to no intervention. The impact of mindfulness-based interventions on quality of life and physiological stress remains unclear.

Key practice points:

- Mindfulness-based interventions offer an option for the management of chronic musculoskeletal pain.

Registration: PROSPERO (CRD42023495032).

Development and evaluation of a trauma-informed approach to learning physical examination in physiotherapy curriculum

Jessica Lees[1], Free Coulston, Kim Allison, Rachel Toovey, Selina Parry, Catherine Granger, Kath Sellick, Megan Sharp, Felix Clayton, Nim Johnson

[1]*University of Melbourne, Carlton, Australia*

ePoster Session - Saturday Screen 1, Halls HJ, October 25, 2025, 12:50 - 13:25

Introduction

Peer physical examination (PPE) is a widely used teaching practice in physiotherapy courses. However, PPE can compromise student safety, particularly those who identify as LGBTQI+, have a history of trauma, or come from diverse cultural, religious, or disability backgrounds. A trauma-informed care (TIC) approach to PPE promotes inclusivity and reduces risk1. This project aimed to develop and implement a trauma-informed curriculum (Safer Spaces) for educators and students in physiotherapy.

Methods

An action research approach for taken where an initial review of TIC literature integrating the student perspective: surveys (n=28) and focus groups (n=9) with students were conducted to explore their priorities for TIC curriculum. Safer Spaces (Educators), followed by Safer Spaces (Students) were delivered (n=145) and evaluated using modified Determinants of Implementation Behavior Questionnaire (DIBQ).

Results

Survey data: All 11 TIC topics identified in the literature were rated as important by physiotherapy students. Thematic analysis of open-ended responses and focus group findings verified these concepts, and additionally identified fostering authentic consent, student autonomy, and tutor modelling of TIC as key priorities for students. Preliminary findings from the pilot DIBQ will be presented.

Discussion

Safer Spaces addresses student safety concerns, particularly for LGBTQI+ and culturally diverse students, aligning with growing support for trauma-informed approaches in teaching physical examination. The collaborative-design process, involving students and educators with lived experience, and the dual focus on educators and students, is innovative. This curriculum has now been embedded in the course to enhance student experiences of learning peer physical examination and improve patient outcomes.

Consumer perspectives of mind-body therapies for persistent pain post-stroke

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Aims: To explore the perspectives of stroke survivors with pain regarding mind-body therapies and physiotherapists providing such therapies.

Design: Semi-structured qualitative interviews.

Methods: Fifteen interviews with Australian stroke survivors with pain were recorded, transcribed and analysed using reflexive thematic analysis. Consolidated criteria for Reporting Qualitative research guidelines were followed.

Results: Meditation, mindfulness and yoga were the most commonly used mind-body therapies among consumers. Themes developed from consumers descriptions related to the use of mind-body therapies, preferences for physiotherapists to use and be trained in mind-body therapies, and pain-related and associated biopsychosocial benefits (e.g., reduced pain, changes in anxiety or depression, increased participation in other tasks) from mind-body therapy use. A lack of awareness/knowledge or current provision, cost and accessibility issues were common barriers, with access assisted via online and group options with networks or peer support.

Conclusions: People with pain after a stroke are interested in and are engaging with mind-body therapies and see physiotherapists as valuable, knowledgeable and credible health professionals who can provide such therapies. Increasing awareness among both consumers and healthcare professionals regarding the evidence-base for mind-body therapies for pain management after stroke is important. Consideration also needs to be given to addressing a range of barriers to therapy access and completion.

Key practice points:

- Consumers are interested in and are engaging with mind-body therapies after stroke. Including mind-body therapies in mainstream healthcare services such as physiotherapy would be welcomed by individuals with stroke.

The impact of strength changes on active function following botulinum neurotoxin-A: A systematic review.

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Aims:

To determine whether changes in muscle strength align with changes in active function after Botulinum Toxin-A injection in adults with spasticity.

Design:

Systematic review.

Methods:

The methodology and reporting followed PRISMA guidelines (Registration: CRD42022315241). Twenty studies in a recent systematic review reporting muscle strength pre- and post-Botulinum Toxin-A injection were screened for inclusion. Strength and outcomes related to active function, participation, or quality-of-life were extracted and analysed at short-, medium-, and long-term timeframes.

Results:

Seventeen studies met the inclusion criteria for assessing strength and active function, with four studies also evaluating participation and/or quality-of-life. The modified Downs and Black and PEDro scores indicated fair-to-good quality evidence. Predominantly, there was no change in strength or function following Botulinum Neurotoxin-A injection.

Eighty (29%) active function outcomes improved. In these 11 studies, 59 (74%) strength outcomes were unchanged. Eleven (14%) outcomes reported significant improvement in strength, and ten (13%) reported significant weakness. The early phase (i.e., < 6 weeks) post-injection found greater weakness in the lower-limb, with no associated change in function. In the upper-limb, no apparent change in strength or function was evident.

Significant heterogeneity in strength and active function outcome measures prevented meta-analyses.

Conclusions:

No clear relationship exists between changes in muscle strength and active function outcomes post-Botulinum Neurotoxin-A injections in adults with spasticity.

Key practice points:

- Predominantly, strength and active function remain unchanged following Botulinum Neurotoxin-A injections.
- Significant muscle weakness post-injection was uncommon, and when it did occur, it seemed unrelated to changes in active function.

Perspectives of people with Parkinson's on the impact of lower urinary tract symptoms

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Background: Lower urinary tract symptoms (LUTS) are a prevalent non-motor symptom (NMS), affecting 27-85% of individuals with Parkinson's disease (PwP). In healthy populations, the impact of LUTS is subjective and varies based on individual perception. The current qualitative study aimed to provide insight into how LUTS affect PwP from their own perspectives, as research on this topic is limited in people with Parkinson's

Purpose: To explore the impact of LUTS from the perspectives of PwP

Methods: Ten PwP and LUTS participated in a qualitative study using one-to-one semi-structured interviews conducted over zoom video-calls.

Results: Two themes emerged from the data: 1) Perception of symptoms, and 2) Actions taken. Themes were further stratified into five subthemes and twelve categories. Perception of symptoms encompassed the undesired experiences, knowledge of LUTS relation to PD, and living in a new normal. Actions Taken comprised self-devised management strategies to cope, with or without external support. Interactions of control and location influenced how themes affected the overall impact of LUTS in participants. Broadly, the impact of LUTS in PwP depended on their perception of symptoms and the actions taken in response, where control and location could change how these themes influenced overall impact.

Conclusions: Perceived impact of LUTS in PwP is dependent on the personal dichotomy between perception of symptoms and actions taken in response. Practitioners should be aware of their time to discuss LUTS and highlight that they deter from healthy bladder behaviour, which may initiate a supported self-management plan.

Is lifting technique related to pain and disability in people with lifting-related low back pain?

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Aim:

To examine the within-person relationship between changes in lifting technique and changes in pain and disability in people with lifting-related chronic low back pain (LBP).

Design:

Replicated single-case experimental design.

Method:

Five people with chronic LBP aggravated by lifting completed repeated measurements on their lifting technique, pain, and disability during baseline (4-6 weeks), intervention (12 weeks) and follow-up periods (3 months).

They received up to 10 sessions of Cognitive Functional Therapy (CFT) during the intervention period. Wearable sensors measured the range of motion and velocity of the trunk and knees during a 20-repetition lift task. Pain and disability levels were collected via online questionnaires. Cross-correlation analyses estimated within-person relationships.

Results:

All five participants changed their lifting technique throughout the study, but the timing and direction of change varied. Changes in lifting technique were often (18/25 relationships, 72%) related to changes in disability and sometimes (13/25 relationships, 52%) in pain.

Where relationships were observed, improvements in pain and disability were usually (27/31 relationships, 87%) related to a shift from a more squat-like technique to a more stoop-like technique and faster lifting speed.

Conclusion:

Within-person changes in lifting technique varied among people with lifting-related chronic LBP who underwent CFT. Transitioning from a more squat-like lifting technique towards a more stoop-like lifting technique usually relates to clinical improvement.

Key practice points:

- Changes in individual-specific lifting techniques often relate to reduced pain and disability.
- Clinical improvements were usually related to greater and faster trunk flexion, less and slower knee bending, and quicker lifting.

Moderators of exercise and manual therapy for people with knee and hip osteoarthritis

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Objective: to explore potential moderators of manual and exercise therapy interventions in pain and function scores in individuals with knee and/or hip osteoarthritis.

Design: This is a secondary analysis of data from the MOA trial that compared the clinical effectiveness of manual therapy and/or exercise therapy in addition to usual care for patients with hip and/or knee osteoarthritis.

Methods: 206 participants enrolled in the MOA trial were analysed. The primary outcome measure was the WOMAC composite score after one year. The secondary outcome measures were WOMAC pain and function scores. We used linear regression models for assessing whether the effect of randomized interventions on pain and function were moderated by body mass index, pain self-efficacy, quadriceps strength, mental health, education.

Results: Body mass index moderated the treatment effect of manual therapy interventions on WOMAC composite score (β: -4.1, 95%CI: -6.6 to -1.7), WOMAC function score (β: -3.3, 95%CI = -5.1 to -1.6) and WOMAC pain scores (β: -0.6, 95%CI -1.3 to 0.0), where a negative β reflects an improvement in outcome associated with each one unit increase in body mass index. Mental health moderated (β: 16.8, 95%CI: 2.2 to 31.4) of manual therapy interventions. No other moderation effect was identified.

Conclusions: Our findings suggest manual therapy may prove to be a more suitable treatment for people with higher body mass index and should undergo further trials. Future trials should continue to explore which variables moderate treatment effects when testing effectiveness of non-surgical interventions in patients with hip or knee osteoarthritis.

A kinematically accurate model of the cervical spine reproducible on a domestic 3D printer

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Aim:

Spinal movements can be difficult for students and patients to understand. Commonly available models are generally much smaller than the average Australian and inadequately convey the complexity of segmental contributions. The aim of this study is to describe a 3D printable model which accurately represents the segmental, combined, and coupled movements as well as movements occurring with special tests and treatments of the cervical spine.

Design: Descriptive

Method: A

n open-source cervical spine model from CT images was scaled to the size of an average Australian. Human segmental kinematics and rotule à doigt joints which accurately represent the patterns of segmental movements occurring across a range of species were considered in the design process. The interdependence between the axes of movement (e.g. movement around one axis differing depending on the extent of movement around the other axis), was evaluated subjectively since this is not quantified in the literature. Multiple prototypes were made and tested to ensure both the individual motion segments and regional movement adequately represented movements in vivo.

Results:

Printable two-axis joints producing movement that is qualitatively consistent with patterns of coupled movements during active movements and passive assessments including special tests such as Spurling's and the flexion/rotation test.

Conclusion: A 3D printable model of the cervical spine is presented whose movements are consistent with in vivo movement.

Key practice points:

- The model can assist both students and patients to better understand cervical kinematics. Future work will incorporate realistic stiffness into a model.

Feasibility of an individualised exercise program for persistent low back pain and motor control impairments

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Aim:

Evaluate an individualised exercise program's feasibility for people with persistent low back pain and lateral abdominal muscle impairments.

Design:

Assessment of effectiveness (randomised controlled trial) and acceptability and responsiveness (mixed methods).

Method:

Fifty people with persistent low back pain and 'suboptimal' lateral abdominal muscle contraction completed a 12-week intervention incorporating motor control exercise, graded activity, and pain science education. Patient exercise preferences were incorporated for the experimental group, but not in the control group. Quantitative and qualitative outcomes measured participant retention, exercise compliance, lateral abdominal muscle contraction, physical activity, pain, function, disability and acceptability. Multivariate regressions and analysis of qualitative data explored predictors of participant responsiveness.

Results:

Participants in both groups achieved significant improvements in disability, pain, function, physical activity and some measures of lateral abdominal muscle contraction. Patient-preferred exercise yielded significantly greater improvements in function and physical activity. Participants considered the intervention acceptable due to individualization, developing therapeutic rapport, education and program design factors. Factors such as engagement with, and optimism for the program influenced participant responsiveness.

Conclusion:

The program was considered feasible and, with modifications, amenable to a future fully-powered trial. Patient-preferred exercise may be associated with increased function and physical activity.

Key practice points:

- A novel, evidence-based low back pain exercise program was acceptable to patients while achieving significant improvements in self-report outcome measures.
- Participants in the experimental group demonstrated greater improvements in some outcomes at the three-month follow-up.
- Understanding factors influencing participant responsiveness may improve treatment allocation for future trials.

The effect of non-invasive brain stimulation and exercise on gait, for people with multiple sclerosis

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Aim: To evaluate the effect of non-invasive brain stimulation plus exercise on gait for people with multiple sclerosis.

Design: Systematic Review

Method: A systematic search of CINAHL, Emcare, Medline, PsycINFO, and SCOPUS was conducted in accordance with PRISMA guidelines. Studies were included if non-invasive brain stimulation (NIBS) plus exercise was compared to sham NIBS plus exercise or exercise alone, using valid outcome measures of gait (e.g., 10-Metre Walk Test). Data on demographics, procedures, intervention parameters and outcomes were extracted. Quality was assessed using the McMasters Critical Review Form.

Results: Eleven high-to-moderate quality studies met the inclusion criteria. Most used anodal transcranial direct current stimulation (tDCS) targeting the motor cortex; others used cerebellar tDCS or transcranial magnetic stimulation. Exercises included aerobic, balance or mixed programs. Six studies showed a significant between-group difference favouring NIBS with exercise, four showed no difference, and one showed mixed results. Gait improvements were observed from 0-6 months when 10 or more sessions of tDCS targeting the motor cortex were combined with lower limb exercise.

Conclusion: NIBS combined with exercise can enhance gait outcomes for people with multiple sclerosis. Optimal effects occur with tDCS targeting the motor cortex plus lower limb exercise, for 10 or more sessions. Future trials should examine long-term practicality (e.g., functional impact, cost).

Key points:

- NIBS combined with exercise may improve gait for people with multiple sclerosis.
- Most consistent gains occurred with 10 or more sessions of tDCS to the motor cortex.
- Exercise alone was beneficial; NIBS furthered improvements in most cases.

Rapid stratified telehealth for patients with low back pain: feasibility and pilot randomised controlled trial

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Aim:

Establish the feasibility of delivering and evaluating Rapid Stratified Telehealth to reduce waiting times for people with low back pain (LBP) seeking care in the public health system.

Design:

Feasibility and pilot randomised controlled trial (RCT)

Methods:

People with LBP newly referred from primary care to a multi-disciplinary outpatient clinic at Royal Prince Alfred Hospital were randomised. Rapid Stratified Rapid Stratified Telehealth matched the mode and type of care to participants' risk of developing persistent disabling pain (Keele STarT MSK Tool) and presence of potential radiculopathy. The intervention involved those at low risk receiving a single phone call and those at medium or high risk being offered physiotherapy via telehealth with App based exercises. High risk participants also received online pain education. Those with potential radiculopathy received clinic-based appointment as per Usual Care.

Results:

Forty people with LBP were randomised to Telehealth (n=26) or Usual Care (n=14). The consent rate was 30% and recruitment rate was 0.4 participants per week. Participant waiting time was 13 days less in the intervention vs. control with largely similar clinical outcomes.

Conclusion:

This study provides important information to guide modifications to our Rapid Stratified Telehealth model and planning of a large multisite RCT across outpatient hospital settings that manage a variety of musculoskeletal conditions.

Key practice points:

- Rapid Stratified Telehealth was feasible to evaluate in a larger adequately powered RCT
- Rapid Stratified Telehealth reduced waiting times by 13 days vs. Usual Care
- Important modifications were made to refine the model

Process evaluation of a virtual hospital model of care for low back pain

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Aim:

To evaluate implementation measures of the Back@Home virtual hospital model of care for low back pain.

Design:

Mixed-method process evaluation study.

Method:

Back@Home is a virtual physiotherapy-led model implemented at the three emergency departments in the Sydney Local Health District. We used the RE-AIM framework to assess reach, adoption, and implementation of the model. Data were collected through quantitative healthcare utilisation data from electronic medical records and qualitative interviews with patients.

Results:

Between Feb-2023 and Jul-2024, 205 patients with low back pain received care through Back@Home – 48% female, median age 45 years. 60% of patients had acute low back pain and 6.8% required an interpreter. Reach was estimated at 80% (205/255), with 50 patients admitted to hospital who were eligible for Back@Home. Adoption varied across the three hospitals, from 62% to 91% of eligible patients referred for the service. During Back@Home admission, 86% of patients had at least one physician consultation and 92% received physiotherapy care. Only 21% of patients were assigned an exercise program via the PhysiTrack app, and 93% of patients had heat wraps delivered to their home. Patients reported positive experiences with the Back@Home program, highlighting personalised support and timely heat wraps delivery.

Conclusion:

This study demonstrated a high level of overall patient satisfaction and acceptability with the model and a high rate of clinician referrals for eligible patients.

Key practice points:

- Back@Home is a feasible referral pathway to avoid unnecessary admissions.
- The model achieves high levels of patient satisfaction and clinician engagement.

How do pain-related cognitions relate to lifting techniques in people with lifting-related low back pain?

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Aim:

To investigate the within-person relationship between changes in lifting technique and changes in pain-related fear, pain catastrophising and pain self-efficacy in people with lifting-related chronic low back pain (LBP).

Design:

Replicated single-case experimental design.

Method:

Five individuals with chronic LBP exacerbated by lifting underwent repeated measurements on their lifting technique and pain-related cognitions (pain-related fear, pain catastrophising and pain self-efficacy) during baseline (4-6 weeks), intervention (12 weeks) and follow-up periods (3 months).

Participants received up to 10 sessions of Cognitive Functional Therapy during the intervention period. Wearable sensors measured the range of motion and velocity of the trunk and knees during a 20-repetition lift task. Pain-related cognitions were collected via online questionnaires. Within-person relationships were estimated by cross-correlation analyses.

Results:

Changes in lifting technique were often related to changes in pain-related fear (15/25 relationships, 60%) and pain catastrophising (16/25 relationships, 64%), and sometimes in pain self-efficacy (12/25 relationships, 48%).

Where relationships were observed, reductions in pain-related fear and pain catastrophising and improvement in pain self-efficacy were usually (36/43 relationships, 84%) related to a shift from a more squat-like technique to a more stoop-like technique and faster lifting speed.

Conclusion:

Transitioning from a more squat-like towards a more stoop-like lifting technique usually relates to reduced pain-related fear and pain catastrophising and improved pain self-efficacy.

Key practice points:

- Changes in individual-specific lifting techniques often relate to more positive pain-related cognitions.
- More positive pain-related cognitions were usually related to greater and faster trunk flexion, less and slower knee bending, and quicker lifting.

Targeting physiotherapist behaviour-change to optimise adult rehabilitation adherence

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Aim:

To explore the lived-experience perspective of adults with Achilles tendinopathy and identify mechanisms influencing adherence to physiotherapist-delivered rehabilitation.

Design:

Longitudinal, interpretive descriptive qualitative.

Method:

Adults with moderate-to-severe Achilles tendinopathy symptoms (VISA-A) having previously seen a health professional, recruited to an RCT were delivered the same rehabilitation protocol and underwent semi-structured interviews at six timepoints across 52-weeks. Maximum variation purposive sampling of 30 participant interview sets, ten from each adherence-behaviour classification (high, partial, low) were analysed using Framework analysis.

Results:

Twelve mechanisms influencing adherence were identified. Grouped into four themes:

Tendinopathy-paradigm: 'Meaning-making of load and pain', 'Comprehension of new knowledge', 'Operationalising knowledge'.

Self-management skills: 'Internal self-management capability', 'External life-rhythm management', 'Managing physical capability'.

Therapeutic relationship: 'Pre-scheduled regular check-ins', 'Personal and professional connection', 'Coaching support'.

Focus on outcome: 'Motivation to maintain functional ability with progressing age', 'Framing success', 'It's a trial'.

Delivery profiles synthesised physiotherapist behaviour optimising participant adherence:

Specificity: typical of high-adherence behaviour in the presence of a well-founded tendinopathy-paradigm and established self-management skills.

Coaching: necessary when participants presented with barriers including time and fear, typical of partial-adherence. Therapeutic-relationship facilitated operationalising rehabilitation and habit formation.

Flexibility: desirable when participants demonstrated difficulty shifting tendinopathy-paradigm or preference for self-tailoring rehabilitation principles. Typical of low- but not no-adherence.

Conclusion:

Physiotherapist rehabilitation delivery behaviour that recognises the delivery profile and targets identified mechanisms of adherence behaviour may optimise adult adherence, likely improving outcomes.

Key practice points:

To optimise adult adherence physiotherapists can:

- Identify delivery profile.
- Address mechanisms optimising adherence in rehabilitation delivery.

Effects of gait retraining interventions on medial knee load in people with medial knee osteoarthritis

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Aim:

Evaluate the effects of toe-in and toe-out gait retraining interventions compared to placebo gait retraining on medial knee joint load in individuals with medial knee osteoarthritis

Design:

Randomised placebo-controlled trial.

Method:

Sixty-nine individuals with medial knee osteoarthritis were recruited from the community and randomised to a six-week toe-in, toe-out, or placebo gait retraining walking program. Weekly clinician-supervised sessions included targeted gait practice with biofeedback, education, and behaviour change techniques. Additionally, participants independently practiced their new gait for 30 minutes daily. Gait assessments occurred at baseline and week seven. Primary outcomes were the early-stance, and late-stance peak knee adduction moment (key measures of medial knee joint load). Data were analysed using linear mixed-effects models. Effect sizes (Cohen's d) were reported.

Results:

Sixty-five participants completed the intervention. Compared to placebo gait; the toe-in group reduced their early-stance peak knee adduction moment by 7%, and the toe-out group reduced their late-stance peak KAM by 8%. Moderate, non-significant reductions were observed for toe-out gait reducing late-stance peak knee adduction moment (effect size: -0.6, 95% CI: -1.2 to 0.1). No adverse events were reported, and intervention adherence was high.

Conclusion:

There is an emerging directional effect of toe-in and toe-out gait in reducing early- and late-stance peak knee adduction moment respectively. However, larger samples are required to confirm certainty.

Key practice points:

- Toe-in and toe-out gait are innovative therapies and demonstrate potential to reduce medial knee joint load.
- Personalisation of the gait interventions based on baseline responses, may improve the effectiveness.

Five years post-implementing GLA:D® in Queensland Health: Statewide review of group hip and/or knee programs

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Aim:

To understand if GLA:D® (Good Life with osteoArthritis: Denmark) has been sustained five years after it was implemented in Queensland Health. If not, to understand (1) the types (specific or general), characteristics and perceived ongoing demand of group-based programs provided for people with knee and/or hip osteoarthritis, (2) the factors influencing decisions to cease delivering GLA:D® and (3) any recommendations for addressing the challenges identified to implementing GLA:D® in Queensland Health.

Design:

State-wide survey.

Methods:

One Senior Physiotherapist from physiotherapy services were invited, through Allied Health/Physiotherapy Directors across 15 Health Services, to participate.

Results:

Physiotherapists representing 49 sites (15 Health Services) participated. One site delivers GLA:D® (not an implementation site). 10 specific and 17 general group-based programs with ongoing demand are delivered statewide. 96.3% (n=26) of programs deliver 6-weeks of supervised exercise.

Specific but not general programs provide standardized education. Specific programs collect 30s chair-stand and 40m fast-paced walk measures. General programs collect a Timed-up-and-Go. 50% (n=14) of programs collect Patient Reported Outcome

Measures. Operational challenges, especially around education and the need for GLA:D® trained and/or certified practitioners, influenced decisions to cease GLA:D®.

Conclusion:

GLA:D® has not been sustained post-implementation trial in Queensland public health services. Alternative specific and general group-based programs for managing people with hip and/or knee osteoarthritis are delivered. There is variability in the education and data collected statewide. Operational challenges influenced the decision to cease delivering GLA:D®.

Key practice points:

- A 'fit-for-purpose' program may support implementation of physiotherapy-led group-based programs in Queensland Health.

Exploring feasibility and functionality of rehabilitative ultrasound in Nepal. A narrative review

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Background: Rehabilitative ultrasound imaging (RUSI) is a method to assess the shape and function of muscles and related soft tissues while patients perform exercises and activities. Rehabilitative ultrasound also has the potential to be used clinically and in research. Specialized training for the use of ultrasound by the physical therapists is recommended. However, its adoption and utilization in resource-limited settings such as Nepal remain relatively unexplored

Purpose: This narrative review aims to explore the feasibility of rehabilitative ultrasound in context of Nepal, its potential benefits and challenges.

Methodology: Literature for RUSI was searched using search engines with standardized search strategy. In addition, review of policies and communication with other stakeholders of rehabilitation in Nepal was done before disseminating the results.

Results: With a growing recognition of rehabilitation needs and the availability of trained healthcare professionals, there is a conducive environment for integrating RUSI into clinical practice. Collaborations between government agencies, non-profit organizations, and academic institutions can facilitate procurement, training programs and research initiatives focused on RUSI. Challenges surrounding the implementation of rehabilitative ultrasound (RUSI) in Nepal encompass various factors, including limited availability of ultrasound machines, high costs associated with equipment procurement and maintenance, and a shortage of trained personnel proficient in performing and interpreting RUSI examinations.

Conclusion(s): Rehabilitative ultrasound holds significant promise as a valuable tool for enhancing musculoskeletal rehabilitation in Nepal. While challenges related to access, affordability, and expertise exist that has to be considered before implementation.

Keywords: Diagnosis, Imaging, Musculoskeletal, Rehabilitation

Clinical differences between chronic whiplash-associated disorders and non-traumatic neck pain: a systematic review and meta-analysis

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Aims:

To compare the clinical presentation of chronic whiplash-associated disorders (WAD) and non-traumatic neck pain (NTNP).

Design:

Systematic review and meta-analysis.

Methods:

Studies were identified through electronic database searches and included if they met predefined eligibility criteria. Standardized mean differences (SMD) or mean differences (MD) and 95% confidence intervals (CI) were calculated. Associations between MDs with demographics and study characteristics were explored using meta-regression. Certainty of evidence was assessed using GRADE.

Results:

Sixty-one studies were eligible, with 45 included in meta-analysis. Individuals with WAD reported clinically relevant higher disability (100-point Neck Disability Index MD [95% CI] 11.15 [8.63, 13.68]), greater remote cold sensitivity (SMD 0.89 [0.57, 1.21]), lower quality of life (SMD -0.96 [-1.77, -0.16]), greater depression (SMD 0.60 [0.27, 0.93]), greater local (SMD -0.56 [-1.00, -0.13]) and remote (SMD -0.50 [-0.81, -0.19]) pressure pain sensitivity, reduced cervical flexion (MD -5.30° [-7.44, -3.16]) and extension (MD -5.43° [-9.31, -1.55]), higher pain intensity (100-point NRS scale: MD 8.15 [5.80, 10.50]), and greater kinesiophobia (SMD 0.35 [0.11, 0.59]). No between-group differences were found for dizziness, stress, anxiety, balance, and local cold sensitivity. Disability MDs were negatively associated with age (R^2 = 29.6%, P = 0.006). The certainty of evidence was moderate.

Conclusions:
Patients with chronic WAD have a worse clinical presentation than those with NTNP.

Key practice points:

- Patients with WAD report clinically relevant greater pain-related disability, more features of nociplastic pain and greater psychological distress.
- Physiotherapy assessment and treatment should take these differences into account when managing patients with neck pain.

Effect of mindfulness-based interventions on brain structure and function in chronic pain: A systematic review

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Aim:

To narratively synthesise evidence on structural and functional brain changes following mindfulness-based interventions in adults with chronic pain, and their associations with patient-reported pain outcomes.

Design:

Systematic review (PROSPERO CRD42024501011).

Method:

Six electronic databases were searched (inception-February 2024). Two independent reviewers screened texts, extracted data, and assessed risk of bias using The Revised Cochrane Risk of Bias Tool for RCTs (RoB 2) and Risk of Bias in Non-randomised Studies – of Interventions (ROBINS-I). An iterative narrative synthesis summarised findings descriptively. Neuroimaging reporting was evaluated using standardised checklists.

Results:

of 6216 studies, 14 studies (with moderate-high risk of bias) met inclusion criteria. The studies included 693 participants [mean age 50.0 (11.0) years, 74% female] with chronic pain conditions including low back pain and fibromyalgia. Neuroimaging data was collected pre- and post- an eight week group mindfulness-based intervention.

Studies used resting state or task-based functional (n=6) and structural (n=2) magnetic resonance imaging and electroencephalography (n=6) and reported changes in five core brain networks. Default mode (n=10), sensorimotor (n=6) and

salience (n=5) network changes were most commonly reported; associated with an improvement in patient reported outcomes including pain intensity and catastrophising.

Conclusion:

This review suggests the default mode network may underpin improvements in pain intensity and disability observed after mindfulness-based interventions. Suppressed default mode network activity alongside enhanced sensorimotor and salience network engagement may be linked to better patient-reported outcomes.

Key practice points:

- Mindfulness-based interventions that suppress default mode network activity may result in better patient-reported outcomes for people with chronic pain.

Evaluation of an inpatient sports-program to guide post-discharge participation among people with brain/spinal cord injury

Hannah Daniel[1], Emily Bray[2], Emma Beckman[3,4], Kathryn Smith[1], Melissa Kendall[2,5,6], Sean Tweedy[3], Timothy Geraghty[2,7], James Richardson[1], Glenn Verner-Wrenn[7], Peter Tonks[1], Jai Peach[1], Elise Gane[1,8,9]

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Aim:

Incorporating sport into the rehabilitation setting contributes to improved participation and meaningful activities for patients; however, more needs to be explored about the potential impact such activities could have during the inpatient phase of rehabilitation, and if they increase participation in sport in the community.

Design:

From October ‘22 to June ‘23, individuals with ABI or SCI receiving rehabilitation were invited to participate in a weekly sporting program. 30 participants were consented for this study. Patient-reported measures of participation and exercise self-efficacy were collected at enrolment, discharge, and three months post-discharge.

Method:

Surveys measured perceptions of the program from participants at hospital discharge. Qualitative interviews were conducted three months post-discharge to explore the uptake of sport in the community.

Results:

Qualitative thematic analysis identified themes: Participation enhanced the rehabilitation experience, Experience was impacted by operational factors, Sporting programs were not considered a pathway to competitive sports and, moving forward with sport in the community was impacted by competing priorities.

Conclusion:

Participation in an inpatient sports program helped participants feel a sense of social connection and improved wellbeing. It did not however improve links to sport in the community within the short time frame that follow-up was completed.

Key practice points:

- Sporting programs in inpatient facilities improved participants mental-health and wellbeing and provided a social aspect to rehabilitation stays.
- Participation in sport/recreation did not translate into community practice post discharge; however, a longer follow-up time may have assisted in providing information to participants to follow-up on these community activities.

Everyday LEAD: Human-rights based assessment driving inclusion-focussed interdisciplinary service provision in the disability sector

Trish Hill[1], Madeline Hand

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ePoster Session - Saturday Screen 5, Halls HJ, October 25, 2025, 12:50 - 13:25

Aim:

The paradigm shift towards prioritizing quality of life, self-determination, and inclusion has transformed disability practice. Despite this, traditional assessment commences with impairments, often guiding impairment-focussed interventions.

Trial of Everyday LEAD is described. This comprehensive interdisciplinary assessment and planning tool integrates social-ecological principles, pioneering a human rights-centric perspective to guide participation-focussed interventions.

Design:

Pilot study

Method:

In 2020, Everyday LEAD was cultivated in consultation with Orima Research. This unique tool measures participation and support needs across 35 universal areas of functioning; emphasizing participation, and quality of life. Its span across 35 life tasks recognizes every person's right to engage in these universal functioning activities. Over 350 therapists have used Everyday LEAD with 7,669 NDIS participants, generating data on its feasibility and impact.

Results:

Preliminary findings demonstrate commercial feasibility and potential in quality participation-focussed therapy planning, incorporating co-design.

Everyday LEAD enhances interdisciplinary practice, while supporting clinical reasoning for new graduates and those entering the disability sector, accelerating their learning. Further data collection and evaluation is ongoing.

Conclusion:

Everyday LEAD emerges as an innovative resource, merging principles of disability assessment with the NDIS' vision of promoting participation and quality of life. This tool has the potential to evolve disability assessment, enhancing quality service provision in disability practice.

Key practice points:

Intervention to optimise participation should provide:

- Opportunities to explore all activities people have a right to participate in.
- Individuals choice about which of these will be the focus of therapy.
- Guidance for interdisciplinary clinical reasoning to plan participation-focussed interventions.

Outcome measures in prehabilitation interventions for total hip and knee arthroplasty: A scoping review

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Aim:

To map outcome measures reported in clinical trials investigating prehabilitation interventions in total hip and knee arthroplasty and timepoints of collection.

Design:

Scoping review following Johanna Briggs Institute guidelines.

Method:

A systematic search of five databases was conducted. Outcome domains and assessment tools were characterised using the International Society for Pharmacoeconomics and Outcomes Research framework, and data collection timepoints were extracted.

Results:

Eighty-one trials were included. Most trials delivered unimodal prehabilitation, with exercise the most common intervention (n=34).

Patient-reported outcomes were the most frequently reported domain (n=74, 91%), including concepts such as pain and quality of life, and had the most unique assessment tools (n=91). Observer-reported outcomes were reported in 90% of trials (n=73), with healthcare utilisation (e.g., hospital length of stay) the most common concept. Clinician-reported outcomes (e.g., post-operative complications), and performance-based outcomes (e.g., muscle strength) were collected in 70% (n=57) and 68% (n=55) of trials, respectively. Biomarker outcomes were rarely reported (n=6,

7%). Timing of outcome measure collection varied, with just under half of trials collecting both pre- and post-operative timepoints.

Conclusion:

The review highlights variability in outcome measure reporting across joint arthroplasty prehabilitation trials, suggesting the need for a core set of assessments to facilitate consistent reporting and robust meta-analyses of prehabilitation efficacy.

Key practice points:

- Evidence for prehabilitation effects on joint arthroplasty outcomes may be affected by heterogeneity in reported measures.
- Meaningful, valid and feasible outcomes and assessment tools in this population need to be identified to form a core outcome set for future reporting.

Powering possibilities: a systematic review of wearable robotic mobility technology for people with cerebral palsy

Nicola Postol[1,2,3], Darryl Chiu[1,2], Wesley Zhang[4], Ismail Sadozai[4], Luke Wakely[5], Jodie Marquez[6], Alistair McEwan[1,4], Petra Karlsson[1,2]

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ePoster Session - Saturday Screen 6, Halls HJ, October 25, 2025, 12:50 - 13:25

Aims

To synthesise clinical data and user perspectives regarding using overground robotic exoskeletons for people with cerebral palsy.

Design

Systematic review.

Methods

Following PRISMA guidelines, Medline, PsychInfo, Embase, CINAHL, Scopus and Web of Science were searched in November 2024, using terms related to cerebral palsy and robotic exoskeletons. Qualitative and quantitative studies from 2010 onwards were included, with proof-of-concept papers excluded.

Results

From 2589 papers, 25 papers were included in the review (n=374 children, 10 adults) across all levels of severity of cerebral palsy. Eight devices were evaluated; one ankle device, and seven full leg devices. Gross motor function, gait kinematics and endurance were commonly evaluated, with statistically significant improvements reported. Other outcomes such as balance, spasticity, sleep quality, bowel function, and user experience, were researched in <20% of papers, with mixed findings. Community use of one device resulted in a significantly increased weekly step count. One qualitative paper highlighted the need for device set-up to be less complicated to improve clinical uptake.

Conclusions

With half of the included papers published in the last three years, evidence is still emerging. Most research focuses on gait kinematics, endurance and gross motor function, with less research evaluating other outcomes, or the perspectives of end users of the technology.

Key practice points

- Hybrid assistive limb is the most researched device for people with cerebral palsy.
- Using robotic exoskeletons can positively influence gait kinematics, gross motor function and endurance for children with cerebral palsy.
- Adults, quality of life outcomes, and user experiences are under-researched.

A clinical approach to the measurement of postural asymmetry in adults with cerebral palsy

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Introduction:

Progressive postural asymmetry is prevalent in non-ambulant adults with cerebral palsy (CP) affecting the ribcage, pelvis, and hips, yet is hard to quantify clinically. Postural asymmetries such as scoliosis and 'windsweeping' may affect many domains of health, wellbeing, and functioning.

Objectively monitoring and assessing the efficacy of interventions targeting posture is an important aspect of lifespan care that can be achieved using the Goldsmith Indices of Body Symmetry (GIofBS), a clinical measurement tool.

Aims:

The GIofBS provides a three-dimensional objective measure of the asymmetries affecting the ribcage, pelvis, and windswept hips. The primary aim of this session is to understand the utility of the GIofBS in the lifespan management of postural asymmetries in non-ambulant adults with CP or other progressive disabilities.

Secondary aims are to explore the nature, prevalence of postural asymmetries, and the clinical applicability and interpretation of the GIofBS.

Approach:

Instruction and demonstration will be provided on use of this tool as a stand-alone clinical measure, but also as an adjunct to seating and spasticity management assessments with the provision of practical examples and relevance using clinical examples and video.

Participants will be encouraged to critically evaluate their current practices around postural care.

Key practice points:

Participants will be able to:

- Identify factors impacting postural asymmetry in people with complex disability and immobility
- Understand the importance of lifespan measurement of postural asymmetries affecting the rib cage, pelvis, and hips
- Understand the use of the GIofBS to guide and measure the efficacy of interventions

Acute concussion management: a headache for hospital physiotherapists

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Aim:

Concussion admissions to public hospitals are rising in Australia. Physiotherapists could deliver early assessment and management that impacts patient outcomes. We aimed to describe current practices, knowledge and confidence of hospital-based physiotherapists in Australia and New Zealand regarding concussion management.

Design:

Two separate surveys were disseminated.

Method:

1) A 27-item benchmarking survey was distributed to all 33 acute hospitals on the Australia New Zealand Trauma Registry for their most relevant senior acute physiotherapist to complete. 2
2) A 26-item knowledge, confidence and patient management survey was completed by physiotherapists from acute care at the Royal Melbourne Hospital.

Results:

1) Benchmarking survey (n=20): all respondents had ≥5 years' experience; 60% treated concussion ≥weekly, practice was variable. Care involved: occupational therapy (30%), medical (25%), physiotherapy (5%), speech pathology (5%) and multidisciplinary (35%). Acute physiotherapy intervention included: education (89%), musculoskeletal (42%), vestibulocochlear (84%), balance (84%) and functional (84%) rehabilitation. Follow-up: occupational therapy (44%), speech pathology (11%), nurses (11%), multi-disciplinary service (33%).
2) Royal Melbourne Hospital survey (n=30): 68.6% of respondents had ≥5 years' experience; 40% reported formal professional development in acute concussion management; 17% were confident in assessment and 11% with management; clinical practice and discharge planning was variable.

Conclusion:
There is inconsistent practice in acute physiotherapy management of concussion.

Key practice points:

- Concussion care provided is inconsistent across Australia and New Zealand
- Further work is needed to improve physiotherapists' knowledge and confidence in managing acute concussion patients

Development of a new specialist research physiotherapist fellowship pathway for the Australian College of Physiotherapists.

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Aims:

To develop and evaluate a new Specialist Research Physiotherapist fellowship pathway for the ACP.

Design:

Descriptive study.

Methods:

Since it's inauguration in 1971, the ACP has been an important part of the Australian Physiotherapy Association's (APA) career pathway. Currently 28 Fellows have completed this non-clinical pathway (Original Contribution). However, the pathway has never been formally reviewed. A working party of Fellows, academics, educators and College staff reviewed and proposed a new Specialist Research Physiotherapist Fellowship pathway based on NHMRC fellowship and university academic promotion criteria, and the APA's Physiotherapy Competence Framework.

Results:

In alignment with the clinical pathway to Fellowship (Specialisation) the 'Original Contribution' monograph has been replaced with a comprehensive evaluation of the seven roles of the Competence Framework. These roles are mapped to the four research capabilities that include Scholarship, Leadership, Practice and Education.

Submissions for evaluation encompass an academic resumé, an executive statement, four 300-500 word statements for each of the four research capabilities, and the top five first or senior author academic outputs published by the applicant, as well as a summary of the contribution of the research to the development of the physiotherapy profession.

Conclusions:

The new Specialist Research Physiotherapist pathway is currently being piloted with a planned evaluation in mid-2026.

Key practice points:

- The Research pathway provides a comprehensive evaluation of the candidate's contribution to physiotherapy research.
- This pathway is aligned with the clinical pathway and evaluation processes for professional and academic promotion.
- This pathway enables streamlined recognition of Australian physiotherapy researcher contribution.

Visual verticality disorder and lateropulsion in neurosurgical patients with brain tumours -an observational study protocol

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Aim:

To investigate the clinical characteristics pre- and post-brain tumour resection with a focus on, visual verticality perceptual disorder, lateropulsion and their correlation with ocular cyclorotation and skew deviation, including neuroimaging analysis, of a neurosurgical cohort of patients with brain tumours.

Design:

Observational prospective cohort study.

Method:

Patients aged 18-80 years, with a brain tumour will be enrolled from the state-wide Neurosurgery Service of Western Australia at Sir Charles Gairdner Hospital. Clinical assessments of neurological impairments and the presence and severity of lateropulsion and visual verticality perceptual disorder will be conducted, pre- and post-brain tumour resection. Neuroimaging will be collected pre- and post-surgery for analysis of lesion size, side, and volume.

The expected recruitment period is six months and estimated sample size of 100 participants.

Results:

The findings from this research will identify the epidemiology, prevalence, associations, and correlations between lateropulsion, and visual verticality perceptual disorder. This research will contribute to understanding how and when these disorders are associated with different brain tumour types according to lesion size, and location.

Conclusion:

This research will provide new knowledge about visual verticality perceptual disorder and lateropulsion in the field of neuro-oncology rehabilitation. This research is expected to provide findings that will contribute to the development of clinical interventions and future research to improve rehabilitation outcomes for neuro-oncology patients.

Key practice points:

- First documentation of visual verticality perceptual disorder and lateropulsion in patients with brain tumours can guide neuro-oncology specific rehabilitation pathways and improve quality of life in patients with brain tumours.