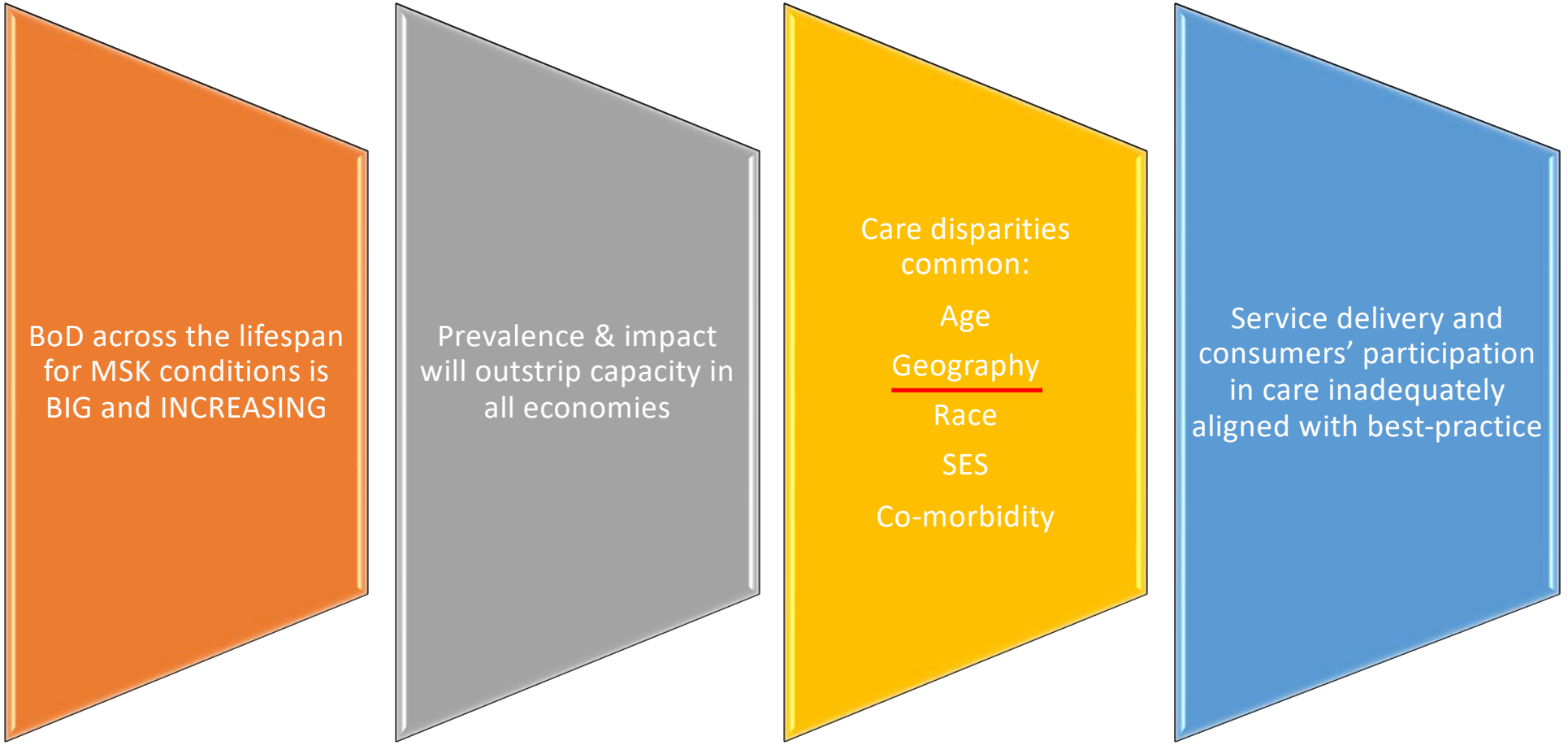
Persistent musculoskeletal pain in the rural health setting

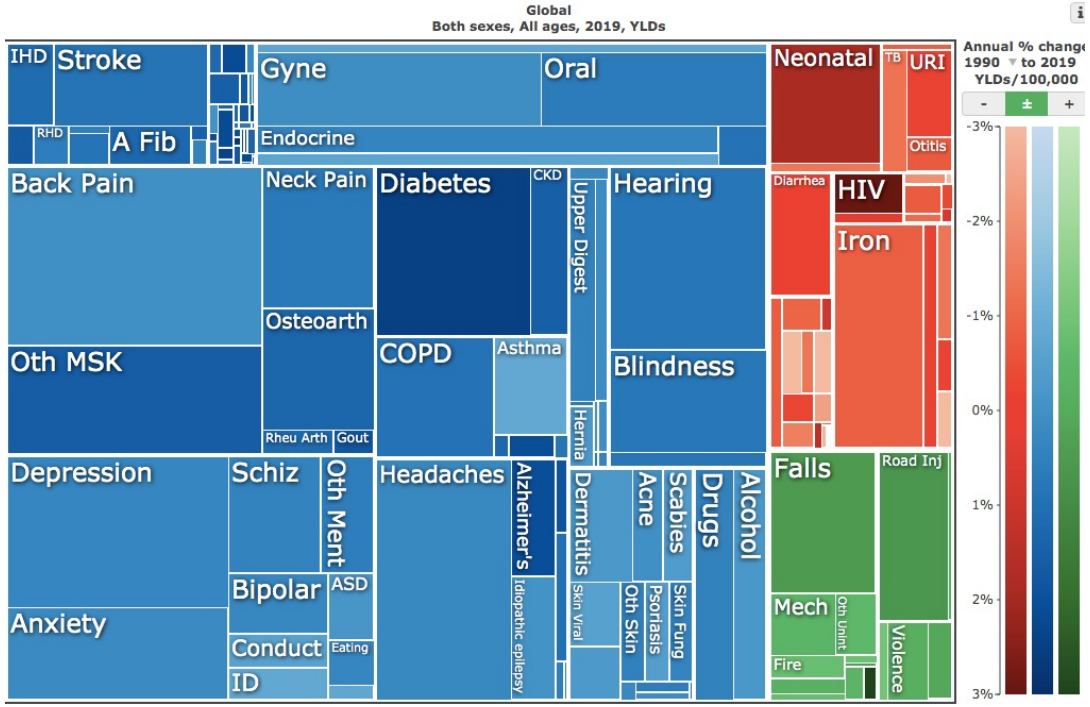
PainOptions

Tim Mitchell
Specialist Musculoskeletal Physiotherapist
PhD

Challenges for musculoskeletal healthcare



Health ecosystem challenges

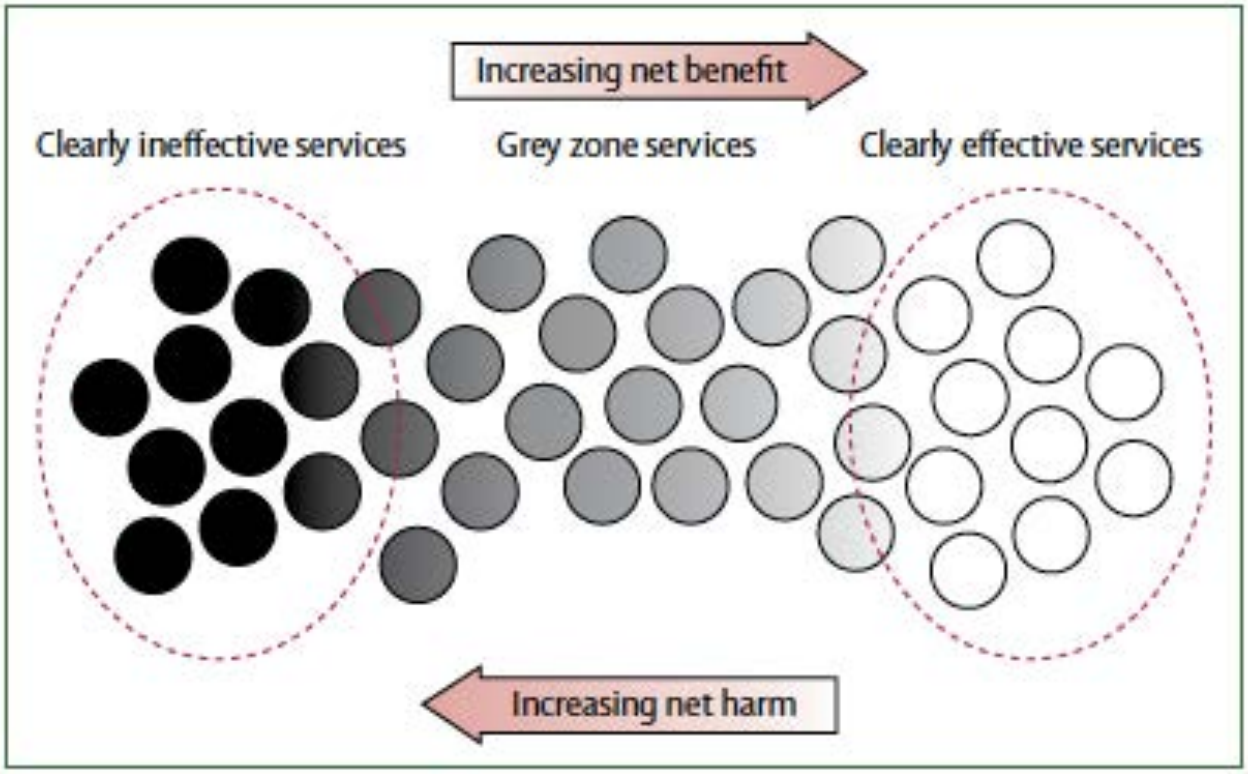


http://www.healthdata.org/global

$55.1B

$139B

Strat plans



Right care 1

Evidence for overuse of medical services around the world

Shannon Brownlee, Kalipso Chalkidou, Jenny Doust, Adam G Elshaug, Paul Glasziou, Iona Heath*, Somil Nagpal, Vikas Saini, Divya Srivastava, Kelsey Chalmers, Deborah Korenstein

Lancet 2017; 390: 156–68

Right care 2

Evidence for underuse of effective medical services around the world

Paul Glasziou, Sharon Straus, Shannon Brownlee, Lyndal Trevena, Leonila Dans, Gordon Guyatt, Adam G Elshaug, Robert Janett, Vikas Saini

Lancet 2017; 390: 169–77

Addressing low-value healthcare

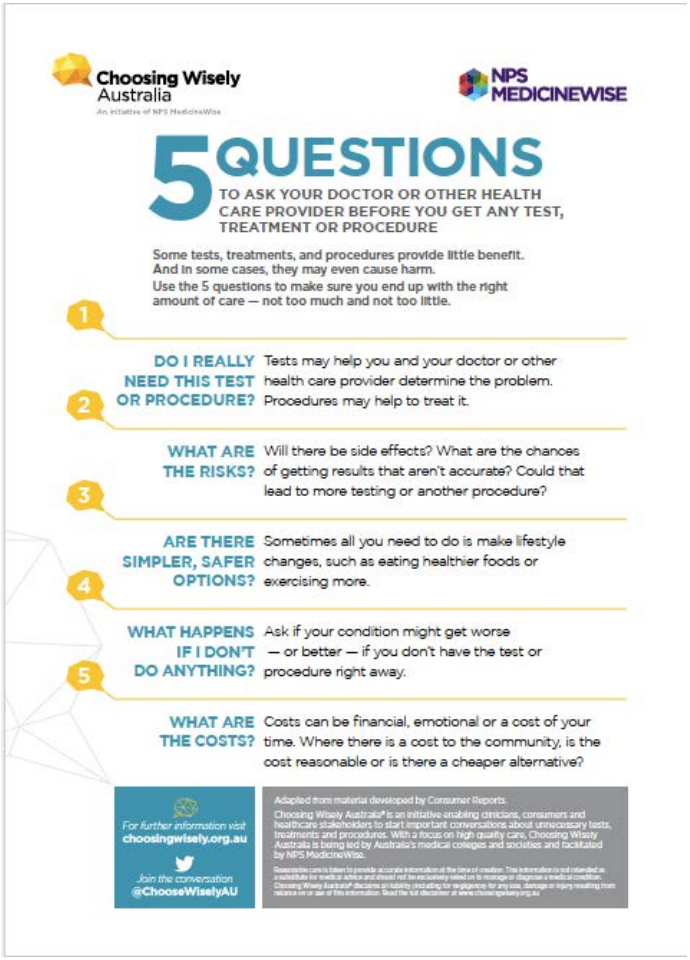
The case for addressing low-value healthcare in Australia is compelling. Nearly one-third of total health expenditure in Australia could be deemed wasteful[1] and potentially expose consumers to unnecessary risk and harm.

RACP EVOLVE

16 lists of recommendations promoted by Choosing Wisely have also been published as part of The Royal Australasian College of Physicians' EVOLVE program. EVOLVE encourages each medical specialty to think about the clinical circumstances in which some of their practices - whether medical tests, procedures or interventions - should have their indications or value questioned and discussed by physicians. These practices may be overused, inappropriate or of limited effectiveness in a given clinical context.

evolve

evaluating evidence. enhancing efficiencies.



Choosing Wisely Australia

An initiative of NPS MedicineWise

NPS MEDICINEWISE

5 QUESTIONS

TO ASK YOUR DOCTOR OR OTHER HEALTH CARE PROVIDER BEFORE YOU GET ANY TEST, TREATMENT OR PROCEDURE

Some tests, treatments, and procedures provide little benefit. And in some cases, they may even cause harm. Use the 5 questions to make sure you end up with the right amount of care — not too much and not too little.

1 DO I REALLY NEED THIS TEST OR PROCEDURE? Tests may help you and your doctor or other health care provider determine the problem. Procedures may help to treat it.

2 WHAT ARE THE RISKS? Will there be side effects? What are the chances of getting results that aren't accurate? Could that lead to more testing or another procedure?

3 ARE THERE SIMPLER, SAFER OPTIONS? Sometimes all you need to do is make lifestyle changes, such as eating healthier foods or exercising more.

4 WHAT HAPPENS IF I DON'T DO ANYTHING? Ask if your condition might get worse — or better — if you don't have the test or procedure right away.

5 WHAT ARE THE COSTS? Costs can be financial, emotional or a cost of your time. Where there is a cost to the community, is the cost reasonable or is there a cheaper alternative?

For further information visit choosingwisely.org.au

Join the conversation @ChooseWiselyAU

Adapted from material developed by Consumer Reports.

Choosing Wisely Australia® is an initiative enabling clinicians, consumers and healthcare stakeholders to start important conversations about unnecessary tests, treatments and procedures. With a focus on high quality care, Choosing Wisely Australia is being led by Australia's medical colleges and societies and facilitated by NPS MedicineWise.

Reasonable care is taken to provide accurate information at the time of creation. This information is not intended as a substitute for medical advice and should not be exclusively relied on to manage or diagnose a medical condition. Choosing Wisely Australia® disclaims all liability (including for negligence) for any loss, damage or injury resulting from reliance on or use of this information. Read the full disclaimer at www.choosingwisely.org.au

Can you change 1 aspect of your clinical practice?

Received: 3 September 2019 | Accepted: 3 September 2019
DOI: 10.1111/1756-185X.13710

EDITORIAL

International Journal of Rheumatic Diseases WILEY

Musculoskeletal healthcare: Have we over-egged the pudding?

Christopher G. Maher[1,2]
Mary O'Keeffe[1,2]
Rachelle Buchbinder[3,4]
I. A. Harris[1,2,5]

Getting the balance right

TABLE 1 Potential drivers of overuse of musculoskeletal health services

Driver	Examples	Impact
Overtesting Ordering unnecessary tests	• Acting upon a single red flag to trigger diagnostic work-up and/or specialist referral • Frequent vitamin D testing	• Up to 80% of patients with low back pain have at least one positive red flag • Medical Benefits Scheme costs for vitamin D testing rose from $109.0 million in the 2009-2010 financial year to $151.1 million in 2012-2013[5]
Overdetection Clinicians act upon clinically unimportant findings	• Incidental findings on imaging trigger unnecessary treatment • Judging minor postural variations as abnormal triggers interventions to correct the abnormalities	• Arthroscopic procedures for degenerative knee disease cost more than $3 billion per year in the USA. • Medicalizing infancy by diagnosing notional spinal lesions that require manipulative care[31]

30% medical care unhelpful, another 10% harmful

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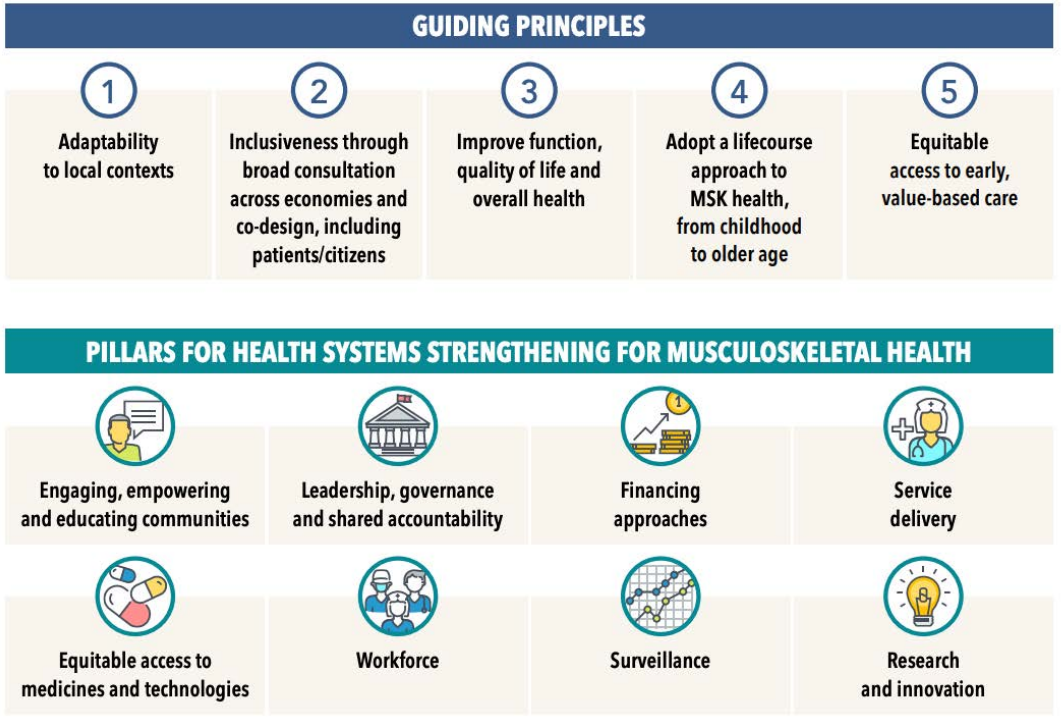
Overdefinition Changed disease boundaries encourage more health care	• Promoting Pain as the Fifth Vital Sign encouraged treatment of any level of pain • Disease subcategories that are no more than nominal diagnoses (eg instability) encourage use of ineffective therapies • Creating the label "neuropathic" low back pain encouraged the use of pregabalin for low back pain	• Contributed to the opioid crisis that has reduced life expectancy in the USA • Spinal fusion is the most expensive surgical procedure in the USA (US$12.8 billion annually) • There has been a surge in the use of pregabalin for pain and in parallel an increase in pregabalin poisonings, abuse and deaths
Overtreatment Culture, industry and health systems encourage treatment that does not provide a net benefit	• There is a predisposition with regard to health care to believe that more is better and that new is better • Professional associations encourage care for musculoskeletal conditions with a good natural history • Health systems reimburse and/or commission more complicated care than is necessary	• Proliferation of stem cell clinics offering treatments for musculoskeletal conditions resulting in high costs, direct and indirect harms • Increased treatment rates based on belief of trusted sources (professional societies and individual professionals) • Higher rates of procedures performed in regions where reimbursement is higher resulting in unwarranted practice variation

Can you change 1 aspect of your clinical practice?

A system strengthening approach to improve musculoskeletal health

Briggs AM, Slater H, Jordan JE, Huckel Schneider C, Kopansky-Giles D, Sharma S, Young JJ, Parambath S, Mishrra S, March L. (2021)



https://gmusc.com/global-strategy-to-improve-musculoskeletal-health/

available in 7 languages, including low- and middle-income countries

So, how do we achieve quality care?

‘Right care’: right time, right team, right place

- Person-centred, value-based health care
- Systems approach essential [screening/outcomes]
- Multidimensional therefore MUST include screening of all relevant dimensions
- Evidence-informed best practice pain management principles
  [low disability simple solution; high disability more complex]

Brain changes in chronic pain.

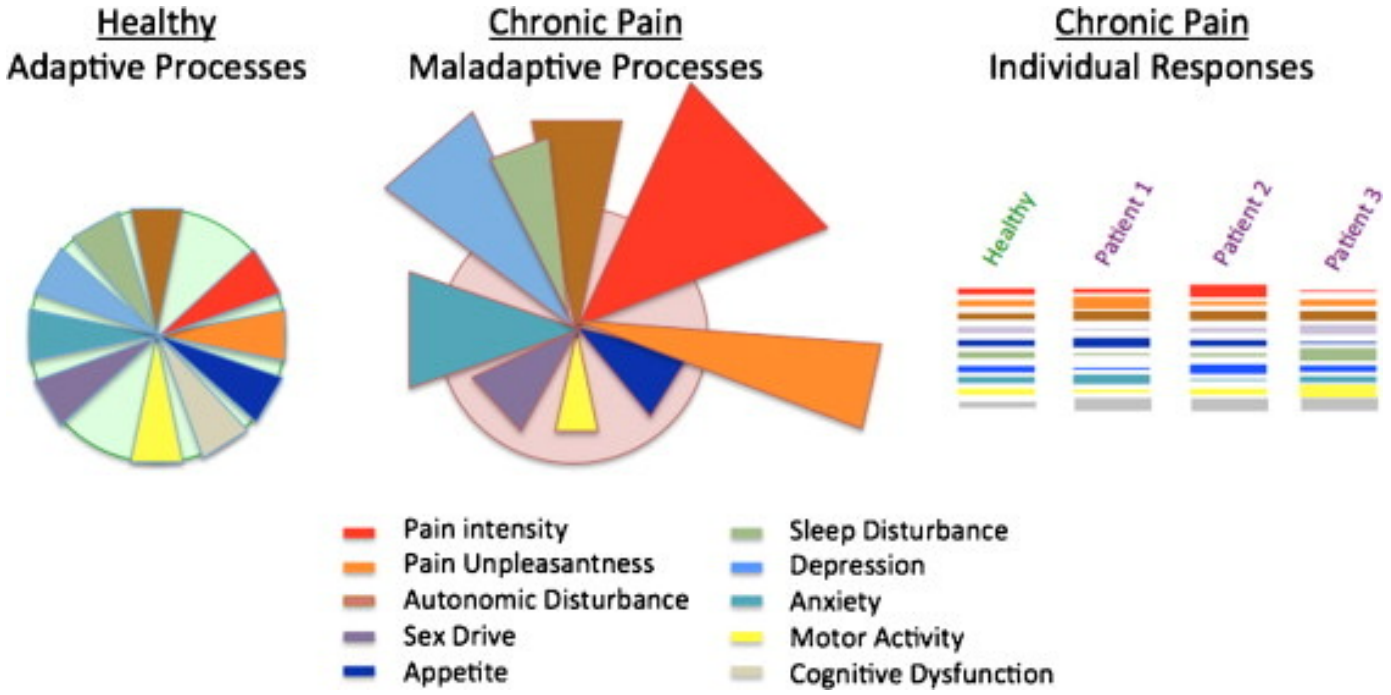
clinical phenotyping: individually targeted care

European journal of pain (London, England)
Author Manuscript HHS Public Access

Transforming Pain Medicine:
Adapting to Science and Society

David Borsook, MD PhD and Eija Kalso, MD
DMedSci

Transforming Pain Medicine: Adapting to Science and Society
Eur J Pain. 2013 Sep; 17(8): 1109–1125. Author manuscript.



So, how do we achieve this with the individual in front of us?

Pain can be complex

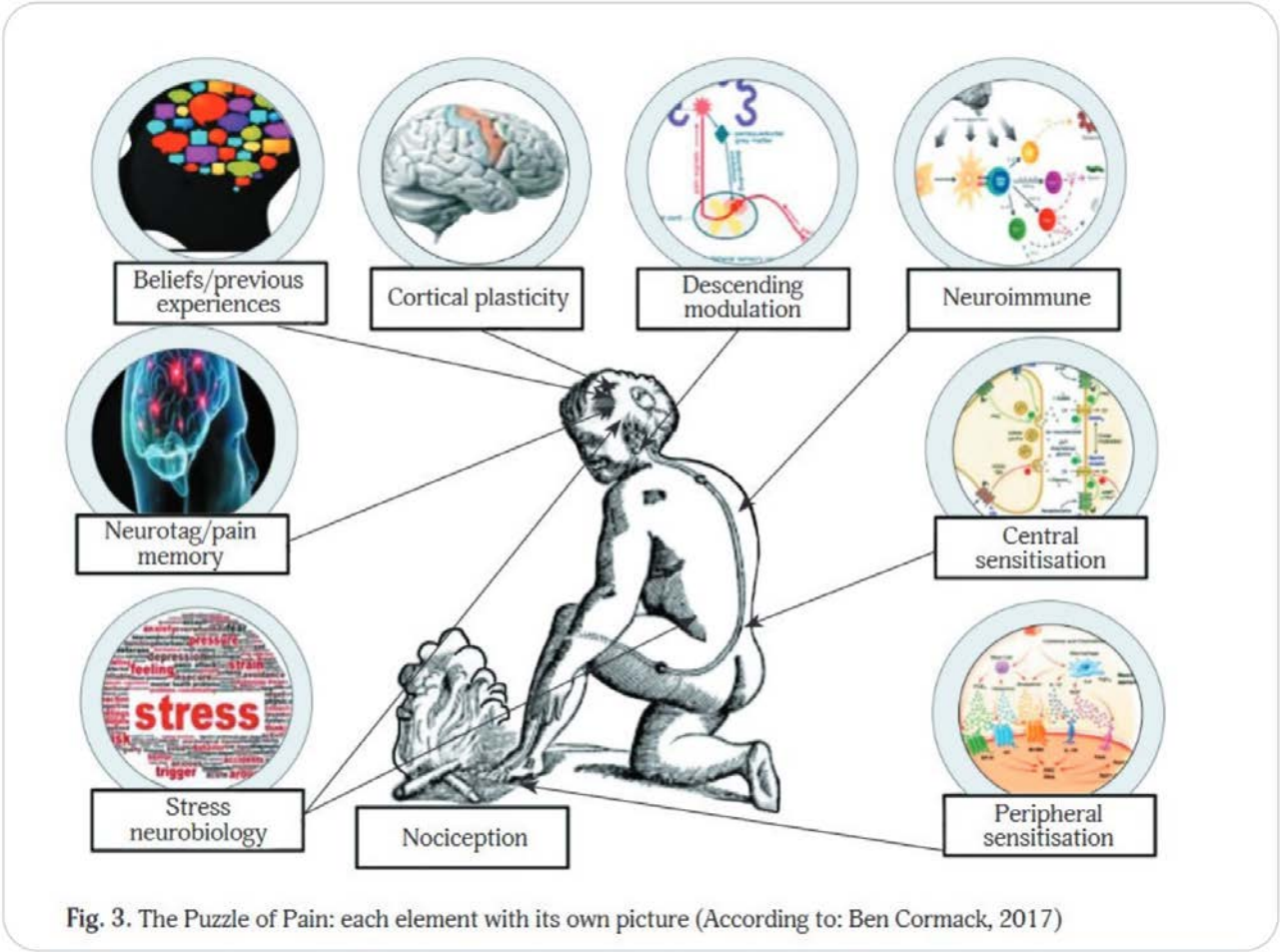
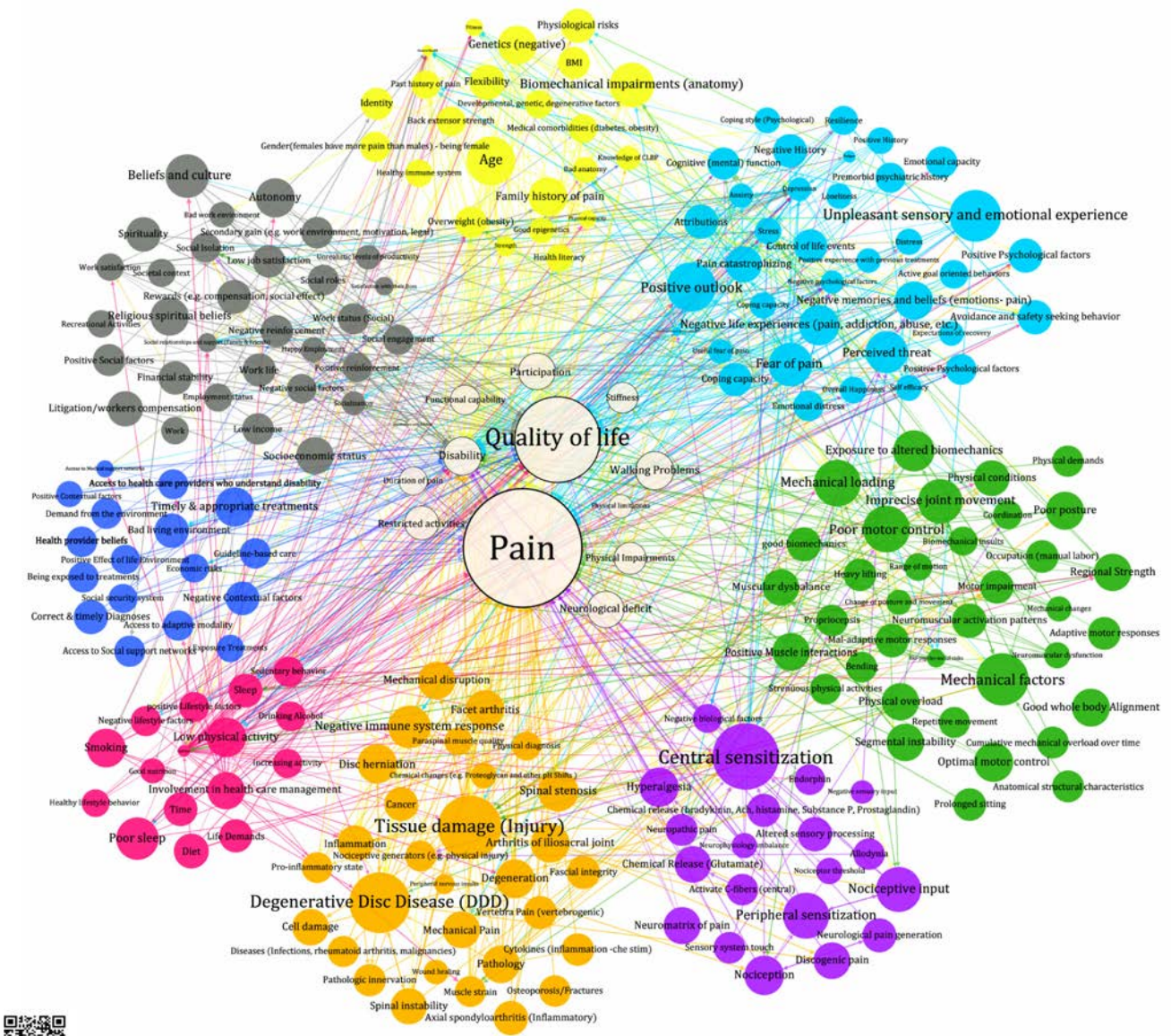


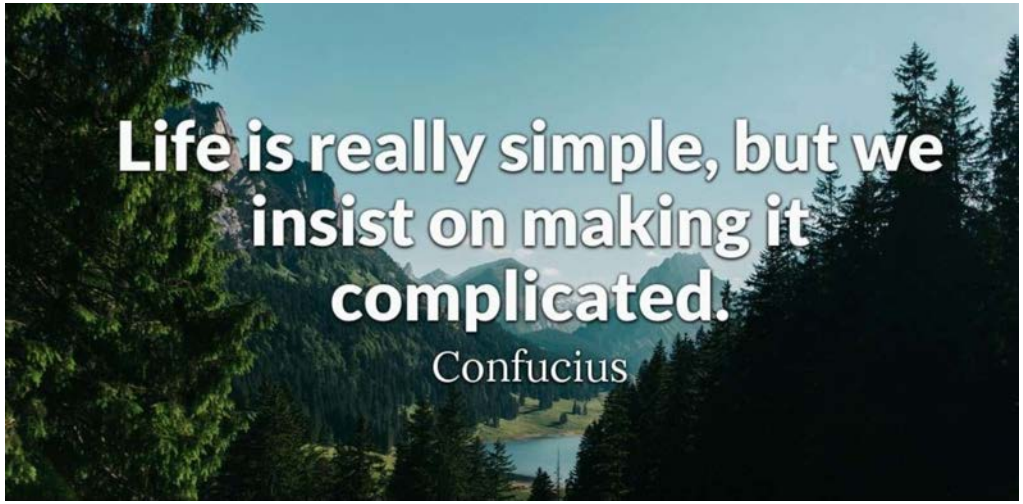
Fig. 3. The Puzzle of Pain: each element with its own picture (According to: Ben Cormack, 2017)

PainOptions



Cholewicki J, Breen A, Popovich JM Jr, Reeves NP, Sahrmann SA, van Dillen LR, Vleeming A, Hodges PW. Can Biomechanics Research Lead to More Effective Treatment of Low Back Pain? A Point-Counterpoint Debate. J Orthop Sports Phys Ther. 2019 Jun;49(6):425-436. doi: 10.2519/jospt.2019.8825. PMID: 31092123.

People can be complex



PainOptions

The SYSTEM is complex

- Impact of an “injury”
- Personal context
- Rural context
- Resources available

PainOptions

we have good evidence but don't use it!

<10 per cent of people with chronic non-cancer pain gain access

to effective care, despite existing treatments having the potential

to help 80 per cent of people

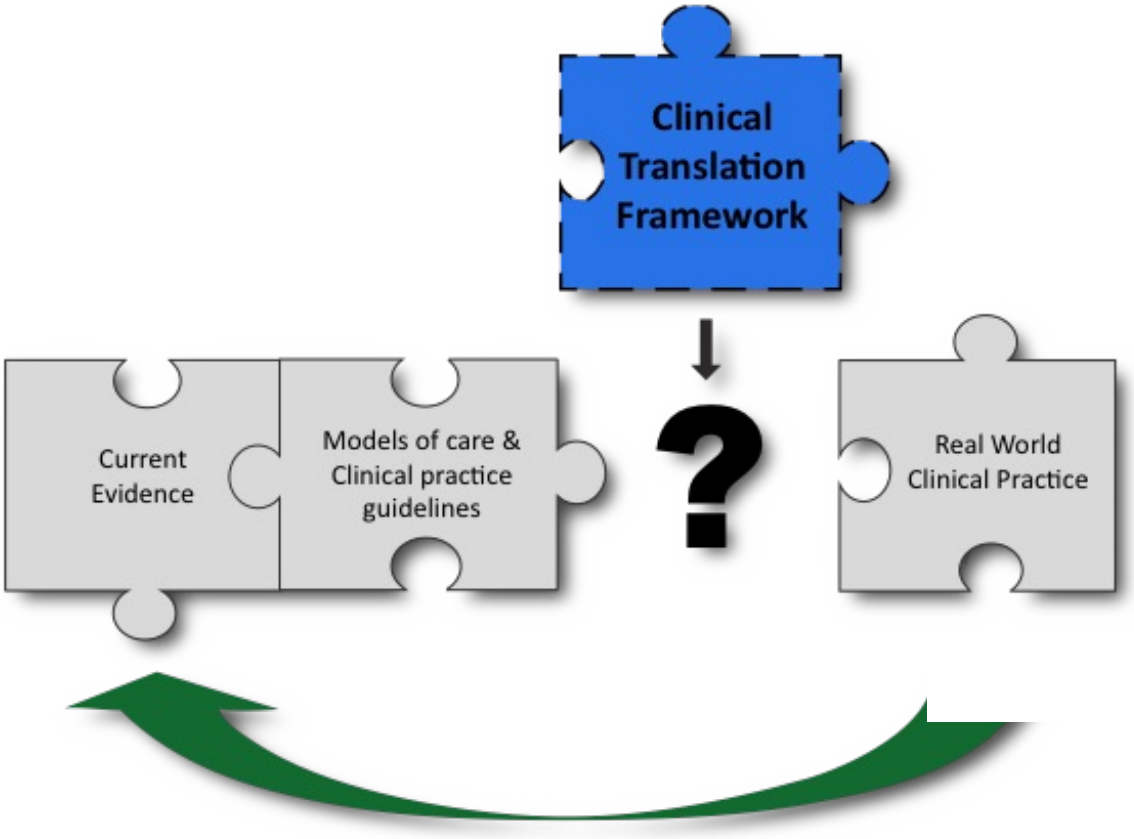
[Henry 2008]

Healthcare advice is conflicting

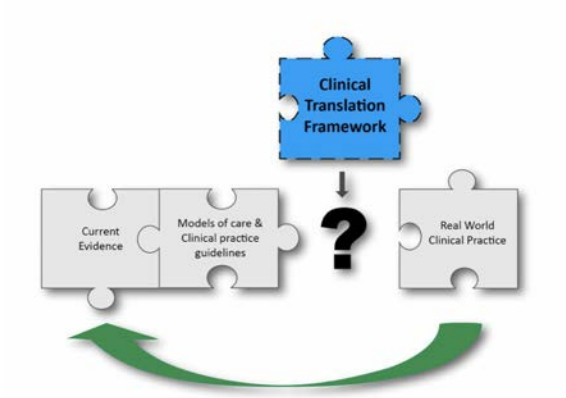
All these messages were given to the same person with back pain:

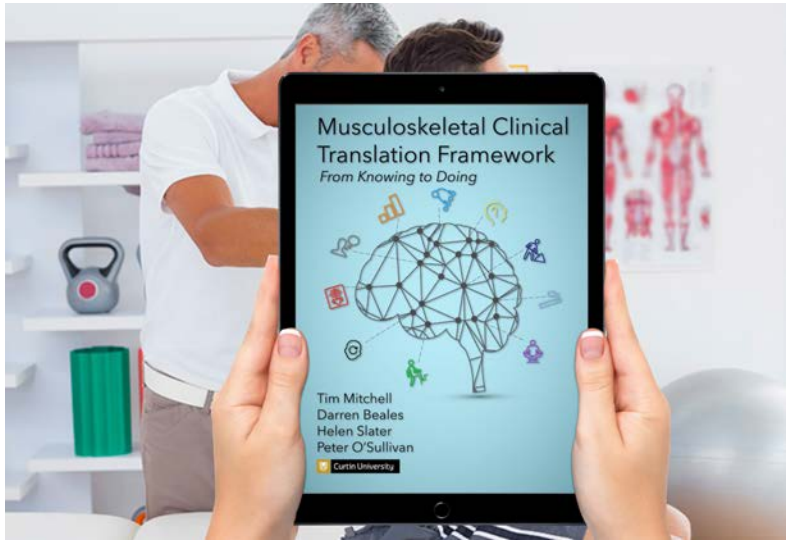
- You have injured your disc
- You will never deadlift again
- You should think about a change in career
- You will probably need surgery
- You will be fine in 2 weeks – we all have a disc bulge
- You should get back to work ASAP

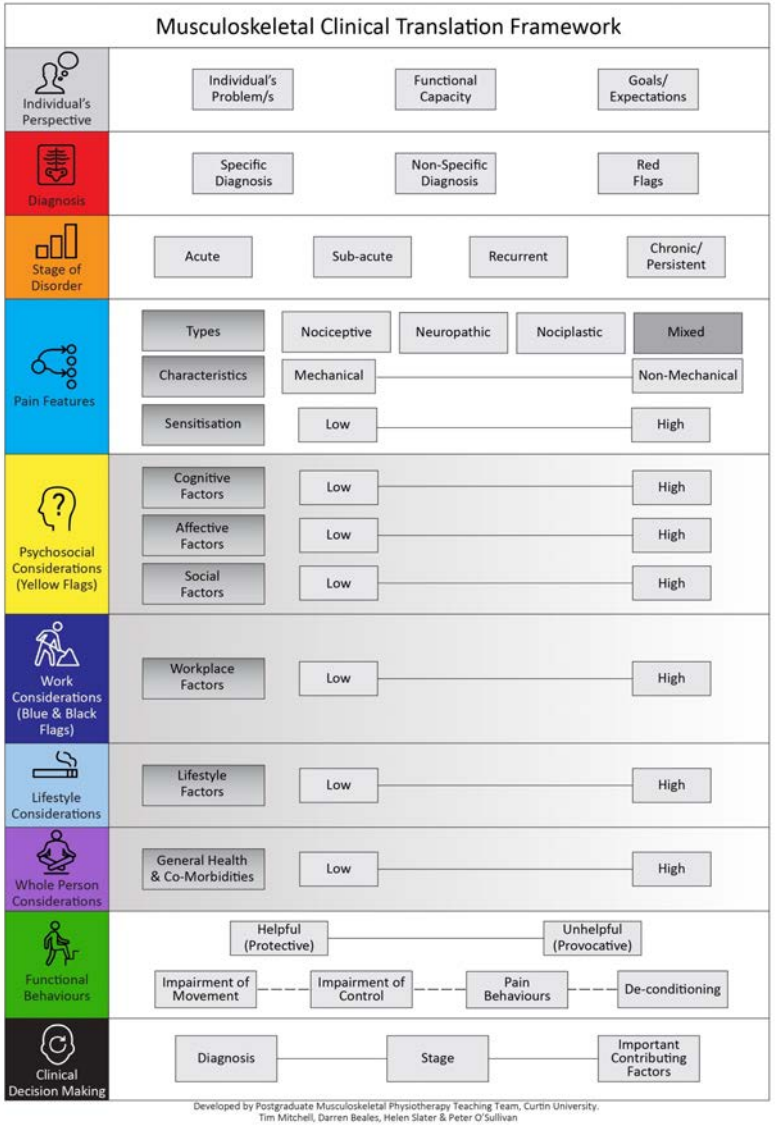
Need a framework to operationalise the model



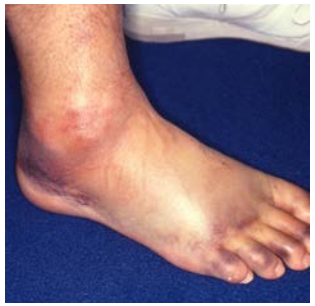
Mitchell, Beales, Slater & O'Sullivan, 2018

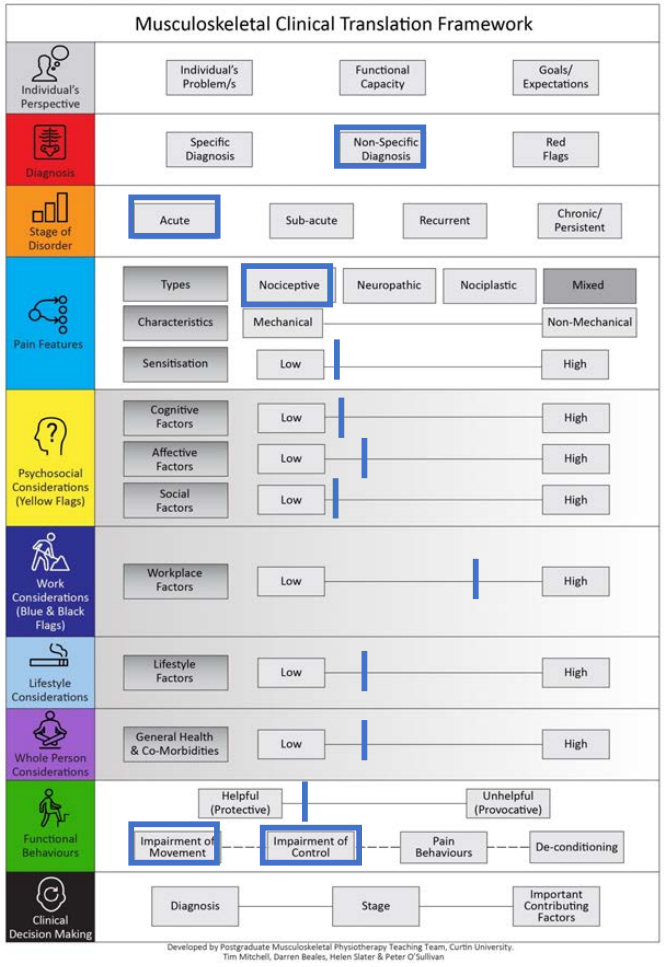

Clinical Translation Framework
Current Evidence
Models of care & Clinical practice guidelines
?
Real World Clinical Practice

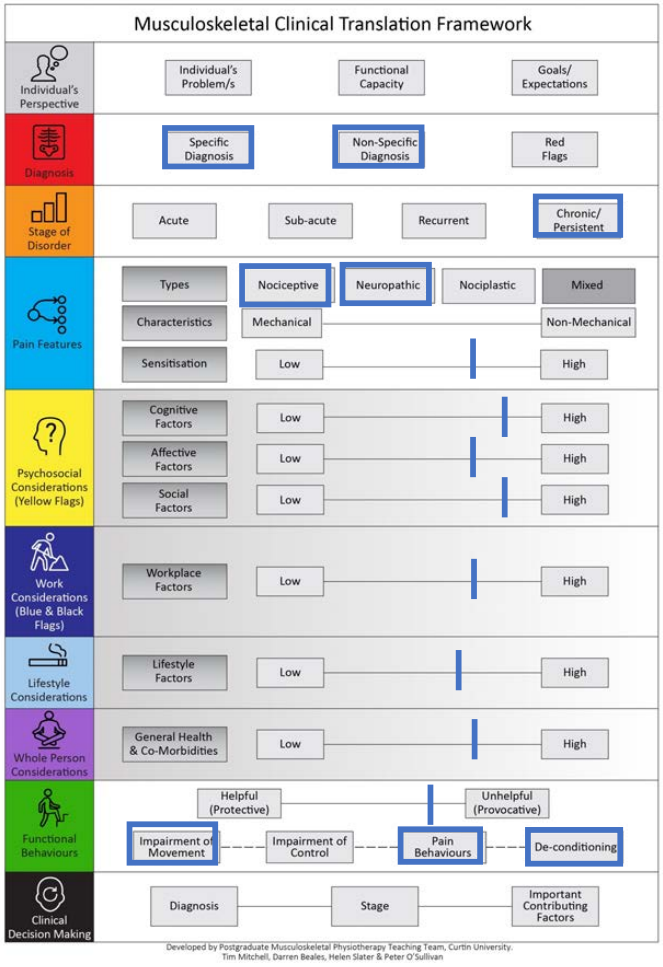

Musculoskeletal Clinical Translation Framework
From Knowing to Doing
Tim Mitchell
Darren Beales
Helen Slater
Peter O'Sullivan
Curtin University

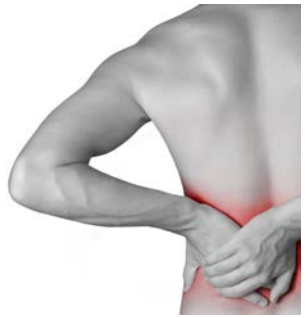

Musculoskeletal Clinical Translation Framework
Individual's Perspective
Individual's Problem/s
Functional Capacity
Goals/ Expectations
Diagnosis
Specific Diagnosis
Non-Specific Diagnosis
Red Flags
Stage of Disorder
Acute
Sub-acute
Recurrent
Chronic/ Persistent
Pain Features
Types
Nociceptive
Neuropathic
Nociplastic
Mixed
Characteristics
Mechanical
Non-Mechanical
Sensitisation
Low
High
Psychosocial Considerations (Yellow Flags)
Cognitive Factors
Affective Factors
Social Factors
Work Considerations (Blue & Black Flags)
Workplace Factors
Lifestyle Considerations
Lifestyle Factors
Whole Person Considerations
General Health & Co-Morbidities
Functional Behaviours
Helpful (Protective)
Unhelpful (Provocative)
Impairment of Movement
Impairment of Control
Pain Behaviours
De-conditioning
Clinical Decision Making
Diagnosis
Stage
Important Contributing Factors
Developed by Postgraduate Musculoskeletal Physiotherapy Teaching Team, Curtin University.
Tim Mitchell, Darren Beales, Helen Slater & Peter O'Sullivan

working examples of clinical application

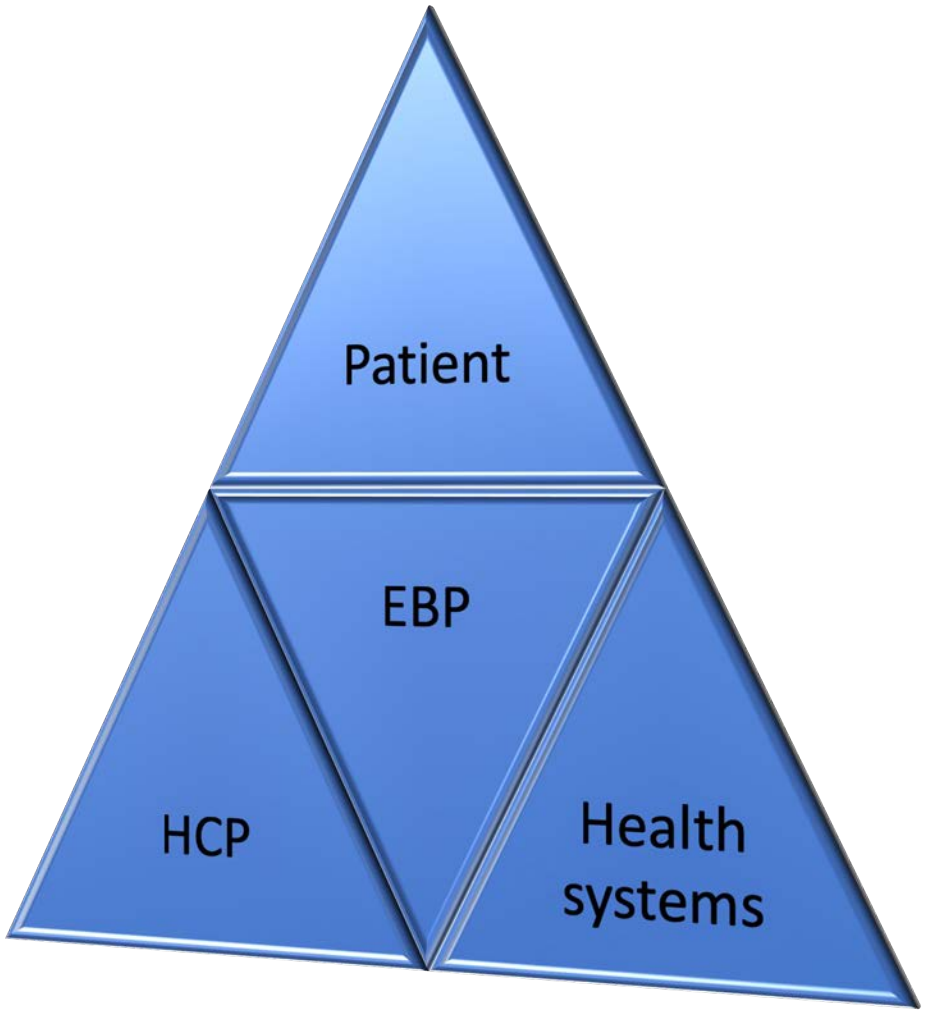








MCTF is part of broader system

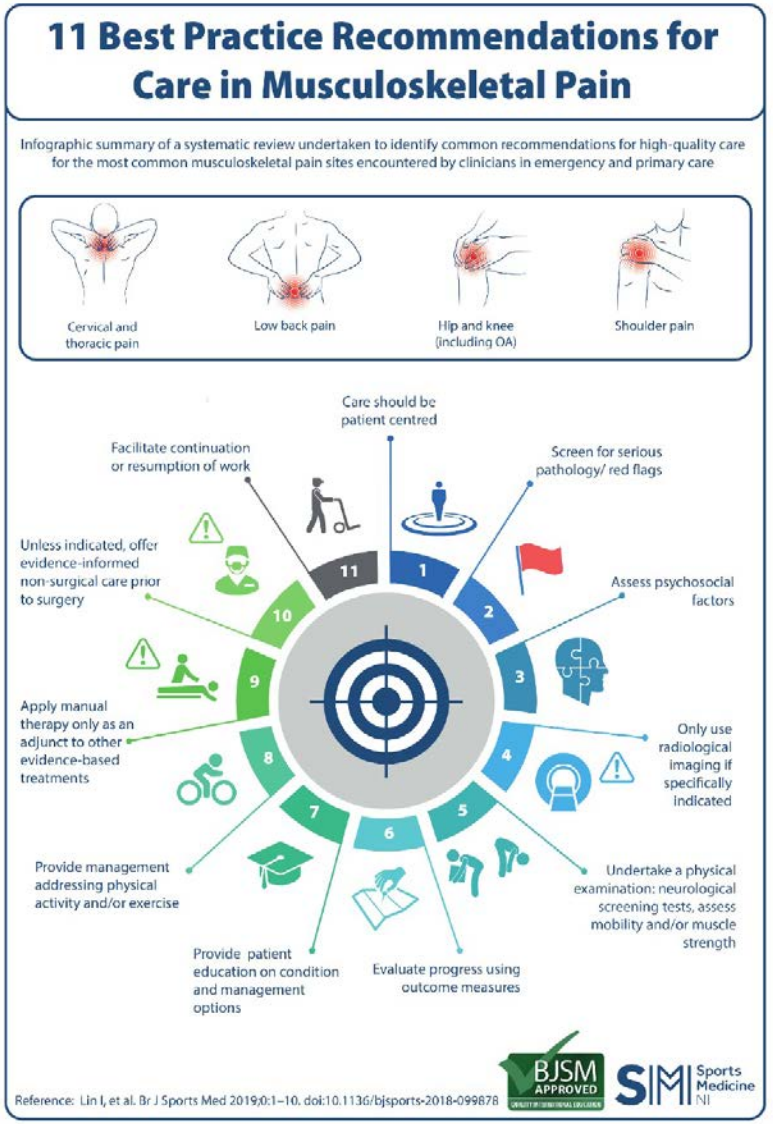


What if I am not confident in this area?

Guideline Based Care - Msk Pain

Lin et al, BJSM 2019

- Patient centred care
- Screen for pathology / red flags
- Assess psychosocial risk
- Judicious radiology
- Physical assessment
- Monitor outcome
- Early exercise
- Non-surgical care first*
- Encourage work participation



How do you conduct a clinical consult?

Skills for Communicating with Patients

by Jonathan Silverman, , Suzanne Kurtz, , and Juliet Draper

PUBLISHER
Taylor & Francis Group

DATE
2013-09-28

More...

Gathering information

Process skills for exploration of the patient's problems

- Patient's narrative
- Question style: open-to-closed cone
- Attentive listening
- Facilitative response
- Picking up cues
- Clarification
- Time-framing
- Internal summary
- Appropriate use of language
- Additional skills for understanding the patient's perspective

Content to be discovered

THE BIOMEDICAL PERSPECTIVE - DISEASE
- Sequence of events
- Symptom analysis
- Relevant systems review

THE PATIENT'S PERSPECTIVE - ILLNESS
- Ideas and beliefs
- Concerns
- Expectations
- Effects on life
- Feelings

BACKGROUND INFORMATION - CONTEXT
- Past medical history
- Drug and allergy history
- Family history
- Personal and social history
- Review of systems

Figure 1.3 An example of the interrelationship between content and process.

We need to make sense of the story

How it started: Cause of injury / symptom onset

- Trauma
- Specific incident
- Repetitive use / overload
- Insidious
  - Red flag disorder
  - Did some factors “pre-sensitise”?

Clinicians need to understand pain

but MORE importantly…

… clinicians need to understand what the person understands about their pain

Example 1

Person with acute knee sprain…

… I need to rest for a bit then slowly build back to full function

… I need to be really careful so I don’t damage my knee more and end up like my mum

Helpful v Unhelpful

Example 2

Person with persistent back pain…

… My back is worn out. I just need to manage as best I can

… I have a pinched nerve and I could end up in a wheelchair

Helpful v Unhelpful

mskPain

PainOptions

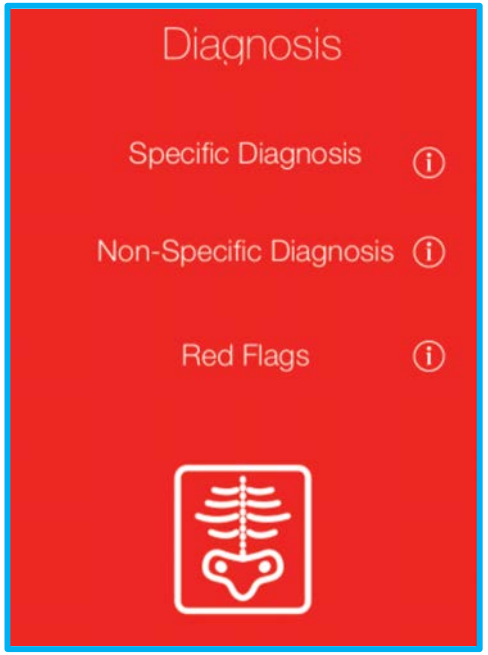
Different diagnoses for the same problem

A person presents to their medical practitioner describing three days of medial knee pain after a day working in the garden.

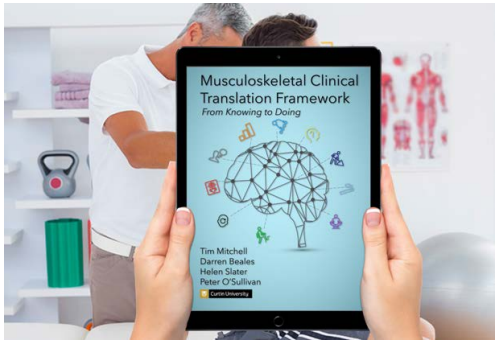
They could be offered the following diagnoses:

- Knee sprain
- Degenerative meniscal tear
- Patellofemoral pain
- Arthritis
- Non-specific knee pain
- An irritated knee ✓

But it depends….



enablers to facilitate integrated pain care



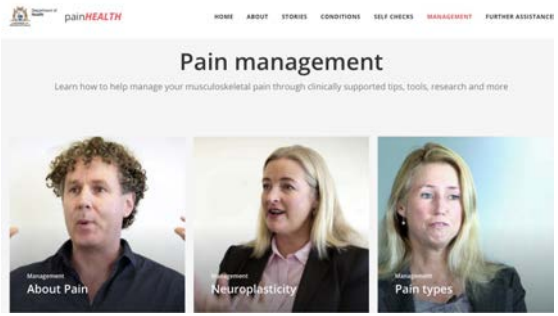
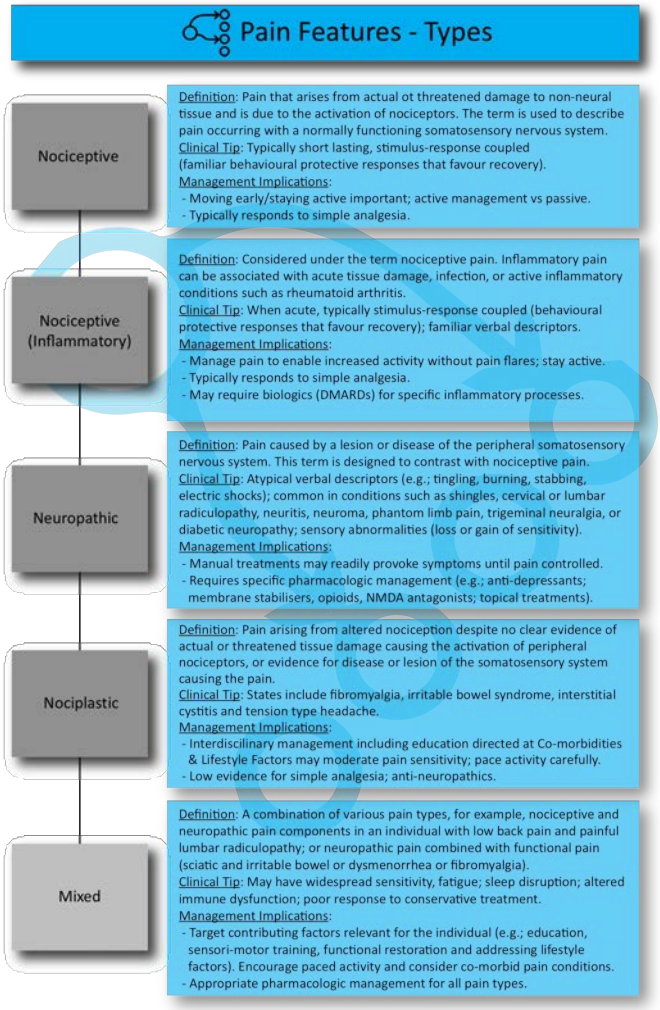
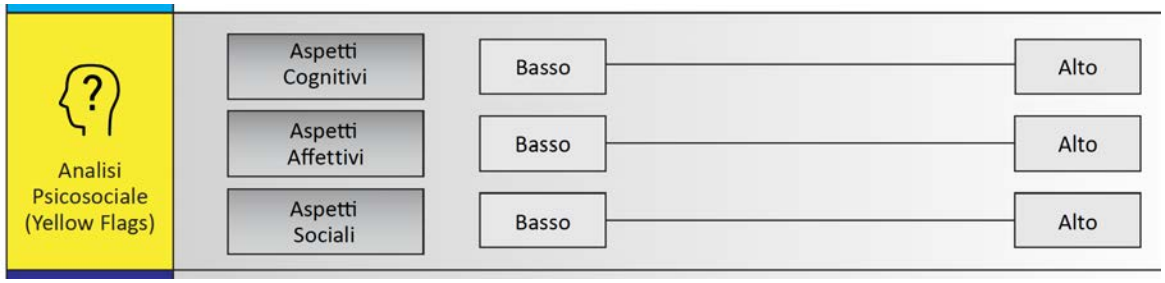


Figure 8: Pain Features - Types



Psychosocial = Psychological + Social



Cognitive (Thoughts and beliefs)

Attention, attitudes, beliefs, expectations, appraisal, self-efficacy, catastrophizing, coping

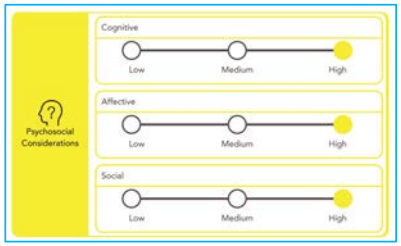
Affective (Emotions)

Depression, anxiety, stress, fear, worry, anger / frustration

Social

Culture, education, relationships, health literacy, socioeconomics

Pre-sensitised to onset of symptoms



- Can explain why symptoms start without changes in physical load
- Low mood, high stress, heightened anxiety + poor sleep
- May be an underlying ‘trait’ of the person
- May be an acute ‘state’ or episode

- Often in combination with other factors
  - Lifestyle
  - General health

mskPain

MCTF

Örebro Musculoskeletal Pain Screening Questionnaire (Short-form)(Linton et al, 2010)

Name: _____ Date: _____

1. How long have you had your current pain problem? Tick (√) one.

☐ 0-1 weeks [1] ☐ 1-2 weeks [2] ☐ 3-4 weeks [3] ☐ 4-5 weeks [4] ☐ 6-8 weeks [5]
☐ 9-11 weeks [6] ☐ 3-6 months [7] ☐ 6-9 months [8] ☐ 9-12 months [9] ☐ over 1 year [10]

2. How would you rate the pain that you have had during the past week? Circle one.

0 1 2 3 4 5 6 7 **(8)** 9 10 [ ]
No pain *Pain as bad as it could be*

For items 3 and 4, please circle the one number that best describes your current ability to participate in each of these activities.

3. I can do light work (or home duties) for an hour.

0 1 **(2)** 3 4 5 6 7 8 9 10 (10-)[ ]
Not at all *Without any difficulty*

4. I can sleep at night.

0 1 2 3 **(4)** 5 6 7 8 9 10 (10-)[ ]
Not at all *Without any difficulty*

5. How tense or anxious have you felt in the past week? Circle one.

0 1 2 3 4 5 6 7 **(8)** 9 10 [ ]
Absolutely calm and relaxed *As tense and anxious as I've ever felt*

6. How much have you been bothered by feeling depressed in the past week? Circle one.

0 1 2 3 4 5 6 7 8 9 10 [ ]

Not at all *Extremely*

7. In your view, how large is the risk that your current pain may become persistent?

0 1 2 3 4 5 6 7 8 9 10 [ ]

No risk *Very large risk*

8. In your estimation, what are the chances you will be working your normal duties (at home or work) in 3 months

0 1 2 3 4 5 6 7 8 9 10 (10-)[ ]

No chance *Very Large Chance*

9. An increase in pain is an indication that I should stop what I'm doing until the pain decreases.

0 1 2 3 4 5 6 7 8 9 10 [ ]

Completely disagree *Completely agree*

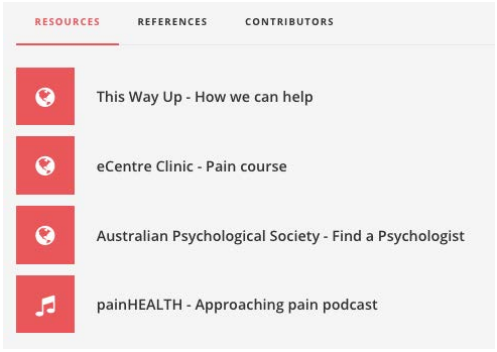
10. I should not do my normal work (at work or home duties) with my present pain.

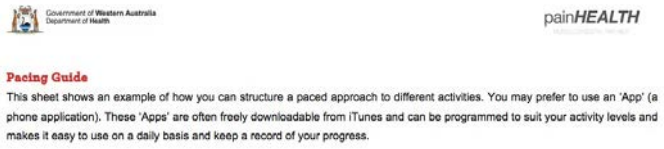
0 1 2 3 4 5 6 7 8 9 10 [ ]

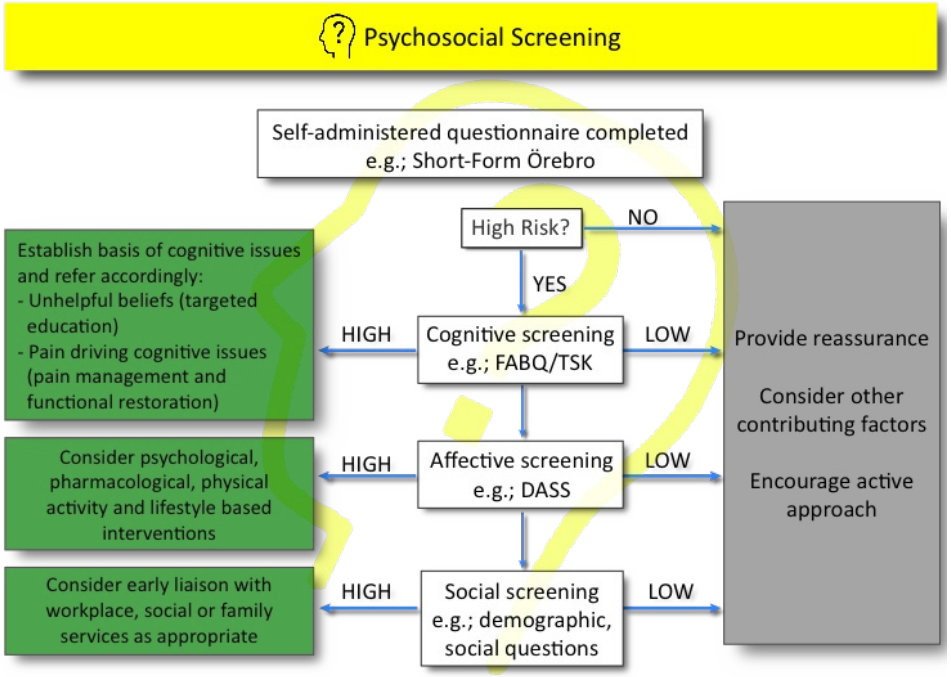
Completely disagree *Completely agree*

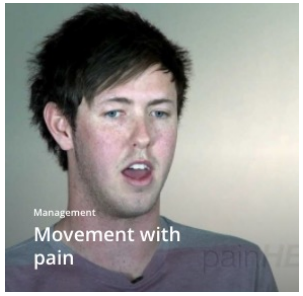
SUM:_____

enablers to facilitate integrated pain care









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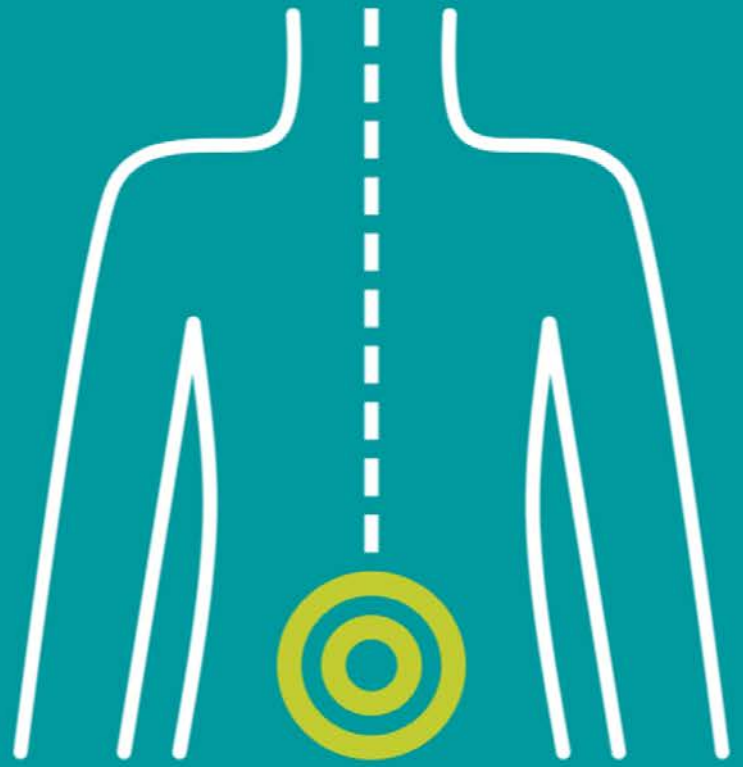
- Systems approach essential [screening/outcomes]
- Multidimensional therefore MUST include screening of all relevant dimensions
- Evidence-informed best practice pain management principles
  - low disability simple solution
  - high disability more complex

AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE

Clinical Care Standards

Low Back Pain
Clinical Care Standard

September 2022



Risk of recurrence and progression after an episode of low back pain

SOURCE: Stanton et al. Spine (Phila Pa 1976). 2008;33:2923-8

Quality Statements

1. Initial clinical assessment
2. Psychosocial assessment
3. Reserve imaging for suspected serious pathology
4. Patient education and advice
5. Encourage self-management and physical activity
6. Physical and/or psychological interventions
7. Judicious use of pain medicines
8. Review and referral

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Clinical Care Standards

- ✓ **Recognise the signs of serious pathology**
- ✓ **Provide evidence-based care once serious pathology has been ruled out**
- ✓ **Avoid unnecessary interventions**

Remember most acute low back pain will **resolve without intervention**

Provide advice and support **self-management**

Always review a patient if their progress is not following the expected pattern

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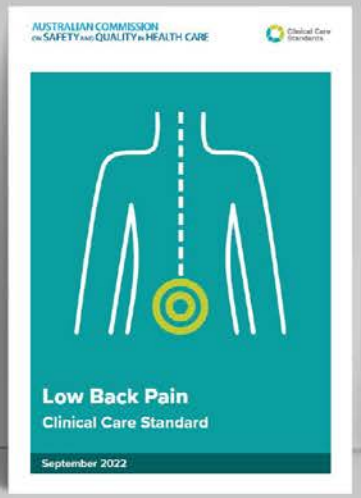
Clinical Care Standards



CLINICAL CARE STANDARD

FACTSHEETS

QUICK QUIDES FOR GPS AND EMERGENCY DEPARTMENTS

INFORMATION FOR CONSUMERS

Work related pain

PainOptions

Specialist physiotherapy reviews

Pain Options Specialist Clinical Reviews for ‘complex cases’ –

1/3 workers had complex conditions – expect protracted recovery

86% workers ‘do not understand what is wrong’

74% workers expressed unhelpful beliefs / messages – pathology, recovery expectations, what treatment was required (passive vs active)

65% guideline based care not followed early

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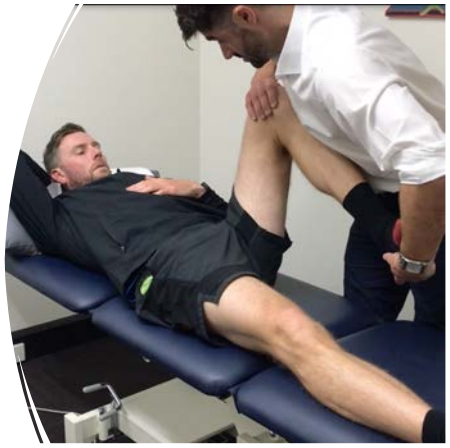
Recovery Options Review – key principles

1. Targeted 60 minute patient interview and thorough clinical assessment

   Identifies key barriers (bio-psyche-social) and solutions relevant to the individual

2. Management commences immediately - targeted education which helps them understand their problem – reassure
3. Provide an action plan which empowers worker with ‘active treatment’
4. Exposure to Clinical Practice Guidelines
   - = turn the workers into discerning buyers of healthcare!
5. Timely follow-up review (1 - 4 weeks)



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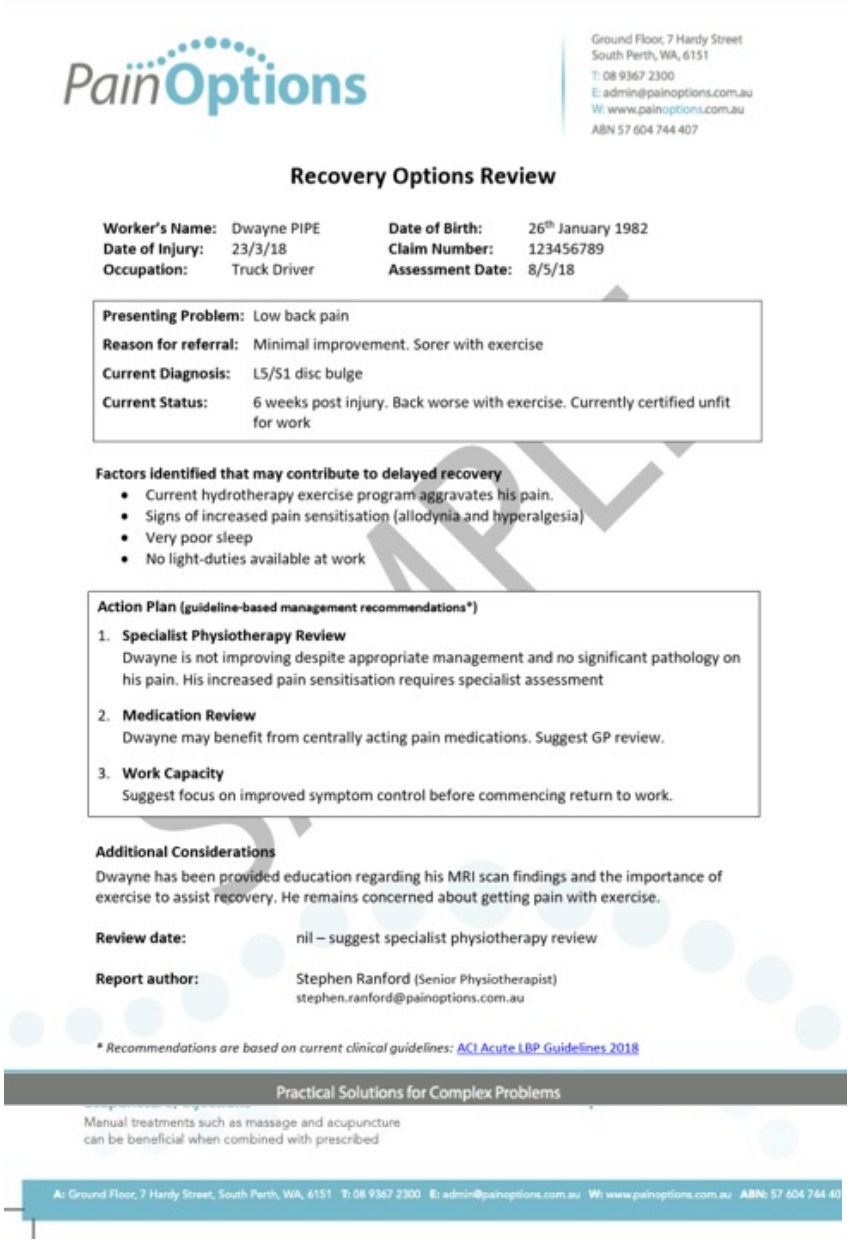

PainOptions

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Recovery Options Review

Worker's Name:	Dwayne PIPE	**Date of Birth:**	26th January 1982
Date of Injury:	23/3/18	**Claim Number:**	123456789
Occupation:	Truck Driver	**Assessment Date:**	8/5/18

Presenting Problem: Low back pain

Reason for referral: Minimal improvement. Sorer with exercise

Current Diagnosis: L5/S1 disc bulge

Current Status: 6 weeks post injury. Back worse with exercise. Currently certified unfit for work

Factors identified that may contribute to delayed recovery

- Current hydrotherapy exercise program aggravates his pain.
- Signs of increased pain sensitisation (allodynia and hyperalgesia)
- Very poor sleep
- No light-duties available at work

Action Plan (guideline-based management recommendations*)

1. **Specialist Physiotherapy Review**
   Dwayne is not improving despite appropriate management and no significant pathology on his pain. His increased pain sensitisation requires specialist assessment
2. **Medication Review**
   Dwayne may benefit from centrally acting pain medications. Suggest GP review.
3. **Work Capacity**
   Suggest focus on improved symptom control before commencing return to work.

Additional Considerations

Dwayne has been provided education regarding his MRI scan findings and the importance of exercise to assist recovery. He remains concerned about getting pain with exercise.

Review date: nil – suggest specialist physiotherapy review

Report author: Stephen Ranford (Senior Physiotherapist)
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** Recommendations are based on current clinical guidelines: ACI Acute LBP Guidelines 2018*

Practical Solutions for Complex Problems

Manual treatments such as massage and acupuncture can be beneficial when combined with prescribed

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ROR Education and Treatment Planning

- Clinical Practice Guideline- discerning buyers
- 1-page report – areas of focus for early intervention and clear treatment recommendations
- Both documents aim to help empower the worker and facilitate conversations around treatment, return to work, and active participation

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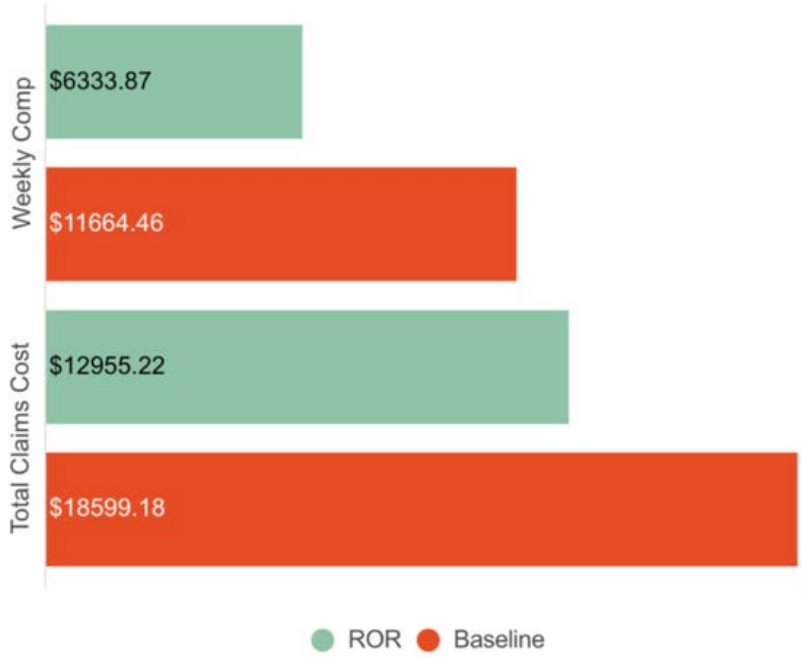
Outcomes?

Over 300 workers (20% telehealth)

Reduced risk of long term work disability (Orebro 60/100 to 48/100).

46% reduction in weekly compensation costs over first 26 weeks of claim

31% reduction in total claims costs over first 26 weeks of claim



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Summary

- Rural healthcare can be challenging
  - And rewarding
- Understand clinical guidelines
  - low disability simple solution
  - high disability more complex solutions
- Resources are available
  - Pain Health
  - LBP Clinical Care Standard
- Telehealth services are growing

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