

# WCHN Rehabilitation Orthopaedic Service: A new model of care



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# Introduction

- Children & young people with complex neuromuscular conditions may develop secondary progressive musculoskeletal pathology over time
  - Adverse health outcomes
  - Impact on function, participation & quality of life
- Orthopaedic surgery is the mainstay of treatment
  - Risks related to co-morbidities &/or social complexities

(Graham et al 2021, International Committee on Perioperative Care for Children with Medical Complexity 2020, Thomason and Graham 2013)

# Nella: 14yo from country SA with bilateral CP (GMFCS III)

Mo has mental  
& physical  
health issues

Limited family  
support

Hx of DCP  
involvement

Attends school

Community PT

Support  
workers



Referral for  
?bilateral LL  
surgery

Disengaged  
from local  
medical support

Mobility equip  
getting small

No ADL equip

Underweight

ASD/ADHD traits

# A need for change

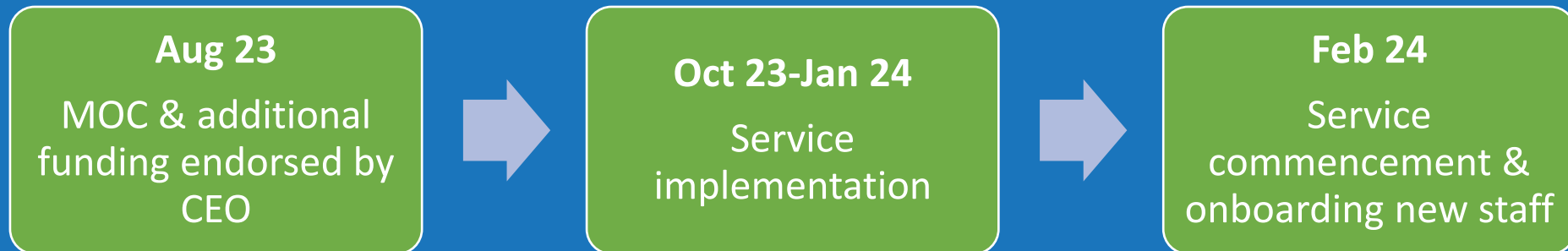
- Challenges & inefficiencies with existing model of care
- Increasing medical & social complexity  
(Antolovich et al 2022)
- NDIS implementation→change in Health/Disability responsibilities
- Frequent post-operative complications & adverse events
- Consumer dissatisfaction
- Reactive care→staff burnout & cost inefficiencies

# Timeline for change



Model of Care (MOC) developed through:

- Literature review
- Collaboration with key WCHN stakeholders
- Benchmarking with tertiary centres interstate & in New Zealand



# Service scope

Assess & manage children and young people who:

- Are likely to benefit from surgical intervention to manage secondary progressive lower limb musculoskeletal pathology **and**
- Are seen in the Rehabilitation Orthopaedic Clinic **and**
- Live with the following conditions:
  - CP
  - ABI
  - SCI
  - Neuromuscular conditions
  - Developmental/genetic/chromosomal syndromes resulting in physical disabilities
  - Neural tube defects



# The team

- Allied health-led, managed by Paed Rehab Dept
- In-kind support
  - Orthopaedic Surgeon
  - Orthopaedic Nurse Consultant
  - Paediatric Rehab Consultant
  - Administrative staff- Ortho Surgery and Paed Rehab Depts
  - Allied Health Assistant
  - Dietitian
- Additional funding endorsed
  - Coordinator AHP3 0.6FTE
  - PT AHP2 1.0 FTE
  - SW AHP2 0.4 FTE
  - OT AHP2 0.2 FTE
  - Orthotics AHP2 0.2 FTE



# Guiding principles

- Early detection & monitoring of musculoskeletal pathology
- Care provided is trauma-informed, connected & child/young person & family centred
- Physical, psychosocial, personal & environmental factors equally influence health, function & childhood development
- Current pain science knowledge is applied
- Optimal outcomes are achieved through collaboration & partnerships with all key stakeholders
- Ax & optimization of health, well-being & community supports
- Engagement in shared decision making
- Align with best practice & be innovative, contemporary & responsive

(Antolovich et al 2022, International Committee on Perioperative Care for Children with Medical Complexity, 2020)



# Service activities

- Gather information to commence early Ax, screening, planning & referrals to other team members/teams as required
- Share information with patients/families re: what to expect in the clinic
- Rehabilitation Orthopaedic Clinic
- Liaison with community therapists & actively involved health care professionals
- Facilitate assessment & optimization of health, well-being & community supports
- Facilitate shared decision-making
- Pre-operative planning
- Peri-operative care
- Post-operative monitoring, support & therapy
- Surveillance until 2 years post-operation

# Key changes

- Dedicated team with appropriate skills & experience to provide holistic & coordinated Ax & care
- Defined timeframe for care
- Increased efficiency & effectiveness of Clinic appointments
- Continuity of care & collaboration with all key stakeholders across pre-, peri- and post-operative phases
- Focus on pre-operative planning
- Health support to access and hire equipment

# Key changes

- Improved & consistent scheduling of theatre lists
- More inclusive & disability-aware inpatient care
- Commonly occurring post-operative issues are proactively addressed
- Strategies to decrease the number of hospital appointments & minimize PED attendance &/or hospital readmission
- Greater equity of post-operative health-funded therapy
- Surveillance program
- Data collection

# Coordinator

“You think of things  
when you leave”

(Parent after Rehab Ortho  
appointment)

You can call or text if you want to ask  
questions

Hi Minnie I thought about the surgery

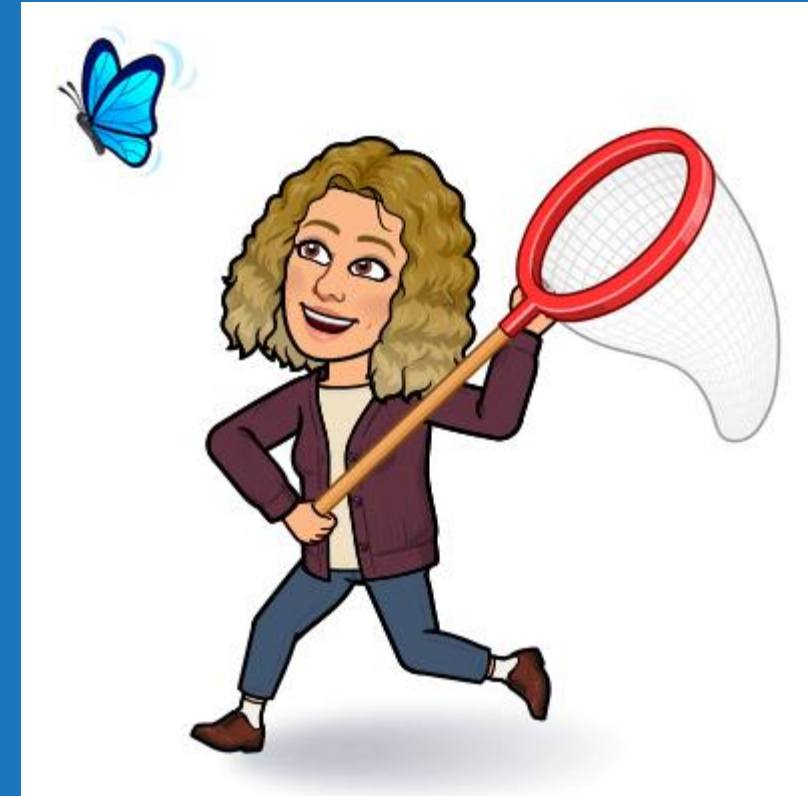
What are your thoughts?

And I am ready I want to do it

OK no problem

When is the next appointment

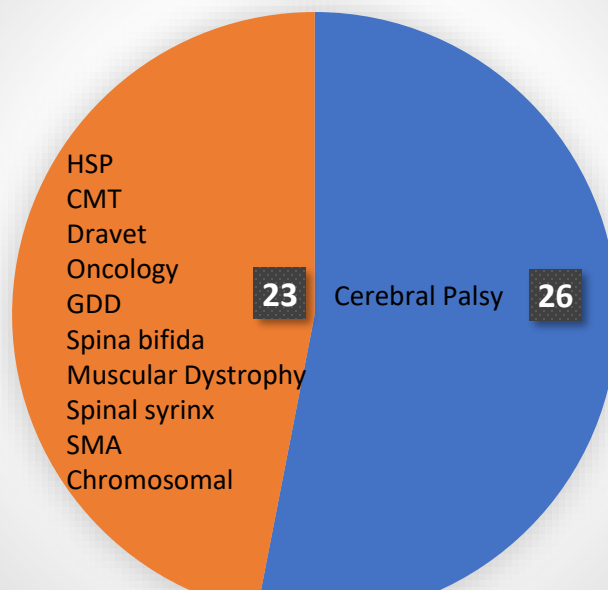
Hi minnie um idk if I will be able to make it  
can we do 25 July instead please



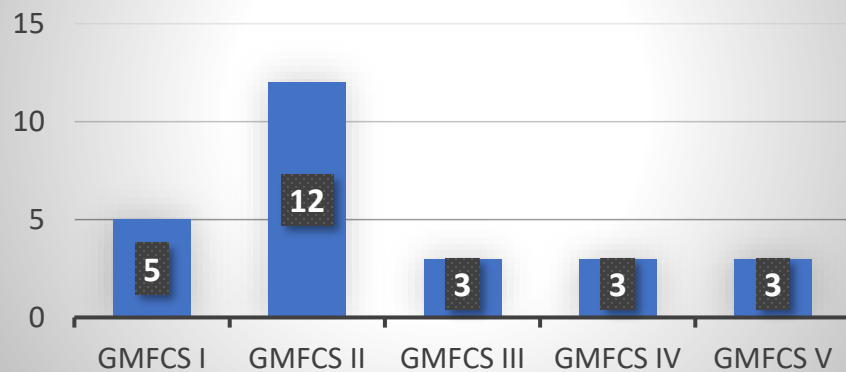
# Patient data

OFFICIAL: Sensitive

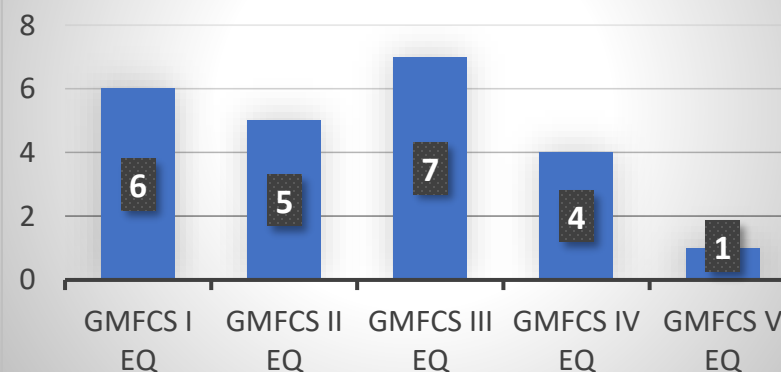
## Primary Diagnosis



## Baseline functional level: CP-group



## Baseline functional level: Non-CP group



# Surgery data

Surgery type		Number of surgeries
Multi-level, gait goals	Bony +/- soft tissue	5
	Soft tissue only	3
Single-level, gait goals	Bony +/- soft tissue	5
	Soft tissue only	14
Single-level hip reconstructive, care/comfort goals		11
Single-level soft tissue, care/comfort goals (non-ambulant)		3
Toe only		2
Guided growth only		8
Exchange or removal of hardware		3
Total		54

# Feedback

From consumers:

“We **couldn't have done this without your team**. We are really grateful”

“This surgery experience has been much more **organised and supported** (second surgery for revision). We are happy to get the **rehab hydrotherapy through WCH** as previously we depended completed on NDIS funded supports which utilised a lot of funding”

“I am happy to have received **nursing support** to learn how to complete moving for personal cares as we did not receive this education previously”.

“To Minnie and the wonderful new Allied Health Team, **your support** has made a huge difference to our whole experience with ()'s surgery and admission. We have so appreciated your involvement. What a great asset you are to WCH! Thank you for your **kindness and attention and for being so available** to us. Many, many thanks, () and family”

From community service providers:

“So glad we can all **work as a team** to make the process as **smooth as possible for the child**”

“Thank you for the update and your **consistent communication** throughout this process, it has been an absolute pleasure to work with your rehab team.”



# Where to from here...

- Consumer health information development e.g. social stories, videos and handouts
  - Review and update of post-operative protocols
  - Development of protocol for outcome measures
  - Data collection
  - Research opportunities
  - Ongoing service evaluation and development
- 
- Stay tuned for more information from Minnie in 2 years!



# Questions

## Contacts

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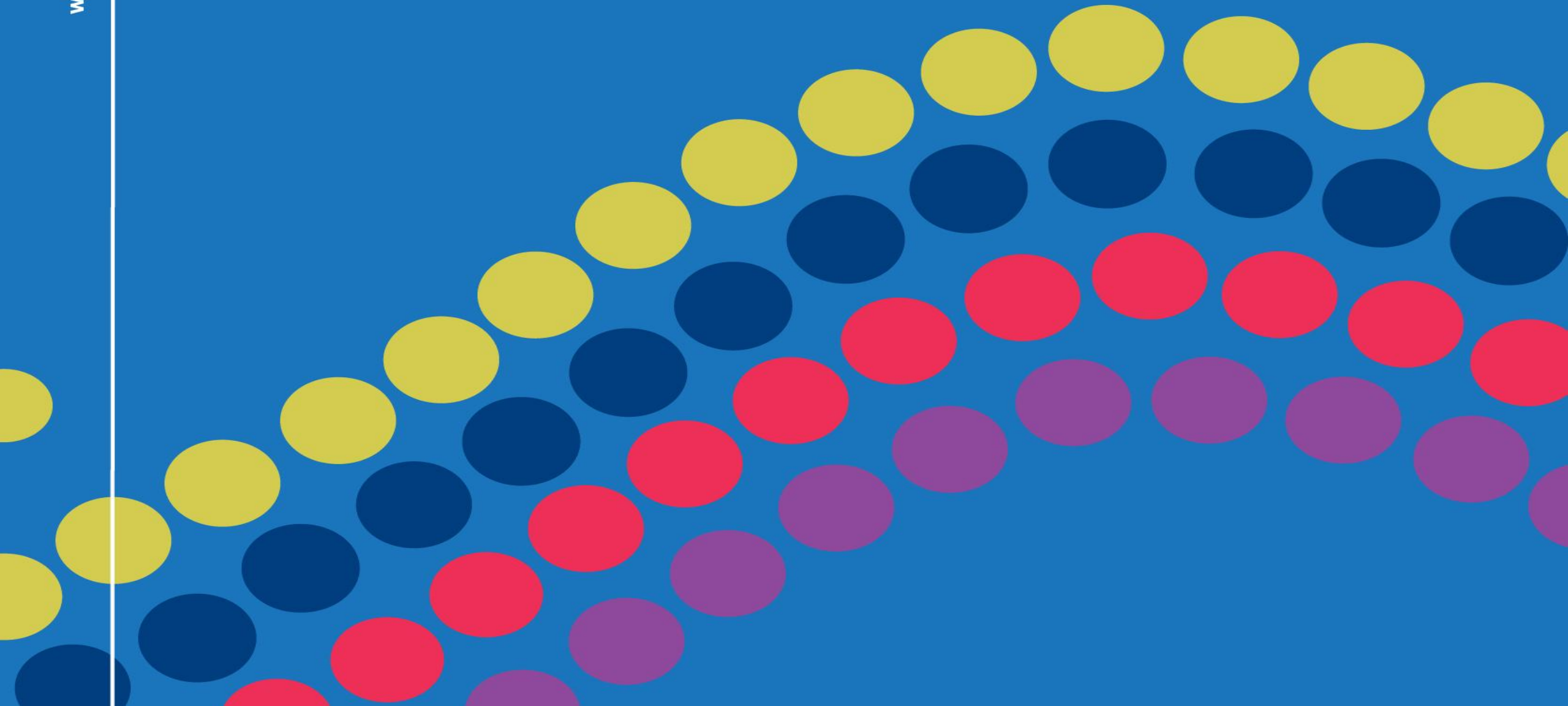
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# Thank you





**Government  
of South Australia**  

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