

REHAB2KIDS ORTHOPAEDIC REHABILITATION - PHYSIOTHERAPY - SCH PRACTICE GUIDELINE[®]

DOCUMENT SUMMARY/KEY POINTS

- This document provides staff with information regarding:
 - When patients are selected for Orthopaedic Rehabilitation
 - Pre-operative planning of the Rehabilitation Week
 - Type of admissions during the Rehabilitation week
 - Timing of post operative x-rays, wound checks, equipment and orthotic provision, and impact of these on commencing rehabilitation
 - Physiotherapy treatment schedule and types of therapy able to be offered
 - Discharge to community and follow up
 - Key contacts within the multidisciplinary orthopaedic service (see Appendix 1)

CHANGE SUMMARY

- Document due for mandatory review
- Updated & expanded 24.6.25 to reflect current processes and practises.

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

Approved by:	SCHN Policy, Procedure and Guideline Committee	
Date Effective:	1 st August 2025	Review Period: 3 years
Team Leader:	Physiotherapist	Area/Dept: Rehab2Kids SCH

READ ACKNOWLEDGEMENT

- This document is aimed at paediatric physiotherapists working in the orthopaedic team within Rehab2Kids
- All multidisciplinary members of the orthopaedic team (Orthopaedic Consultants, Orthopaedic Registrars, Occupational Therapists, Orthotists and Allied Health Assistants) are required to read and acknowledge they understand the contents of this document

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Background

This practice guideline has been developed to assist paediatric physiotherapists carry out post-operative Orthopaedic Rehabilitation for patients known to Rehab2Kids at Sydney Children's Hospital, Randwick (SCH).

Orthopaedic Rehabilitation, or the 'Rehab Week', is a five-day therapy block which is comprised of post-operative removal of casts, x-rays, wound checks/removal of dressings, fitting of orthoses and twice daily physiotherapy. This is typically carried out four to six weeks following surgical intervention.

Patients who are eligible for the Rehab Week are those who are known to Rehab2Kids. These patients typically have a diagnosis of Cerebral Palsy (CP) or other complex neurological diagnosis, such as Brain Injury, that require co-ordinated care during the rehabilitation period. Patients are identified for rehabilitation at the time that surgery is proposed, dependent on the type of surgery and identified goals. This decision is at the discretion of the Orthopaedic Consultant and CP Physiotherapist.

Pre- Surgical Planning

Prior to the patient's surgery, a pre-surgical meeting is held with the child, their family and community therapists via telehealth (my virtual care) or a face-to-face appointment. This is coordinated by the CP orthopaedic physiotherapist and/or occupational therapist at a time that suits the family and professionals involved.

Staff members from SCH who attend the meeting may include CP orthopaedic Physiotherapist, CP Occupational Therapist, Orthotist, +/- Child Life Therapist, CP Social Worker and/or psychologist.

During this meeting, the following may be discussed:

- The inpatient stay:
 - The proposed surgery and post-operative instructions e.g. weight bearing status and orthotic management as indicated by the Orthopaedic Consultant
 - Pain management
 - Estimated length of hospital stay following surgery
 - What the young person should expect from allied health whilst staying as an inpatient
 - Home Exercise program which will be given upon discharge
- The sub-acute phase (up to 6 weeks post-operative) i.e. what the patient will require once they are discharged home, including local therapy requirements
- Additional equipment that needs to be hired for use at home in the sub-acute phase
- Possible return to school during the sub-acute phase
- To commence planning their Rehab Week

Sub-Acute Phase (up to 6 weeks post op)

NSW Health is responsible for funding physiotherapy and occupational therapy intervention in the sub-acute phase; to be delivered by the child's local therapists. The local therapists will be advised how much therapy (number of sessions/time) is required depending on the type of surgery, weight bearing status and child's GMFCS level. Once the service has been provided and the 6-week period is complete, the local therapists are asked to send an invoice to the NDIS transition manager.

NB: This process may be subject to change dependent on agreed process between NSW Health and the National Disability Insurance Agency (NDIA).

Timetable for the Rehab Week

Prior to the Rehab Week, the multi-disciplinary team will organise the patient's rehabilitation timetable. The timetable may include but may not be limited to:

- When to present to the outpatient department on Day 1 of Rehab Week for removal of casts, wound check and x-ray, clearance for weight bearing as required
- An orthotics appointment for fitting or casting of orthoses, as required
- An occupational therapy review may be needed to reconfigure the child's wheelchair, car seat and address other equipment needs.
- A review appointment with their surgeon through the Orthopaedic Outpatient Clinic (booked into dedicated orthopaedic CP clinic slots, either on a Thursday morning or Friday afternoon)
- Planned physiotherapy sessions. The physiotherapy admin team will be advised of relevant bookings at least one day in advance to ensure resources are available for use.

Physiotherapy appointments (gym and hydrotherapy) must be booked into the electronic orthopaedic gym or hydrotherapy book; to ensure the spaces are available for use.

Once the patient's timetable is finalised, the family is contacted via phone and/or email by the CP Physiotherapist or rotating rehabilitation physiotherapist.

Please note that a full rehab week is generally suitable for patients who have undergone SEMLS (Single Event Multi Level Surgery). Patients who have undergone more minor surgeries or are GMFCS IV-V may not require the full week, depending on the goals. See table below for guidelines:

Type of Surgery	GMFCS Level	Goal of Surgery	Amount of Rehab Required
SEMLS	I-IV	Functional goals such as improving mobility, transfers etc	Full week
Hip Surgery	III-IV	Functional goals such as standing transfers	3-5 days
Hip Surgery	IV-V	Pain, hygiene, ROM, back to standing frame	A few hydro sessions can be offered; especially if not available locally
Tendon/Muscle lengthening (not allowed to WB)	I-IV	Functional Goals	3-5 days
Bony Foot Surgery, tendon transfers or bilateral calf lengthening	I-IV	Functional Goals	3-5 days
Bony Foot Surgery, tendon transfers or bilateral calf lengthening	V	Pain, tolerance of AFOs, back to standing frame	A few sessions (land/hydro) can be offered; especially if not available locally
Unilateral Calf lengthening (allowed to WB in cast)	I-III	Functional goals – i.e. improve walking and standing	May only need land-based physio. Number of sessions dependent on local physio availability
Hardware removal or epiphysiodesis	I-V	N/A	Not required

Please also note that if the patient is attending as an outpatient, the sessions can be spread out over more than one week if that is more suitable; or if they patient is able to access plenty of local physio sessions, they may elect to have less rehab through SCH and more locally.

Sometimes we offer two weeks of intensive rehab for children who are more complex, slower to progress or have less local physiotherapy support.

Decisions regarding the amount and layout of the post op “rehab” are at the discretion of the CP Ortho Physiotherapists in consultation with the orthopaedic surgeon.

Admission for the Orthopaedic Rehab Week

The type of admission for the Rehab Week should be discussed prior to discharge, or during the pre-surgical meeting with the Orthopaedic Consultant and family. Admission for the Rehab Week can occur via two pathways, dependent on the patients' locality and/or preference:

Inpatient Admission

This is utilised when patient and families are required to travel a long distance to the hospital for their rehabilitation. In this case, the patient is admitted as an inpatient and stays for the week on the ward.

The inpatient admission is organised by the Orthopaedic Resident Medical Officer (RMO) by submitting a Recommendation for Paediatric Admission (RFA) form following their surgery, prior to discharge; and in close liaison with the bed manager. The patient is to be admitted under orthopaedics for “a week of intensive physiotherapy and hydrotherapy”. The patient and family should check in at Admissions at the High Street entrance of the SCH, level 0 prior to going to the ward on the afternoon of Day 1 of their Rehab Week.

If specialised equipment is required for the inpatient stay and cannot be brought with the patient e.g. hoists, pressure relieving mattress etc., this should be discussed with the Orthopaedic team by the patient's family. Appropriate equipment may then be organised in conjunction with the CP Orthopaedic Occupational Therapist prior to the child's admission where possible.

Note: Some families that live close to the hospital may elect to stay on the ward rather than travel in each day, which is dependent on bed availability as per the bed manager.

Outpatient Rehabilitation

This is utilised when the patient and families live within close proximity to the hospital or have elected to stay in accommodation provided by Ronald McDonald House (RMH) or private accommodation. The patient is required to check in daily for physiotherapy.

Note: RMH accommodation is dependent on availability and must be booked by the family if they live outside a 100km radius from the hospital. There is a fee associated with accommodation at RMH.

Commencing Rehabilitation

Families are required to present to the Outpatient Department Orthopaedic Clinic on day one of their Rehab Week, which typically falls on a Monday. Patients should present to the reception of the Outpatient Department **prior to 9am** to ensure they are assessed by the Orthopaedic Registrar. The CP Orthopaedic Physiotherapist will be paged upon the patient's arrival.

Dependent on the patient's surgical intervention, the first day of rehabilitation may consist of:

Cast and dressing removal:

- The patient's cast will be removed in the outpatient department by the CP Orthopaedic Physiotherapist.
- All dressings will be removed from wounds and checked for healing by the Orthopaedic Registrar. If there are any concerns with regards to wound healing, the Orthopaedic Registrar or nursing staff will advise on further management. All wounds should be clearly healed prior to entering the hydrotherapy pool; to minimise the risk of infection.
- If there are any concerns regarding scar management; the CP orthopaedic physiotherapist may liaise with the burns/scar management physiotherapist for advice.
- In the case of tendon transfers, muscle lengthening and/or SPLATT surgical procedures, the cast should be bi-valved and reapplied temporarily prior to having orthoses fitted. This is to ensure the ankle and foot are supported at all times so that the integrity of the surgical intervention is not compromised.
- The patient should be reminded to remain non-weight bearing until their weight bearing status has been confirmed following their x-ray **and** provision of orthoses/CAM boot.

Note: An IIMS should be completed for any pressure areas or adverse events.

X-ray

- If the patient has had a bony procedure, they should be directed to the radiology department for an x-ray out of their cast. This x-ray will be assessed by the Orthopaedic Registrar to confirm the patient's weight bearing status prior to commencing standing or walking on land.
- X-ray forms may be given to the family on the ward by the Orthopaedic Consultant or Registrar upon discharge from their inpatient stay; at the outpatient department on day one of the Rehab Week, or x-rays can be ordered electronically on EMR by the orthopaedic team.

Orthotics

- The patient's orthotic prescription will be discussed with the Orthopaedic Consultant prior to surgery. Upon confirmation of the type of orthoses required, the patient may be cast, scanned or measured for their orthoses either the day before surgery, during surgery whilst under GA, three weeks post operatively (if there is a change of cast) or on day one of the Rehab Week.
- If the patient requires new orthoses following surgery, the orthotics department should be invited to the pre-surgical meeting to assist with planning for fitting and/or fabrication of new orthoses in a timely manner. This includes provision and fitting of Newport braces and foam wedges (for hip surgery) as they may need to be modified/ customised before use.

- Following removal of their cast by the CP Physiotherapist and confirmation of weight bearing status by the Orthopaedic Registrar, the patient will be directed to the Orthotics Department, Level 1 Prince of Wales Hospital, to have their orthoses fitted.
- **Under no circumstances should patients weight bear on their operated foot/leg without an orthoses before this has been cleared by the Orthopaedic Registrar.** It is generally advised that orthotics are worn at all times (including night), with the exception of showering and during hydrotherapy, for the first six to twelve weeks following the operation. This recommendation should only change on the instruction of the Orthopaedic Consultant.
- If the patient's orthoses are not ready for fitting at the beginning of their Rehab Week, the Orthopaedic Consultant may request that they be fitted with a CAM boot through the Orthotics Department. This enables commencement of weight bearing activities until their orthoses is fitted. The custom orthoses should be fitted prior to the end of the Rehab Week in this circumstance. If the orthotist cast for the new orthoses after the casts were removed on the first day of the rehab week; fabrication of the orthoses will be fast tracked.

If the patient has been using a Newport Brace in the post-operative period, it is advised that time in the brace is slowly reduced in the first few days of the Rehab Week. Time out of the brace can be increased as the patient tolerates; or they may continue to wear it overnight for a period of time.

If the patient has been using knee extension splints in the post-operative period, full time wear should be reduced to two hours of long leg sitting in the knee extension splints during the day and overnight use to maintain extension of the knees. The leg board can be removed from their wheelchair; if the patient has trouble bending the knee to 90 degrees, the leg can be supported by a pillow/s on the foot plate.

Instructions with regards to weaning of orthotic use will be advised by the Orthopaedic Consultant at subsequent outpatient appointments.

Physiotherapy Intervention

Following cast removal, wound checks, clarification of weight bearing status and provision of orthoses, the patient is routinely taken into the hydrotherapy pool to commence their Rehab Week on Day One.

A hydrotherapy clearance form needs to be completed by the treating physiotherapist prior to entering the pool as per the Physiotherapy Department Hydrotherapy Policy and recorded in the patient's electronic medical record.

For the remainder of the rehabilitation period, the patient may be offered one land based and one hydrotherapy session per day. The patient's physiotherapy program will be individualised dependent on the surgical intervention and the patient goals.

Pain Relief

During the first days of rehabilitation, it is not uncommon for patients to experience discomfort. It is recommended that if pain relief is required, patients take it 30-60 minutes prior to the session.

If there are concerns about significant or prolonged pain, consultation with the Orthopaedic Consultant and possibly a referral to the SCH pain team is advised for further management. If the patient is already known to the pain team a referral is not needed, and the pain team can be contact directly by the family or treating therapist.

Equipment

If additional or alternative mobility equipment is required, this will be issued during the rehabilitation week for use. Ongoing use/loan of equipment will be at the discretion of the therapy team through the Home Equipment Loan Pool (HELP Centre) at an appropriate cost. Alternatively, equipment can be arranged to be hired from the patient's local ELP if available.

Wheelchair modifications and/or adjustments may be required following removal of hip braces, knee extension splints or casts. This can be organised by liaising with the CP or Orthopaedic Occupational Therapist.

Discharge

On the last day of the week of rehabilitation, a home exercise program will be given to the patient. This is to be carried out in conjunction with local physiotherapy services and progressed accordingly.

A handover is commonly provided to the patient's local therapy team once the week of rehabilitation is complete, usually by email using the handover template which can be found on the Cerebral Palsy drive (Orthopaedics → Templates & Handovers).

The patient will be followed up in the Orthopaedic clinic at time intervals advised by the Orthopaedic Consultant. Parents are responsible for ensuring booking of outpatient appointments.

Tab A. Key contacts

- Surgeons:
 - Dr Michael Stening
 - Dr Jason Chinnappa
- Orthopaedic Registrars: **BONE PHONE: 0436607186 (best contact)**, pager #44107 / #44108
- Orthopaedic JMO: #45302
- Pain Team: 0408868274
- Surgical/wound CNC: #44253
- Orthopaedic Physiotherapist, CP team: #47117
- Orthopaedic Physiotherapists: #47095 / 0476835039 (TL); #47049 (rotator); #47338 (FYG)
- Scar Management/Burns Physiotherapist: #47147
- Orthopaedic Occupational Therapist, CP team: #47157 / #47116
- Orthotics Department: ext 28184 / #45009 / #45248 / 0499976392
- Outpatient Department plaster room: ext 21473
- Physiotherapy plaster room: ext 21080
- Bed Manager: SCHN-SCHBedManager@health.nsw.gov.au
- NSW Patient Transport Service: 1300233500
- NDIS Transition Manager: SCHN-NDIS@health.nsw.gov.au (for patients residing in ACT: PaedsRehab@act.gov.au)

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