



™
The Royal
Children's
Hospital
Melbourne

Car seat modification for children in hip spica casts and hip braces

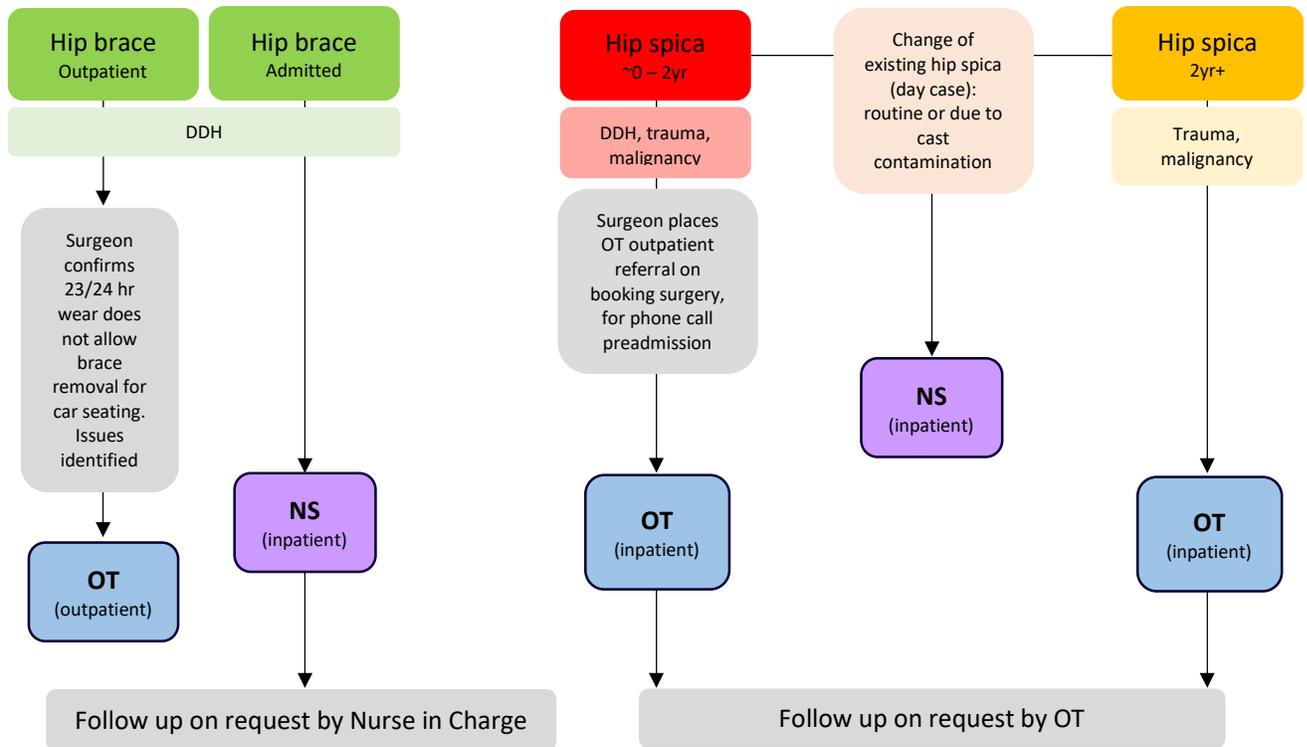
Referral information, management, and training.

RCH Occupational Therapy Department, November 2021



Referral pathway

Nursing and Occupational Therapy



How to use this document

This document is designed to be used as both a training and reference tool. Working with your supervisor, or Clinical Nurse Educator, select the relevant sections as a guide to training and clinical practice.

1. Use 'Traffic light system: demographics' to decide which category referral may fit within.
2. Refer to relevant section 'green', 'yellow', 'red' (E, F, G) for associated clinical practice guides.
3. Complete section D: Assessment guide checklist.



Traffic light system: demographics

| Preadmission action | Outpatient referral to OT on surgical booking | | | | | |
|--|--|--|---|---|--|---|
| | Rhino/hippo brace | Hip spica (double leg) | Hip spica (double leg: one full +/- IR, one half length) | Hip spica and complex comorbidities | Hip spica (single, full leg) | Hip spica (double leg: one full, one half length) |
| Common age | 6m – 2yr | 0 – 2yr | | 0 – 6mo | 2yr+ | |
| Underlying condition | Developmental Dysplasia of the Hip | Developmental Dysplasia of the Hip, trauma, malignancy | Developmental Dysplasia of the Hip (late presentation) | Developmental Dysplasia of the Hip | Trauma and malignancy | Trauma and malignancy |
| Common hip angles (<u>not prescriptive</u>) | 75° abduction 90° flexion | 60° abduction 100° flexion | 60° abduction 100° flexion 15° IR | 60° abduction 100° flexion | Variable, but often in seated position with a slightly open hip | Variable, but often in seated position with a slightly open hip |
| Car seat commonly used (<u>not prescriptive</u>) | <ul style="list-style-type: none"> - Use of own child restraint. <ul style="list-style-type: none"> o Forward facing -> rearward facing o Can fit extended crotch strap if approved model | <ul style="list-style-type: none"> - Use of own child restraint. <ul style="list-style-type: none"> o Forward facing -> rearward facing o Can fit extended crotch strap if approved model - Britax Safe-n-Sound Safeguard in rearward facing | <ul style="list-style-type: none"> - Britax Safe-n-Sound Safeguard in rearward facing | <ul style="list-style-type: none"> - Britax Millenia | <ul style="list-style-type: none"> - Britax Safe-n-Sound Encore 10 Booster w slideguard clip - Britax Safe-n-Sound Maxi Rider AHR - Britax Safe-n-Sound Maxi AHR - Britax Safe-n-Sound Safeguard in forward facing | <ul style="list-style-type: none"> - Britax Safe-n-Sound Encore 10 Booster w slideguard clip - Britax Safe-n-Sound Maxi Rider AHR - Britax Safe-n-Sound Maxi AHR |
| Common modifications | <ul style="list-style-type: none"> - Padding under seat cover (lumbosacral) - Extended crotch strap | <ul style="list-style-type: none"> - Padding under seat cover (lumbosacral to scapula) - Extended crotch strap | <ul style="list-style-type: none"> - Padding under seat cover (lumbosacral to scapula) - Extended crotch strap | <ul style="list-style-type: none"> - Padding under seat cover (lumbosacral to scapula) - Extended crotch strap | <ul style="list-style-type: none"> - Padding under seat cover (lumbosacral) - Extended crotch strap | <ul style="list-style-type: none"> - Padding under seat cover (lumbosacral) - Extended crotch strap |
| Expected patient journey and considerations | <ul style="list-style-type: none"> - Day stay - Will likely have a modified car seat from spica to trial in first instance. - 23/24 brace wear, cannot come off for car ride | <ul style="list-style-type: none"> - Overnight stay | <ul style="list-style-type: none"> - Overnight stay - Sometimes Hx of dislocation | <ul style="list-style-type: none"> - Overnight stay | <ul style="list-style-type: none"> - Overnight stay | <ul style="list-style-type: none"> - Overnight stay |
| Documentation | <ul style="list-style-type: none"> - Prescriber form - Medical certificate - Medical chart note <p>*Both must be updated</p> | <ul style="list-style-type: none"> - Prescriber form - Medical certificate - Medical chart note | <ul style="list-style-type: none"> - Prescriber form - Medical certificate - Medical chart note | <ul style="list-style-type: none"> - Prescriber form - Medical certificate - Medical chart note | <ul style="list-style-type: none"> - Prescriber form - Medical certificate - Medical chart note | <ul style="list-style-type: none"> - Prescriber form - Medical certificate - Medical chart note |
| Indicators for Non Emergency Patient Transport | <ul style="list-style-type: none"> - Padding >2kg - Child no longer within bounds of lateral head/side supports. | <ul style="list-style-type: none"> - Padding >2kg - Child no longer within bounds of lateral head/side supports. | <ul style="list-style-type: none"> - Padding >2kg - Modifications required too extensive in rearward facing. | <ul style="list-style-type: none"> - Padding >2kg - Child no longer within bounds of lateral head/side supports. | <ul style="list-style-type: none"> - Padding >2kg - Manual handling needs. - Hip in extension, not compatible with seating | <ul style="list-style-type: none"> - Padding >2kg - Manual handling needs. - Hip in extension, not compatible with seating |



Background

Literature and anatomical implications

There is little, current data defining safe transport protocols for spica-casted children (Mead et al., 2020). National guidelines mandate that all children must be appropriately restrained while travelling in motor vehicles to reduce injury risk in a motor vehicle accident (Martin et al., 2011). For children with orthopaedic conditions, compliance with standard methods is difficult. There are few conclusions drawn within the literature regarding optimal seating positions for children in hip spica casts when travelling in a car restraint (Zeilinski, Oliver, Sybesma, Walter & Atkinson, 2009), however, Herman et al. (2011) concluded that a **5-point restraint, forward-facing, specially-sized, and designed car seat** is the best method of transportation for children in spica casts whose position of immobilisation allows it. There was agreement in the evidence that an in-hospital car restraint loaner program was beneficial in facilitating appropriate transport options.

Limitations in the literature include generalisability to the Australian context; most studies reference American Association of Paediatrics guidelines developed in 1999 revised in 2018, which outline the need for safe car seating for children in hip spica casts and are based strongly on weight guides. Further, the American context is influenced by individual access to health insurance schemes and financial resourcing. All studies analysed car restraints that were assessed by a physical therapist but not modified outside of original capabilities, or, a specialised hip spica car restraint which is not available on the Australian market. Studies advocated for the use of this specialised 'spica car seat' (such as the Hippo).

The greatest hip stability is achieved with hip flexion or abduction and fixed knee flexion (Zeilinski, Oliver, Sybesma, Walter & Atkinson, 2009), however, this presents challenges to the clinician in fitting an appropriate car restraint.

Avoiding use of a traditional car seat may be indicated if a flexed position of the back and loss of breathing space when tightening child restraints is noted (Zeilinski, Oliver, Sybesma, Walter & Atkinson, 2009). Car restraints that do not accommodate the child in a hip spica can result in cast deformation, cuts and abrasions, excessive space between the lumbosacral spine and backrest causing the patient to shift forward and placing pressure on the genitals and hyper-flexion of the neck (Adams et al., 2019). Without an extended crotch strap, the strap may sit under the child and place pressure on the genitals (Zeilinski, Oliver, Sybesma, Walter & Atkinson, 2009).

Increased cervical flexion can cause tracheal compression and reduced chest expansion, impacting breathing and increasing pressure to the mesenteric artery (Adams et al., 2019). If a child is discharged prior to the cast drying, deformation of the cast can result (Zeilinski, Oliver, Sybesma, Walter & Atkinson, 2009). This can be decreased through reducing the lumbo-sacral space (Zeilinski, Oliver, Sybesma, Walter & Atkinson, 2009).



A:

Vic Roads requirements and Australian Standards

Road rules: Vic Roads states that a child with a medical condition may be exempt from the child restraint road rules, granted conditions are met. Children must have a medical certificate and be considered safe when travelling in a vehicle. As such, AS-NZS 4370 should be adhered to (Victoria State Government, 2014). Neura and Kidsafe (2019) provide consensus-based recommendations that children with additional needs, including medical needs, require specialist, multidisciplinary, case-by-case assessment and should follow guidelines in AS/NZS 4370.

Vic Roads: [Frequently asked questions about child restraints : VicRoads](#)

Australian Standards: All car seats must comply with the Australian and New Zealand Standard AS/NZS 1754 (have an Australian Standard approved sticker). It is illegal to use an overseas model or restraint that doesn't meet this standard. Do not use a car seat that has previously been in a crash. It is recommended that a child car seat should not be used if it is more than 10 years old, or if the seat has cracks, other damage or frayed straps.

Within AS NZS 4370, restraint options are given in order of preference; a compliant restraint (complies with AS/NZ 1754) is preferable to a customised or modified restraint. Modification includes accessories, postural supports (support to improve function, safety, control and postural alignment) and/or additional padding that is not provided with the child restraint, nor included in the manufacturer's instructions for use. Non-compliance with the relevant standards (AS-NZS 1754) may make the child restraint non-compliant and reduce the safety to the occupant in a crash. A special purpose child restraint must still comply with AS/NZ 1754, Canadian Motor Vehicle Safety Standard 213, US Federal Motor Vehicle Safety Standard 213 or Economic Commission for Europe Regulation 44 (Queensland Government, 2019).

Assessment of a child restraint is in the following order based on suitability:

1. Compliant child restraint, or one which can be hired
2. Modified, compliant child restraint i.e.:
 - a. Short term use of an extended crotch strap
 - b. Short term use of towels or foam to raise the child's hips and move the child's trunk forward in the restraint.
3. Special purpose child restraint
4. Modified special purpose child restraint

Modifications should not exceed 2kg in weight, and the combined weight of the child, child restraint and plaster cast does not exceed 36kg. Consider too that fibreglass cast can add 1.5kg to 3.5kg to the total weight of the patient (Adams et al., 2019). If a child is transported when over the designed weight limit, they can be at risk of increased stress on the harness and seat system (Zeilinski, Oliver, Sybesma, Walter & Atkinson, 2009).

Safety recommendations: [Kids Health Information : Safety: Child car seats \(rch.org.au\)](#)



B

Documentation

AS-NZS 4370 outlines that at a minimum, the prescriber should provide certain written advice to parents, using a recommended template. It is recommended that modifications be prescribed for no longer than 6 months. Both forms are a standard requirement to be provided to parents/carers to confirm the car seat they are using contains modifications. Staff clinical reasoning or actions that lead to this result should be documented in the usual EMR progress note.

Both forms must be completed through EMR and reflect the child's most recent surgery. The original copy must always be provided to the caregiver to keep in their vehicle. An additional copy must be sent for Health Information Services to be scanned to the child's medical record.

1. OT CAR SEAT LETTERS
2. RCH MEDICAL CAR SEAT LETTER

How to find in EMR:

Communication Management

Search all contacts + Add 1 Patient 2 Print For Patient 3 Care Team 4 GP 5 Referring 6 All Referring 7 Previous 8 Last 9 Free Text

> To: No recipient selected

Send Notes Paste Notes Assessment/Plan Child Absence Parent Absence Blank Copy Letter **Other**

Death Notification Letterhead My Provider Letter My Patient Letter

Letter: No letter selected

From: NORRIS, BRIONY

Wait for results Wait for transcriptions

Route draft

+ New Communication

Preview Pending Send Now Cancel

Previous Next

Letter Template Lookup

Letter Templates

Favourites All

Match: car seat

| ID | Template | Notes |
|-------|---------------------------------------|-------|
| 15993 | OT CAR SEAT LETTERS | |
| 16378 | RCH MEDICAL CAR SEAT LETTER | |
| 14673 | RCH ORTHOTIC PROSTHETIC CAR SEAT POST | |

Default Make Tab Default Add to Favourites

Accept Cancel



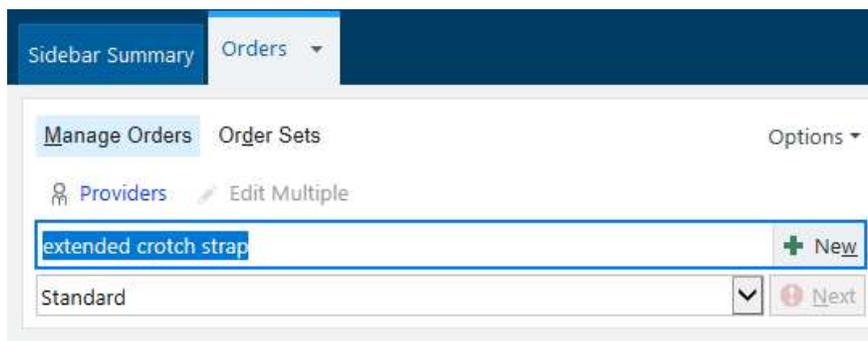
C:

Modified crotch strap prescription

Please refer to the attached full *Communication Notice from Britax* regarding use of the extended crotch strap. As per Britax's Communication Notice 036 (0294 Hip Spica Crotch Buckle, Adjustable for A/AB/G/BE), the extended crotch strap must only be used with specific, branded child restraints.



Use EMR to place an EDC order:





D:

Use of Assessment Guide Checklist



Checklist:

**Print and take to patient encounter to assist reasoning*

- Identifiable mark from a body accredited or approved by the Joint Accreditation System of Australia and New Zealand that certifies compliance with the edition concerned of the Standard, and confirms <10 years since manufacture.
- Foam or plastic shell, anchor points, attachment clips not modified.
- Harness or webbing straps not cut or sewn.
- Child's shoulder height conforms with markings on the car seat.
- Padding is firm foam and secured under the cover.
- Padding does not exceed 2kg.
- Combined weight of child, child restraint and plaster cast does not exceed 36kg.
- Padding is resistant to flame to AS/NZS 3744.3.
- Folded cloth nappies and towels have been used for short term use only.
- Extended crotch strap follows Britax Memo.
- Caregivers are competent in positioning child in the car seat.
- Parents are able to move restraint to other vehicle child may travel in.
- Child can stay seated appropriately for longest journey they must participate in.
- Family configuration in car including siblings or other passengers regularly transported confirmed as appropriate.
- Completion of Prescriber form and copy provided to family.
- Completion of Medical Certificate and copy provided to family.



Verbal education provided to family:

- Car seat has been modified and no longer meets AS NZS 1754.
- Car seat must be used for essential travel only, as child at increased risk of injury in the event of an accident.
- Modifications must not be tampered with. If concerns arise or modifications shift position, caregivers are to call Occupational Therapy department, or discharge ward for advice.
- Modified car seat must only be used by the child prescribed for.
- Once the child has ceased wear or changed current hip spica/brace, existing car seat modifications must be re-assessed by an Occupational Therapist or Nursing Staff.



E:

Modification of car seat for a child in a hip brace

- Rhino brace
- Hippo brace

Typically, 6 to 12 weeks after a child has a medial open reduction of their hip and hip spica cast applied, they can be considered for hip brace wear. In general, in the six weeks that follow hip spica removal the hip brace cannot be removed for car seat positioning regardless of 23/24 wear regimes. This is because the legs cannot be forced into adduction. The 23/24 hours per day wear regime is so parents can take the brace off for nappy changes and bathing only. 3 months after the initial medial open reduction of the hip, time out of the brace could be considered for travel in a child restraint but must be cleared by the child's orthopaedic surgeon.

Clinical process guide:

The following car seats in EDC are most used with children in hip braces:

- Britax Safe-n-Sound Safeguard
 - Child's own car seat (convertible)
1. If child's own car seat is convertible (rearward to forward facing) and compatible with a modified crotch strap, try converting from forward facing to rearward facing. This might increase contact to the back rest of the car seat.
 2. If there is a gap to the lower back, try placing **Foam wedge B** to lumbosacral space (*Image 2*).
 3. Assess if the harness can be secured as per the 5 Step Safety Test. If not, an extended/modified crotch strap may be required. Ensure the car seat model is compatible.
 4. If steps 1, 2, 3 do not provide a satisfactory outcome, the Equipment Distribution Centre (EDC) hire of Britax Safe-n-Sound Safeguard in rearward facing might be explored. Repeat steps 1->3.
 5. Complete the '5 step safety test' and Assessment Guide Checklist.



Image 1: Foam wedge B



F:

Modification of car seat for children in hip spica cast, 2+ years

- Single or double leg hip spica cast.

Typically, children in such a cast are aged between 2 and 7 years. Indicators for such a hip spica might include single leg trauma (such as a proximal femur fracture), or resection for malignancy. As such, admissions may be unplanned and the hip spica cast applied as part of theatre booked on an emergency theatre list. Children are likely non-weight bearing on this limb within the hip spica cast, with surgical review between 4 and 6 weeks. This can be longer, particularly in the instance of malignancy and limb reconstruction. This cast type would be the most common style seen after hours.

Clinical process guide:

The following car seats in EDC are most used with children in this style of hip spica cast:

- Britax Safe-n-Sound Encore 10 Booster with slideguard clip
 - Britax Safe-n-Sound Maxi Rider AHR
 - Britax Safe-n-Sound Maxi AHR
1. Assess if the caregiver can complete required manual handling to position the child within the car seat. If not, no further car seat assessment might be required, and NEPT will need to be explored with the family.
 2. Ascertain if the child's own car seat is appropriate to be assessed. Use the above car seat models as a basis for this decision making, as well as knowledge that a modified crotch strap will likely be required. Otherwise, try a model from EDC (see above options).
 3. If there is a gap to the lower back, try placing **Foam wedge A or B** to lumbosacral space (*Image 2*).
 4. Assess if the harness can be secured as per the 5 Step Safety Test. If not, an extended/modified crotch strap may be required.
 5. Complete the '5 step safety test' and Assessment Guide Checklist.



Image 2: Foam wedge A



Foam wedge B



G:

Modification of car seat for children in hip spica cast, 0 -> 2 years

- Double leg hip spica cast. The affected leg may or may not be in a full-length cast.
- Position is typically 60° hip abduction, 100° hip flexion, +/- 15° internal rotation. An internally rotated position may be required if the hip was dislocated prior to surgery, or, if the DDH was diagnosed late and requires an osteotomy.

Given the variability in spica positioning, child weight and height, this style of hip spica for this age group can require the most clinical reasoning to assess for a car seat. Children in this hip spica cast are typically 6 months to 2 years of age and have a background of developmental dysplasia of the hip, or trauma. The aim of the hip spica is to correct the dysplasia and hip position, depends on severity of presentation, and may need to be worn for several months. Children may then need to wear different casts or braces to make sure the hip joint/s remain stable and in the right position.

Clinical process guide:

The following car seats in EDC are most used with children in this style of hip spica cast:

- Britax Safe-n-Sound Safeguard
 - Child's own car seat (convertible)
 - *An extended/modified crotch strap will most likely be needed
1. Assess if the caregiver can complete required manual handling to position the child within the car seat. If not, no further car seat assessment will be required, and NEPT will need to be explored with the family.
 2. Ascertain if the child's own car seat is appropriate to be assessed. Use the above models as a basis for this decision making, as well as knowledge that a modified crotch strap will likely be required.
 3. If child's own car seat is convertible (rearward to forward facing) and compatible with a modified crotch strap, try converting from forward facing to rearward facing. This might increase contact to back rest of car seat. Otherwise, try a model from EDC (see above options) in rearward facing.
 4. If there is a gap to the lower back, try placing **Foam wedge C** to lumbosacral space (*Image 3*).
 5. Assess if the harness can be secured. If not, an extended/modified crotch strap may be required.
 6. Complete the '5 step safety test' and Assessment Guide Checklist.



Image 3: Foam wedge C



Quiz and simulation scenarios

Optional to facilitate training sessions

A: Quiz, Vic Roads and Australian Standards

Q: Can a 3 year old legally sit in a booster seat?

A: No. A child must be four years old to sit in a booster seat as per Australian law.

Q: Can a 10 month old use a rearward facing restraint or should they use a capsule?

A: Both options are rearward facing, and as per Australian law, children under 6 months should be rearward facing only. This child should remain rearward facing as long as possible and use height (not age) to determine when to change restraints.

Q: A child attends RCH to have their hip spica removed and a hip brace applied. The existing car seat modifications completed for the hip spica are assessed as appropriate for the child in the hip brace. Do staff need to complete new documentation?

A: Yes. The medical certificate and prescriber form must reflect their most recent surgery.

Challenge Question:

You are working with a 4 year old child who usually sits in a forward facing car seat, however, all forward facing options including those in EDC require excess modifications (i.e. the child is 'floating' in front of the seat and there is not appropriate contact between their back and the car seat). Would you explore a booster seat? What might make the booster seat a safe option?

A: Legally this child can use a booster seat, however, as per RCH recommendations they should remain in a forward facing car seat as long as possible and use height to determine when to change restraints. As a booster seat is legal, this could be explored if the child's shoulders are within appropriate ranges, if this option required less modification than other options, and if a slideguard clip was explored. It should be made clear to the family that once the hip spica is removed, the child should return to their forward-facing restraint and instructed to use the car seat for essential travel only.



C: Quiz, crotch strap prescription

Q: Which models of car seat can a modified crotch strap be applied to?

A: Britax 0294 Hip Spica Adjustable Crotch Buckle **is only suitable for use with Australian manufactured Britax Child Restraints** branded;

- Britax Safe-n-Sound
- Safe-n-Sound
- Babylove
- Hipod

Q: The child only requires a modified crotch strap to allow for safe transport in their car seat. Do they need a medical certificate and prescribers form?

A: Yes they do as this is a modification that doesn't comply with AS NZS 1754. Britax 0294 Hip Spica Adjustable Crotch Buckles **MUST** only be used with a letter of exemption by a Medical Practitioner (and Prescriber form).

E: Simulation, hip braces

Simulation resources:

- Doll with hippo brace
- Britax Safe n Sound Safeguard
- Foam wedge B
- Extended crotch strap
- Checklist for modification of child restraint
- Cot from bed pool (optional)

Simulation participants:

- 1 parent
- 1-2 nurses

Simulation Learning Objectives:

By the end of this simulation participants should be able to:

- i) Identify if the child restraint meets the transport needs of children in hip braces.
- ii) Demonstrate the safe use and adjustability of the child restraint.
- iii) Provide appropriate education to caregivers regarding transport in a car restraint.
- iv) Demonstrate effective communication skills to family and team members.

Synopsis of Scenario:

A referral has been received for a 1 year old child (Bethy) with developmental dysplasia of the hip, for car seat modification following their planned surgery (removal of hip spica cast and application of hip brace, Hippo). The child was in theatre this morning and is currently in Day Surgery with a plan for discharge by early afternoon today. She has been cleared by the Orthopaedic team and they are happy for her to be discharged home today. Bethy already has a car seat that has been modified by an Occupational Therapist following her original surgery where a hip spica cast was applied. Bethy is on the ward with her mother (Jo) who did not realise the car seat would need to be modified again, and as such the child's father (Greg) has gone to the car to uninstall the car seat. Both parents are heightened because of this unexpected situation but are motivated to be discharged and as such are being cooperative. She is on Panadol only and given her a dose just half an hour ago. In the past, Bethy had a closed reduction of her hip under anaesthetic.



The goal of the clinical encounter is to assess the child for an appropriate car seat for discharge. All other hip brace care education (pressure care, sleep, hygiene, cast care, play) has already been provided.

Patient demographics:

| | | | |
|-------------------|--------------------------------------|----------|---|
| Patient Name: | Bethy Smith | DOB/Age: | 12 months |
| Medical Record #: | | Weight: | 10 kg |
| Allergies: | None | Male | <input type="checkbox"/> Female <input checked="" type="checkbox"/> |
| Dx/Procedure: | Removal of hip spica cast in theatre | | |

Nurse: You are an experienced ward nurse. You are aware of where all the equipment is, know the demographics of the patient and medical history. As is usual practice with a challenging child restraint fitting, you have attended the clinical scenario with a nurse colleague to assist (a 'double').

Mother (Jo): You are the mother to Bethy (first born child). You and your partner work from home and are fully aware of her condition of DDH which you have researched on the internet and various forums. You are moderately health literate via information from the internet as well as the RCH website. You are happy to be bringing Bethy home but anxious about the transport and providing the care at home with all the information provided.

F: Simulation, hip spica 2+

Simulation resources:

- Casted doll in 90° hip flexion, 30° knee flexion, 30° hip abduction
- Britax Safe-n-Sound Encore 10 Booster with slideguard slip
- Foam wedge A and B
- Extended crotch strap
- Checklist for modification of child restraint

Simulation participants:

- 1 parent
- 1-2 Occupational Therapists

Simulation Learning Objectives:

By the end of this simulation participants should be able to:

- i) Identify if the child restraint meets the transport needs of children in hip spica cast.
- ii) Demonstrate the safe use and adjustability of the child restraint.
- iii) Provide appropriate education to caregivers regarding transport in a car restraint.
- iv) Demonstrate effective communication skills to family and team members

Synopsis of Scenario:

A referral has been received for a 4 year-old child (Julie) who fractured her right proximal femur after being double bounced on a trampoline by her older brother, for car seat modification. Last night, Julie had emergency surgery (insertion of IM nail) and application of hip spica cast. Julie was in theatre yesterday and stayed on Platypus ward overnight with a plan for discharge by late today. Julie has an Infasecure convertible car seat currently in forward facing. Julie weighs 15 kgs and has no other injuries. Julie is on the ward with her mother (Connie) who did not realise the existing car seat would need to be modified, and as such her mother (Jackie) has gone to the car to uninstall the car seat. Both parents are heightened because of this unexpected situation but are motivated to be discharged and as such are being cooperative.



The goal of the clinical encounter is to assess the child for an appropriate car seat for discharge. All other hip spica care education (pressure care, sleep, hygiene, cast care, play) has been provided this morning as part of Julie's initial assessment.

Patient demographics:

| | | | |
|-------------------|-------------------------------|----------|---|
| Patient Name: | Julie Kerrie | DOB/Age: | 4 years |
| Medical Record #: | | Weight: | 15 kg |
| Allergies: | None | Male | <input type="checkbox"/> Female <input checked="" type="checkbox"/> |
| Dx/Procedure: | IM nail insertion right femur | | |

Occupational Therapist: You are a competent Occupational Therapists working within/to cover the orthopaedic caseload. You are understanding of current referral pathways and demonstrate compassion towards the family unit. As is usual practice with a challenging child restraint fitting, you have attended the clinical scenario with a colleague (Occupational Therapist) to assist (a 'double').

Mother (Connie): You are the mother to Julie (second born child). You are moderately health literate via information from the internet as well as the RCH website. You are happy to be bringing Julie home but anxious about the transport and providing the care at home with all the information provided.

G: Simulation, hip spica 0 -> 2yrs

Simulation resources:

- Casted doll in 60° abduction, 100° flexion, 15° internal rotation
- Britax Safe n Sound Safeguard
- Foam wedge C
- Extended crotch strap
- Checklist for modification of child restraint

Simulation participants:

- 1 parent
- 1-2 Occupational Therapists

Simulation Learning Objectives:

By the end of this simulation participants should be able to:

Clinical:

- i) Identify if the child restraint meets the transport needs of children in hip spica cast.
- ii) Demonstrate the safe use and adjustability of the child restraint.
- iii) Provide appropriate education to caregivers regarding transport in a car restraint.
- iv) Demonstrate effective communication skills to family and team members.

Synopsis of Scenario:

A referral has been received for a 15-month-old child (Iris) with developmental dysplasia of the hip, for car seat modification, following her planned surgery (medial open reduction (L) hip) and application of hip spica cast. Iris was in theatre yesterday and stayed on Possum ward overnight with a plan for discharge by midday today. Iris' own car seat is an Infasecure convertible. The hip spica cast is considered challenging due to 15° internal rotation of the Iris' left leg. Iris weighs 11 kgs and has not had this surgery before. Iris is on the ward with her father (Gary) who did not realise the existing car seat would need to be modified, and as such her mother (Beck) has gone to the car to uninstall the car seat. Both parents are heightened because of this unexpected situation, but are motivated to be discharged and as such are being cooperative.



The goal of the clinical encounter is to assess the child for an appropriate car seat for discharge. All other hip spica care education (pressure care, sleep, hygiene, cast care, play) has been provided this morning as part of Julie's initial assessment.

Patient demographics:

| | | | | | |
|-------------------|-------------------------------|----------|--------------------------|--------|-------------------------------------|
| Patient Name: | Iris Bloom | DOB/Age: | 15 months | | |
| Medical Record #: | | Weight: | 11 kg | | |
| Allergies: | None | Male | <input type="checkbox"/> | Female | <input checked="" type="checkbox"/> |
| Dx/Procedure: | medial open reduction (L) hip | | | | |

Occupational Therapist: You are competent Occupational Therapists working within/to cover the orthopaedic caseload. You are understanding of current referral pathways and demonstrate compassion towards the family unit. As is usual practice with a challenging child restraint fitting, you have attended the clinical scenario with a colleague (Occupational Therapist) to assist (a 'double').

Father (Gary): You are the mother of Iris (first born child). You and your partner work from home and fully aware of her condition of DDH which you have researched on the internet and various forums. You are moderately health literate via information from the internet as well as the RCH website. You are happy to be bringing Iris home but anxious about the transport and providing the care at home with all the information provided.



Foam modifications

Sourcing

<https://www.clarkrubber.com.au/products/25039p-high-density-foam-36-130>

Clark Rubber

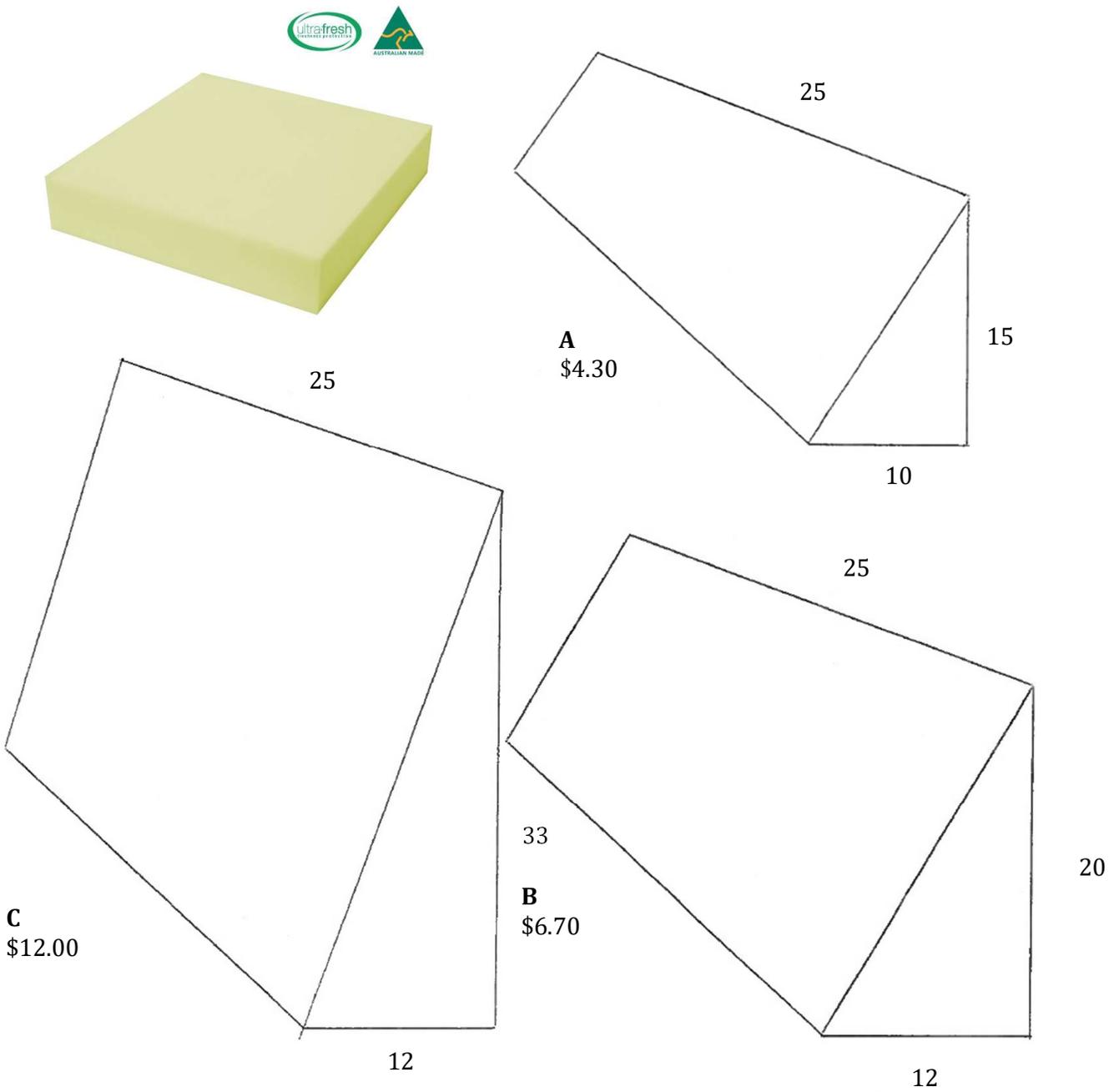
High density foam 36-130

\$3.23 / per 100 x 100mm square (150mm thickness)

Flame retardant to AS/NZS 3744.3 (ignitability of upholstered furniture).

Enduro Protect used in commercial applications, including furniture, bedding, transport.

Shapes A, B, C





Britax

Communication notice



Communication Notice – 036

0294 Hip Spica Crotch Buckle, Adjustable for A/AB/G/BE

For Child Restraints requiring modifications for children with disabilities or medical conditions

Dated: 06/05/2020

USAGE: Please use this communication to inform Customers, Customer Service, Fitters and consumer enquiries & Website

DISTRIBUTION LIST: SALES, CS, KAMS, MARKETING, QUALITY, SPARES & REPAIRS

Dear All,

Britax produce and supply "Hip Spica" Adjustable Crotch Buckles under the below conditions of use:

1. 0294 Hip Spica Adjustable Crotch Buckles are designed to meet the market demand for unique longer adjustable twin crotch buckle straps for children with "Hip Spica" needs travelling in child restraints in the following Type categories:
 - a. TYPE A – Baby Capsule/ Infant Carrier
 - i. Birth to 6months or Birth to12 months approx
 - ii. Rearward Facing with 6 point harness,
 - b. TYPE AB – Convertible Car Seat
 - i. Birth to 12months or Birth up to 2-3years, approx
 - ii. Rearward Facing or Forward Facing with 6 point harness
 - c. TYPE BE – Convertible Booster/ Harnessed Booster
 - i. 6 months – 4 years harnessed, (Booster to 6-8years approx.)
 - ii. Forward Facing with 6 point harness
 - d. TYPE G – Harnessed Seat
 - i. 6 months – 8 years harnessed
 - ii. Forward Facing with 6 point harness through to 8 years,
2. Britax will manufacture and supply unique 0294 Hip Spica Adjustable Crotch Buckles outside of the AS/NZS 1754:2013 Child restraint systems for use in motor vehicles requirements to specified Prescribers and Safety Advocates ONLY. This includes Prescribers as defined in AS/NZS 4370:2013 Restraint of children with disabilities, or medical conditions, in motor vehicles, and organisations (Safety Advocates) supporting Prescribers in their role.
 - a. Britax 0294 Hip Spica Adjustable Crotch Buckle is only suitable for use with Australian manufactured Britax Child Restraints branded;
 - i. Britax Safe-n-Sound
 - ii. Safe-n-Sound
 - iii. Babylove
 - iv. Hipod
 - b. Britax 0294 Hip Spica Adjustable Crotch Buckles **MUST** only be used with a letter of exemption by a Medical Practitioner, or other authorised provider as defined in the relevant jurisdiction's legislation. The product will have a warning disclaimer with similar reference.
 - c. Safety Advocates may help Prescriber's by providing access to resources, support and advice to ensure the safe and legal use of the Hip Spica Adjustable Crotch Buckles. (List of Safety Advocates below)
 - d. Britax 0294 Hip Spica Adjustable Crotch Buckles will be supplied in minimum order quantity packs of 10. These packs cannot be broken.
 - e. Britax 0294 Hip Spica Adjustable Crotch Buckles is **NOT** a warranty or spare part item.
 - f. Britax recommend reverting back to the original crotch buckle as supplied with the original child restraint when the medical condition is cleared by the Prescriber.
 - g. Refer to the child restraint instructional manual for reference on removal, installation and cleaning of child restraints. If unavailable download from www.britax.com.au, or contact our Customer Service team.

<http://www.britax.com.au> - productmgmt/SafetyEngineering Documents/01_COMMUNICATION/PIN/CS/RELEASED/036 PIN BRITAX 0294 HIP SPICA v6.docx

britax
safe-n-sound



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