Note:

This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach.

Information in this statewide guideline is current at the time of publication.

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The clinical material offered in this statewide standard/policy provides a minimum standard, but does not replace or remove clinical judgement or the professional care and duty necessary for each specific patient case. Where care deviates from that indicated in the statewide guideline contemporaneous documentation with explanation must be provided.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for:

> Discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes the use of interpreter services where necessary,
> Advising consumers of their choice and ensuring informed consent is obtained,
> Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
> Documenting all care in accordance with mandatory and local requirements
Summary of screening developmental dysplasia of the hip in neonates

Screen all babies clinically with Barlow and Ortolani tests
  > All newborn baby hips require two medical examinations: one at birth and one before discharge
  > All suspicious findings require a paediatrician, neonatologist or orthopaedic review

Normal

Abnormal

Subluxable
  Femoral head feels ‘loose’ or unstable but is not displaced from acetabulum (no ‘clunk’)

Dislocatable
  Femoral head can be displaced from acetabulum (‘clunk’ is felt)

Dislocated
  Femoral head lies outside the acetabulum and may be relocatable (‘clunk’ detected) or irreducible (no clunk, abduction restricted)

Routine care
Clinical examination of hips at 1-4 weeks, 5-8 weeks, and 5-9 months occurs in the community with CAYH, GP or paediatrician

> Subluxable and dislocatable hips immediately after birth can represent ligamentous laxity
> Re-examine in the first week
> If hips remain abnormal clinically, arrange orthopaedic review as soon as practical
> Abduction splinting should commence as soon as possible
> If repeat hip examination is normal, re-examine medically at 5 week check and consider a hip ultrasound in children 6 weeks to 3 months of age, or an AP pelvis radiograph at 3 months of age

Arrange an urgent orthopaedic review
Neonatal hip screening and management of developmental dysplasia of the hip

Developmental dysplasia of the hip (DDH) is a condition where there is inadequate formation of the acetabulum resulting in an abnormal relationship between the femoral head and acetabulum. Varying degrees of clinical instability of the hip joint result ranging from a feeling of looseness of the joint to frank dislocation. They can be classified as subluxatable, dislocatable, dislocated and reducible or dislocated and irreducible. DDH is also applied to a range of ultrasound and radiographic abnormalities of the acetabulum. The term developmental emphasises that DDH can evolve post delivery in early infancy and is not always detectable at birth.

The incidence of DDH is approximately 1 in 100 live births screened clinically, and up to 8 in 100 infants screened by ultrasound. DDH is more frequent in females (relative risk about 4), and with breech presentation (relative risk about 10). A first-degree relative with DDH, fixed foot deformities, first born infant, and oligohydramnios are other risk factors.

It is important to note that 60% of infants with DDH have no risk factors. Ultrasound has a high false positive rate for DDH. Treatment of DDH with a Pavlik harness or Denis-Browne splint, is effective and safe but requires close supervision to ensure the hip remains enlocated and developing in a satisfactory manner. Splinting also has a defined morbidity, the main concern being avascular necrosis of the hip, which is estimated at about 2.5 / 1,000 treated infants with a splint applied before age 2 months.

Current recommendations based on evidence based reviews from the Canadian Medical Association and American Academy of Pediatrics and Australian publications are summarised as follows:

- Careful examination in the neonatal period using the Ortolani and Barlow manoeuvres followed by serial hip examinations at every well-baby check. Above 3 months of age the Ortolani and Barlow tests are less reliable however reduced hip abduction and leg length discrepancy can indicate a hip problem. Using this method, the incidence of late diagnosis of DDH has reduced from 1-2 / 1,000 to 0.2-0.7 / 1,000, with an incidence of abduction splinting of around 1 in 100 in Australia.

- Ultrasound has a role to confirming enlocation in an abduction splint. It is important to ensure that the femoral head is in-joint when in the splint. Ultrasound is not recommended as a screening tool because of a high false positive rate, operator dependency, high inter-observer variability, limited availability and cost.

- In selected cases where there is uncertainty regarding the hip, ultrasound may be useful. Ultrasound is more reliable in infants over 6 weeks of age.
# References


## Abbreviations

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<tr>
<th>Abbreviation</th>
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<td>DDH</td>
<td>Developmental dysplasia of the hip</td>
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<tr>
<td>CAYH</td>
<td>Child and Youth Health</td>
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<td>GP</td>
<td>General Practitioner</td>
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<td>AP</td>
<td>Anterior-posterior view</td>
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<td>CMAJ</td>
<td>Canadian Medical Association Journal</td>
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## Version control and change history

**PDS reference:** OCE use only

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