Developmental Dysplasia of the Hips (DDH) – Paediatric Full Clinical Guideline

Reference no.: NIC SS 03

Introduction

This guideline is to provide healthcare professionals with clear guidance and advice when undertaking checks for abnormalities of a neonate's hip joints

1. Aim and Purpose

- To ensure a standardised approach to screening for Developmental Dysplasia of Hips in the newborn.
- To ensure that all neonates who are at risk of DDH are screened at the appropriate age.
- To deliver a clinical pathway in line with current NIPE standards

2. Background information

Development dysplasia of the hips (DDH) is a condition with a range of anatomical abnormalities of the hip joint in which the femoral head has an abnormal relationship with the acetabulum. This includes:

- dysplasia - there is an inadequate acetabulum formation (may not be clinically noted)
- subluxation - occurs if the femoral head is partially displaced out of the acetabulum
- dislocatable - when the femoral head may be displaced from the acetabulum with manoeuvres
- dislocated – the femoral head is completely outside the acetabulum.

Teratologic hip dysplasia refers to prenatal severe fixed dislocation usually associated with genetic or neuromuscular disorders.

Clinically detected neonatal hip instability ranges from 1.6 - 28.5 neonates per 1000. Long term of undiagnosed or untreated DDH leads to pain in the hip, knee and lower back, gait abnormalities, and degenerative changes of the hip joint.

During the immediate neonatal period, laxity of the hip capsule predominates, and if considerable enough, can cause the femoral head to spontaneously dislocate. If it spontaneously relocates and stabilises within a few days future hip development is usually normal, however if dislocation continues structural abnormalities may develop. Audible and palpable tendinous 'clicks' can be confused with true neonatal instability of the hips. These clicks are normal and often disappear within the first few weeks after birth. The baby should be referred to the General Practitioner (GP) for the routine 6-8 week examination.

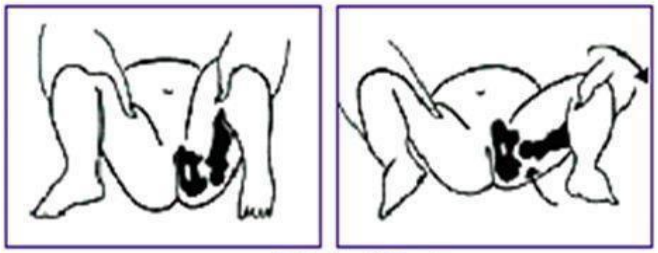
Clinical examination by performing the Barlow and Ortolani tests are used to detect DDH. A positive test for Barlow or Ortolani signs also resolve quickly in more than 80% of infants with hip instability. More than 60% of neonates have no identifiable risk factors for DDH5,, with only 1 in 75 infants with identified risk factors for DDH being diagnosed with hip dislocation. Suspicion for DDH may be aroused when the neonate presents with asymmetric thigh or buttock skin folds (30% of neonates will have these without DDH), a positive Allis or Galeazzi sign (relative shortness of the femur with the hips and knees flexed) and discrepancies in leg lengths

DDH is more common in girls than boys (girls 19 in1000 verses boys 4.1 in1000 of clinically diagnosed neonates) It occurs three-four times more in the left than the right hip which is probably due to the fetus commonly lying in the left occipital anterior position. This places the left hip against the maternal spine and causes limiting movements. Despite clinical examination and screening practices for DDH until the infant is walking there is a 1:5000 rate of late-onset dislocation of the hips.

3. Management

1. All neonates are examined **within 72 hours of birth** for DDH. This examination may be performed by a midwife/ ANNP/ paediatrician who is clinically competent in performing the NIPE examination which includes the Barlow Test and the Ortolani Test.

Barlow Test



Ortolani Test

Risk Factors

Neonates with increased risk of DDH include:

- First degree relative with a history of DDH,
- Any Breech presentation at or after 36 weeks gestation irrespective of presentation at delivery, or, breech presentation at delivery if this is prior to 36 weeks
- Breech presentation at birth between 28 weeks gestation and term
- Multiple births – if any of the babies fall into any category above, all babies need a hip scan

Timing of Hip Ultrasound scan

1. All neonates born at or more than **≥ 34 weeks** gestation with risk factors for DDH should be referred for a routine hip scan at **4 weeks of age.**
2. All neonates born less than **< 34 weeks** gestation with risk factors for DDH should be referred for a routine hip scan at **38 weeks corrected age.**
3. If the practitioner who is performing the hip examination is at all unsure whether the hip/hips are unstable, must refer to the neonatal paediatric registrar on duty, who will review the baby's
4. A neonate with **definite or suspicious** signs of DDH on clinical examination should be referred immediately to the Orthopaedic paediatric Clinic at the Royal Derby Hospital for review for both Burton and Derby born neonates. Consultation must be **within 4 – 6 weeks of birth**. Call **extensions 85358 or 85654** to make an **URGENT** hip appointment for an **UNSTABLE ABNORMAL HIP.** . Complete the 'Hip Referral Form' and inform the midwife who is caring for the baby.
5. If a neonate was noted to have **Clicky Hips** during hip examination without risk

factors, they should be reviewed by GP at 6 weeks of age. **DO NOT** refer for Hip scan

6. All babies with risk factors that have an abnormal hip ultrasound scan should be referred immediately to the Orthopaedic paediatric clinic to be seen **within 2 weeks**.

4. References

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3. Storer SK,Skaggs DL.Developmental Dysplasia of the Hip. **American Family Physician**.2006;74:1310- 6
4. Dezateux C, Rosendahl K. Developmental dysplasia of the hip. **The Lancet**. 2007;369:1541-52.
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9. Goldberg MJ. Early Detection of Developmental Hip Dysplasia: Synopsis of the AAP Clinical Practice Guideline. **Pediatrics in Review**. 2001;22(4):131-34.
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5. Documentation Controls

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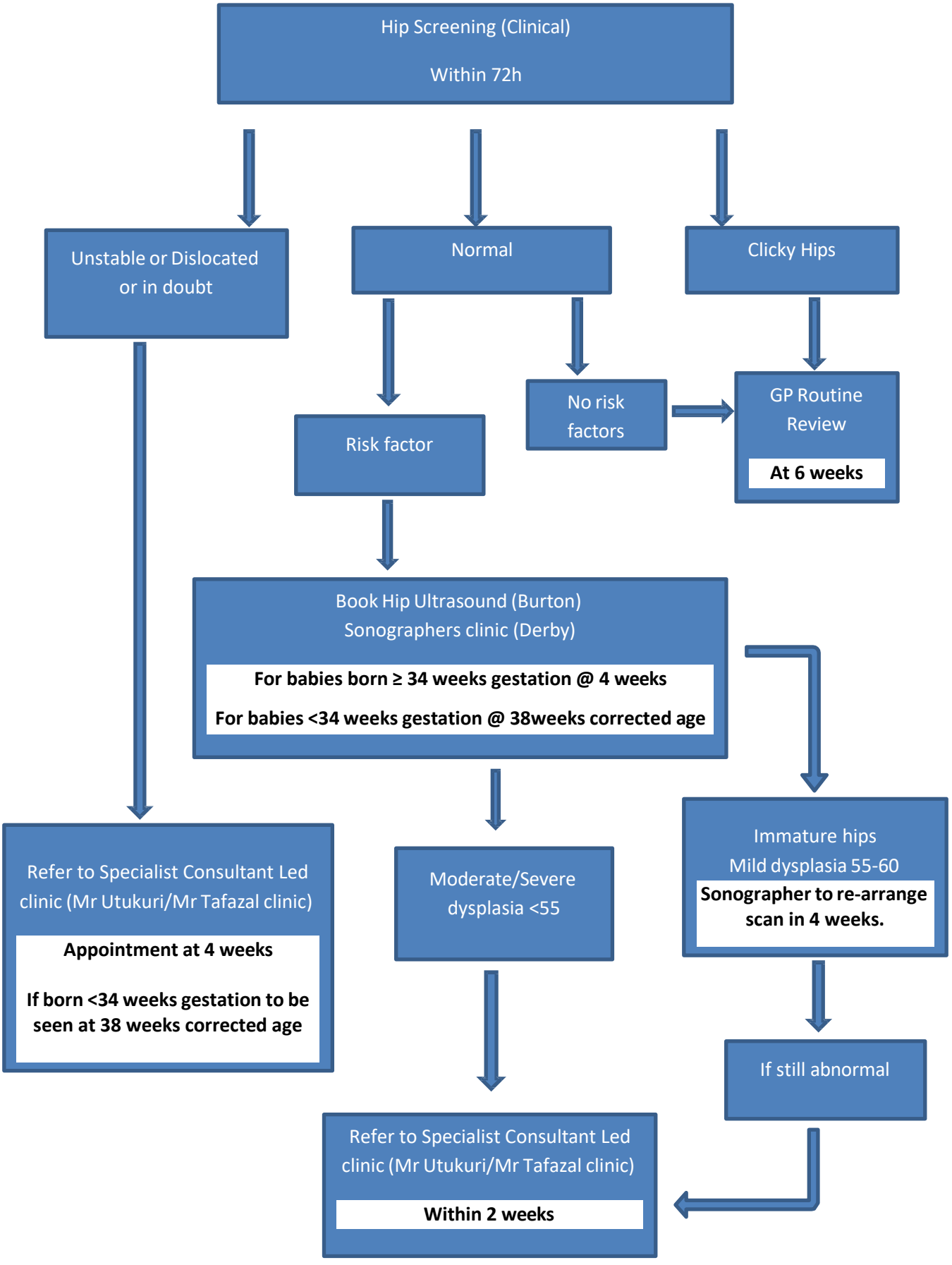
Appendix 1

Developmental Dysplasia of the hips – Flow Chart



Maternal details:	**Baby's details**
Hospital number: ……..	**Hospital number:**
NHS number: ……	**NHS number:**
Name	**Name:**
Date of Birth: ….. **/** ….. **/** …..	**DOB:**
Address:	**Address**
GP:	**GP:**
Attach Patient Label if available	*Attach Patient Label if available*

The indication for this review is: ***(Please tick all that apply)***

A. Screen Positive For:

Bilateral clinically abnormal Hips	……	☐
Clinically abnormal **Left** Hip	……	☐
Clinically abnormal **Right** Hip	……	☐

Please make an appointment for this baby in 4- 6weeks in the consultant hip clinic

If baby born <34 weeks gestation, appointment should be between 38- 40 weeks corrected age

☐

Send appointment to: ***dhft.paedsappointmentrequest@nhs.net***

B. Outcome of Hip screening ultrasound scan:

Evidence of hip dysplasia on ultrasound scan	……	☐

Please make an appointment for this baby within 2 weeks in the consultant hip clinic

☐

Send appointment to: ***dhft.paedsappointmentrequest@nhs.net***

… ..... (Signed by NIPE practitioner)

An appointment has been made for this baby on

……../ ……/ 20….. @ ……