

## ***Neonatal assessment and discharge examination in the term newborn - Guideline for midwives and obstetric staff***

### **Definition**

Applies to well babies born >37 weeks gestation and > 2.5 kg who remain under the care of Maternity Services.

An initial assessment of the newborn is performed soon after birth to detect significant abnormalities, birth injuries and cardio respiratory disorders that may compromise a successful adaptation to extra uterine life.

A single more detailed clinical examination is accepted good practice done during the mother's hospital stay with the mother /parent present, preferably after the first 24 hours following birth.

Where discharge is earlier than 24 hours a full examination and assessment is attended prior to discharge with Extended Postnatal Care (EPC) review again after 24 hours.

### **Expected outcomes**

All term newborn babies receive appropriate and timely assessments and examination.

All term newborn babies receive prompt and appropriate referral to neonatal/paediatric medical staff where indicated.

Parents know how to assess their baby's general condition and are aware when to contact the maternal child health nurse (MCHN); general practitioner (GP) and when emergency services (ambulance, Emergency Dept of the hospital) are required.

### **Why**

The dual purpose of the detailed physical examination is to confirm normality so as to reassure the parents, and to identify an act upon any abnormalities.<sup>1</sup>

### **Precautions**



Before undertaking term newborn assessments the clinician must have successfully attained formal Southern Health **maternity clinical competency in newborn examination**.<sup>2</sup>



Newborn assessment and examination should be performed with mother/parents present whenever possible. Parents should be offered explanation and information to enable them to:

- continue to assess their baby's general health and condition
- identify signs and symptoms of common health problems
- recognise when to contact a health care professional or emergency service.

**Newborn assessment**

Review the health history of the family, woman and baby and identify potential risk or referral factors.<sup>1</sup>

- family, maternal, antenatal and perinatal history
- newborn history:
  - birth weight, head circumference, length (check growth percentile chart) gestational age
  - feeding patterns and general well being
  - output (urine and meconium)
- ascertain if there are any family /maternal concerns.

**Newborn examination****Preparation**

Explain the purpose of the examination to the mother /parent/s.

Take measures to prevent cross infection.

- wash hands /avaguard®
- wear gloves as necessary
- clean equipment (Littmann Stethoscope, ophthalmoscope).

**Environment**

The baby should be examined in a warm environment with the mother present.

Ensure comfort for mother and baby during procedure.

Provide privacy especially where confidential information is to be discussed.

**General appearance****Colour**

- Inspect for pallor, cyanosis or jaundice.
- Identify variations e.g. naevi, bruising, Mongolian blue spot, birthmarks.

**Skin**

Inspect for texture, turgor, rashes, tags etc.

**Activity / tone**

- Observe alertness, posture, muscle tone (truncal tone; limb tone) and variations e.g. Hypertonia, hypotonia. Jitteriness, non symmetrical movements, lethargic, flaccid, tremors, irritability.
- Observe respiratory effort: identifying signs of distress, nasal flare, grunt, rib retraction.
- Cry: vigorous weak, high pitch.



**Watch for dysmorphic features** (refer CD ROM 'Physical examination of the Newborn').<sup>3</sup>

**Cardiorespiratory system****Heart**

- Auscultate heart rate, rhythm and regularity at the apex for 1 minute (100 - 160 bpm and regular).
- Identify variations or murmur (refer CD ROM heart sounds<sup>5</sup>).

**Lungs**

- Auscultate the lungs noting respiratory rate, audible bilateral air entry and clarity (rate < 60 breaths/minute).

**Pulses**

- Palpate femoral pulses for presence and volume.<sup>1</sup>

**Systematic examination****Head**

- Assess size, shape and symmetry.
- Check distribution and character of hair and scalp.
- Inspect sutures and fontanelles.
- Assess for excessive moulding, bruising, abrasions, caput succedaenum, and cephalhaematoma.

**Ears**

- Inspect for position (relationship of helix to imaginary horizontal line drawn from inner canthus).
- Assess patency of ear canal.
- Check for periauricular skin tags and dimples.

**Eyes**

- Inspect for pupillary size, equality, and reaction to light (using an ophthalmoscope).
- Assess integrity of iris and test for 'red reflex'.
- Check for symmetry of eye movement's and ability to fixate and follow.
- Identify variations e.g. tearing, subconjunctival haemorrhage, hyper/ hypotelorism; cataract, discharge.

**Nose**

- Assess size, shape and position.
- Check for nasal patency.

**Mouth and palate**

- Check for symmetrical movement.
- Inspect lips, gums, buccal surface, tongue and uvula.
- Check hard and soft palates.
- Ascertain suckling and rooting reflexes.
- Identify variations e.g. tongue tie, natal teeth.

**Neck**

- Assess range of movement.
- Palpate neck to identify lumps, swelling or webbing.
- Inspect the clavicles for fractures.

**Chest**

- Assess symmetry, shape, rib retraction.
- Inspect breasts and nipples.

**Abdomen**

- Inspect for symmetry and distension.
- Palpate for presence of liver or spleen enlargement or masses.
- Inspect umbilical cord for signs of separation and/or infection, hernia.

**Arms and hands**

- Assess length for shortening.
- Assess for symmetry and for full range of movement.
- Inspect fingers for number, fusion or webbing.
- Inspect palms for presence of simian crease.

**Spine**

With baby prone palpate the vertebral column:

- inspect for signs of underlying deformities e.g. myelomeningocele
- inspect sacral area for possible sacral pit. (Noting a coccygeal pit is of no consequence).

**Genitalia male**

- Palpate scrotum for the presence of both testes.
- Identify the position of the urethral meatus.
- Identify variations e.g. hydrocele.

**Genitalia female**

- Inspect vagina for patency and discharge.
- Explain female mucoid discharge.

**Legs**

- Inspect legs for length, contour, symmetry, size, full range of movement.
- Inspect toes for number, fusion or webbing.

**Anus**

- Normal/patent.
- Meconium passed. If meconium has not been passed by 24 hours refer the baby to neonatal/paediatric medical staff.

**Bladder**

- Check baby has passed urine within 24 hours.

## Hips

Compare leg length and symmetry of creases over the front and back of thighs.

### Perform a Barlow's manoeuvre

- Place baby in a supine position with knees flexed.
- Stabilise the pelvis with one hand, then grasp and adduct thigh while applying downward pressure, pushing posteriorly in line with the femoral shaft, causing the femoral head to dislocate posteriorly from acetabulum.
- In a positive finding, the dislocation is palpable as the femoral head slips out of acetabulum.

### Perform an Ortolani's manoeuvre

- Place baby in a supine position with the hip and knee flexed.
- Grasp the baby's thigh with the thumb resting close to the lesser trochanter and the third finger resting on the greater trochanter.
- Abduct the thigh while applying pressure to the greater trochanter. This would bring the femoral head from its dislocated posterior position to opposite the acetabulum, hence reducing femoral head into acetabulum.
- In a positive finding, there is a palpable & audible clunk as hip reduces.

## Referral



Any baby with a positive Barlow's or Ortolani's manoeuvre finding should be referred to neonatal/paediatric medical staff.

In addition, where there is a **strong family history of developmental dysplasia of the hips (DDH) or breech position in pregnancy** a referral should be arranged for paediatric review and ultrasound.

## Reflexes

### Babinski

Stroke along the lateral plantar surface length of the sole and observe for dorsal flexion of the great toe and fanning of the other toes.

### Stepping / Walking

Support the infant in an upright position.

Rest the baby's feet on a firm surface.

Move the baby forward slightly to elicit stepping motions.

### Moro

Hold infant in supine position, supporting head and neck with hand.

Allow head to drop slightly while still supporting it.

Observe for rapid spreading of arms with hands open followed by adduction and flexion of arms with hands closing.

### Palmar Grasp

Stimulate palm with a finger/object observing grasping of finger/object.

## Documentation

- Document the newborn discharge assessment in the maternity Newborn Caremap (medical record (MRJ44 (i))).
- Document findings on BOS discharge section - even if there are no abnormalities found.
- Refer baby to other health professionals as required. Document referral on the referral & consultation form (Medical Record MRI01).

## Parental Education

**The newborn examination provides opportunity for health promotion** and education on a range of neonatal health areas. During the examination:

- provide information regarding normal behaviour of the newborn
- refer to the southern health booklet caring for yourself and your baby to discuss recognition of illness in the baby
- refer to the maternity postnatal contacts card to discuss sources of assistance within the community after discharge
- explain the role of GP and the Mother & Child Health Nurse (MCHN)
- explain the importance for ongoing assessment by parents as well as professionals as some conditions may not be evident in the first days of life (i.e. developmental dysplasia of the hip, heart murmur)
- demonstrate safe positioning and safe sleeping - Refer to *SIDS and Kids*.

## Follow up

- Provide the mother with a **copy of the Birthing Outcome System (BOS)** discharge summary. Discuss and clarify content.
- Provide the woman with her **Child Health Record (Blue Book)** which outlines the role of the **Maternal and Child Health Nurse (MCHN)** and recommended ongoing physical and developmental assessments and health checks. A full physical examination is repeated **at 2 and 8 weeks** (inclusive of hips, eyes, and heart) where significant pathology may exist without earlier symptoms.
- Advise the women to arrange **GP appointment for 4 -6 weeks** for a further repeat newborn and maternal postnatal physical review.



If an adverse event (actual or 'near miss') is associated with this guideline, document details in the health record and complete an incident report on Riskman.



1. National Institute for Health and Clinical Excellence (NICE) (2006) *Routine postnatal care of women and their babies*, Clinical Guideline 37, London  
[www.nice.org.uk/CG037](http://www.nice.org.uk/CG037)
2. Southern Health (2008), *Clinical Competency in Newborn Examination* (CP-MA53) Clinical Protocols and Guidelines, Maternity.
3. Colitz P (2004) *Physical Examination of the Newborn*, University of Queensland
4. Glazener Cathryn M.A. Ramsay Craig R. Campbell Marion K, et al. Neonatal examination and screening trail [NEST] : British Medical Journal 1999;3 18: 627-32
5. Royal Melbourne Institute of Technology (1996) Paediatric Assessment & Interactive Learning Heart Sounds CD ROM RMIT Version 1.
6. Southern Health 2008 'Looking after yourself and your baby' booklet Allenby Press
7. Victorian Government (2009) *Child Health Record, The Department of Education and Early Childhood Development*. [http://www.education.vic.gov.au/oecd/maternal-child-health/health\\_record.html](http://www.education.vic.gov.au/oecd/maternal-child-health/health_record.html)

|                   |                                       |                         |             |
|-------------------|---------------------------------------|-------------------------|-------------|
| <b>SH Policy</b>  | Patient Care                          | <b>ACHS</b>             | Clinical    |
| <b>Reviewer</b>   | Neonatal Guideline Group              | <b>Last review date</b> | August 2012 |
|                   | Maternity Guideline Development Group |                         |             |
| <b>Authoriser</b> | Maternity Executive Committee         | <b>Next review date</b> | August 2012 |

**If this is a hard copy it might not be the latest version of this document. Please see the Southern Health site for current policies, protocols and guidelines.**

## Disclaimer

These clinical practice guidelines and protocols have been developed having regard to general circumstances. It is the responsibility of every clinician to take account of both the particular circumstances of each case and the application of these guidelines. In particular, clinical management must always be responsive to the needs of the individual woman and particular circumstances of each pregnancy.

These guidelines have been developed in light of information available to the authors at the time of preparation. It is the responsibility of each clinician to have regard to relevant information, research or material which may have been published or become available subsequently. Please check this site regularly for the most current version.