NEONATAL EXAMINATION

Keywords: Neonatal examination, newborn assessment, cephalocaudal check, head to toe check

AIMS

- To assess growth, health and behaviour of the neonate.
- To confirm neonatal maturity.
- To detect any abnormal effects of birth and recognise an unwell neonate enabling commencement of appropriate management.
- To detect any abnormalities which are present at birth.
- To have a documented record of any distinguishing features with regards to the neonate’s physical appearance as an aid to description and identification in the event of abduction (See Emergency Preparedness Manual, Code Black Alpha response & Policy Prevention and Management of an Infant Abduction)
- To inform parents of any problems that the neonate may have, or reassure them that their baby is healthy.

KEY POINTS

1. Skin to skin contact and breastfeeding are the priority in the first hour of the well neonate. As soon as possible after this, providing the temperature is stable, the examination should be performed.
2. The examination should be delayed if the neonate is cold or unwell.
3. Where a midwife does the initial examination, a Medical Officer must perform a further complete physical examination within 24 hours.
4. Maintain standard precautions in accordance with Infection Control Policy - Standard Precautions
5. Each time the woman is checked and her physical condition assessed, the midwife shall perform a visual check of the neonate to ensure its condition remains within normal limits.

EQUIPMENT

- Overhead warmer
- Stethoscope with a neonatal diaphragm
- Adequate lighting
- Thermometer
- Tape measure
- Infant scales
- Neonatal History Sheet MR 410
**PREPARATION**

1. Obtain maternal history including medical, pregnancy, previous obstetric history, labour and birth details.¹⁻³
2. Gain parental consent and where possible, perform the examination in the presence of one or both parents.¹⁻²
3. Prepare the environment by ensuring it is:
   - warm²
   - well lit²
   - free from draughts.
   The examination should be performed under a neonatal warmer when possible to ensure maintenance of temperature.²
4. Ensure the neonate has two identification bands in place. Refer to page 4 of the guideline Patient Identification
   - Bands should have the mother’s family name and unit medical number recorded on it.
   - Confirm the details on the mother’s and neonate’s identification bands match
   - Instruct the mother to immediately inform nursing staff if an identification band comes off so it may be replaced as soon as possible.
5. Perform assessment of neonatal vital signs including temperature, respirations, heart rate, and oxygen saturation. Obtain a current axillary temperature of the neonate. If normal (36.5 to 37.4°C) proceed with the examination.³ If cold, discontinue the examination or place neonate under a radiant heater for the remainder of the examination.³

**INITIAL EXAMINATION**

- The midwife will perform the initial examination of a normal well term neonate and an additional more detailed examination is done by a paediatrician within 24 hours of birth.
- All abnormal findings should be reported to the paediatrician for review.

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<thead>
<tr>
<th>AREA OF ASSESSMENT</th>
<th>ASSESS</th>
<th>ADDITIONAL INFORMATION</th>
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| Initial general overview | Crying sounds³ | A weak, high-pitched, or hoarse cry is considered abnormal.³  
Observe the neonate prior to the beginning of the physical examination for activity, skin colour, and obvious congenital abnormalities.¹,³ |
| | General appearance | |
| Skin | Colour | Observe for jaundice, cyanosis, bruising, vernix, dryness, mottling, pallor, plethora.⁵  
Note milia, erythema, pustules⁵  
Assess for haemangioma, port-wine stains, Mongolian spots⁵, or birth marks.  
Note any skin peeling¹, or abrasions. |
<p>| | Rashes | |
| | Nevi | |
| | Skin integrity | |</p>
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<tr>
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| Head               | • Head circumference - measure.  
                     • Shape and symmetry of head  
                     • Palpate suture lines and fontanelles  
                     • Eyes  
                     • Ears  
                     • Nose  
                     • Mouth  
                     • Philtrum – area between the nose and mouth  
                     • Neck  
                     • Chin  
                     • Hair | Check for microcephaly, macrocephaly, bruising or abrasions.  
Dysmorphic features may be associated with chromosomal conditions.  
Note if fontanelles are bulging, depressed, small or enlarged. Assess for moulding, caput, haematoma or signs of increased intracranial pressure.  
Note any subconjunctival haemorrhages. View position of eyes. The paediatrician will assess the ‘red eye’ reflex.  
Assess position and note presence of skin tags. All parents at KEHM are offered a hearing test for their neonate.  
Note any nasal flaring, breathing difficulties, sniffing, sneezing or discharge. Assess position, symmetry and patency of nares. Patency may be checked by occluding one nostril at a time and observing breathing.  
Perform examination of the palate. Note tongue-tie, signs of infection, abnormal frothy or copious saliva, or presence of teeth. Elicit the sucking reflex. A flat philtrum may indicate fetal alcohol syndrome.  
Check mobility, excess skin or webbing at back of neck.  
Observe size and shape.  
Document a description of the hair including colour, thickness, and pattern. This provides useful information in response |
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<tbody>
<tr>
<td><strong>Chest</strong></td>
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<tr>
<td>Movement</td>
<td></td>
<td>Observe shape of chest, and placement of nipples. Note signs of sternal or rib recession, abnormal nipple size, or discharge.</td>
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<tr>
<td>Cardiac function</td>
<td></td>
<td>Assess heart sounds, rate and rhythm. View central and peripheral perfusion. If a cardiac murmur is suspected / noted then check the peripheral pulsations and perfusion, central cyanosis and assess for respiratory distress. Document the findings, give an explanation to the parents reassurring them that this is quite common and usually an innocent finding, however it is important to inform the paediatrician just in case there is anything significant and inform the paediatrician on call as soon as possible after counselling the parents.</td>
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<td>Lungs</td>
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<td>Observe for chest recession, rate, depth, type of breathing pattern. Note the shape and symmetry of chest. Observe the symmetrical expansion of chest. Listen to breath sounds and for any grunting sounds. A term baby has a firm nodule of breast tissue 6 – 8 mm felt.</td>
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<tr>
<td>Breasts</td>
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<tr>
<td><strong>Abdomen</strong></td>
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<tr>
<td>Shape, colour and size</td>
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<td>Distension may indicate obstruction or abdominal mass. A scaphoid or flat abdomen may suggest diaphragmatic hernia. View abdominal tone and note if excessive skin is present. Observe the number of vessels, presence of hernias, colour of umbilicus and umbilical stump. Check the umbilical clamp is secure. Gentle palpation of the abdomen may be done to detect masses.</td>
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<tr>
<td>Umbilicus</td>
<td></td>
<td>Auscultate for bowel sounds.</td>
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<tr>
<td>Palpation of abdomen</td>
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<tr>
<td>Bowel sounds</td>
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<tr>
<td>Genitalia / Anus</td>
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<tr>
<td></td>
<td>Genitalia</td>
<td>Male:</td>
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<tr>
<td></td>
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<td>- examine and palpate for descended testes.²</td>
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<td></td>
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<td>- observe shape, size and position of the penis³</td>
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<td>- observe the foreskin is not retracted.²</td>
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<td>- assess for bruising, swelling or haematomas.¹</td>
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<td>- check position of urethra⁴</td>
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<td>- inform the parents a male neonate may pass urates in the urine in the first 48 hours which may look reddish.²</td>
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<td>Anus</td>
<td>Female:</td>
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<td>- part the labia to visualise the opening and to detect any masses, swelling, abnormal discharge or abnormal anatomy.²</td>
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<td>- Advise parents of the possibility of pseudo-menstruation resulting from circulating maternal hormones.</td>
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<td>Urine output</td>
<td>Observe the position. Gentle touching of the anus causes contraction and retraction of the anus muscle proving patency.³</td>
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<td>Document if meconium has been passed.² Advise the mother to inform staff when meconium is passed.</td>
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<td>Document if urine has been passed. Advise the mother to inform staff when urine is passed.</td>
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| **Muscular skeletal** | • Arms and legs | Check for:  
➢ Normal shape, posture and length.  
➢ Deformities  
➢ Limitations of movements  
➢ Normal symmetrical movements.  
➢ Normal digits  
➢ Talipes  
Assess for a dislocated or unstable hips. Prior to examination ensure the neonate is relaxed and in the supine position.  
Observe for vertebral malformations. Assess for clefts, dimples or sinuses.  
A fractured clavicle may occur after a difficult delivery and may present as an irregular contour, shortening, and tenderness of the area. |
| • Hips | | |
| • Spine | | |
| • Clavicle | | |
| **Neurological** | • Reflexes | Absent, depressed, or exaggerated reflexes may be signs of neurological disorders.  
➢ Moro Reflex  
Should cause abduction of both arms and extension of fingers. Asymmetry may indicate a fractured clavicle, hemiparesis or a brachial plexus injury.  
➢ Grasp reflex  
➢ Rooting reflex  
➢ Sucking reflex  
Illustrates the ability to coordinate breathing, suck and swallowing which shows neural integrity.  
➢ Stepping or walking reflex  
Indicates mature extension and flexion mechanisms.  
➢ Traction response  
Reflects development of the flexor tone which occurs at approximately 37 weeks. |

### AREA OF ASSESSMENT

#### Neurological (continued)
- Muscle tone
- Posture
- Level of consciousness
- Movements

#### Gestational age
- Resting posture
- Breast tissue
- Ear cartilage
- Genitalia
- Reflexes

#### Measurements
- Weight
- Length
- Head circumference

### ADDITIONAL INFORMATION

- Assess tone by posture and resistance to passive movement.
- Cerebral irritation may cause neonatal back arching, scissoring of legs, and thumbs to tightly abduct. Assess alertness, interaction with mother, behaviour. Note any absence or reduced movements, quality of movements, and abnormal movements.

- A normal term neonate has:
  - fully flexed extremities
  - creases covering the whole of the foot in the first 12 hours of birth
  - 6-7mm of breast tissue
  - completed ear cartilage and curve to the pinna
  - well developed genitalia

- Measure and record on the:
  - MR 410 Neonatal History
  - MR 425.10 Care of the Neonate (weight only)

### MANAGEMENT AFTER EXAMINATION

1. Discuss the findings with the parents.
2. Notify the paediatrician if the examination findings suggest review is required earlier than routine paediatrician examination.
3. Offer the parents skin-to-skin contact with the neonate after the examination.
REFERENCES / STANDARDS


National Standards – 1- Care provided by the clinical workforce is guided by current best practice
Legislation - Nil
Other related documents – KEMH Clinical Guidelines:
- Obstetrics & Midwifery: Neonatal Care: Neonatal Observations
- Obstetrics & Midwifery: Neonatal Care: Neonatal Hypothermia: Management if Temperature < 36.5°C
- Obstetrics & Midwifery: Neonatal Care: Neonatal Examination: QRG
- NCCU Section 1: Newborn Resuscitation Algorithm
- WNHS Emergency Preparedness (See Code Black – Infant abduction guidelines & Appendix 4)

RESPONSIBILITY

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<thead>
<tr>
<th>Policy Sponsor</th>
<th>Nursing &amp; Midwifery Director OGCCU</th>
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<tr>
<td>Initial Endorsement</td>
<td>March 2006</td>
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<tr>
<td>Last Reviewed</td>
<td>September 2014</td>
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<tr>
<td>Last Amended</td>
<td>February 2015</td>
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