Initial Assessment of the Newborn

University Hospitals of Leicester NHS Trust

C115/2008

1. Introduction and who the guideline applies to:

This guideline covers the process of the initial assessment of the newborn. It applies to midwifery and neonatal staff involved in the care of babies immediately after birth. This guideline is intended to ensure a standardised approach to the initial assessment of the newborn. The initial assessment consists of two parts and allows for the early detection of abnormalities, with the opportunity for prompt referral and treatment. It also provides a baseline examination from which to monitor the newborn's progress.
The first part of the assessment is the Apgar score, whilst the second is the initial newborn examination.
This guideline outlines the process of systematic newborn assessments in the period immediately after birth and provides a clear standard for care to be used in conjunction with other relevant guidelines.
The neonatal examination, usually undertaken between 24 and 72 hours following birth, is a separate assessment for which there is a different process and guideline Newborn Infant Physical Examination (NIPE) UHL Neonatal Guideline reflecting the additional training and documentation requirements.

This guideline should be used alongside related guidelines for all other aspects of the management of newborn care, including immediate neonatal care, resuscitation, thermal protection and supporting successful feeding.

What's new?

- Assess for subgaleal haemorrhage
- 10 minute Apgar in line with E3 requirement

Contents

Related UHL documents:

- **Newborn Infant Physical Examination (NIPE) UHL Neonatal Guideline**
- **Postnatal Ward Handbook UHL Neonatal Guideline**
- **Thermal Protection of the Newborn UHL Obstetric and Neonatal Guideline**
- **Breast Feeding Support UHL Obstetric Guideline**
- **Infant Feeding Policy UHL LLR and Childrens Centre Services**
- **Bottle Feeding UHL Obstetric Guideline**
- **Group B Streptococcus in Pregnancy and the Newborn UHL Obstetric Guideline**
- **Breech Presentation UHL Obstetric Guideline**
- **Consent to Examination or Treatment UHL Policy**
- **HIV Screening and Management in Pregnancy UHL Obstetric Guideline**
- **Resuscitation at Birth UHL Neonatal Guideline**
- **Patient ID Band UHL Policy**
- **NPulse Oximetry Screening for the Newborn Infant UHL Obstetric Guideline**
- **Pyrexia and Sepsis in Labour UHL Obstetric Guideline**
- **Meconium Stained Liquor at Delivery UHL Neonatal Guideline**
- **Hypoglycaemia - Neonatal UHL Neonatal Guideline**
- **Jaundice in Newborn Babies UHL Obstetric Guideline**

Key Principles:

- The initial assessments should be made by a person appropriately qualified to do so i.e. midwife, advanced neonatal nurse practitioner (ANNP) or neonatologist. Student midwives may undertake assessments, under supervision, as part of their training. The mentor remains accountable for ensuring that the assessment is appropriately completed and documented.

- All staff undertaking initial examination of the newborn are expected to undertake appropriate training as per Trainings Needs Analysis.

- Assessments should take into account maternal medical and pregnancy history, gestation, weight, labour and birth events as these will help to establish the level of risk of imminent neonatal morbidity and mortality (WHO 2017).

- The initial newborn assessment should take place as soon as is practicable: however, skin to skin contact and initial feeding (unless contraindicated) should not be interrupted to allow the examination to take place.

- Principles of thermal protection of the newborn and infection control should be observed at all times.

- Assessments should be undertaken in the presence of the parent(s) wherever possible, with full explanations given.

- All assessments and discussions should be documented in accordance with Trust and national standards for documentation.

- Any abnormality, either suspected or diagnosed should be notified to the paediatric team in line with the appropriate care pathway.

- Clear communication is fundamental in expediting the process once the diagnosis or suspicion of abnormality has been made.

APGAR assessment

- The Apgar parameters should be assessed and scored at fixed times from birth:
    - 1 minute
    - 5 minutes
    - 10 minutes – E3 requests 10 min apgar for all newborns
    - If active resuscitation is in progress, every 5 minutes until baby has stabilised, resuscitation is discontinued or he / she is transferred to neonatal unit

- The Apgar parameters should be assessed and scored in line with time intervals as above.

- Where a midwife, ANNP or neonatologist is not present at birth, the Apgar score should not be estimated but will be documented as not known. Apgar scores are not required for stillborn babies when there has been no attempt at resuscitation. Apgar scores should be calculated in accordance with the parameters outlined below.

Apgar Parameters & Scoring System:

Score	**0**	**1**	**2**
Heart Rate	**absent**	**Less than 100bpm**	**More than 100bpm**
Respiratory Effort	**Nil**	**Gasp**	**Regular**
Muscle Tone	**Nil**	**Slight**	**Good**
Response to Stimuli	**Nil**	**Slight**	**Good**
Colour	**all blue**	**trunk pink**	**All pink**

The newborn examination

- A full newborn examination, following the approved process, should take place as soon as possible after birth.

- The midwife, ANNP or neonatologist providing care for the baby immediately after birth should undertake a full newborn examination.

- The examination should take place as soon as practicable after the birth.

- Skin to skin contact and initial feeding (unless contraindicated) should not be interrupted to allow the examination to take place.

Approved process for undertaking Initial Newborn Examination:

Head	• The vault of the skull should be examined visually and by palpation • Presence of caput or moulding: including location and degree of visible signs of trauma • Consider subgaleal haemorrhage, fluctuant swelling which crosses suture lines, is gravity dependent so shifts on repositioning, head circumference may increase, eyelids may swell and ear position may displace. Urgent escalation is required if suspected • Normal size and appearance of suture lines and fontanelles • Does size of head appear to be proportionate to gestation • Any abnormalities suspected • All above must be documented on the body map if noted
Shape of face	• Shape of the face should be symmetrical • Assess chin for evidence of micrognathia/Pierre-Robins Syndrome
Eyes	• Two eyes should be present • Discharge may be present • Signs of conjunctival haemorrhage- must be documented on body maps • Pupils should appear round and clear of cataracts • Presence / absence of epicanthal folds • Normally spaced and shaped
Nose	• Shape and size should be noted (may be altered by delivery) • Should be patent • Flaring nostrils may be indicative of respiratory distress
Mouth	• Should be formed and symmetrical • Visualise entire palate for absence of

	cleft palate (using good light source, a finger may be used if it is difficult to visualise the entire hard & soft palate, e.g. if high vault)) • Note if epithelial pearls (Epstein's Pearls) on gums or palate • Note natal teeth • Note presence of ankylglossia
Ears	• Two ears, fully formed and equal level • At correct level (upper notch of pinna level with the canthus of the eye) • Appear patent • Presence of accessory skin tags noted, although relevance to hearing is doubtful and pitting.
Neck	• Should be symmetrical • Presence of swellings, webbings or redundant skin folds should be noted • Does baby appear to have normal range of flexion and rotation
Clavicles	• Intact
Arms	• Both arms present, of equal length • Able to move freely and with good tone • Axillae & elbows examined for any abnormalities
Hands	• Number of digits on each hand • Number of palmer creases noted • Polydactyly / syndactyly noted • Finger nails / nail beds present
Chest	• Should move symmetrically with respirations • Signs of respiratory distress should be noted • Nipple and areola (x2) should be well formed and symmetrical on the chest wall • Accessory nipples should be noted
Abdomen	• Should appear rounded • Should move synchronously with chest during respirations • Skin should be intact with no abnormal swellings or protrusions e.g. umbilical hernia • Umbilical cord clamp should be secure, haemostasis achieved
Genitalia (M)	• Penis length appears to be within normal parameters • Position of urethral meatus confirmed

	• Scrotum gently palpated for presence of testes (x2)
Genitalia (F)	• Confirm presence of clitoris, urethral & vaginal orifices, formed perineum
Legs	• Assess symmetry, size and posture • Both legs should move freely • Good tone • No abnormality of popliteal spaces
Feet	• Position of feet in relation to the legs should be noted • Number of toes counted • Presence of webbing or unusual spacing (e.g. sandal gap) between toes
Spine	• Observe for obvious signs of abnormality • Assess curvature of the spine • Observe for dimples, sinuses or hairy patches which may indicate spina bifida
Buttocks	• Confirm presence of anus • Observe for dimples or sinuses
Skin	• Condition of the skin should be observed • Colour, rashes, marks and pigmentation marks should be noted, include size / location etc (must be recorded on body maps in the hospital records and Child Health Record) • Evidence and degree of skin trauma should be noted (Must be documented on body map in the hand hospital records and Child Health Record) • Obvious swelling or spots should be examined and noted
Elimination	• Note passing of urine and meconium
Weight	• Documented in kilograms / grams
Temperature	• Axillary temperature should be noted
Tone / movement	• Any abnormality of tone or movements should noted

Newborn pulse oximetry

- All babies born at 34+0 or above should receive newborn pulse oximetry (unless admitted to NICU or require continuous monitoring e.g. congenital abnormality) within first 8 hours of life

- This should be documented on NIPE smart and on the paediatric page of the birth records.

Parents presence

- Parents should be present when assessments of their baby are undertaken (NICE 2017).

- Professionals should work in partnership with parents (NMC 2018): discussion of findings expected progress and advice should be timely and encourage exploration of parental concerns and needs (NICE 2014).

- Parents should be advised of normal newborn care and given information of indications which require urgent assessment (WHO 2017).

Documentation

- Documentation of the initial newborn examination should be completed on the paediatric page within the mother's intrapartum notes.

- Any birth marks, bruising or birth injury should be noted on the body map page in the mothers Intrapartum notes and Child Health Record. This page should be signed, name printed and dated regardless of whether any marks have been noted or not.

- Accuracy in completion of electronic records is of paramount importance as rapid data transference into national IT systems occurs.

Abnormalities

- Any diagnosis or suspected abnormality should be documented, reported and the baby referred appropriately

- Where there are suspected deviations from the normal, these must be discussed with the parents, referred to the on-call neonatologist (Senior trainee or above) and documented in the case notes.

- Discussion with parents should be fully documented in the notes.

- Where a congenital anomaly is present, a Congenital Anomaly Register notification should be completed and submitted.

3. Education and Training:

None

4. Supporting References

Johnson R. Taylor W (2000) *Skills for Midwifery Practice.* Churchill Livingstone. Edinburgh

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World Health Organisation (2003) Managing Complications in Pregnancy and Childbirth – a Guide for Midwives and Doctors. Newborn Care Principles.

http://www.who.int/reproductive-health/impac/Clinical_Principles/ accessed 5.8.2008

WHO recommendations on newborn health: guidelines approved by the WHO Guidelines Review Committee 2 May 2017 | Guideline

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5. Key Words

Newborn examination, NIPE, APGARS

The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

DEVELOPMENT AND APPROVAL RECORD FOR THIS DOCUMENT			
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Approved by:	Maternity Service Governance Group	**Date Approved: 17/11/2021**	

REVIEW RECORD			
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November 2015	V1	A Dziemianko	No change
February 2016	V1	A Dziemianko and L Harvey	Clarification on requirement to complete paediatric page and body map page even when no marks, bruising etc are seen.
October 2018	V2	A Dziemianko	Insertion of pulse oximetry
September 2021	V3	L Taylor H Field D Panjwani	Added consider subgaleal haemorrhage to head examination Updated related documents and references