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Newborn Physical Examination Guideline

Introduction and Aim:

The Newborn Physical Examination is a universal screening tool which aims to identify those neonates who may be at increased risk of a disease, condition or abnormality and subsequently require a timely referral for further tests and appropriate specialist review.

Objectives:

To promote early detection and referral of all babies born with congenital abnormalities and improve health outcomes for that population of neonates.

Scope:

This policy applies to all healthcare professionals in all locations including those with honorary contracts.

Equality Health Impact Assessment	*An Equality Health Impact Assessment (EHIA) has not been completed.*
Documents to read alongside this Procedure	• *Pulse Oxymetry Guideline* • *Postnatal Orthopaedic Guideline* • *Postnatal Handbook (current version Oct 2018; as of March 2019)*
Approved by	*Maternity Professional Forum / Perinatal Guidelines Forum*

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Disclaimer

If the review date of this document has passed please ensure that the version you are using is the most up to date either by contacting the document author or the Governance Directorate.

Summary of reviews/amendments			
Version Number	**Date of Review Approved**	**Date Published**	**Summary of Amendments**
1	Aug 2006	Aug 2006	
2	July 2009	Aug 2009	Reviewed and amended by Delyth Bebb
3	May 2012	Sept 2012	Reviewed and amended by Elizabeth Baraz / Anne Morgans / Sybil Barr
4	17/05/2019	04/06/2019	Reviewed and amended by Jayne Frank

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2 Introduction

The Newborn physical examination is a systematic examination of the newborn baby and is an integral part of universal Child Health Promotion Programme (NSC 2016 a). The timing of the examination should reflect the physiological adaptations the neonate makes to extra uterine life. It is undertaken in addition to an initial general examination routinely carried out by the midwife or neonatal team immediately following birth to ensure the absence of abnormalities (NMC 2018). Please note that it may also be in addition to any specialist examinations for fetal medical concerns raised during the antenatal period and/or medical concerns raised following birth.

The examination should be completed by a suitably qualified and proficient practioner within 72 hours of the baby's birth (Hall and Elliman 2006; NMC 2018; NHS Direct Wales 2018). The examination may be delayed if a baby is too premature or too unwell for it to be completed (for example if it is not the clinical priority where a baby's condition is considered too unstable), however the examination should be completed as and when the baby's condition allows.

For the purpose of this guideline the term parent(s) is used throughout however this term also includes non-parental legal carer(s) or guardian(s) of the baby.

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3 Professional Requirements

Professional requirements to undertake the newborn physical examination:

- The Newborn Physical Examination can be performed by a suitably trained and competent health professional (NMC 2018).
- Practitioners must maintain the appropriate level of ongoing clinical experience, which includes a minimum of **15** newborn physical examinations per year; this should be evidenced in their annual PADR.
- The practitioner should attend a minimum of two 'Newborn Physical Examination Forums' annually. It is the practioners responsibility to sign in to the forum on arrival, a record of attendance is stored.
- Each practitioner is responsible for maintaining evidenced based practice and their own competence to carry out the examination to the highest standard and for the identification and resolution of gaps in knowledge, training needs and continuing education (Hall and Elliman 2006; NMC 2018).
- Mandatory annual training is required by completing the NIPE e-learning module (efm); confirmation of ongoing CPD is reviewed at their annual PADR and three yearly revalidation (NMC 2018).
- Practitioners are required to access senior neonatal support in the event of any abnormality suspected or detected, by way of a referral to a suitably qualified professional as may reasonably be expected to have the necessary skills and experience (NMC 2018). 24hr advice and referral is achieved via NNU for an inpatient and NNU or PAU for outpatient's dependant on urgency.
- Practitioners should maintain records of their examinations and participate in periodic audit.
- A suitably trained practitioner can undertake the newborn physical examination on most neonates. However, the practitioner must use their clinical judgement to assess whether the newborn physical examination needs to be completed by a more senior health professional e.g. the neonatal

Registrar. Examples of exclusion criteria for midwife practitioner examinations (NIPE 2014):

- Prematurity, under 37 week's gestation.
- Admission to intensive care, transitional care or requiring neonatal follow up.
- Suspected or confirmed abnormality identified during the antenatal or initial postnatal period.

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4 Newborn Physical Examination Procedure

The examination is an overall physical assessment of the baby which includes specific key components to check if the baby has any problems with their eyes, heart, hips and in boys the testes (NHS Direct Wales 2018):

1. Eyes: approximately 2 or 3 in 10,000 babies have problems with their eyes that require treatment.
2. Heart: approximately 4 to 10 in 1,000 babies have a heart problem.
3. Hips: approximately 1 or 2 in 1,000 babies have hip problems that require treatment.
4. Testes: approximately 1 in 100 baby boys have problems with their testes that require treatment.

The above incidence rates are derived from best estimates of national and regional historical data (Public Health England 2018; NHS Direct Wales 2018).

The examination also provides an opportunity to address any concerns or questions parents or healthcare professionals may have whilst providing an opportunity for further health education and parental reassurance (RCM 2012). Effective professional collaborative working between nursing, midwifery and neonatal teams can improve the service, facilitate continuity of carer and early discharge home or in the case of home delivery ensure mothers and babies are cared for holistically within the community setting.

The parent(s) should have received written information in the antenatal period. However it is good practice to explain the components of the examination, its limitations and further sources of information (NHS Direct Wales 2018): https://www.nhsdirect.wales.nhs.uk/doityourself/pregnancy/newbornphysicalexamination/

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4.1 A systematic approach to the examination

This is not an exhaustive list:

- Obtain verbal parental informed consent, if a parent(s) declines all or part of the Newborn Physical Examination with informed choice it must be clearly documented in the notes and E3 should be completed. The rationale for the examination including its benefits and the risks of not identifying abnormalities at the earliest opportunity should be highlighted and clearly documented. Parents should be given information on what to do and who to contact if they change their mind.
- Communication with the parent(s) is paramount and an independent interpreter must be used if required, for example where there is hearing loss / impairment or a language barrier.
- The examination should be completed in the presence of the parent(s) where possible; in a warm, well-lit, safe and appropriate environment; note a firm surface is required for the hip examination.
- Ensure warm, clean hands and note the baby should be fully undressed during the examination, however you should consider the thermal care and wellbeing of the neonate throughout.
- All necessary equipment must be available and cleaned prior to the examination
- Review the social, lifestyle and medical history both verbally with the parent(s) and utilising all available medical records (paper and electronic). This should include family history maternal, paternal and siblings; maternal antenatal (including screening test and USS results) and perinatal history; fetal and neonatal history including mode of birth, resuscitation, medications, observations and baby's postnatal behaviour etc.
- Ascertain any parental anxieties and observe their interaction with the baby.
- Obtain a robust feeding history, including history of excessive or bilious vomiting.

- Identify whether the baby has passed meconium and urine (the nature of the urine stream in boys).
- General morphological appearance, including activity, posture, behaviour, tone and symmetry etc.
- Skin; note integrity, colour and texture, abrasions, trauma, petechie, birthmarks including Mongolian blue spots or rashes etc.
- Head; scalp and shape (including caput, cephalhaematoma, trauma etc.), fontanelles, face, nose, mouth including thorough visualisation and palpation of hard and soft palate, sucking reflex, teeth, tongue and gums, ears (position, placement etc.), neck, general symmetry of the head and facial features, including head circumference etc.
- Eyes; check presence of eyes, general appearance, size, symmetry, squints, conjunctivitis, discharge, haemorrhage, shape and position including checking opacities and 'red reflex' etc.
- Neck and clavicles, limbs, hands, feet and digits (talipes, palmar creases, webbed fingers or toes, syndactyly/polydactyly etc.), assess proportions and symmetry.
- Lungs and chest; check effort and movement, rate and listen to air entry across chest fields (observing for crackles, stridor, tachypnoea at rest, retraction, grunting, nasal flaring etc.) breast tissue, nipples, chest size, shape and symmetry etc.
- Heart (Cardiovascular system) check position, rate, rhythm and sounds, colour, capillary refill time, brachial and femoral pulse volumes and pulse oximetry.
- Abdomen; check shape and palpate to identify and exclude organomegaly, masses, hernia, tense or distended abdomen etc; also check the umbilical cord.
- Hips; check symmetry of limbs including length and skin folds; perform Barlow and Ortolani's manoeuvres to exclude dislocation.

- Genitalia - Male infants; penis, foreskin, both testes present (Cryptorchidism - bilateral undescended testes may also be associated with ambiguous genitalia or an underlying endocrine disorder), hypospadias/epispadias, chordee, hydrocele etc. Female infants; clitoris and labia. Check that there is no passage of meconium exiting the genitalia.
- Anus; position, size, shape, completeness and patency.
- Spine; palpate bony structures with the baby prone, symmetry of scapulae and buttocks, integrity of skin, dimples, hair tufts, naevus, abnormal skin patches etc.
- Central nervous system (CNS); check tone, behaviour, spontaneous movements and posture, elicit newborn reflexes (Moro, Palmer, Planter, Rooting, Suck, Grasp etc.)
- Cry; note sound and pitch.
- Weight.

The practitioner should allow sufficient time for an unhurried thorough examination which includes discussing parental concerns and answering any questions they have. Please ensure a timely referral to the neonatal Registrar in the event of any abnormalities being identified.

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4.2 Communication and documentation

Following the newborn physical examination all results should be recorded on E3, a signed printout completed for the neonatal record. The parent(s) should be informed of the outcome of the examination and provided with a second signed printout to take home which will form part of the Child Health Record (Red Book). If a deviation from normal (screen positive) result or risk factor is identified, the parents should be informed of any plan for referral and further investigation, treatment and/or care planning including expected appointment timescales and where relevant/available patient information leaflets provided.

Any deviation from normal must be referred to the supporting neonatal team, for an inpatient this is usually the neonatal registrar over the telephone for a (non emergency) urgent problem or via the agreed non-urgent routine referral pathways. In the community setting referral for an outpatient (non emergency) urgent problem, please follow the referral process as indicated on the Neonatal transfer from community SBAR form:
http://nww.cardiffandvale.wales.nhs.uk/pls/portal/url/ITEM/F96D678B0A6D2020E0400489923C7334
Refer to the PAU, first floor - West or via the agreed pathways for non-urgent routine referrals.

Examination outcome including referrals, investigations, treatment and/or care plans should be documented on E3 and within the neonatal notes with a summary in the postnatal notes. All referrals should be completed with parental informed consent at the time of the examination, these include non-urgent routine referrals, for example risk factor triggered screen negative Hip referrals and BCG vaccination referrals.

Appropriate skills should be utilised, especially in the event of suspecting or discovering an abnormality, the parent(s) should be supported to ensure they understand the implications and do not become unduly alarmed. They should also be informed of the limitations of the examination so as not to be falsely reassured about their baby. Ensure that parents know how to assess their baby's general condition, health and wellbeing and how to access help at any time in the event of any future concerns. The parent(s) should also be informed that the examination will be repeated at 6 to 8 weeks of age as some conditions can develop or become apparent later.

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5 Audit

Periodic audits will take place to monitor compliance with this guidance.

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6 References

Hall DMB, Elliman D (2006). Health for all children. 3rd ed. Oxford: Oxford University Press.

National Screening Committee (NSC 2016) Newborn and Infant Physical Examination Screening Programme Handbook 2016/17. National Screening Committee.

NHS Direct Wales (2018) Newborn Physical Examination https://www.nhsdirect.wales.nhs.uk (Accessed 12th January 2019)

Nursing and Midwifery Council (NMC 2018) The Code: Professional standards of practice and behaviour for nurses, midwives and nursing associates. Nursing and Midwifery Council.

Public Health England (2014) NIPE Midwife Examination criteria https://www.england.nhs.uk/south/wp-content/uploads/sites/6/2014/06/midwife-nipe-examination-criteria.pdf (Accessed 5th February 2019)

Public Health England (2018) NIPE - Newborn and infant physical examination screening programme handbook. Public Health England.

Royal College of Midwives (RCM 2012), *Evidence Based Guidelines for Midwifery-Led Care in Labour: Immediate Care of the Newborn*, RCM, https://www.rcm.org.uk/sites/default/files/Immediate%20Care%20%20of%20the%20 Newborn.pdf (Accessed 5th February 2019)

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7 Resources

UHW Postnatal Handbook (Oct 2018):
http://nww.cardiffandvale.wales.nhs.uk/pls/portal/url/ITEM/78E25E52EE4D0C74E0500489923C4D45

https://www.nhsdirect.wales.nhs.uk/livewell/pregnancy

This guideline is to be used in conjunction with specific neonatal referral guidelines and patient information leaflets (Links correct as of March 2019 -please check for the most up to date version):

Cardiac - Pulse Oxymetry Guideline:
http://nww.cardiffandvale.wales.nhs.uk/pls/portal/url/ITEM/853B8FA6C5782169E0500489923C1497

Postnatal Orthopaedic Guideline:
http://nww.cardiffandvale.wales.nhs.uk/pls/portal/url/ITEM/2ACA37E1D313BC40E0500489923C4906

- DDH Referral form:
  http://nww.cardiffandvale.wales.nhs.uk/pls/portal/url/ITEM/2A6819A50EE3A841E0500489923C6541

- DDH Patient Information leaflet:
  http://nww.cardiffandvale.wales.nhs.uk/pls/portal/url/ITEM/477988729180835C8E0500489923C7279

- DDH 'STEPS Charity' Patient information leaflet:
  https://www.steps-charity.org.uk/wp-content/uploads/2018/08/Baby-Hip-Health.pdf

- UHW Talipes leaflets:
  http://nww.cardiffandvale.wales.nhs.uk/pls/portal/url/ITEM/0D9EB4C009C898B7E0500489923C7775
  http://nww.cardiffandvale.wales.nhs.uk/pls/portal/url/ITEM/0D9EB4C009C798B7E0500489923C7775
  http://nww.cardiffandvale.wales.nhs.uk/pls/portal/url/ITEM/0D9EC92F6AC8B72BE0500489923C7790

- Talipes 'STEPS Charity' Patient information leaflets:
  https://www.steps-charity.org.uk/wp-content/uploads/2016/11/Parent-to-Parent-information-guide.pdf
  https://www.steps-charity.org.uk/wp-content/uploads/2016/11/Talipes_Clubfoot.pdf

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