



Aneurin Bevan University Health Board

Guideline for the Routine Examination of the Newborn

N.B. Staff should be discouraged from printing this document. This is to avoid the risk of out-of-date printed versions of the document. The Intranet should be referred to for the current version of the document

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Summary

Routine physical examinations of the neonate are an integral part of the universal Child Health Promotion Programme. Guidance can be found in the 2021 NICE (National Institute for Clinical Excellence) guideline on routine postnatal care of women and their babies and in the document from the UK national Screening Committee, setting standards for Newborn and infant physical examinations (NIPE, DH, 2018) and in the Health Education and Improvement Wales (HEIW) 2023. These standards address four areas of the examination: eyes, testes, hips, and heart (UK NSC, 2008 and HEIW, 2023). [New-born and Infant Physical Examination Standards 2023 \(nhs.wales\)](#)

The Newborn and Infant Physical Examination Cymru will be termed 'NIPEC' to denote the examination throughout this document as a recognised term.

The NHS newborn and infant physical examination (NIPEC) is a more detailed examination, to be undertaken with parental/ legal guardian consent between 6 hours and 72 hours of birth. The main aims are to:

- Identify and refer all children born with congenital abnormalities of the eyes, heart, hips and (in males) testes, where these are detectable.
- Reduce morbidity and mortality (HEIW, 2023)

These ages are recommended based on best practice and current evidence and should facilitate a prompt referral for early clinical assessment.

Parents should be informed that not all conditions are detectable at birth and the examination is therefore repeated at 6 – 8 weeks of age. The NIPEC has a health promotion function by providing an opportunity to discuss infant and family health issues with parents as they are beginning to care for their new infant (Mitchell, 2002).

The examination is performed by either a Neonatologist, Advanced Neonatal Nurse Practitioner (ANNP) or a Midwife who has undergone the appropriate training course (for the midwife- either as part of their BScHons Midwifery or post graduate Diploma in Behavioural Assessment of the Newborn Examination).

The guideline uses the term 'women' throughout. This should be taken to include people who do not identify as women but those who have given birth or are pregnant.

Criteria for midwives to perform detailed neonatal examination:

- Midwife must perform a minimum of 15 examinations per year, or 30 spread over a two-year period. Evidence of this must be provided when requested by a Clinical Supervisor for Midwives and can be evidenced via BadgerNet reports.
- Midwives must attend minimum 1x NIPEC forum per annum
- NIPEC reflection (verbal or written)
- Midwives must maintain their skills and remain up to date, platforms such as Y Ty Dysgu online learning can be used.
- Midwives must have 1x peer review per annum (Appendix 1)
- Appropriate referral pathways for senior neonatal review are established for either immediate/urgent review or routine outpatient review where necessary.

Babies SUITABLE for examination by midwives:	Babies NOT SUITABLE for examination by midwife:
<ul style="list-style-type: none"> • Infant is considered well • Infants born ≥ 37 weeks gestation irrespective of the mode of birth. (This includes instrumental delivery, elective caesarean section and emergency section for maternal reasons.) • Infants with growth greater than 5th centile as per Perinatal institute Gap and Grow 2.0 chart • Between 5th and 20th centile on perinatal institute gap and grow 2.0 chart please discuss with neonatal team to plot on RCPH chart. • If plotting less than 5th centile on RCPH chart, infant is considered severe intrauterine growth restriction, therefore for neonatal team to perform NIPE. • No known fetal abnormalities except where a clear protocol for follow up exists (e.g. maternal hypothyroidism, pelvicalyceal dilatation, risk factor for hip dislocation). 	<ul style="list-style-type: none"> • Infants of any gestational age if problems are present and all infants < 37 weeks gestation. • Infants with antenatally diagnosed abnormalities (unless clear protocol in place e.g., pelvicalyceal dilatation). • Infants with severe intrauterine growth restriction • Infants admitted to the neonatal unit. • Infants showing signs or symptoms of ill health • Infants that required Resuscitation involving Positive End Expiratory Pressure (PEEP) or further interventions.

Considering a NIPEC in the community

Consider the following if the infant goes home before the NIPEC is performed or if the midwife leaves the family home (following a homebirth) and the NIPEC has not been performed:

- Ascertain any of the family's concerns and give them the chance to discuss them.
- Review and plot the infant's weight ('*gap and grow*'), if <20th centile on Gap and Grow chart, please liaise with neonatal team.
- Observe if the infant can latch at the breast or suck a bottle (if being artificially fed) and mum is confident handling her infant to feed
- Consider whether the infant is well enough to be discharged/ remain at home.
- Consider any specific known risk factors
- Ensure that any appropriate urgent interventions for the infant have been completed or are planned (e.g. administration of Hepatitis B immunoglobulin and /or bcg vaccine to the infant).
- Ensure arrangements are in place for the routine examination of the infant to be completed.
- Ensure that the parents know how to assess their infant's general condition and to contact a midwife or doctor if any concerns.

Specific questions to ask the parents/ care givers:

- Any parental concerns?
- Is there any family history of heart problems/ hip dislocation from birth/ blindness or sight problems from birth/ genetic conditions?
- Has the infant been breech at any point from 32 weeks?
- Has the infant passed urine +/- meconium (have they visualised the urinary stream in a male infant)?
- Parental country of origin

Procedure - Standards for neonatal examination

Performing the Routine Examination

<https://heiw.nhs.wales/files/48482-nipec-standards-web-pdf/>

<https://heiw.nhs.wales/files/48946-nipec-eyes-final-web-pdf/>

<https://heiw.nhs.wales/files/48946-nipec-hips-final-web-pdf/>

<https://heiw.nhs.wales/files/48946-heart-english-final-web-pdf/>

<https://heiw.nhs.wales/files/48946-nipec-testes-final-web-pdf/>

Documentation

Ensure that the findings of the examination are appropriately recorded on the BadgerNet record and on the CWS E-discharge.

Please ensure all appropriate referrals are made if risk factors or concerns are identified.

Confirm the findings in discussion with the parents.

Community Midwives referral Pathways

See appendix 2

Findings that require explanation/ reassurance and follow up by GP

There are occasionally findings that are apparent on the first clinical examination that are neither life threatening or harmful to the infant but require explanation and reassurance (for example- a small birthmark). This can be conducted by the midwife performing the examination at the time with sensitivity whilst answering any concerns or questions the parents have.

If the condition or findings need a further check by the GP, the findings should be documented on the infant's CWS record discharge summary on the 'well infant ward' and on the BadgerNet record. Imaging can be undertaken using the PANDO app.

Guidelines for specific neonatal conditions Heart murmurs

If a heart murmur is detected during routine neonatal examination- note the presence or absence of any associated worrying signs or symptoms:

- Quality of the murmur
- Cyanosis
- Respiratory distress
- Absent femoral pulses
- Poor feeding, lethargy
- Other dysmorphic features
- Oxygen saturation levels <95%

Contact the Neonatal Registrar on the Neonatal Unit at GUH. Transfer can then be arranged with accordance to the All Wales Guideline for Maternity Transfers from Community and Freestanding Midwifery Units.

Developmental Dysplasia of the Hips (DDH)

Screening policy

The current policy in ABUHB as per national guidance, is to offer a hip ultrasound to any infant with risk factors for DDH. These are:

- Family history of DDH requiring treatment (only 1st degree relatives i.e., parent or sibling)
- Breech presentations from 32/40 gestation

Abnormal Hip examination

If the routine examination of the hips is abnormal (positive Barlows or Ortolani test), with or without risk factors, then the infant will need urgent referral to the Neonatal doctor for a repeat examination. If an unstable (dislocated or dislocatable) hip is confirmed, referral to the orthopaedic team can be arranged by the neonatal team.

- Discuss with the neonatal registrar on the neonatal unit at GUH.
- Complete a referral on BadgerNet and send to postnatal neonatal mailbox.
- The registrar will arrange to review the infant in the hospital and arrange urgent orthopaedic referral if necessary.
- Parents should be kept informed of the plan. They should be reassured that infant is not likely to be in any discomfort and that they can handle the infant to wash and change them as normal.

Talipes or Metatarsus adductus

Metatarsus adductus is caused by intrauterine positioning. It may be a positional (flexible) deformity with no bony abnormality involved or a structural deformity. In a structural deformity, the forefoot usually cannot be abducted beyond the midline (neutral position) and the heel (hindfoot) is in a valgus position. In a positional deformity, the forefoot is very mobile and can be easily abducted. A positional deformity will correct without treatment. In a rigid foot, an orthopaedic consultation is necessary for prompt treatment.

Talipes (Talipes Equinovarus) is one of the most common congenital anomalies with an incidence of 1 per 1000 live births and is bilateral in 50% of cases. A thorough examination should be made for other anomalies. There are variations in the severity of talipes. Some are flexible and correctable with serial exercises and casting.

Protocol for referral

Very mild and correctable deformities will improve without treatment. Parents can be advised to gently manipulate the feet into the normal posture several times a day during nappy changes.

It is difficult on routine examination to establish whether there is a fixed or a postural deformity. Therefore, babies with possible talipes should be referred for a Neonatal assessment:

- With more severe or fixed deformities, discuss with the neonatal registrar who can arrange to see the infant within 24- 48 hours.
- With less severe deformities, complete a referral to the neonatal team on badgernet.

- Physiotherapy and/ or orthopaedic referral can then be arranged after the Neonatal review.

Hypospadias

Identify the extent of the problem, i.e. incomplete foreskin, curvature of shaft of penis, site of urethral opening (either normally placed on tip of glans or opening along ventral or underside of penis or even within the scrotum), presence of testes and normal scrotal development.

Ensure the infant is passing urine.

Inform the parents of the findings. Ask them to avoid circumcision until a review performed by a paediatrician, as the foreskin may be used in reconstruction.

Refer to the neonatal team.

Undescended testes (or cryptorchidism)

Unilateral undescended testes are common in Newborn boys and in most cases will descend over the first few months. Advise the parents that the infant will be re-checked at the 6- 8 week check with the GP. Document the findings. If the testes remain undescended at the 6–8 weeks check with the GP, they should be followed up further at 4–5 months with a view to referral for paediatric review.

Bilateral undescended testes are more concerning and require neonatal review in case of possible underlying problems. These infants should be discussed with the neonatal registrar to arrange a review.

Jaundice

Virtually all babies have a transient rise in bilirubin but only about 50% are visibly jaundiced. A common dilemma is when to investigate and at what level to treat. The decision is influenced by:

- Whether the infant is term or preterm.
- Whether the infant is well or sick.
- The presence of other factors predisposing to hyperbilirubinemia, e.g. maternal infections, maternal antibodies, blood group incompatibility, or prolonged rupture of membranes.

The 2023 NICE guidance identifies risk factors for likelihood of significant jaundice as:

- Infants less than 38 weeks' gestation.
- A previous sibling requiring phototherapy.
- Exclusively breast-fed infants.
- Visible jaundice in the first 24 hours.

NICE guidance (2023), suggests checking a bilirubin level in any infant with visible jaundice or clinical concern, either with a transcutaneous bilirubinometer or a serum bilirubin (SBR). It is useful to classify jaundice based on the age at which it becomes clinically

apparent. Be aware that changes to skin pigmentation because of hyperbilirubinaemia may be harder to see in darker skin (NICE, 2023)

Early jaundice during first neonatal examination (< 24 hours):

- Presume pathological until proven otherwise-
- Discuss with neonatal registrar.
- Arrange transfer/ admission to GUH for investigation.

Jaundice after 24 hours in a well-infant:

- Likely to be physiological but assess for risk factors.
- Emphasise good hydration with regular feeds.
- Advise mother to report any lethargy or other signs of poor feeding or illness.
- If checking SBR, inform parents the infant may require admission to Neonatal ward for phototherapy. It is the responsibility of the midwife to obtain the result and inform the parents of the plan
- Reassessment by the midwife until jaundice is observed to be subsiding. Jaundice usually peaks at 5-7 days.
- If the infant is unwell/ poor feeding/ lethargic, an urgent assessment is required to review bilirubin levels +/- undertake further investigations, depending on findings.
- Discuss with the Neonatal Registrar at GUH

BCG Vaccination

National policy recommends that neonatal BCG vaccinations should be offered to infants considered to be at increased risk of Tuberculosis (TB). This includes babies whose parents originate from home countries with an incidence of TB greater than 40 per 100, 000 in the population according to WHO, accessible via:

[https://worldhealthorg.shinyapps.io/tb_profiles/?inputs &tab=%22charts%22&lan=%22EN%22](https://worldhealthorg.shinyapps.io/tb_profiles/?inputs&tab=%22charts%22&lan=%22EN%22)

The BCG vaccine should also be offered in instances listed below:

- Babies born to parents born in the UK but from ethnic groups originating from high-risk countries.
- Babies born to parents who reside in/ travel to areas for periods of 1 month or longer, where the risk of contracting Tuberculosis is thought to be high.
- Babies who have someone in their close family with TB.

The midwife must refer the infant for a BCG vaccine with consent via BadgerNet. If the parents decline the vaccination, this should be documented in the notes. Parents should be counselled on the risks of disease to ensure fully informed consent/ non- consent.

Miscellaneous

It is not possible to have a pathway for all minor problems that may be detected in the neonatal period. If in doubt about the appropriate course of action, the infant can be discussed with the Neonatal team for further plan of care.

The use of the PANDO app can be used to upload clinical imagery to the infant record in cases of birth marks being identified should clinical photography be unavailable. Guidance for use of PANDO can be found on sharepoint via:

https://nhs.wales365.sharepoint.com/sites/ABB_Pulse_CP_MI/Shared%20Documents/Forms/AllItems.aspx?id=%2Fsites%2FABB%5FPulse%5FCP%5FMI%2FShared%20Documents%2FUsing%20the%20Pando%20App%5FAug%202022%2Epdf&q=pando&parent=%2Fsites%2FABB%5FPulse%5FCP%5FMI%2FShared%20Documents&parentview=7

Accountability

Each midwife must keep her own record/ evidence of maintaining skills (Appendix 1). This should be produced when requested by a CSfM (Clinical Supervisor for Midwives) to ensure that all midwives performing the NIPEC are maintaining the standard expected by this guideline.

It is the responsibility of the midwife to ensure that they access updates and opportunities of learning on a regular basis (The Code 6.2 *maintain the knowledge and skills you need for safe and effective practice*. NMC 2015).

Audit

Midwives should provide evidence of ongoing learning, knowledge and peer review annually to CSfM team using standardised form (appendix 1). The CSfM team will undertake an annual audit on the NIPEC standards compliance.

References

Carr N and Foster P (2014) Examination of the Newborn: Key Skills, The Practicing Midwife 17 (1) : 26 – 29

Jaundice in Newborn Babies under 28 days

Clinical Guideline (CG98) Published 19/5/10 Updated 26/10/16 Updated October 2023
<https://www.nice.org.uk/guidance/cg98/chapter/Recommendations#care-for-all-babies>

Mitchell M (2002) The Neonatal examination: a chance to provide health education and influence public health. The Practicing midwife 5 (5): 32

Newborn and infant physical examination (NIPE) screening programme handbook, Public Health England (www.gov.uk) accessed September 2018

Newborn and infant physical examination (NIPE) screening programme handbook [Internet]. Gov.uk, 2020

NHS TB, BCG Vaccine & Your Infant (2021)

www.nhs.uk/conditions/vaccinations/bcg-tuberculosis-tb-vaccine/

www.nhs.uk/vaccinations

www.healthpublications.gov.uk

Postnatal care, NICE guideline 2021 (www.nice.org.uk/guidance/ng194) accessed September 2021

Public Health England Newborn and infant physical examination (NIPE) screening programme handbook [Internet]. Gov.uk, 2020. Available: <https://www.gov.uk/government/publications/newborn-and-infant-physical-examination-programme-handbook/newborn-and-infant-physical-examination-screening-programme-handbook>

The Code: Professional standards of practice and behaviour for nurses and midwives (NMC) 2018

Thiagarajan Nandhagopal;Franco I.De Cicco *Developmental Dysplasia of the Hip* October 2021

UK National Screening Committee: Newborn and Infant Physical Examination; Standards and Competencies (NIPE) DH 2008

Appendix 1



GIG
CYMRU
NHS
WALES

Bwrdd Iechyd Prifysgol
Aneurin Bevan
University Health Board

NHS Wales Newborn & Infant Physical Examination

Name:

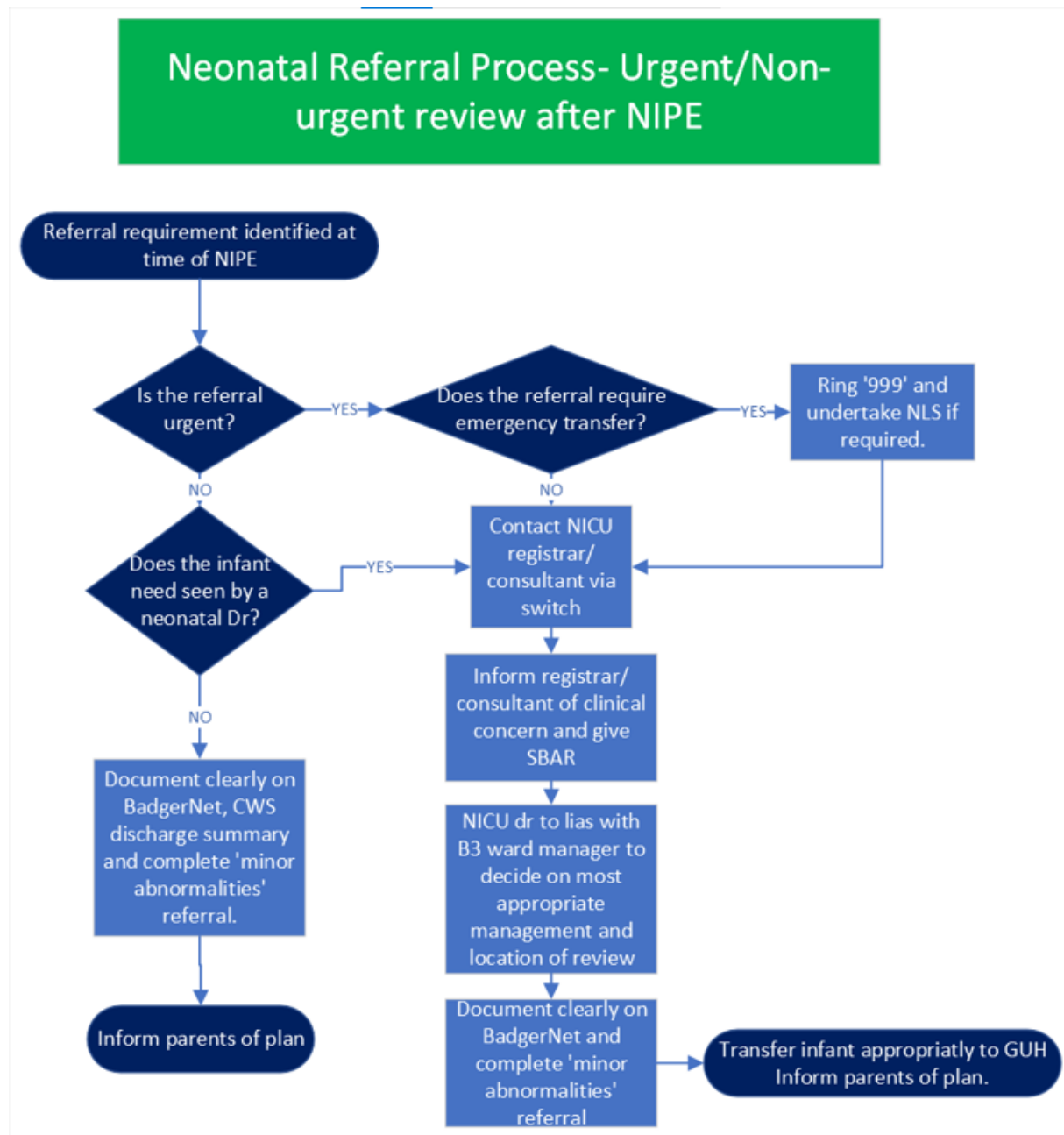
Date:

Cymru (NIPEC) in ABUHB

	Standards	Date & Evidence
1	E-Learning and knowledge update: www.heiw.nhs.wales/our-work/the-newborn-and-infant-physical-examination-cymru-nipec	
2	NIPEC examination: <ul style="list-style-type: none"> Understanding of NIPEC standards, national guidance and local guidance Undertakes minimum 15 NIPEC per annum or 30 biannually 	
3	Attendance at a minimum of one local NIPEC forum per annum	
4	NIPEC reflection (verbal or written): <ul style="list-style-type: none"> Describe a recent NIPEC experience What did you do well? What could have been better? Would you do anything differently in future? 	
5	Peer review: <ol style="list-style-type: none"> Communicates professionally and effectively with parents/carers using appropriate language to explain the process and gain informed consent. Undertakes a health history using case notes and verbally. Completes a full systematic physical examination in line with the NIPEC clinical guidance Welsh Government 2023 including the eyes/heart/hips/testes. Undertakes appropriate referrals/ understands local referral processes. Documents examination on BadgerNet Identifies any areas of learning or development? 	<p>Peer reviewer name:</p> <p>Peer reviewer signature:</p> <p>Peer review date:</p>

****Once completed please scan and send to abb.clinicalsupervisorsformidwives@wales.nhs.uk or pass it to the CSFM team for uploading to your record****

Appendix 2



Appendix 3

