Newborn Infant Physical Examination (NIPE) in UHL

University Hospitals of Leicester NHS Trust

Trust ref: C98/2008

Introduction and who the guideline applies to:

This guideline applies to clinicians undertaking the full examination of the newborn on the postnatal ward within the hospital setting.

Associated UHL Guidelines

Joint breastfeeding policy for all Leicestershire NHS Trusts (Hospital and community)
Child welfare and child protection concerns protocol Access via InSite child protection page or via www.lscb-llr.org.uk
Maternity Safeguarding Guideline
Guideline to support successful breastfeeding of Healthy term babies
Prevention and management of hypoglycaemia on postnatal wards
Thermal protection of the newborn
Consent to examination or treatment
Hand hygiene
Patient case note documentation policy
Maternity Records
Pulse Oximetry screening for the newborn infant UHL guideline
Fetal surveillance – small for gestational age UHL guideline
UHL Postnatal Ward Handbook

Definition of the newborn infant physical examination:

The examination is part of an on-going programme of child health surveillance and in addition it provides health promotion in the form of advice, information and reassurance to parents.

Staff able to perform the examination

- GMC registered doctor assessed as competent
- Advanced Neonatal Nurse practitioners (ANNPs) who have been assessed as competent
- Registered Midwives who have undergone and completed a recognised examination of the newborn course.

All staff performing the NIPE should complete the NSC NIPE e-learning package annually available at https://www.e-lfh.org.uk/programmes/nhs-screening-programmes/

Babies suitable for examination by a midwife:

- Birth weight > 1.99kg

- Any baby born where there are no apparent birth injuries that didn't need significant resuscitation and clinically well.
- Any baby discharged home or to SMBC
- The midwife may perform the NIPE on any baby deemed suitable, in their professional opinion. If in doubt contact neonatal registrar or consultant for opinion.
- lowest gestation >36 weeks

The following Babies should be reviewed by a Paediatrician and assessed as suitable for a NIPE examination by a midwife:

- Any congenital abnormality
- Insulin dependent or diabetes
- Severe haematological disorders i.e. Haemophilia Known substance misuse during pregnancy with high risk of withdrawal
- Known maternal infection e.g. herpes, HIV
- Previous neonatal death

Key point:

- If a baby has been transferred to either UHL from outside or vice versa, ensure documentation has been reviewed regarding NIPE. If the NIPE is completed, and baby is preterm, repeat in line with national NIPE guidelines at 34 weeks corrected gestation.
- If NIPE has not been completed, and baby has been repatriated to local hospital, ensure adequate handover in the discharge Badger has been completed.

Location:

- A suitable and safe environment to perform the NIPE is at the discretion of the practitioner.
- It should offer some privacy and confidentiality.
- Access to Smart4NIPE (S4N) is required https://nipe.northgate.thirdparty.nhs.uk/S4N/nhsbaby

Timing of the Examination

- The NIPE can be performed as soon after birth as possible, there is no lower time limit.
- Every effort should be made to ensure that the NIPE check is performed prior to discharge home and within 72 hours of birth. Refer to Appendix 2 for how to book a baby into a community NIPE clinic if the baby is going home prior to the NIPE check.
- If an appropriately trained clinician is not available for the examination, the midwife responsible for the discharge must arrange for the NIPE to be completed in the community and ensure the person completing the NIPE has access to the relevant history as the notes may not be available.
- Babies born preterm under <34 weeks should have their NIPE performed at greater than 34 weeks corrected gestation age (CGA),

Prior to the examination:

- Ensure parents have been offered the screening tests for you and your baby information
- Obtain consent for NIPE and document on Smart4NIPE (S4N). Language line should be used when the parent's first language is not English in order to establish an accurate family history prior to the examination.

- Review maternal history regarding past medical history, pregnancy, labour and birth.
- Review outcomes of antenatal screening
- Check for administration of vitamin K
- Check pulse oximetry results
- Obtain a clear family history and check for fetal alerts
- Explain limitations of the examination as a screening test
- Discuss with parents how they perceive the baby is progressing e.g. feeding pattern, urination, passing of meconium, and any concerns

The examination:

The NIPE check ideally should be performed in the presence of the birth mother or the person given designated parental responsibility and with regard to thermal protection and infection control for the baby.

It should be performed in line with the current NIPE Handbook available from – https://www.gov.uk/government/publications/newborn-and-infant-physical-examination-programme-handbook [1]

The postnatal ward handbook from UHL contains useful summaries for many of the common conditions encountered during NIPE.

An examination of the 4 main screening elements:

- Eyes: General examination and elicit the red reflex
- Cardiovascular system including heart sounds and femoral, brachial pulses and capillary refill time.
- Musculoskeletal system: Hips including Ortolani's and Barlow's test, limbs and digits
- Genitalia: In male infants check the position of the urethra and note whether the testes are descended. Ensure the infant has passed urine (and the nature of the stream in a boy).

In addition to this a systematic examination of the following is also undertaken:

- Observe the baby for posture, movement, tone, colour, cry, and obvious deviations from the norm, such as dysmorphic features
- Respiratory system - Rate and noise, symmetry of movement, use of diaphragm and abdominal muscles
- Head: Head circumference (use a non-stretch tape, record to the nearest millimeter), anterior fontanelle, sutures, structural anomalies, mouth to exclude cleft lip and palate, symmetry and position of ears, nose and neck
- Clavicles to exclude fracture
- Abdominal examination: Palpate for masses/organomegaly, condition of the umbilical cord
- Anus: Check for patency and the passage of meconium
- Spine: Check for bony structures and integrity of the skin
- Neurological system: posture, tone and reflexes
- Skin: Check for colour, texture, lesions, birth marks, rashes and subconjunctival haemorrhage. Document these on a body map in the hospital records and red book.

The examiner should be alert to the risk factors and signs of child abuse and follow UHL Safeguarding Children guideline (2019) if suspected.

Documentation:

Record all findings in the S4N system and print a copy for the Child Health Record booklet and retain a copy for the maternal records and document in postnatal notes.

Body map on in the red books need to be completed with birth marks. Head circumference must be plotted on the growth chart in the red book. Record any deviations from normal, subsequent actions taken including referrals and discussions with parents. Any practitioner not assessed as competent to perform NIPE must have their findings countersigned by someone assessed as competent.
If a baby has gone home prior to the NIPE the baby's record will need to be moved back from the GP facility to the hospital of birth to complete the NIPE on S4N.

Any birth marks, bruising, subconjunctival haemorrhages or birth injury should be noted on the body map page in the mother's intrapartum notes and Child Health record (red book). This page should be signed, name printed and dated regardless of whether any marks have been noted or not.

See Appendix 1 for the Standard Operating Procedure (SOP) for monitoring of S4N at UHL by the failsafe team.

Referrals from the NIPE examination:

Timeliness of referral should be observed. As a general rule the following should be applied (PHE 2021)[2]:

Problem	Referral Process	
	In hospital	**Out of Hospital**
Eye problems	Refer for senior paediatric opinion, if confirmed referral to specialist ophthalmologist within 2 weeks of examination, if a cataract or retinoblastoma is suspected.	Refer to single front door for second opinion, if confirmed referral to specialist ophthalmologist within 2 weeks of examination, if a cataract or retinoblastoma is suspected.
Heart Problems	Refer for senior paediatric opinion including oxygen saturations and ECG.	Refer to single front door for second opinion and if confirmed ECG and saturations.
Testes	**Screen positive requiring Urgent senior paediatric review** Bilateral impalpable testes • Unilateral impalpable testis with or without hypospadias • Unilateral palpable testis but not located in the scrotum, with hypospadias • Disorders of sexual development (previously known as ambiguous genitalia, and sometimes referred to as disorders of sexual differentiation) **Screen positive requiring non-urgent review** • Bilateral palpable testes but not located in the scrotum, without hypospadias • Unilateral palpable testis but not located in	Bilateral undescended testes – Refer to single front door for second opinion if confirmed refer to paediatrics. Review in 6-8 with the GP

	the scrotum, without hypospadias	
Hip Problems	• Dislocatable hips should be seen, scanned and reviewed by a specialist within 2 weeks of age. Email referral to Babyscanclinic@uhl-tr.nhs.uk with all details, letter not required. • Babies with risk factors (including successful ECV's at term) should be referred for an outpatient hip scan using a radiology request form or ICE at 4- 6 weeks of age Babies with "clicky" hips should be referred for an outpatient hip scan using a radiology or ICE request form after 6 weeks of age. Clicky hips should be recorded as "other" in the abnormality section of S4N and then select "referral required".	
BCG Vaccination	• Complete this in the "risk factors" section on S4N and the referral will automatically be received by the relevant team. • It is really important to follow the most up to date guidance on the requirement for BCG vaccination – see Appendix 3.	
If at any point during a NIPE examination, if abnormalities are noticed that are unfamiliar to the practitioner these should be either referred or discussed.		
All referral letters are downloadable from the S4N website if required **Single front door contact details if required: Tel 01162586923** **Paediatric Registrar for phone advice is available on 07960873483**		

Communication:

- Communicate findings to Parents including any potential problems identified and recommended action.

- Explain problems such as jaundice that may not be observable in the newborn but could be significant a few days later. If there have been concerns about jaundice in the newborn period perform and Transcutaneous Bilirubin test and document this on the relevant chart. This chart must then be given to the parents so that the Community midwife can continue to observe the baby's progress.

- Advise on health education as appropriate e.g. infant feeding, baby care, baby's social capabilities and reducing the risk of sudden infant death syndrome.

- Advise on continuing programme of child surveillance including newborn blood spot screening test, hearing screen, 6-8 week postnatal check.

- Ensure findings are communicated to those providing future health care to the family i.e. Midwives, GP, Health Visitor

References

1. Newborn and Infant Physical Examination Screening Programme Handbook 2019
2. PHE Newborn and infant physical examination screening standard (2021)

Audit:

A record of all examinations must be kept on the S4N system for the purposes of clinical audit and KPI reporting.

Monitoring

Quarterly ANNB screening KPI's and review of outcome data which is reported to the ANNB screening programme board quarterly.

Guideline development:

DEVELOPMENT AND APPROVAL RECORD FOR THIS DOCUMENT		
Author / Lead Officer:	Panjwani, D	**Job Title:** Consultant Neonatologist
Reviewed by:	Panjwani D, Dziemianko A, Ulyett H, Robinson L, Ainsworth M	
Approved by:	Maternity Service Governance Group and Neonatal Guidelines Group	**Date Approved:** 21/04/2021

REVIEW RECORD			
Date	**Issue Number**	**Reviewed By**	**Description Of Changes (If Any)**
Sept 2011	V2	Boyle E, Foxon J	General update.
May 2016	V3	Ulyett H, Behrsin J	Updated in general. Addition of the use of the NIPE smart system
April 2021	V4	Panjwani D, Dziemianko A, Ulyett H, Robinson L, Ainsworth M Ford F	Importance of making every effort to perform NIPE prior to discharge. Date changes for related guidance and references Change to use of S4N Combination and standardisation of midwifery and medical guideline Signposting to national guidance
December 2022	V4.1		
April 2024	V5	L. Taylor H. Ulyett	Updated referral criteria for undescended testes BCG referral criteria added Clarity on lower timeframe for screening Clarity on use of interpreters when offering screening and for accurate history taking Instructions for booking community NIPE clinic using MS teams channel

Appendix 1: Standard operating procedure for monitoring of Smart 4NIPE (S4N) at UHL by the failsafe team

The S4N system is provided by Northgate and its use is mandatory for all Maternity Units nationally. The web-based IT system links the generation of a baby's NHS number at birth to a completed NIPE check and audits whether this was performed within 72 hours of birth.

Babies that are over 48 hours old are alerted as amber on the system and red if the NIPE check is not completed and the baby is over 72 hours old.

All babies highlighted should be checked on the HISS system to see if they are inpatient and to avoid contacting families of deceased babies. All newborn morbidities are reported to the screening team and will be dealt with immediately to avoid outstanding examinations being chased on a deceased baby but double checking on HISS is still required due to the sensitive nature of these situations.

GP facility:

Babies that have gone home and not had their NIPE check are moved into the GP facility within the UHL site on Smart. This will then allow the screening team to provide a failsafe list to the community midwives for babies that have gone home prior to the NIPE

To do this perform a search of "newborn screening not started" and then check each baby against the HISS system for their episodes. If the baby has gone home view the baby's record and click "move" in the "hamburger" sign and select GP facility.

The Midwife performing the NIPE in the community will then move the baby back into the relevant facility when the check has been performed.

Transfer in/out:

Babies who have transferred out of UHL need to be transferred to the care of the hospital that the baby is inpatient.

These functions can only be performed by super users in the "site facility".

Search for baby's record in Smart by NHS number, go to the baby summary page and select transfer out in the "hamburger sign" . Select the relevant hospital, document the reason for transfer and click "transfer to selected site".

Babies who transfer in to UHL hospitals need to be transferred into the UHL facility that the baby is inpatient.

These functions can only be performed by superusers in the "site facility".

Select admin and transfer in and the check HISS for the location of the baby within UHL. Tick the right hand box to accept the baby and select the correct facility for the baby.

Occasionally babies will be transferred into UHL from other hospitals but the baby has gone home so these need accepting into our site by ticking the right hand box and select GP facility. You can use the case notes in S4N to help with locating these babies.

Merging records

Search on missing NHS number in each individual facility for LRI & LGH. Match all babies on this list with the record in the system that contains the NHS number.

Outcome data

Periodically the outcomes for Hips, hearts, eyes and undescended testes should be completed within the NIPE smart system. This is particularly important for Hips as this is monitored quarterly through the KPI's and in the future will not be amendable locally.

Appendix 2 – How to use the MS teams chanel to book a NIPE clinic appointment:

This MUST be done before discharge for all babies that are discharged from hospital prior to the NIPE.

The appointment MUST be within 72 hours of the baby's birth – if there are no slots within this timeframe – escalate to band 7 or above whilst the baby is still inpatient. If NIPE remains incomplete email the community office and screening team to alert them that the NIPE appointment is still required and they can chase this on the next working day and the baby can go home:

CommunityMidwifeOffice@uhl-tr.nhs.uk

annbscreening@uhl-tr.nhs.uk

Booking an appointment:

Go to the MS teams channel

Select "referral hub".

Click on the NIPE bookings in the row along the top of the screen.

Complete the questionnaire.

Please explain to parents that having the NIPE done at the next available slot should be the priority rather than the distance about where the clinic is held.

Appendix 3 – BCG vaccination, referral criteria:

Neonatal BCG Risk Assessment

Check your patient's risk overleaf and if vaccination is indicated follow the checklist below:

Referral checklist

- Child meets criteria for vaccination (see flow chart)
- Parent/guardian aware of the risks/benefits and consents to vaccination.

Exclusions FOR BABY

- Any recent history of TB contact* *(If baby has been in recent contact with TB please refer to TB service)*
- Any immune deficiency/ treatment that may affect immune response. Suspected SCID results on NBBS.
- HIV infection-known allergy to any of the vaccine components
- Previous BCG immunisation from another country

New Exclusions

- Mother received medication during pregnancy, or during breastfeeding that will impair their immune system and may be passed onto baby.
- Any previous siblings with a known or previous auto-immune deficiency disorder or diagnosis.

BCG vaccination Common Reactions

Pain (common), Slight swelling, redness & tenderness,
Local papule (small raised blister)

Rare Side Effects

Local abscess 1/1000
Disseminated TB 1/ 1million in young children

How to refer your patient 0-5 years of age (SCID not suspected result must be checked and recorded in child's record)

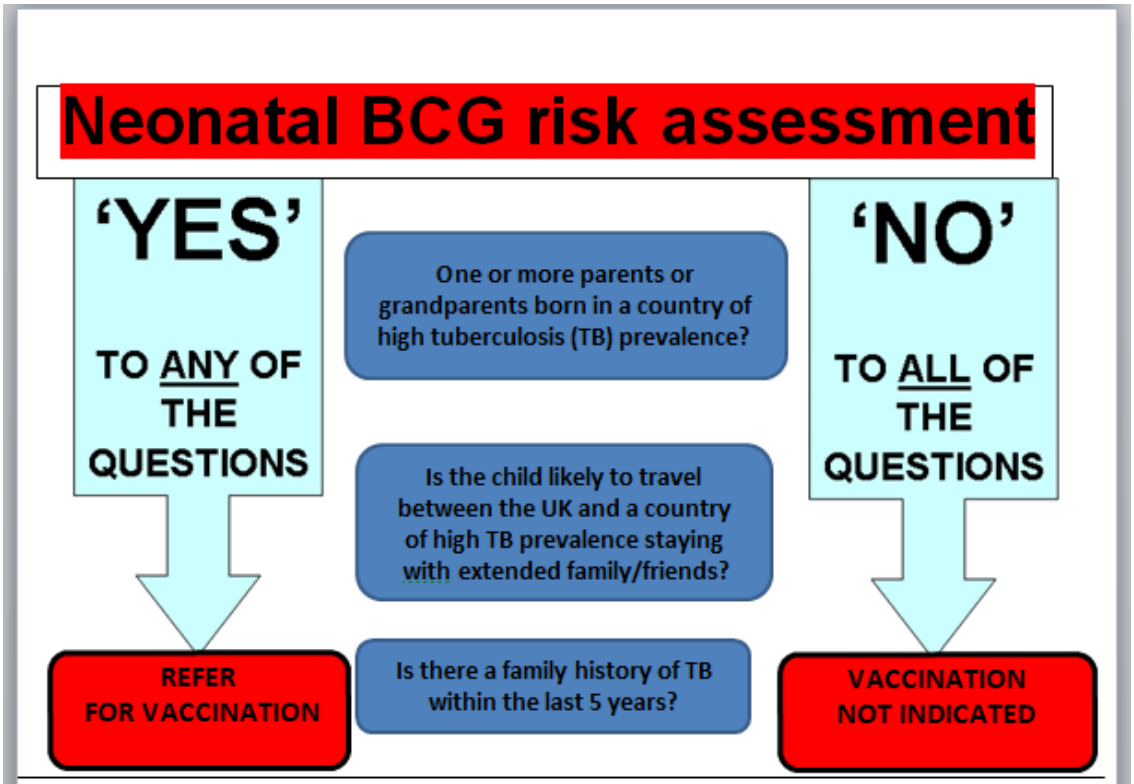
1. Refer via 10-14 day/ 6-8 week questionnaire or by BCG node on Systm1(even is no concluded NBBS result available).
2. Movers in (by 365 days of age) ensure repeat NBBS has been performed.
3. Advise parent to wait for an appointment/ letter -BCG appointment line 0116 2587643.

Contacts and information for under 1's

For urgent referrals or high-risk travel is imminent please contact the BCG Coordinator Women's & Children's Services on 0116 254 85522 or email bcgclinics@uhl-tr.nhs.uk BCG Appointment Line 0116 258 7643

Children over 1 years requiring a BCG continue to refer via BCG node on Systm1.

Child New Entrant's regardless of evidence of BCG please contact the TB Nursing via Uho-tr.tbservice@nhs.net. Telephone 0116 2583767.
Further information about the TB programme, including leaflets in other languages, can be found at www.gov.uk/government/collections/bcg-vaccination-programme



High-risk countries (WHO TB burden estimates by Country 2022)

A Afghanistan, Algeria, Angola, Azerbaijan **B** Bangladesh, Benin, Bhutan, Bolivia, Botswana, Brazil, Brunei Darussalam, Burkina Faso, Burundi **C** Cambodia, Cameroon, Central African Republic, Chad, China,China, Macao SAR, Congo, Côte d'Ivoire	**D** Djibouti, Dominica Dominican Republic **E** Ecuador, El Salvador, Equatorial Guinea, Eritrea, Ethiopia Eswatini **F** Fiji **G** Gabon, Gambia, Georgia, Ghana, Greenland, Guinea, Guinea Bissau, Guyana	**H** Haiti, Hong Kong SAR China **I** India, Indonesia **K** Kazakhstan, Kenya, Korea Kiribati, Kyrgyzstan, **L** Lao People's Democratic Republic, Lesotho, Liberia, Libya,	**M** Madagascar, Malawi, Malaysia, Mali, Marshall Islands, Mauritania, Micronesia Moldova Mongolia, Morocco, Mozambique, Myanmar **N** Namibia, Nauru, Nepal, Nicaragua, Niger, Nigeria, Niue, Northern Mariana Islands	**P** Pakistan, Palau, Papua New Guinea, Paraguay, Peru, Philippines **R** Romania Russian Federation Rwanda	**S** Sao Tome and Principe, Senegal, Sierra Leone, Singapore, , Solomon Islands, Somalia, South Africa, South Sudan, Sri Lanka, Sudan, , T Taiwan Tajikistan, Tanzania, Thailand, Timor-Leste, Tokelau Turkmenistan Tuvalu	**U** Uganda, Ukraine, Uzbekistan **V** Vietnam Venezula **Y** Yemen **Z** Zambia, Zimbabwe