NHS
University Hospitals Sussex
NHS Foundation Trust
St Richards, Worthing & Southlands Hospitals

Newborn BCG Immunisation Guideline

Summary statement: How does the document support patient care?	Providing clear evidence based guidance for staff involved in identifying and delivering the BCG Immunisation Programme
Staff/stakeholders involved in development:	TB Nurse Specialist; Maternity, Joint Obstetric Guidelines Group, Paediatrics, Public Health England
Division:	Women and Children's
Department:	Maternity
Responsible Person:	Chief of Service
Author:	Public Health Midwife & TB Nurse Specialist
For use by:	All paediatric and maternity staff involved in the care of newborn babies
Purpose:	To provide clear evidence based guidance on the BCG Immunisation Programme
This document supports:	Public Health England Service Specifications.
Key related documents:	UH Sussex West (SRH&WH) Maternity Guidelines: CG17003 NIPE guideline
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If you require this document in another format such as Braille, large print, audio or another language please contact the Trusts Communications Team	
Reference Number:	CG1130

Version	date	Author	Status	Comment
1.0	March 2018	TB Nurse Specialist and Public Health Midwife	Archive	New Guideline
2.0	August 2019	Public Health Midwife & TB Nurse Specialist	Archived	Amendments to reflect PGD, HIV guidance & inclusion of SOPs
3.0	November 2021	C. Thomas, Public Health Midwife	LIVE	PHE Immunisation Programme: Changes from September 2021.

The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician.

If in doubt contact a senior colleague or expert.

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Newborn BCG Immunisation Guideline

1.0 Introduction

This guideline has been developed to standardise the procedure for identification of those neonates at risk of human tuberculosis (TB), the procedure for the referral and documentation, and the vaccination programme for those neonates deemed to be at risk of developing TB.

This guideline applies to neonates/infants under the care of practitioners working within UH Sussex West (SRH & WH).

Human tuberculosis is caused by infection with the mycobacterium tuberculosis, and may affect any part of the body. Rates of TB have stabilised in the UK over the past seven years, following an increase in incidence from 1990 to 2005. However, despite considerable efforts to improve TB prevention, treatment and control, the incidence of TB in the UK remains high compared to most other Western European countries, with 5,758 cases reported in 2015, an incidence of 9.0 per 100,000 of the population.

2.0 Scope

This guideline applies to:

- Midwives
- Paediatric nurses
- Paediatricians

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3.0 Abbreviations used in this guideline

TB - Tuberculosis	**SCID -** Severe Combined Immunodeficiency
BCG - Bacillus Calmette-Guerin	**CHRD -** Child Health Records Department
NIPE - Newborn Infant Physical Examination	**PGD -** Patient Group Directive
PCHR - Personal Child Health Record book	**NBBS -** Newborn Blood Spot
CHIS - Child Health Information System	**MTCT -** Mother to Child Transmission
PHE - Public Health England	**MMR -** Mumps Measles Rubella

4.0 Responsibilities

Midwives, paediatric nurses and paediatricians:

- To access, read, understand and follow this guidance.

Management:

- To ensure the guideline is reviewed as required in line with Trust and National recommendations.

- To ensure the guideline is accessible to all relevant staff.

5.0 Aim of the immunisation programme

The aim of the selective neonatal BCG immunisation programme is to protect those infants (0 - 12 months of age), identified in 'at risk' groups as being at an increased risk from or exposure to TB infection.

The aim will be achieved by delivering an evidence-based, population-wide immunisation programme that:

- Identifies the eligible population and ensures effective timely delivery with optimal coverage based on the target population.
- Is safe, effective, equitable and of a high quality and is independently monitored via the Screening and Immunisation Teams based within NHS England.
- Is delivered and supported by appropriately trained, competent healthcare professionals who participate in ongoing training and development in line with national standards.
- delivers, manages and stores vaccine in accordance with national guidance
- Is supported by regular and accurate data collection using the appropriate returns as required nationally and/or locally.

6.0 BCG immunisation programme

The BCG immunisation programme is delivered as a risk-based programme. A key part of this risk based approach is the selective neonatal programme targeted at those infants most at risk of exposure to TB.

Analysis shows the vaccine to be 70 - 80% effective against the most severe forms of the disease that includes TB meningitis in children.

6.1 Direct health outcomes

In the context of health outcomes the selective neonatal BCG vaccine programme aims to:

- Reduce the number of new-borns at risk from or exposure to TB infection.
- Reduce the number of preventable infections and their onward transmission.
- Achieve high coverage across the groups identified.

7.0 Antenatal booking visit

At booking the midwife should identify the exact country of origin of both parents and ensure that this is documented onto the Medway Maternity system. The midwife should complete the BCG section of the woman's handheld notes.

7.1 Definition of at risk infants

Neonatal BCG vaccine is routinely offered to infants in the following high-risk groups:

- All infants (0 – 12 months) living in areas of the UK where annual incidence of TB is 40/100,000 or greater.
- All infants (0 – 12 months) where one or more parent or grandparent was born in a country where the annual incidence of TB is 40/100,000 or greater.

Countries listed in appendix 1 have high rates of TB. If the answer to any of the following questions is '**yes'** then the baby should have a BCG vaccination:

- Are you, your family or your baby's father or his family from one of these countries?
- Will you and your baby be going to live for more than one month or travel frequently in one of these countries in the near future?
- Is there anyone in your house, or anyone else who is likely to have long-term close contact with your baby, who either has TB, or has had it in the past, or comes from one of these countries?

The above is not exclusive and any baby who is considered at risk but does not fit any of the above categories should be discussed with a paediatrician.

If the parents answer 'yes' to any of the high risk categories, the midwife should discuss BCG vaccination and give the National Patient Information leaflet regarding BCG Vaccine to the parent. This can be accessed and / or printed from Family Assist via a computer or Smart phone.

8.0 Newborn infant physical examination (NIPE) screening

Using the definition of at risk infants, the NIPE practitioner will identify if the baby requires a BCG vaccination.

Eligibility for BCG is a mandatory field on NIPE S4N systems. Screening will be completed identifying risk of TB and if BCG vaccination is indicated. Free text should be added to identify the concerns e.g. country of origin; active TB in house etc.

If BCG referral is indicated, the referral form 'BCG Neonatal Immunisation Referral Form' can be selected from the 'letters' tab. All fields must be completed in the NIPE Practitioner section only. Any missing information can cause a delay in immunisation of the infant. The NIPE practitioner is responsible for the BCG referral.

- The referral form should be emailed to: uhsussex.bcgimmunisationprogram@nhs.net

- The referral procedure should be explained to the parents with the aim of vaccination within 28 days of birth.

9.0 Responsibilities of staff following BCG referral

9.1 Responsibilities of the discharging community midwife

- At discharge to the health visitor, if BCG vaccination is required, this should be documented on the carbonated page on the back of the Maternal Postnatal Care Record.
- If a referral has been made this can be identified by looking at the S4N NIPE print out in the Personal Child Health Record book (PCHR).
- If it is not clear from this documentation whether a referral has been made, a paper copy referral using the form 'BCG Neonatal Immunisation Referral Form' should be completed. This is then scanned and emailed to: uhsussex.bcgimmunisationprogram@nhs.net

9.2 Administrative staff

- Staff should check the referral form is fully completed by the NIPE practitioner.
- An appointment is made for vaccination in the BCG neonatal immunisation clinic as soon as possible. This should be within 2 weeks of age.
- Inform CHIS weekly of all our eligible babies.
- Staff to check NBBS result received and that the SCID result is recorded. Any results which show a detected result to be highlighted to Public Health Midwife.
- If repeat sample is a positive result. Cancel BCG appointment.
- When the baby has attended for immunisation the carbon copies of PCHR will be sent to the GP and child health records department (*CHRD)*. The completed referral and administration form will be filed in maternal notes. The completed referral should also be scanned into EVOLVE as part of the neonatal record.
- If a parent fails to bring their child to the appointment (DNA) contact the midwife / heath visitor or GP to check address correct and send new appointment.
- If 2nd DNA the standard hospital DNA letter will be sent to health visitor / GP / CHRD.
- If the vaccine is declined this should be documented on the referral form and filed on Evolve.
- All referrals and outcomes will be recorded on the failsafe spreadsheet maintained by the administrative BCG team within the Maternity Shared Drive. This will include reports obtained from Medway and NIPE S4N to ensure that all referrals are made and actioned.
- If no referral has been received within 3 days of birth, check NIPE for BCG referral history.
- Run a report from NIPE S4N per site of all BCG referrals for the month.

9.3 The paediatric nurse/midwife in clinic

BCG Vaccination is to be given to infants only by a nurse/midwife trained and competent in the administration of BCG immunisation. BCG is delivered via a Patient Group Directive (PGD). Training will be facilitated by an appropriately identified trainer overseen by the TB Nurse Specialist

- The baby must be identified by name, date of birth and NHS number checked with the parent/carer and against PCHR red book and referral form.
- The nurse/midwife must ensure that the baby has been correctly identified as needing BCG vaccination using the definitions above.
- The nurse/midwife must check the result of SCID screening has been received. As BCG is a live vaccine it cannot be given to a baby with SCID, due to immunosuppression, so the SCID result (not tested/detected/not detected) must be known before the BCG vaccine can be given.
    - SCID Not tested=Give vaccine.
    - SCID Not detected=Give Vaccine.
    - SCID detected=Contradicted DO NOT GIVE.
- Check the exclusions below and document consent from the parent/carer on the referral form.
- Post vaccination the nurse/midwife must complete EPMA including batch no, product name, expiry, site & route of vaccine.
- The nurse/midwife must complete the referral form, the appropriate PCHR pages (including the batch number and date given) and return them to the administrator.
- Post vaccine advice leaflet should be discussed with the parent and given for reference (see Appendix 2).

9.4 Responsibilities of Public Health midwife

If there is no referral made present reprint and complete relevant sections. Feedback is given to NIPE practitioner to avoid reoccurrence.

If there is no history of referral then check maternal notes and check country of origin against Medway entry and complete referral as appropriate. Feedback to NIPE practitioner.

- Failsafe: This should occur monthly.
- Check each baby against Medway spreadsheet to ensure all referral and babies are accounted for.
- If no NBBS result received or baby is SCID detected ensure appointment for BCG is cancelled. BCG not to be given if no SCID result available.
- Use Northgate/CHIS to confirm result.
- All SCID suspected/SCID detected results will be seen by immunologist within 24 hrs in specialist centre for confirmatory testing-flow cytometry.

- Contact babies GP to establish outcome of immunologist appointment. If letter confirms BCG eligibility ask admin team to book baby appointment in BCG clinic. Ensure copy of immunologist letter is received and attached to referral form.
- Report data to PHE monthly report any delays and mitigations.

10.0 Exclusions

The injection should not be given or should be delayed if the baby:

- Has a high fever.
- Is having treatment for cancer or other serious conditions that weaken the immune system.
- Is HIV positive.
- Is suffering from a generalised skin condition e.g. eczema.
- Is in receipt of passive antibodies e.g. immunoglobulin within the last 3 months.
- Is currently receiving a course of steroids.
- NO NBBS result received.
- SCID Detected. Until letter received from Immunologist to clarify SCID result.
- Exposure to immunosuppression treatment in pregnancy or mother is breastfeeding, BCG not to be given until six months of age.

10.1 Maternal HIV

Infants considered at VERY LOW or LOW RISK of HIV transmission (i.e. maternal viral load <50 HIV RNA copies/mL at or after 36 weeks' gestation) may be given BCG following birth if indicated according to UK guidelines for HIV-unexposed infants.

Where maternal HIV is present and BCG is required the referral form for BCG should be sent to the paediatric consultant (Dr Anne-Marie Buckley for St Richard's and Dr Jonathan Rabbs for Worthing). The consultant will confirm that the mother-to-child-transmission (MTCT) is considered low risk and they will date and sign the referral form stating the baby can receive its BCG immunisation.

10.2 SCID - Severe Combined Immunodeficiency

- Rare treatable genetic disorder that affects the development of functional T cells and B cells in the infants.
- If left untreated results in repeated severe infections and death within the first few years of life.
- Current estimate of incidence in the UK is 1in 48,933.
- BCG vaccine is contradicted in infants affected by SCID.

11.0 BCG vaccine dose and administration

11.1 Dose

Infants under 12 months of age:	0.05ml of the reconstituted vaccine strictly by **intradermal** injection.
Infants and children over 12 months of age:	0.1ml of the reconstituted vaccine strictly by **intradermal** injection.

11.2 Method of administration

When drawn up into the syringe the vaccine suspension should appear homogenous, slightly opaque and colourless. BCG Vaccine (AJ Vaccine) should be administered with a syringe fitted with a short bevel needle (gauge 26 G).

The baby should be held by the nurse/carer and the left arm exposed. The injection site should be clean and dry and not contaminated with antiseptics. If alcohol is used to swab the skin, it must be allowed to evaporate before the vaccine is injected.

The vaccine should be injected strictly intradermal normally into the lateral aspect of the left upper arm at the level of the insertion of the deltoid muscle. Sites higher on the arm should be avoided as more likely to lead to keloid formation.

- The skin is stretched between thumb and forefinger.
- The needle should be almost parallel with the skin surface and slowly inserted with the bevel upwards, approximately 2mm into the superficial layers of the dermis; the needle should be visible through the epidermis during insertion.
- The injection should be given slowly.
- A raised, blanched bleb is a sign of correct injection.
- The injection site is best left uncovered to facilitate healing.

Check the comfort of the baby and reassure the parents/carers.

11.3 Advice

The parents/carers should be advised that a sore area may form, it may burst and leak fluid/blood; this is an expected reaction and should not cause alarm. The sore area should be kept dry and a dressing should not be applied, it will heal slowly (it may take 6-8 months or longer).

Advise the parents/carers to see the GP if they are concerned about the baby's well-being or the area of soreness.

11.4 Interactions

BCG vaccine may be given concurrently with inactivated or live vaccines. Live vaccines, such as rotavirus, live attenuated influenza vaccine (LAIV), oral typhoid vaccine, yellow fever, varicella, zoster and MMR can be administered at any time before or after BCG vaccination.

Other vaccines to be given at the same time as BCG vaccine should not be given into the same arm. No other vaccination should be given for at least three months in the arm used for BCG vaccination (the left arm at UHSussex NHS Trust) because of the risk of regional lymphadenitis.

11.5 Surrey and Sussex Partnership

Surrey and Sussex
BCG SCID pathway v

12.0 Audit / Monitoring

The number of babies vaccinated by 28 days and after 28 days will be monitored by key performance indicator (KPI) statistics sent to Public Health England.

This will include the number who decline and the number who fail to attend the appointment.

13.0 References

British HIV Association Guidelines for the management of HIV in pregnancy and postpartum 2018

Public Health England: Tuberculosis in the UK: 2016 report

Immunisation against infectious disease: Green Book Chapter 32Tuberculosis July August 2018
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/731848/_Greenbook_chapter_32_Tuberculosis_.pdf

Public Health England: WHO estimates of tuberculosis incidence by country 2012

Sedaghatian M.R. Kardouni K. Tuberculin response in preterm infants after BCG vaccination at birth. Archives of Disease in Childhood (1993); 69:309-311

NICE Guidelines for Tuberculosis 2016

Collaborative Tuberculosis Stratergy for England 2015 to 2020

Immunisation against infectious disease – 'The Green Book':
https://www.gov.uk/government/collections/immunisation-against-infectious-disease-the-green-book

For country information on prevalence see:
www.who.int/tb/country/data/profiles/en/index.html

Immunisation training: national minimum standards
https://www.gov.uk/government/publications/immunisation-training-national-minimum-standards

NPSA Vaccine cold storage, supporting information January 2010:
http://www.nrls.npsa.nhs.uk/EasySiteWeb/getresource.axd?AssetID=66112&type=full&servicetype=Attachment

Protocol for ordering, storing and handling vaccines (DH Sept 2010)
www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_120010

Health Protection Agency, Vaccine Incident Guidance, March 2012: https://www.gov.uk/government/publications/vaccine-incident-guidance-responding-to-vaccine-errors

National Reporting and Learning System (NRLS): https://report.nrls.nhs.uk/nrlsreporting/

NHS England, Serious Incident Framework March 2015. An update to the 2010 National Framework for Reporting and Learning from Serious Incidents Requiring Investigation https://www.england.nhs.uk/patientsafety/serious-incident/

NMC Standards for medicine management 2010: http://www.nmc.org.uk/standards/additional-standards/standards-for-medicines-management/

Who pays for what: Aspects of the maternity pathway payment for the screening and immunisation programmes June 2015 https://www.gov.uk/government/publications/maternity-pathway-payment-system-guidance-for-nhs-providers-and-commissioners

British National Formulary www.bnf.org/bnf/index.htm

JCVI (Joint Committee on Vaccination and Immunisation) https://www.gov.uk/government/policy-advisory-groups/joint-committee-on-vaccination-and-immunisation

Resuscitation Council – UK guidelines www.resus.org.uk/pages/guide.htm

World Health Organization – Immunisations www.who.int/topics/immunization/en/

NICE – Shared learning resources www.nice.org.uk/usingguidance/sharedlearningimplementingniceguidance/examplesofimplementation/eximpresults.jsp?o=575

https://www.gov.uk/government/publications/bcg-immunisation-programme-changes-from-september-2021-letter/bcg-immunisation-programme-changes-from-september-2021-letter

Appendix 1: Countries at high risk of TB

Afghanistan	Guinea	Palau
Algeria	Guinea-Bissau	Panama
Angola	Guyana	Papua New Guinea
Armenia	Haiti	Paraguay
Azerbaijan	Honduras	Peru
Bangladesh	Hong Kong (SAR)	Philippines
Belarus	India	Rep. Korea
Benin	Indonesia	Republic of Moldova
Bhutan	Iraq	Romania
Bolivia (Plurinational State Of)	Kazakhstan	Russian Federation
Botswana	Kenya	Rwanda
Brazil	Kiribati	Sao Tome & Principe
Brunei Darussalam	Kyrgyzstan	Senegal
Burkina Faso	Lao PDR	Sierra Leone
Burundi	Lesotho	Singapore
Cabo (Cape) Verde	Liberia	Solomon Islands
Cambodia	Libya	Somalia
Cameroon	Lithuania	South Africa
Central African Republic	Macao (SAR)	South Sudan
Chad	Madagascar	Sri Lanka
China	Malawi	Sudan
Congo	Malaysia	Swaziland
Côte d'Ivoire	Maldives	Tajikistan
DPR Korea	Mali	Thailand
DR Congo	Marshall Islands	Timor-Leste
Djibouti	Mauritania	Togo
Dominican Republic	Micronesia (FSO)	Turkmenistan
Ecuador	Mongolia	Tuvalu
El Salvador	Morocco	Uganda
Equatorial Guinea	Mozambique	Ukraine
Eritrea	Myanmar	UR Tanzania
Ethiopia	Namibia	Uzbekistan
Fiji	Nauru	Vanuatu
Gabon	Nepal	Viet Nam
Gambia	Nicaragua	Yemen
Georgia	Niger	Zambia
Ghana	Nigeria	Zimbabwe
Greenland	Northern Mariana Islands	
Guam	Pakistan	

Appendix 2: A guide for parents about the BCG vaccination and after care

Patient name: **Hospital Number:**

Date of vaccine: **Date of birth:**

Limb/Side Vaccine Given:

The BCG vaccination

The Bacillus Calmette-Guérin (BCG) vaccination has been administered to help give protection against Tuberculosis (TB). The BCG vaccine is currently provided by the company Intervax and has been approved by the World Health Organisation (WHO).

You should have received the patient information leaflet regarding BCG vaccine for the newborn with your appointment letter. The nurse/midwife should have also explained the points below before, the BCG vaccination was given.

- The BCG is a live vaccine containing a weakened form of the bacteria that causes TB. Because it is weakened it doesn't actually cause TB but helps people develop immunity against it.
- The vaccination is given under the skin and the body slowly absorbs it.
- The BCG vaccine should not make your baby feel unwell.
- Following changes in advice from Public Health England regarding live vaccines, the BCG vaccine can now be given at any time. This means it can be given before or after rotavirus, live attenuated influenza vaccine, oral typhoid vaccine, yellow fever, varicella, zoster, MMR and tuberculin skin testing. A four week interval does not need to be observed.
- If further vaccinations are given, they should not be given in the same arm for a period of three months.
- The BCG vaccination is only given once. Even if no scar develops, we do not re-vaccinate.

The injection

The injection is given just under the skin of the left upper arm (Deltoid). The vaccination usually leaves a white mark under the skin.

This mark will disappear a few hours after it has been given. Between two and six weeks later a small lump where the injection was given will appear. It can be up to the size of a five pence piece. It may ooze and form a scab. This is quite normal but may take several months to heal.

After care

- Keep the area clean.
- No creams, lotions or plasters should be used on the area. Only use a plaster if you are going swimming.
- If it oozes on to clothing a small dry woven dressing may be used (gauze).
- The sore should gradually heal over to leave a scar on the arm.

If you are worried about the vaccination reaction please contact the Tuberculosis (TB) Nursing Team on the details below.

BCG/Tuberculosis (TB) Nursing Team

Emma Gluba
TB Nurse Specialist
Respiratory Department, Loxwood Centre
St Richard's Hospital
Spitalfield Lane, Chichester
West Sussex PO19 6SE

Telephone: 01243 788122 Ext: 32397

Appendix 3: BCG referral booking process

Maternity oversee BCG Immunisation Clinics for all babies born in our Trust.
Please see flow chart below on the expectations of the Antenatal Clinic and Booking Midwife with this process.

On receiving a referral (self-referral or GP referral) please ensure that the information given on the form regarding nationality is entered to Sema Helix.

At booking please ask the parent the follow questions:

- Are you, your family or your baby's father or his family from one of these countries?
- Will you and your baby be going to live for more than one month or travel frequently in one of these countries in the near future?
- Is there anyone in your house, or anyone else who is likely to have long-term close contact with your baby, who either has TB, or has had it in the past, or comes from one of these countries?

- At booking the midwife should identify the exact country of origin of both parents and ensure that this is documented onto the Medway Maternity system.
- Also indicate if the baby will need BCG if any of the answers to above questions are 'yes'. The midwife should complete the BCG section of the woman's handheld notes.

- Save NIPE SMaRT report with comments in the relevant month of the BCG administration folder
- If the baby requires BCG immunisation once born, discuss this with the woman and ensure that you give her the patient information on BCG vaccination.
- Please ensure that you give the parent the Patient Information on TB and BCG Vaccine. This can be printed out via Family Assist using the Family Assist Icon in WSHT Applications or searching Family Assist on the parent's Smart phone.
- Search: BCG; Open Screening Tests for you & your baby; Press on more information on the BCG vaccination to open leaflet which can be printed or downloaded to read.

Family Assist

Appendix 4: BCG referral process (NIPE practitioner)

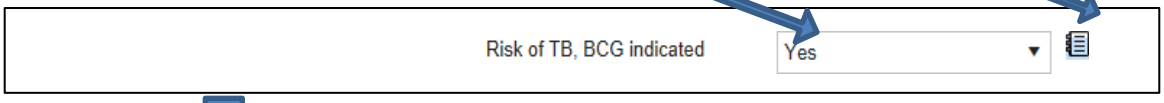
Please see flow chart below on the expectations of you as NIPE Practitioners with this process.

On completing a NIPE screen please ask the parent the follow questions:

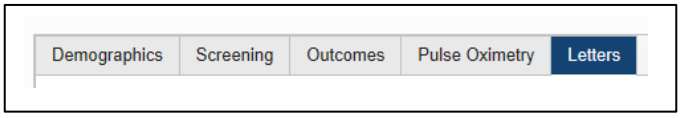
- Are you, your family or your baby's father or his family from one of these countries?
- Will you and your baby be going to live for more than one month or travel frequently in one of these countries in the near future?
- Is there anyone in your house, or anyone else who is likely to have long-term close contact with your baby, who either has TB, or has had it in the past, or comes from one of these countries? (See appendix 1)

If a baby has been identified as requiring BCG vaccination please ensure 'yes' is selected on the S4N form (Risk Factors tab).

In the free text box enter the country or other information which determines this baby to be of risk to TB.



Following completion of the screening on S4N the referral form 'BCG Neonatal Immunisation Referral Form' can be found in the 'Letters' tab.



Press 'Print Selected Letter' & wait for this to build in the print list. Once built please open the word documented and ensure all fields are completed in the NIPE Practitioner section only. Any missing information can cause a delay in immunisation of the infant

Continued on next page

Childs Surname: : «PatientLastName»		Childs First Name: «PatientFirstName»	
Date of Birth: «PatientDOB»	Gestation at birth: «GA»	NHS No: «PatientNHSNo»	Gender: «Gender»
Address: «Address1» «Address2» «Address3» «Address4» «Address5» Postcode:		GP Details: «GPName» «GPAdd1» «GPAdd2» «GPAdd3» «GPAdd4» «GPAdd5» «GPPostCode»	
Home Tel: «ContactPhone»		Hospital of Birth: «screeningFacility»	
To be completed by referrer (NIPE Practitioner)			
Which TB high risk country were the parent/grandparent/ household member born in?			
Will the child live for more than one month or travel frequently to a TB high risk countries in the near future?		Yes □ Specify-	No □
Does anyone in the household have previous or current history of TB?		Yes □ Specify-	No □
Any relevant medical conditions (Prematurity, Maternal HIV etc)		Yes □ Specify-	No □
If maternal HIV present please send this referral to consultant for confirmation of low risk MTCT status *(Dr Anne-Marie Buckley SRH; Dr Jonathan Rabbs WH)*		To be completed by paediatric consultant	
		I confirm low risk MTCT □ Date	Print Name Signed
Referrers Name: «ScreenerName»		Referrers Job Title: «Designation»	
Base of Referrer:		Date:	

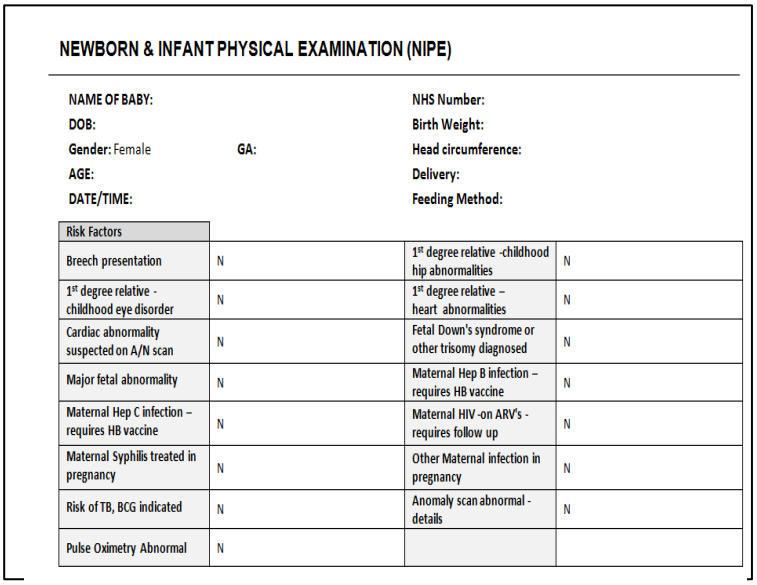
The above fields can be completed on computer which will then make it easier for you to send as an attachment to: uhsussex.bcgimmunisationprogram@nhs.net

Please ensure that you give the parent the Patient Information on TB and BCG Vaccine. This can be printed out via Family Assist using the Family Assist Icon in WSHT Applications or searching Family Assist on the parent's Smart phone Search: BCG; Open Screening Tests for you & your baby; Press on more information on the BCG vaccination to open leaflet which can be printed or downloaded to read.

Appendix 5: BCG referral process (discharging midwife)

Please see flow chart below on the expectations of you as the discharging Midwife with this process.

Prior to discharge please check the NIPE Print Out to identify if the baby has had a BCG immunisation referral.



NEWBORN & INFANT PHYSICAL EXAMINATION (NIPE)

NAME OF BABY:		**NHS Number:**	
DOB:		**Birth Weight:**	
Gender: Female	**GA:**	**Head circumference:**	
AGE:		**Delivery:**	
DATE/TIME:		**Feeding Method:**	

Risk Factors			
Breech presentation	N	1st degree relative -childhood hip abnormalities	N
1st degree relative - childhood eye disorder	N	1st degree relative – heart abnormalities	N
Cardiac abnormality suspected on A/N scan	N	Fetal Down's syndrome or other trisomy diagnosed	N
Major fetal abnormality	N	Maternal Hep B infection – requires HB vaccine	N
Maternal Hep C infection – requires HB vaccine	N	Maternal HIV -on ARV's - requires follow up	N
Maternal Syphilis treated in pregnancy	N	Other Maternal infection in pregnancy	N
Risk of TB, BCG indicated	N	Anomaly scan abnormal - details	N
Pulse Oximetry Abnormal	N		

NIPE Paperwork (found in PN notes and/or PCHR 'Red Book')

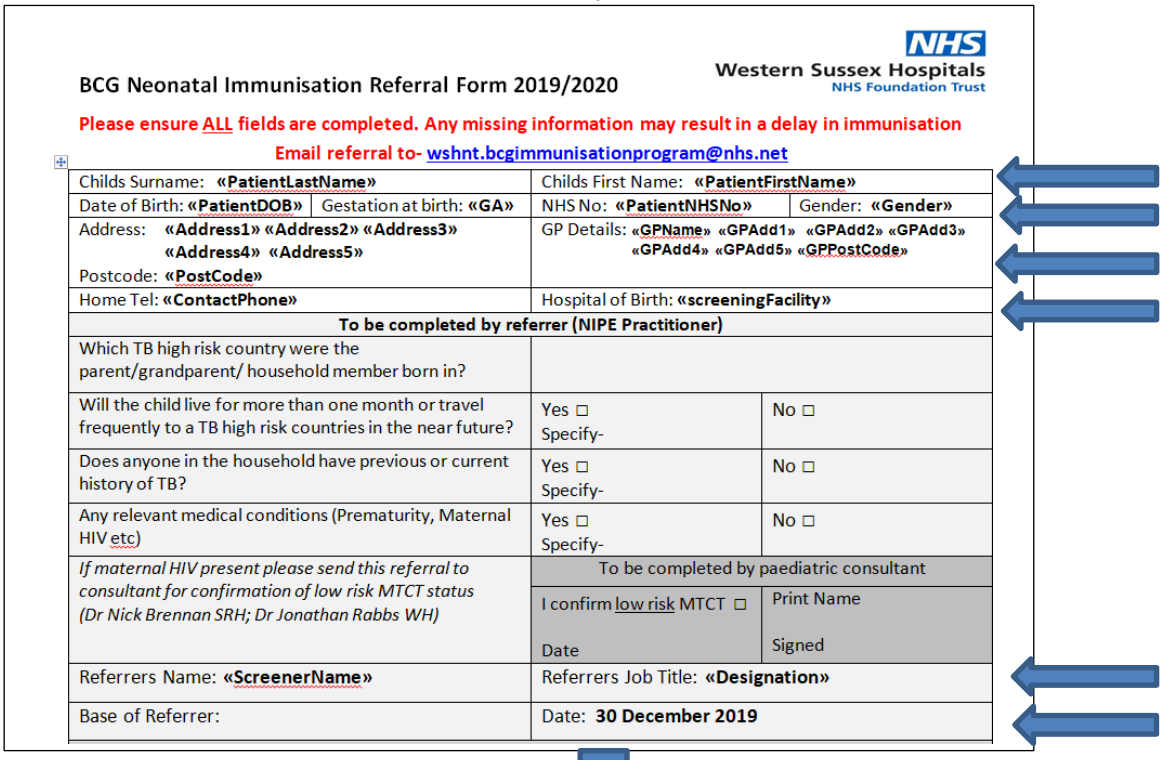
- If highlights 'Yes'- assume referral sent and the administration failsafe will follow this up
- If highlights 'No'- assume referral not sent

If you suspect a BCG vaccine is required and you assume one hasn't been completed as the NIPE paper states 'No' please ask the parent the follow questions:

- Are you, your family or your baby's father or his family from one of these countries?
- Will you and your baby be going to live for more than one month or travel frequently in one of these countries in the near future?
- Is there anyone in your house, or anyone else who is likely to have long-term close contact with your baby, who either has TB, or has had it in the past, or comes from one of these countries? (See appendix 1).

Continued on next page

Once confirmed that a BCG immunisation referral is required please completed a paper copy of the BCG Newborn Immunisation Referral From 2019



NHS
Western Sussex Hospitals
NHS Foundation Trust

BCG Neonatal Immunisation Referral Form 2019/2020

Please ensure ALL fields are completed. Any missing information may result in a delay in immunisation

Email referral to- wshnt.bcgimmunisationprogram@nhs.net

Childs Surname: **«PatientLastName»**		Childs First Name: **«PatientFirstName»**	
Date of Birth: **«PatientDOB»**	Gestation at birth: **«GA»**	NHS No: **«PatientNHSNo»**	Gender: **«Gender»**
Address: **«Address1» «Address2» «Address3» «Address4» «Address5»** Postcode: **«PostCode»**		GP Details: **«GPName» «GPAdd1» «GPAdd2» «GPAdd3» «GPAdd4» «GPAdd5» «GPPostCode»**	
Home Tel: **«ContactPhone»**		Hospital of Birth: **«screeningFacility»**	
To be completed by referrer (NIPE Practitioner)			
Which TB high risk country were the parent/grandparent/ household member born in?			
Will the child live for more than one month or travel frequently to a TB high risk countries in the near future?		Yes ☐ Specify-	No ☐
Does anyone in the household have previous or current history of TB?		Yes ☐ Specify-	No ☐
Any relevant medical conditions (Prematurity, Maternal HIV etc)		Yes ☐ Specify-	No ☐
If maternal HIV present please send this referral to consultant for confirmation of low risk MTCT status (Dr Nick Brennan SRH; Dr Jonathan Rabbs WH)		To be completed by paediatric consultant	
		I confirm low risk MTCT ☐ Date	Print Name Signed
Referrers Name: **«ScreenerName»**		Referrers Job Title: **«Designation»**	
Base of Referrer:		Date: **30 December 2019**	

Please ensure that once completed you scan and send the copy to the address below. A Ward Clerk can assist you with this.
Uhsussex.bcgimmunisationprogram@nhs.net

Please ensure that you give the parent the Patient Information on TB and BCG Vaccine. This can be printed out via Family Assist using the Family Assist Icon in WSHT Applications or searching Family Assist on the parent's Smart phone. Search: BCG; Open Screening Tests for you & your baby; Press on more information on the BCG vaccination to open leaflet which can be printed or downloaded to read.

Family Assist

Appendix 6: BCG referral process (administration of failsafes)

Please see flow chart below on the expectations of you as Administrators of the BCG Failsafe with this process. Any concerns with any aspect of the process please contact the Public Health Midwife.

Pre appointment:
• A weekly report is run from Medway & NIPE, which will produce a list of babies born who were identified at booking requiring BCG immunisation. For details on how to run the reports please see the how to guide. • This will be found on the server in the Maternity Shared Drive; Public Health; BCG Immunisation Programme Folder- BCG Clinic Set Up; Flow Chart SOP (Please save reports in the specific named folder in the BCG administration folder) • Please action those for your site specifically and start with the oldest babies first. • DO NOT DELETE the spreadsheet as this will need to be saved for use by others. The purpose of the spreadsheet is to detail all actions made with regards to BCG immunisation. • Add the additional template columns to the spreadsheet. This is to log all your actions.
• BCG referrals will be received via email: uhsussex.bcgimmunisationprogram@nhs.net • Please check that you have received a referral form for each baby. If you have not received a form once the NIPE examination has been complete, please generate a BCG referral from NIPE S4N and email to the NIPE practitioner to confirm. Please do not wait for the NIPE practitioner to respond. Proceed with making the appointment and cancel later if needed.
• If the referral does not match any of the babies on the Medway spreadsheet please ensure baby's family origin is on the high risk list for TB or there is a family history. Add baby to the spreadsheet and proceed with making the appointment.
• Inform CHIS weekly of babies identified at NIPE eligible for BCG.
Once the referral has been received please check the following: 1. Has all of the NIPE Practitioner section been completed? ○ Yes: Proceed ○ No: Please email referrer to complete. Ensure baby has a family origin on the high risk list for TB or family history of TB and proceed with making the appointment. 2. Do the countries stated on the referral form match those on the country list below? ○ Yes: Proceed ○ No: Check Medway for both Mother and Father's family origin or if there is a family history of TB. If country stated is not on the list, highlight blue on the spreadsheet. If no specific country is listed, contact mum to check and proceed with making appointment if applicable.

- Check Sema Helix for available appointment and book.
- Appointment should be given within 2 weeks of birth (over 28 days is reportable to Public Health England so this should 'allow' for a potential DNA).

- Send appointment letter with BCG Leaflet.
- This can be found under Maternity Shared Drive; Public Health; BCG Immunisation Programme Folder- BCG Administration.

- Enter all actions to the relevant baby on the spreadsheet

- Text reminders to each parent prior to appointment

- One week prior to appointment crosscheck that NBBS result received. CHIS will notify us of any screen positive results from SCID screening taken on day 5 NBBS.
- Use Northgate to check NBBS back and result for SCID is known:

  SCID Negative-proceed
  SCID not screened-proceed
  SCID positive-Cancel Appointment with parents. Inform Public Health Midwife.
- Cancel upcoming BCG appointment. Inform parents.

Pre Clinic:

Prior to day of clinic ensure that 'BCG Pack' is made for those babies due to attend clinic

BCG Pack (plastic wallet per baby) to include:

- Referral Form
- Nurse Checklist
- BCG Immunisation Leaflet
- After Care Leaflet

The nurse will come and collect the packs on the day of the clinic.

Has the patient declined?

- Cancel the appt and send cancelation letter to patient; Send a decline letter to GP and email appropriate Health Visitor team; Record on spreadsheet; Upload scan copy of this form to EVOLVE and file this and a copy of the decline letter in maternal notes.

Post Clinic:

Once you have received the referrals back check the following:

Has the Paediatric Nurse section of form been fully completed?

- Yes: Proceed.
- No: Email nurse that the form requires completed cc TB Nurse Specialist to email.

Has the patient DNA'd?

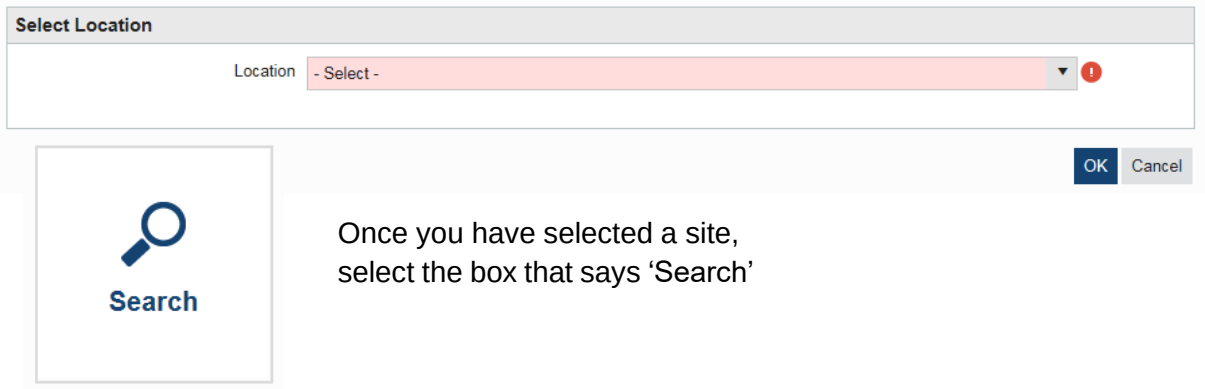
- No: Proceed
- Yes: Rebook the appointment and contact mother to confirm address. Record second

appt on spreadsheet. **2nd DNA?** • No: Proceed • Yes: Send DNA letter to GP and patient, and email the appropriate Health Visiting Team on NHS.net. Record on the spreadsheet, upload referral to EVOLVE and file in Mum's Maternity notes.
Patient Attended Clinic? • Vaccinated: Send the pink carbon copies of PCHR to GP, keep the yellow one; Upload scan copy of the referral form and Paediatric Nurse Checklist to EVOLVE and file in maternal notes. Record on the BCG and CHIS spreadsheet. • Not Vaccinated: Find out whether they declined or appt need to be rebooked. Action as appropriate.
Enter all actions to the relevant baby on the spreadsheet.

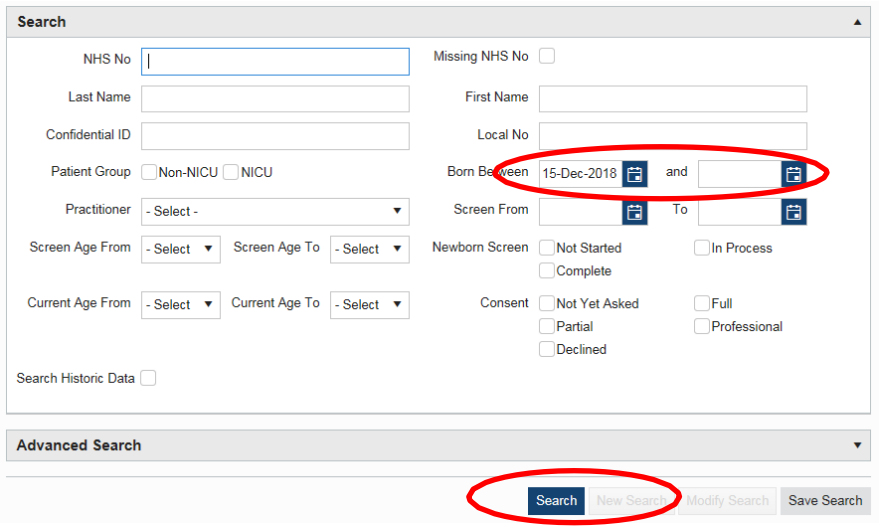
Appendix 7: How to run the NIPE BCG report

As well as the weekly BCG report from Medway, a report from NIPE is also run every Monday to ensure no babies are missed.

Log in to NIPE. You will need to select which site you wish to run the report for. Please select either Worthing or St Richards as the report will not work if you select 'Western Sussex Hospitals'.

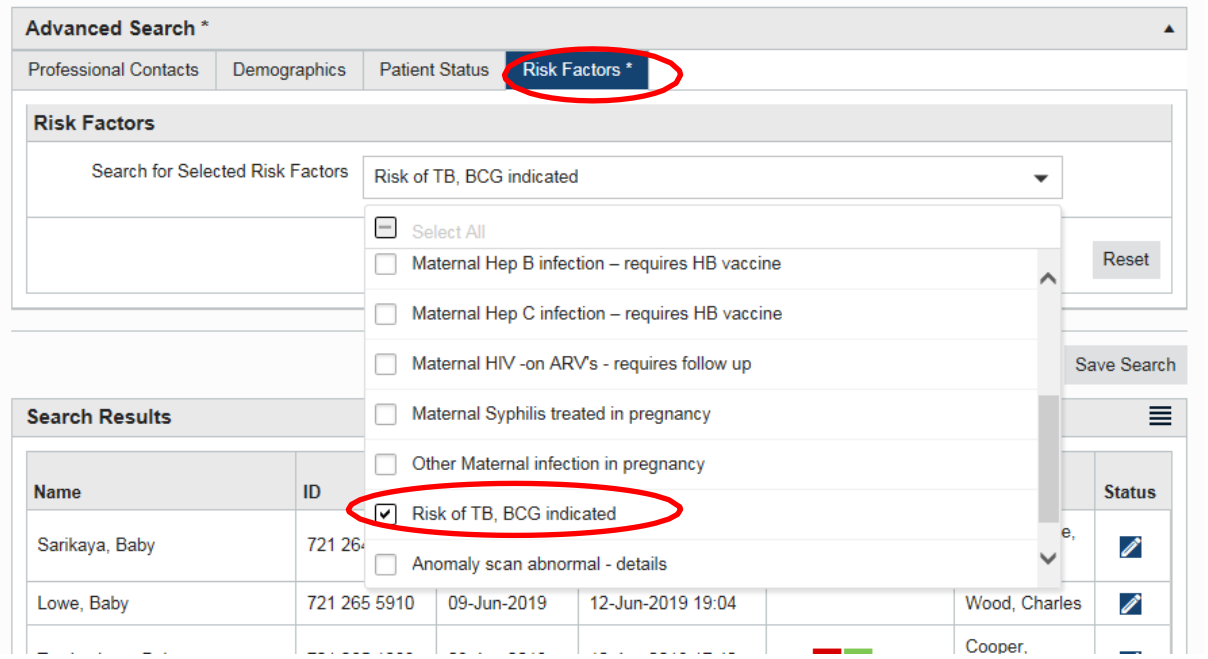


Once you have selected a site, select the box that says 'Search'



You will need to select a **'from'** and **'to'** date. The report is run weekly so this will need to be for the previous week. For example if it is Monday 31st December, you will need to run the report from Monday 24th to Sunday 30th December. Then click **'search'**.

Another box will appear with a list of babies born within that date period. Click on arrow next to **'Advanced Search'**, followed by the **'Risk Factors'** tab. From the drop down menu tick the box next to **'Risk of TB, BCG indicated'** and hit enter on the keyboard. This will adjust the list of babies to only those who have been identified by the NIPE practitioner as being eligible for a BCG vaccine.



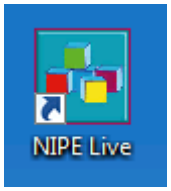
Remember you will need to run this report twice – once for St Richards and once for Worthing.

Please screenshot both NIPE reports and save under:
S:\WomenChildrenMgmt\MATERNITY\PUBLIC HEALTH\BCG Immunisation Programme\BCG Administration\BCG NIPE Report

If you have not received a referral, check Medway for a country of origin or family history of TB. If they are eligible and were not also generated form the Medway report, please add baby to the BCG spreadsheet and proceed with generating a referral and making an appointment. If no eligibility for BCG is indicated on Medway, contact the parents to check for family origin or family history of TB.

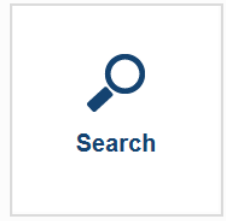
Official flowcharts and guides on the BCG clinic process can be found under:
S:\WomenChildrenMgmt\MATERNITY\PUBLIC HEALTH\BCG Immunisation Programme\BCG Clinic Set Up\Flow Chart SOP

Appendix 8: How to print a BCG referral from NIPE

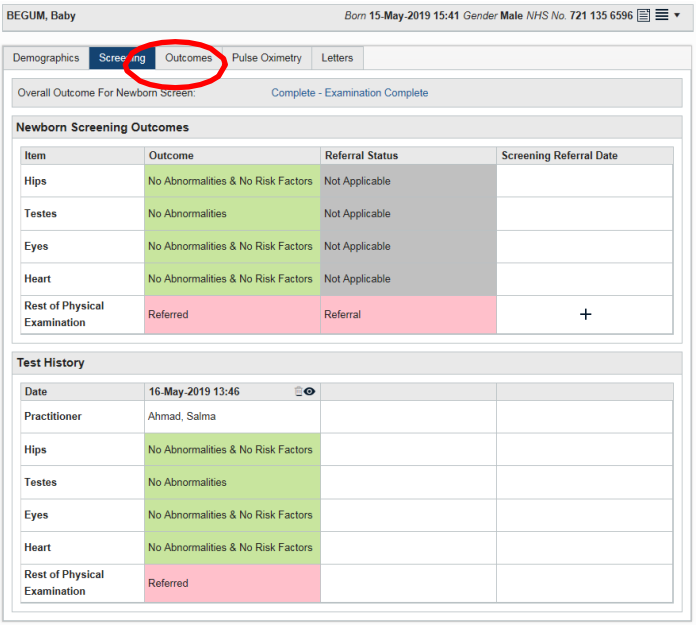


1. Log in to NIPE.
2. Select the site. **Please select either St Richards or Worthing** as selecting Western Sussex will not work.

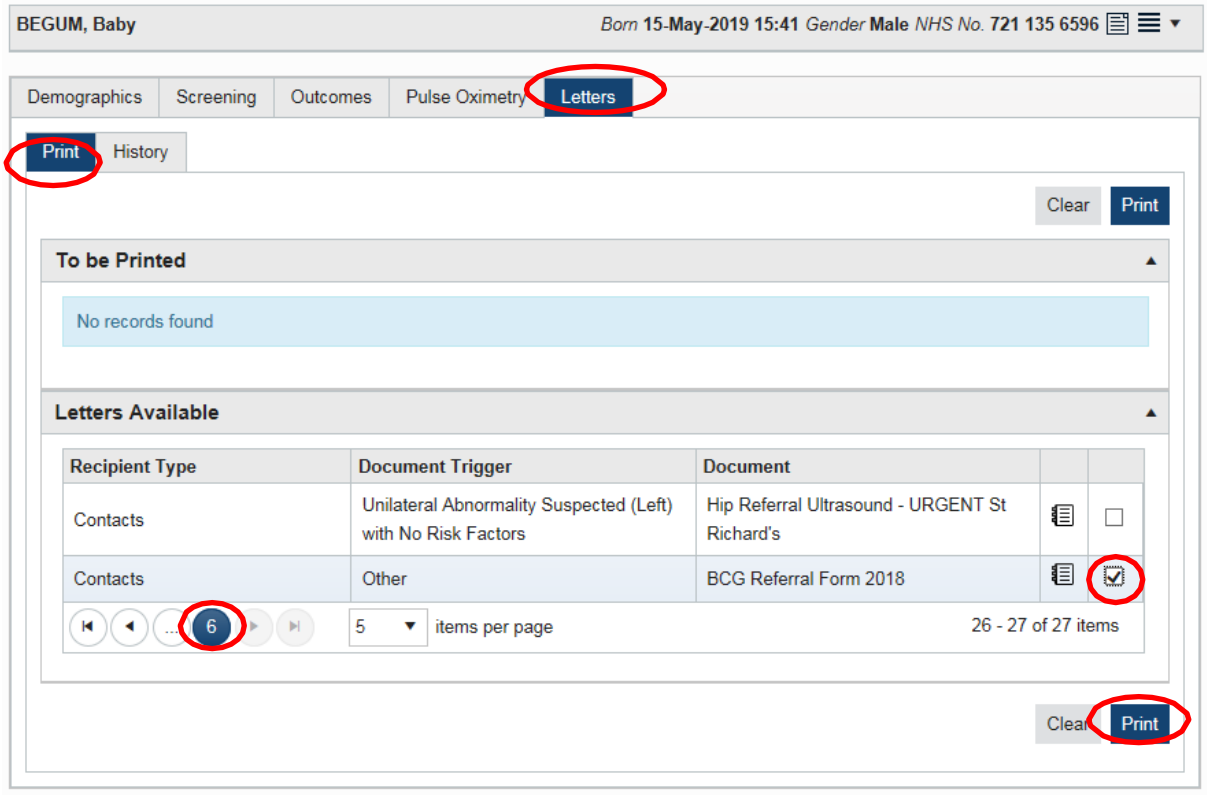
3. Click on the **'Search'** box.



4. Search for the baby using name or NHS number and click **'Search'**.
5. Click on babies name to open the record.
6. Click on the **'Screening'** tab. If the NIPE has been completed it will look like the image below with green/red outcomes. If it has not been complete, the boxes will be grey.



1. Click on the **'Letters'** tab.
2. Click on the **'Print'** tab to bring up a list of documents.
3. Go to page 6 and tick the box text to **'BCG Referral Form 2018'**. The click **'Print'.**



4. Click on the word icon to open the word document.

5. Once you have opened it in a word document you will be able to save/print it and fill in the relevant details.

Appendix 9: How to book a BCG appointment (administrators)

Official flowcharts and guides on the BCG clinic process can be found under MATERNITY > PUBLIC HEALTH > BCG Immunisation Programme > BCG Clinic Set Up
Throughout the week emails will come in to the BCG inbox (wsht and nhs.net) with BCG referrals. With these you will need to check the stated country on the referral against the high risk list on the back of the referral (WHO list). If it matches you can make the appointment.

Please note: Syria is not on the list but we are currently offering babies with a Syrian family origin the BCG vaccine.

If there is no country that matches but there is a family history of TB, the BCG vaccine can also be offered. If this is the case it will be stated on the BCG referral.

Now you can put the referral on sema…

Open sema and go to **Outpatients** > **Manage Outpatient Referrals.** Type in baby's NHS number. Check that the correct baby has been entered and click on **New Referral** at the bottom of the box. You will need to answer any underlined questions.

- Referral Type will be '**Consultant, other than A&E**' for paediatricians, '**Allied Health Professional**' for Midwives or '**Health Visitor**' for Health Visitors.
- In Referrers ID or Source write the name of the person who referred the baby (found on the referral).
- Date Referral Received.
- Intended Case Type is **Outpatient.**
- In the small box next to Health Prof type **NMB** and click the arrows. Then select **Nick M Brennan** from the drop down menu. In the drop down menu next to speciality select **Paediatrics**. **Please note:** this is for St Richards BCG clinic ONLY. If you are booking an appointment for Worthing clinic please see list of codes on the next page.
- Under Administrative details the Service Type is **Advice/Consultation**, the Priority is **Routine** and the Overseas Visitor is **Not Applicable.**

Now you can book the appointment...

- Under **Outpatients** > **Manage Outpatient Referrals**, select the referral you just put on and click **Book Appt** at the bottom right.
- Next to **Clinic** write **PABCGC** (for St Richards, if you are booking an appointment for Worthing please see list of codes on the next page) and select the arrows. Select **BCG Newborn Immunisation SRH** should from the drop down list. The **from** and **to** dates should be filled out automatically (this is the range date you will be searching available clinics. (If there aren't any appointments available in this range you can change it). Click **Search**.
- Then select a clinic date and time and click **next**. In the Booking System drop down menu select **Partial Booking System** and click **finish**. Another box should appear for an appointment letter to be sent to the patient. In the box next to **code** type

OPTEPI (code for the BCG Clinic letter – St Richards ONLY, if you are booking for Worthing clinic, check the codes below). In the list you should see '**Contact – Paed Immunisation'**, click on it and click the '**>**' so that it moves to the box on the right. Then click **ok**.

The appointment letter will need to be sent with the blue 'TB, BCG vaccine and your baby' leaflet in the envelope.

Make a note of what babies you receive throughout the week to make filling out the spreadsheet easier. **Do not** add babies to the spreadsheet that are born in the current week as this will confuse things when the BCG report is run every Monday.

Filling out the referral form

Once the appointment is made you will need to fill out the referral form. Fill out the **Date/Time of appt** and tick when you have sent an **appointment letter** and when the BCG vaccine has been **prescribed on JAC**.

Useful Codes

BCKY – Dr Anne-Marie Buckey is the health professional for St Richards BCG Clinic
Vam – Dr Vamvakiti is the health professional for Worthing BCG Clinic
PABCGC – St Richard's clinic code
OPTEPI – St Richard's clinic letter code
PABCGW – Worthing clinic code. If Sally is away and you are covering for Worthing this is the code to book babies in the Worthing clinics. When putting the referral on sema it's the same process but instead of Nick Brennan as the Health Professional it's E Vamvakiti.
WOPTPZ – Worthing clinic letter code

Appendix 10: BCG referral process (Public Health Midwife)

Obligations of the Public Health Midwife:

The administrators will contact if a referral has not been received within at least 3 days of birth of any baby from the Medway spreadsheet.

- Please check NIPE for a BCG referral history. If there is one present reprint and complete relevant sections. Feedback to NIPE practitioner that a referral was not sent by email to avoid reoccurrence.
- If no history of referral printed then request maternal notes and check country of origin against Medway entry and complete referral if appropriate. Feedback to NIPE practitioner that a referral was not completed to avoid reoccurrence.

The administrators will contact if a referral has been received but does not appear on Medway spreadsheet or the countries of origin do not match the high risk list.

- Please request maternal notes and check country of origin written. Check against Medway entry. If not clear why a referral was sent and nothing written in NIPE SMaRT please contact NIPE practitioner to understand why a referral was required.

The administrators will contact you if the BCG referral has not been fully completed and no response has been gleaned from email sent.

- Please request maternal notes and check country of origin against Medway entry and complete referral if appropriate. Feedback to NIPE practitioner that the referral was not completed fully to avoid reoccurrence.

Failsafe

Monthly (may need adjusting to fortnightly if regular referrals missing) Requirement:

- Pull report on excel spreadsheet from NIPE SMaRT per site facility (cannot use Trust oversite for this) of all BCG referrals for the month.
- Check each baby against the Medway spreadsheet to ensure all referrals and babies accounted for.
- If there are additional babies on the NIPE SMaRT report that do not appear on the Medway spreadsheet please review comments in NIPE SMaRT to determine if BCG referral should have been sent. This will also require checking against maternal notes and Medway entry to ensure it was not a manual entry error by NIPE Practitioner.

Failsafe for public health midwife if no NBBS result received/ SCID positive.

- Use Northgate/CHIS to double check result.
- Ensure appointment for BCG has been cancelled and parents aware.

Contact babies GP via email to establish outcome of immunologist appointment.

- If false positive result confirmed by GP or immunologist has confirmed vaccine can be given.
- Rebook BCG appointment.
- Report delay /mitigations to PHE in monthly returns.