IMPROVING SERVICE DELIVERY AND COVERAGE OF THE NEONATAL BCG VACCINATION PROGRAMME

DECEMBER 2012
Produced on behalf of the North West TB Summit by:
Lynn Simpson, Immunisation Lead Nurse, NHS Oldham
Debbie Wright, Acting Assistant Director, Health Protection, NHS Central Lancashire
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Acknowledgements

With thanks to the expert steering group, who freely gave their time and expertise to help inform this work:

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Katie Dee, Assistant Director of Public Health, NHS North West.
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Improving service delivery and coverage of the neonatal BCG vaccination programme

Key messages

The neonatal Bacillus Calmette–Guérin (BCG) vaccination programme aims to protect at risk babies from Tuberculosis (TB) infection by immunising them as soon after birth as possible.

In the North West there has been a worrying increase in the number of children being diagnosed with TB over recent years.

Over the same time period rates of BCG vaccination in the North West have remained static and it is unclear what proportion of eligible babies have been vaccinated.

Recent serious incidents in the BCG programme have not always been systematically investigated to identify the root cause. Lessons learnt have not always been acted upon in a timely manner and they are not always widely shared.

The TB Summit commissioned a review of how the neonatal BCG vaccination programme is delivered across the North West and this report presents the findings of this work. Four High Impact Actions and eight supporting recommendations have been made.
High Impact Actions

1. Pregnant women should be assessed, during the antenatal period, to determine if their child is likely to be at higher risk of TB. The outcome of this assessment should be recorded in the clinical notes.

2. Babies should be vaccinated before discharge from the Maternity Unit. In low incidence areas where this is not practical, arrangements need to be in place to ensure that babies are vaccinated within two weeks of birth.

3. Incidents and near misses need to be reported and investigated fully. Root Cause Analysis should be carried out to detail the underlying cause of the incident and lessons learnt should be anonymised and shared widely.

4. Local BCG programmes should be regularly audited using the assurance tools within this document and commissioned as a comprehensive pathway.
Improving service delivery and coverage of the neonatal BCG vaccination programme
SECTION 1
INTRODUCTION
Improving service delivery and coverage of the neonatal BCG vaccination programme
1. Introduction

Since 2004 the number of cases of TB in children aged 0 to 5 has increased significantly across the North West. These cases are of great concern as they are sentinel events which demonstrate that TB is transmitting within our communities, in the North West. Children have a higher risk of morbidity and mortality from TB than adults, so it is vitally important that BCG vaccination programmes are robust and that all eligible children are offered vaccination in a timely manner. In the North West, the rate of BCG vaccination uptake has remained static over many years.

The North West TB Summit commissioned a BCG workstream to support local organisations with their work to strengthen the delivery of safe and effective neonatal BCG programmes. A number of PCTs had already begun work in this area and their findings and good practice provided valuable information for this workstream.

An important part of the project was to gain an overview of the existing delivery systems and clinical pathways in place, and to review findings from incidents related to the programme. This information was then compared to local coverage rates, evidence based practice and national guidance to enable the production of recommendations which would support both commissioners and providers in reviewing, designing and delivering safe and effective BCG Neonatal programmes.

1.2 TB in children

Human TB is caused by infection with bacteria of the Mycobacterium tuberculosis complex and may affect almost any part of the body. Whilst there has been enormous progress in combating the disease

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over the past century, the last 20 years have seen resurgence in TB across England. The 2010 TB surveillance data showed that the North West had the third highest rate (11.9 cases per 100,000 population) of any UK region, and was the only Region to experience an increase in tuberculosis rates since 2009.\textsuperscript{2}

In the North West around 50% of all cases of TB are pulmonary and can be spread by coughing. However in young children, non-pulmonary TB is more common than in adults. This includes serious conditions such as miliary TB and TB meningitis. Children with TB have a far higher risk of morbidity and mortality than adults.

Over recent years there has been a significant increase in TB cases among children aged 0 to 4 across the North West (Figure 1)

\textbf{Fig 1: TB incidence for those age 0–4 years}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{tb-incidence.png}
\caption{TB incidence for those age 0–4 years}
\end{figure}

\textsuperscript{2} Tuberculosis in the UK 2011 report. London: Health Protection Agency, 2011
1.3 The BCG Vaccination Programme

The BCG vaccination programme was introduced in the UK in 1953. The programme was initially targeted at children of school leaving age (which was then 14 years). This was due to the peak incidence of TB being in young working adults.

In the 1960s rates in the indigenous population continues to decline, however, rates were higher in the new immigrant from high prevalence countries and their families. This resulted in the introduction of a selective neonatal BCG programme the aim being to protect infants born in the UK to parents from high-prevalence countries, by vaccinating them shortly after birth.

As the epidemiology of TB changed from a disease of the general population to predominantly a disease of risk groups, in 2005 the BCG school programme was stopped and replaced with a risk based programme primarily aimed at infants under the age of one.

The aim of the current UK BCG immunisation programme is to immunise those at increased risk of developing severe disease and/or of exposure to TB infection.

BCG immunisation should be offered to:\(^3\)

- All infants (aged 0 to 12 months) living in areas of the UK where the annual incidence of TB is 40/100,000 or greater.

- All infants (aged 0 to 12 months) with a parent or grandparent who was born in a country where the annual incidence of TB is 40/100,000 or greater.

- Previously unvaccinated children aged one to five years with a parent or grandparent who was born in a country where the annual incidence of TB is 40/100,000 or greater. These children should be identified at suitable opportunities, and can normally be vaccinated without tuberculin testing.

\(^3\) Department of Health. *Immunisation against Infectious Diseases (Green Book)*, 2006
• Previously unvaccinated, tuberculin-negative children aged from six to under 16 years of age with a parent or grandparent who was born in a country where the annual incidence of TB is 40/100,000 or greater. These children should be identified at suitable opportunities, tuberculin tested and vaccinated if negative.

• Previously unvaccinated tuberculin-negative individuals under 16 years of age who are contacts of cases of respiratory TB (following recommended contact management advice – see National Institute for Health and Clinical Excellence, 2011).

• Previously unvaccinated, tuberculin-negative individuals under 16 years of age who were born in or who have lived for a prolonged period (at least three months) in a country with an annual TB incidence of 40/100,000 or greater.

NB: The National Institute for Health and Clinical Excellence (NICE) also recommends BCG vaccination for neonates with a family history of TB in the last five years.

The NHS constitution sets out a number of ‘rights’ for patients and the public. A right is a legal entitlement conferred explicitly by law and places a legal obligation on NHS bodies. The right to receive vaccinations that have been recommended by the Joint Committee on Vaccination and Immunisation (which includes BCG) is included within the constitution.

1.4 When to give BCG vaccination

NICE guidance states that BCG vaccination should be given "as soon as possible after birth", however in practice, in areas which do not vaccinate before babies are discharged from a Maternity Unit, there can be a considerable time delay before vaccination is given. Unpublished data suggests uptake of BCG is higher if it’s delivered on post natal wards, compared with community services. Within the North West this issue was considered by a group of experts who recommended that in order to limit the opportunity for children to become infected and to ensure the highest uptake possible, vaccination should take place before discharge from the maternity unit.

In areas of low TB incidence, where the delivery of pre-discharge vaccination may be challenging due to the inability to maintain staff competence and also in the event of a home birth or unplanned discharge, it is accepted that vaccination post-discharge may be necessary. However, it is essential that systems are in place to offer and vaccinate babies as soon as possible after birth, an acceptable timeframe would be within two weeks of birth.

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6 Riordan A. Personal communication. 2012
Improving service delivery and coverage of the neonatal BCG vaccination programme
SECTION 2
THE BCG VACCINATION PROGRAMME IN THE NORTH WEST
Improving service delivery and coverage of the neonatal BCG vaccination programme
2 The BCG vaccination programme in the North West

Of the 24 PCTs in the North West, NHS Manchester is the only PCT which runs a ‘universal’ BCG programme, whereby all infants aged 0 to 12 months are offered vaccination. The remaining 23 PCTs across the region have in place a ‘selective’ programme, whereby vaccination is only offered to infants considered to have a higher risk of contracting TB (see section 4).

Around 15% of children aged under one receive the BCG vaccination each year in the North West, this compares to around 23% across England. 8 Between 2004 and 2011 BCG vaccination rates in the North West increased by 13%. However, over the same period BCG rates in England increased by 66%. However, this data does not tell us the proportion of eligible children that were vaccinated, so we do not know how many children who are at risk of contracting TB are being missed.

2.1 Measuring coverage

The NHS Information Centre for Health and Social Care publish immunisation statistics for England on an annual basis. Most of the immunisation statistics relate to routine vaccinations which are offered to everyone in particular specified age groups. However, the report also covers some non-routine vaccinations which are targeted at particular groups within the population and this includes the neonatal BCG vaccination programme. Information is collected from Child Health Information Systems via the KC50 form (figure 2). However, it is widely accepted that there are data quality issues with this return which continue to affect the quality of the information collected on BCG vaccination in some PCTs. It is therefore difficult, if not impossible, to compare vaccination statistics between organisations and over time.

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The number of PCTs completing the return has increased over time, with 2010/11 being the first year that all North West PCTs made a submission. However, due to the gaps in previous years’ data and the significant fluctuation in the numbers reported as vaccinated each year, it is difficult to draw conclusions or make comparisons between areas (table 1).
### Table 1: Number of vaccinations given to children under one year of age, 2004/05 to 2010/11, by PCT

Source: Form KC50.

<table>
<thead>
<tr>
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<td>84,281</td>
<td>106,216</td>
<td>135,071</td>
<td>143,316</td>
<td>148,948</td>
<td>155,611</td>
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<td>786</td>
<td>784</td>
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<td>-</td>
<td>-</td>
<td>50</td>
<td>54</td>
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<td>-</td>
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<td>1,095</td>
<td>1,124</td>
<td>1,018</td>
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<td>164</td>
<td>231</td>
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<td>337</td>
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<td>Manchester PCT</td>
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<td>179</td>
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<tr>
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<td>337</td>
<td>171</td>
<td>141</td>
<td>166</td>
<td>159</td>
<td>213</td>
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<td>Tameside and Glossop PCT</td>
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<td>362</td>
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<td>324</td>
<td>327</td>
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<td>-</td>
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<td>-</td>
<td>-</td>
<td>109</td>
<td>93</td>
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<td>105</td>
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<td>157</td>
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<td>166</td>
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<tr>
<td>Wirral PCT</td>
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<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>168</td>
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</table>
This highlights the need to develop more robust and consistent systems and pathways which can provide an accurate denominator and numerator data. A true reflection of vaccination coverage is vital for organisations to assure themselves of the robustness of their pathways and to guide service improvement.

**It is recommended that Identification of eligible babies commences during the antenatal period.** This would allow eligibility to be communicated to all agencies involved in the pathway and recorded accurately in the clinical and handheld notes. This is vital in order to produce an accurate denominator figure for the KC50 data set, which enables monitoring of the Neonatal BCG immunisation Programme and also helps to prevent any eligible child being missed.

### 2.2 Review of local programme delivery

A covering letter outlining the purpose and aims of the project was sent out by the Regional Director for Public Health to all Directors of Public Health within the North West. A questionnaire (appendix 1) was attached to the covering letter to be completed and returned with a three week period. The questionnaire covered; eligible population size, numbers of vaccines given, model of service delivery, availability of training and education, recent incidents/near misses and any audits that had been undertaken.

The response rate was 92% with 22 out of 24 PCTs returning completed questionnaires. The findings are listed below.

### 2.3 Models of delivery

Analysis of the returns identified two different models in use across the North West; delivery in hospital settings only and delivery in both hospital and community.
Hospital only model

Out of 22 the responding 22 PCTs, seven organisations provided the BCG vaccination prior to discharge from maternity unit. Each of these areas also had provision to “catch up” any unimmunised babies within clinics either within the acute or community setting. There was a significant variation in the number of babies that were vaccinated per year in each of these PCTs, ranging from 187 to 1088 (note one PCT was not able to provide this data).

Hospital and Community model

The remaining 15 PCTs commissioned a variety of clinic sessions within both the hospital and community settings. Again the number of babies vaccinated each year varied widely, from 40 to 896. The only PCT in the North West with a universal BCG vaccination programme is NHS Manchester, where 4378 babies were vaccinated in 2010/11.

Very few PCTs reported having undertaken an audit in the last two years to assess the robustness of the local programme. *It is recommended that regular audits should be completed in order provide assurance that the service and systems are in place to deliver an effective neonatal BCG pathway.*

2.4 Identifying eligible neonates

Only 50% of PCTs (11 out of 22) stated that they were able to identify their eligible population of babies aged 0 to 12 months, in 2010/11. Further analysis of the data and responses suggests that there may be some inaccuracies in identification in some areas, for example some returns only included children from specific ethnic groups and did not capture the full range of eligibility. However, when PCTs were asked how many eligible neonates had received vaccination, 19 PCTs provided data. As seven of these PCTs had already reported as being unable to identify their eligible population, it is clear that there are discrepancies within this data that require further investigation.
In view of these issues, it does not appear that accurate denominator data is available for the majority of areas in the North West. This makes it impossible to establish accurate coverage and uptake data, on a local or regional basis and increases the risk of missing eligible children.

It is recommended that accurate, robust and consistent recording processes are developed locally, which can support all of the required information throughout the pathway, e.g. Maternity, Child Health, Acute Trusts, Community Services, GP systems.

It is recommended that parents/prospective parents are given Information on the BCG vaccine in an appropriate formats/language and that they also have an opportunity to discuss any concerns or issues.

2.5 Which health care professionals identify eligible babies?

As the figure below shows, a variety of health care professionals were involved in identifying eligible babies. All PCTs reported more than one health care profession being responsible for assessing eligibility. However, only 15 of the 22 PCTs had systems in place to identify eligibility during the antenatal period.

![Fig 3: Health professionals involved in identification of eligible babies](image-url)
2.6 Which health care professionals vaccinate?

The range of professionals administering BCG vaccinations also varied across all the PCTs (figure 4) with some areas using more than one staff group. The most common provider was TB Nurses and in five PCTs this was the only group of staff who provided BCG vaccination.

![Fig 4: Staff groups administering neonatal BCG Vaccination, by PCT](image)

2.7 What training have they received?

The BCG vaccine requires intradermal delivery and therefore needs specific skills and continuous practice to maintain competency. In areas of the North West where there are small numbers of eligible babies, it can be difficult for staff to maintain these skills.

Training and education are key to ensuring that all staff involved in the Neonatal BCG programme have the necessary skills and knowledge to administer the vaccine and/or provide consistent and accurate advice to both the public and other Health Care Professionals.

The questionnaire asked PCTs to specify where training in administering BCG was commissioned from. The returns showed that the majority of training in the North West is provided by TB Specialist Nurses (figure 5).
The provision of training varied across the Region in terms of length of courses and the level they were aimed at. The data gathered did not allow in depth analysis of course content, but it did demonstrate that training ranges from ‘on the job’ peer to peer training to an academic course (including practical training).

All staff need to be skilled, knowledgeable and competent at the level appropriate for their role. This will range from raising awareness of TB infection and BCG vaccination to knowledge around the delivery of care including the administration of the intradermal BCG vaccination. It is recommended that all staff are trained in line with the National Minimum Standards for Immunisation, as set out by the Health Protection Agency.9

It is also recommended that local area policies clearly identify the roles and responsibilities of all staff involved with the programme. This should include; a named person responsible for the BCG programme and the named lead within each area, clinic or agency.

2.8 Review of Serious Incidents

Ten PCTs reported having had BCG vaccination related incidents over the past two years. The incidents were wide ranging and occurred in both community clinics and hospital settings. The issues that were found to reoccur included; lack of accurate data on eligibility, poor sharing of information, insufficient adequately trained immunisers and lack of robust clinical pathways.

Examples of issues identified and some of the steps taken to improve the service are shown in table 2.

<table>
<thead>
<tr>
<th>Model</th>
<th>Issues identified</th>
<th>Steps taken to address these</th>
</tr>
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<tbody>
<tr>
<td>Community model</td>
<td>• High DNA rates&lt;br&gt;• Inappropriate referrals received (e.g. non eligible babies and those who had already been vaccinated)&lt;br&gt;• Duplicate referrals received from different sources&lt;br&gt;• Low number of eligible babies&lt;br&gt;• Lack of trained BCG immunisers</td>
<td>• Introduced eligibility screening questionnaire&lt;br&gt;• Increased training provision&lt;br&gt;• Changed appointment method&lt;br&gt;• Checked information more thoroughly to prevent duplication of vaccination&lt;br&gt;• Established specific BCG clinic</td>
</tr>
<tr>
<td>Community model</td>
<td>• Failure to offer BCG vaccination to an eligible child lead to death from TB Meningitis. Coroners’ findings identified fragmented service delivery and poor record keeping as key issues.</td>
<td>• Established specific BCG clinic for all referrals&lt;br&gt;• Paediatric nurses trained to give BCG&lt;br&gt;• Roles and responsibilities for referral and follow up clarified.&lt;br&gt;• Developed clinical policy for referral and administration of BCG vaccination to children&lt;br&gt;• Developed referral form&lt;br&gt;• Developed Specialist Health Visitor Role to ensure eligible children receive timely vaccination</td>
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### Table 2: continued

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<th>Model</th>
<th>Issues identified</th>
<th>Steps taken to address these</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hospital model</strong></td>
<td>• Rotating SHOs delivered BCGs, with little training and few opportunities to develop skills due to infrequency of vaccinating.</td>
<td>• Review of this model is underway</td>
</tr>
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<td></td>
<td>• This resulted in a number of vaccine incidents, eligible babies who were not identified, non-eligible babies immunised, poor technique resulting in increased adverse reactions and incidences of diluent only being used.</td>
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<td></td>
<td>• Provision changed to Midwives and Antenatal Nurse Practitioners, but coverage was low and there was poor communication with community services</td>
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<tr>
<td></td>
<td>• TB nursing service then commissioned to “mop up” missed babies. However increasing numbers of eligible babies and a number of incidents has meant that further review of this model is needed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Rotating SHOs delivered BCGs, with little training and few opportunities to develop skills due to infrequency of vaccinating. This lead to a large number of BCG related incidents on post natal wards.</td>
<td></td>
</tr>
<tr>
<td><strong>Hospital model</strong></td>
<td></td>
<td>• Pathways across the Acute Trust and Commissioners are being developed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• New pathway introduced within maternity services to ensure:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– Midwives are trained to identify eligibility and administer BCG</td>
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<td></td>
<td>– That eligibility is recorded on the Maternity Unit IT system and the women’s hand held record (red book)</td>
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<td>– That eligibility and vaccination are documented appropriately and that this is communicated to Child health and the women’s GP</td>
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<td></td>
<td></td>
<td>– Babies who do not receive BCG prior to discharge receive an appointment to return to the Unit for vaccination</td>
</tr>
<tr>
<td><strong>Hospital model</strong></td>
<td>• A large proportion of babies in the PCT are born out of area in a Maternity Unit that does not immunise prior to discharge.</td>
<td>• Discussions are underway between the Acute Trusts and commissioners to improve the pathway and provision of the BCG to all babies born outside the area.</td>
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<tr>
<td></td>
<td>• These babies therefore need to go back to their resident PCT area for vaccination.</td>
<td></td>
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<td></td>
<td>• The TB service in the resident PCT area has set up BCG clinics, for these babies, however there is a high DNA rate.</td>
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</tbody>
</table>
Review of these incidents suggests that there are few examples of the root cause being identified and systematically addressed. The lessons learnt do not appear to have been widely shared and acted upon, as there are a number of examples of the same incident occurring in different parts of the North West. **It is therefore recommended that robust systems are put into place for reporting incidents and near misses, and that all staff are up to date with relevant processes. Root Cause Analysis should be carried out to detail the underlying cause of the incident and lessons learnt should be anonymised and shared widely.**

It is also recommended that local policies are put in place to ensure that a child’s BCG vaccination status is communicated in writing to relevant agencies. This is vitally important to ensure that children are not ‘lost to the system’ when families move areas or GPs.

**The final recommendation in this section is that robust systems to follow up unimmunised children are put in place.** The North West Immunisation Quality Standards\(^\text{10}\) recommend that organisations should document their local procedures for follow up of non-attenders and unimmunised children and ensure that failsafe systems are in place to routinely check BCG eligibility and status at key milestones up to age five.

\(^{10}\) The North West Immunisation Quality Standards. NHS North West and the Health Protection Agency North West. 2010.
Improving service delivery and coverage of the neonatal BCG vaccination programme
SECTION 3
DEVELOPING ROBUST PATHWAYS
Improving service delivery and coverage of the neonatal BCG vaccination programme
3 Developing robust pathways

The majority of issues identified in this report can be addressed through the introduction of clear and robust local clinical pathways. This section of the report provides model care pathways and assurance frameworks for both community and hospital based models of delivery. It is recommended that these tools are used by both commissioners and providers to review and strengthen their neonatal BCG programme.

From the 1st April 2013 the responsibility for commissioning the BCG immunisation programme will transfer from PCTs to the National Commissioning Board (NHS CB). The Department of Health has published a service specification which sets out the quality and standards by which the NHS CB will commission local services. **This specification requires there to be improvement on the current number of eligible babies vaccinated and that organisations should work towards achieving 100% coverage.**

---

Improving service delivery and coverage of the neonatal BCG vaccination programme

Neonatal BCG Programme: Hospital Based Referral Pathway 0 to 5 years of age

Antenatal check
- Identification of future need for BCG
- Discuss BCG with mother and provide written information
- Record eligibility in mother’s medical record

Post Natal Ward
- Check/identify BCG eligibility
- BCG Vaccination discussed and offered

Vaccinated before discharge
- Document eligibility and vaccination details in relevant records eg:
  - Infants hospital medical record
  - Hand held record
  - Child Health Department
  - General Practitioner
  - Health Visitor

Not vaccinated before discharge
- Arrange referral/follow up appointment
- Document eligibility, details of referral
- Document any refusal, contraindication or postponement of vaccination
- Document details in relevant records eg:
  - Infants hospital medical record
  - Hand held record
  - Child Health Department
  - General Practitioner
  - Health Visitor

Failsafe process
Routinely check and document all infant’s eligibility and vaccination status with appropriate action at following milestones:

10 DAYS CHECK; MIDWIVES/HEALTH VISITORS:
Refer to Hospital/Community BCG clinic for vaccination

6 – 8 WEEK POSTNATAL CHECK; HEALTH VISITOR/GENERAL PRACTITIONER:
Refer to Hospital/Community BCG clinic for vaccination

AT EACH PRIMARY IMMUNISATIONS VISIT (8WKS/12WKS/16WKS); PRACTICE NURSE/GENERAL PRACTITIONER/HEALTH VISITORS: Refer to Hospital/Community BCG clinic for vaccination

12 MONTHS – ROUTINE MMR/HIB/MENC; PRACTICE NURSE/GENERAL PRACTITIONER/HEALTH VISITOR:
Refer to Hospital/Community BCG clinic for vaccination

CHILDREN OVER 12 MONTHS:
- PRE-SCHOOL BOOSTER VACCINES – HEALTH VISITOR/GENERAL PRACTITIONER:
- 2, 3 OR 4 YEARS HEALTH REVIEWS – HEALTH VISITOR/GENERAL PRACTITIONER:
- SCHOOL ENTRY CHECKS – SCHOOL NURSE ADVISOR:
- NEW PATIENT REGISTRATION CHECKS – PRACTICE NURSE/GENERAL PRACTITIONER:
  Refer to Hospital/Community BCG clinic for vaccination

# BCG Neonatal Programme: Hospital Based Assurance Framework Tool

## Section 3: Developing robust pathways

### 1. Antenatal Appointment(s)

<table>
<thead>
<tr>
<th>Actions</th>
<th>Rationale</th>
<th>Process</th>
<th>Person(s) responsible</th>
</tr>
</thead>
</table>
| **1.1 Identification of eligibility** | • Early identification of eligibility helps to improve uptake  
• Provides a record of eligibility:  
  to ensure babies are not missed once delivered.  
  to identify babies where the BCG vaccine may be contraindicated.  
  to ensure babies are not missed following a home birth.  
  to ensure babies are not missed if parents move area of residence.  
  to follow up unimmunised babies.  
  to establish accurate denominator figure for performance and uptake monitoring via KC50.  
• Provides the opportunity to discuss TB/BCG with parents, provide information both verbal and written, advice and answer any queries at booking and/or subsequent antenatal appointments. | • Identify future need for BCG using National guidance on eligibility as per Green Book.  
• Have access to list of countries with TB incidence of 40/100,000. Access to list of countries via HPA website: [http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733837507](http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733837507)  
• Discuss TB Infection and BCG vaccination with parents, (use interpreter if required) provide written information leaflet in appropriate language. |  |
| **1.2 Accurate recording and documentation** | • Ensure accuracy of data being entered and uploaded in both written and electronic records.  
• Ensure confidentiality is maintained  
• Enable follow up of all missed vaccinations.  
• Enable accurate denominator for BCG coverage data, via KC50.  
• Enable accurate data for audit purposes.  
• Reduce data errors. | • Record eligibility, including reason for eligibility in mothers written notes.  
• Record eligibility, including reason for eligibility on mothers electronic record. |  |
## 2. Postnatal: Ward

<table>
<thead>
<tr>
<th>Actions</th>
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</tr>
</thead>
</table>
| **2.1 Identification of eligibility for vaccination** | • Ensure all eligible babies are identified for vaccination before discharge.  
• Ensure all eligible babies with contraindications are identified and appropriate actions taken  
• Provide a record of eligibility for those babies not immunised before discharge: To follow up unimmunised babies. If parents move area of residence.  
• Provide another opportunity to discuss TB/BCG with parents, provide information both verbal and written, advice and answer any queries before vaccination or discharge.  
• To offer and administer BCG vaccination to new born babies before discharge to optimum protection at the earliest opportunity.  
• Check or identify need for BCG using National guidance on eligibility as per Green Book & NICE guidance.  
• Have access to list of countries with TB incidence of 40/100,000. Access to list of countries via HPA website: http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733837507  
• Discuss TB Infection and BCG vaccination with parents, (use interpreter if required) provide written information leaflet in appropriate language.  
• Have referral process in place to relevant departments/professional if required for vaccine contraindications, e.g. Born to HIV positive mothers | | |
| **2.2 BCG vaccination offered before discharge** | • To improve BCG vaccination coverage  
• Support the convenient access to the vaccination removing the need or inconvenience of having to return for additional appointment.  
• Following discussion gain informed consent to administer BCG vaccination or refusal.  
• Ensure only adequately trained and competent staff administer BCG vaccinations.  
• Ensure staff have knowledge of, work to, and have access to local and national policies e.g. Department of Health ‘Immunisation against infectious diseases’ (Green Book) online version: http://immunisation.dh.gov.uk/category/the-green-book/  
• Ensure staff have knowledge of, work to, and have access to local clinical referral pathways.  
• Offer and vaccinate eligible babies prior to discharge. | | |
| **2.3 Accurate recording and documentation** | • Ensure accuracy of data being entered and uploaded in both written and electronic records.  
• Ensure confidentiality is maintained  
• Enable follow up of all missed vaccinations.  
• Enable accurate denominator for BCG coverage data, via KC50.  
• Enable accurate data for audit purposes.  
• Reduce data errors.  
• Ensure the following is recorded and documented in: babies hospital record, hand held record, Child Health System, GP, Health Visitor:  
- Eligibility  
- Vaccination details including: BCG vaccination offered  
  Details of vaccine given & by whom  
  If vaccine given but not eligible, record why given  
  If eligible but not vaccinated state reason why:  
    • Refused vaccination  
    • Reason why BCG vaccination is contraindicated  
    • Reason why vaccination postponed  
    • Details of referral/appointments arranged | | |
### Section 3: Developing robust pathways

#### 2.4 Unimmunised, postponed, contraindicated and refused vaccination

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>• Ensure all unimmunised babies are followed up in a timely manner, offered vaccination to provide optimum protection at the earliest opportunity.</td>
<td></td>
<td>Ensure robust pathways and systems in place to:</td>
<td></td>
</tr>
<tr>
<td>• Ensure all home birth babies are followed up, offered and have access to BCG vaccination</td>
<td></td>
<td>• Record, appoint, follow up and recall unimmunised eligible babies at earliest opportunity following discharge or home birth.</td>
<td></td>
</tr>
<tr>
<td>• To have robust record of babies where BCG vaccination is contraindicated.</td>
<td></td>
<td>• Record/document all refusals.</td>
<td></td>
</tr>
<tr>
<td>• Identification of babies born to HIV Positive mothers</td>
<td></td>
<td>• Record/document any contraindications to BCG vaccination.</td>
<td></td>
</tr>
<tr>
<td>• To have a robust record of babies where BCG vaccination has been refused</td>
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</table>

#### 3. Failsafe process

<table>
<thead>
<tr>
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<th>Rationale</th>
<th>Process</th>
<th>Person(s) responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Identify all unimmunised eligible infants and children under 5 years</td>
<td>Ensure all unimmunised eligible infants and children under 5 years are identified and offered BCG vaccination to provide protection at the earliest opportunity</td>
<td>• Ensure robust pathways and systems are in place to routinely check all infants and children under 5 years for BCG eligibility and vaccination status at the following milestones and take appropriate action:</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>10 Days Check:</td>
<td>Midwives/Health Visitors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 – 8 Week Check:</td>
<td>Health Visitors/GPs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary Vaccinations (8/12/16 weeks):</td>
<td>Practice Nurse/GP/Health Visitor/Other Provider</td>
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<td>12 months vaccinations:</td>
<td>Practice Nurse/GP/Health Visitor/Other Provider</td>
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<td></td>
<td></td>
<td>Opportunistic contact:</td>
<td>Practice Nurse/GP/Health Visitor/Other Provider</td>
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<tr>
<td></td>
<td></td>
<td>New Patient Registrations:</td>
<td>Practice Nurse/GP</td>
</tr>
<tr>
<td>3.2 Referral of unimmunised infants and children under 5 years</td>
<td>• Ensure accuracy of data being entered and uploaded in both written and electronic records.</td>
<td>• Record eligibility, including reason for eligibility in mothers written notes.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ensure confidentiality is maintained</td>
<td>• Record eligibility, including reason for eligibility on mothers electronic record.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Enable follow up of all missed vaccinations.</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Enable accurate denominator for BCG coverage data, via KC50.</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Enable accurate data for audit purposes.</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Reduce data errors.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.3 Accurate recording and documentation

- Ensure accuracy of data being entered and uploaded in both written and electronic records.
- Ensure confidentiality is maintained.
- Enable follow up of all missed vaccinations.
- Enable accurate denominator for BCG coverage data, via KC50.
- Enable accurate data for audit purposes.
- Reduce data errors.

Ensure the following is recorded and documented in: babies hospital record, hand held record, Child Health System, GP, Health Visitor:

- Eligibility
- Vaccination details including:
  - BCG vaccination offered
  - Details of vaccine given & by whom
  - If vaccine given but not eligible, record why given

If eligible but not vaccinated state reason why:

- Refused vaccination
- Reason why BCG vaccination is contraindicated
- Reason why vaccination postponed
- Details of referral/appointments arranged

4. Training

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>• To ensure all staff have the skills and knowledge appropriate for role</td>
<td>• Ensure all staff are appropriately trained in line with the Health Protection Agency’s immunisation standards</td>
<td>• Ensure staff maintain competency i.e. keep up to date on at least an annual basis and keeping abreast of any changes to the programme</td>
<td>• Ensure staff have access to appropriate resources e.g. Green Book online version, NICE guidance, local policies.</td>
</tr>
<tr>
<td>• To ensure all staff are competent</td>
<td>• Ensure all staff have access to training</td>
<td>• Ensure staff maintain competency i.e. keep up to date on at least an annual basis and keeping abreast of any changes to the programme</td>
<td>• Ensure staff have access to appropriate resources e.g. Green Book online version, NICE guidance, local policies.</td>
</tr>
<tr>
<td>• To ensure a high quality provision of care</td>
<td>• Ensure competencies have been assessed by appropriate experienced assessor</td>
<td>• Ensure staff maintain competency i.e. keep up to date on at least an annual basis and keeping abreast of any changes to the programme</td>
<td>• Ensure staff have access to appropriate resources e.g. Green Book online version, NICE guidance, local policies.</td>
</tr>
<tr>
<td>• To ensure a safe delivery of care and service</td>
<td>• Ensure staff maintain competency i.e. keep up to date on at least an annual basis and keeping abreast of any changes to the programme</td>
<td>• Ensure staff have access to appropriate resources e.g. Green Book online version, NICE guidance, local policies.</td>
<td></td>
</tr>
<tr>
<td>• To prevent vaccine errors</td>
<td>• Ensure staff maintain competency i.e. keep up to date on at least an annual basis and keeping abreast of any changes to the programme</td>
<td>• Ensure staff have access to appropriate resources e.g. Green Book online version, NICE guidance, local policies.</td>
<td></td>
</tr>
<tr>
<td>• To prevent incidents and near misses with the clinical pathway</td>
<td>• Ensure staff have access to appropriate resources e.g. Green Book online version, NICE guidance, local policies.</td>
<td></td>
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</tr>
</tbody>
</table>

5. Audit

<table>
<thead>
<tr>
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<th>Rationale</th>
<th>Process</th>
<th>Person(s) responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>• To provide assurance that the processes and systems within the Neonatal BCG pathway are robust</td>
<td>• Identify person(s) responsible for leading audits</td>
<td>• Ensure results of audit are communicated to relevant professionals / organisations / agencies</td>
<td></td>
</tr>
<tr>
<td>• To proactively identify areas for improvement</td>
<td>• Ensure audits are devised and scheduled on a regular basis depending on local need</td>
<td>• Ensure results of audit are communicated to relevant professionals / organisations / agencies</td>
<td></td>
</tr>
<tr>
<td>• To identify and monitor actions required to improve the service/pathway</td>
<td>• Ensure audits are carried out to schedule or more frequently if required</td>
<td>• Ensure results of audit are communicated to relevant professionals / organisations / agencies</td>
<td></td>
</tr>
</tbody>
</table>

- Ensure identified and appropriate actions are taken following an audit within agreed timescales
### 6. Significant incidents or near misses

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>• To identify root causes of incidents</td>
<td>• To ensure prompt response and investigation of any incidents that occur</td>
<td>• Ensure a non-blame culture is in place to encourage significant event reporting.</td>
<td></td>
</tr>
<tr>
<td>• To ensure prompt response and investigation of any incidents that occur</td>
<td>• To identify lessons to be learned and actions to be implanted to in order prevent recurrence of incidents</td>
<td>• Ensure robust processes and procedures are in place to:</td>
<td></td>
</tr>
<tr>
<td>• To identify lessons to be learned and actions to be implanted to in order prevent recurrence of incidents</td>
<td>• Ensure robust processes and procedures are in place to:</td>
<td>Report and investigate errors and near misses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ensure all patients affected by any incident is informed immediately or as soon as practicable following the event.</td>
<td>To provide and record accurate findings</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ensure all affected patients are offered the opportunity to discuss any aspect of the incident.</td>
<td>To ensure appropriate actions are taken and concluded.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Share findings to relevant departments and professionals.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Ensure all patients affected by any incident is informed immediately or as soon as practicable following the event.</td>
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<td>• Ensure all affected patients are offered the opportunity to discuss any aspect of the incident.</td>
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</table>
Improving service delivery and coverage of the neonatal BCG vaccination programme

Neonatal BCG Programme: Community Based Referral Pathway 0 to 5 years of age

Antenatal check

- Identification of future need for BCG
- Discuss BCG with mother and provide written information
- Record eligibility in mother’s medical record

Post Nataal Ward

- Check/identify BCG eligibility
- BCG Vaccination discussed and offered

Prior to discharge

- Arrange referral/follow up appointment
- Document eligibility, details of referral
- Document any refusal, contraindication or postponement of vaccination
- Document details in relevant records eg:
  - Infant’s hospital medical record
  - Hand held record
  - Child Health Department
  - General Practitioner

Failsafe process

Routinely check and document all infant’s eligibility and vaccination status with appropriate action at following milestones:*

10 DAYS CHECK; MIDWIVES/HEALTH VISITORS:
Refer to Hospital/Community BCG clinic for vaccination

6 – 8 WEEK POSTNATAL CHECK; HEALTH VISITOR/GENERAL PRACTITIONER:
Refer to Hospital/Community BCG clinic for vaccination

AT EACH PRIMARY IMMUNISATIONS VISIT (8WKS/12WKS/16WKS); PRACTICE NURSE/GENERAL PRACTITIONER/HEALTH VISITORS: Refer to Hospital/Community BCG clinic for vaccination

12 MONTHS – ROUTINE MMR/HIB/MENC; PRACTICE NURSE/GENERAL PRACTITIONER/HEALTH VISITOR:
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CHILDREN OVER 12 MONTHS:
- PRE-SCHOOL BOOSTER VACCINES – HEALTH VISITOR/GENERAL PRACTITIONER:
- 2, 3 OR 4 YEARS HEALTH REVIEWS – HEALTH VISITOR/GENERAL PRACTITIONER:
- SCHOOL ENTRY CHECKS – SCHOOL NURSE ADVISOR:
- NEW PATIENT REGISTRATION CHECKS – PRACTICE NURSE/GENERAL PRACTITIONER:
  Refer to Hospital/Community BCG clinic for vaccination

*Adapted from Hall D, Eliman D, Health for All Children 4th Ed. Oxford University Press, December 2002
## BCG Neonatal Programme: Community Based Assurance Framework Tool

### 1. Antenatal Appointment(s)

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| **1.1 Identification of eligibility** | • Early identification of eligibility helps to improve uptake  
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  To ensure babies are not missed following a home birth.  
  If parents move area of residence.  
• To follow up unimmunised babies  
• Provides the opportunity to discuss TB/BCG with parents, provide information both verbal and written, advice and answer any queries at booking and/or subsequent antenatal appointments.  
• To establish accurate denominator figure for performance and uptake monitoring via KC50. | • Identify future need for BCG using National guidance on eligibility as per Green Book & NICE guidance.  
• Have access to list of countries with TB incidence of 40/100,000. Access to list of countries via HPA website: [http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733837507](http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733837507)  
• Discuss TB Infection and BCG vaccination with parents, (use interpreter if required) provide written information leaflet in appropriate language. |  |
| **1.2 Accurate recording and documentation** | • Ensure accuracy of data being entered and uploaded in both written and electronic records.  
• Ensure confidentiality is maintained  
• Enable follow up of all missed vaccinations.  
• Enable accurate denominator for BCG coverage data, via KC50.  
• Enable accurate data for audit purposes.  
• Reduce data errors. | • Record eligibility, including reason for eligibility in mothers written notes.  
• Record eligibility or to mother’s electronic record, if facility available record reason for eligibility. |  |
## 2. Postnatal: Ward

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| **2.1 Identification of eligibility for vaccination** | • Ensure all eligible babies are identified for vaccination before discharge.  
• Ensure all eligible babies with contraindications are identified and appropriate actions taken  
• Provide a record of eligibility for those babies not immunised before discharge: To follow up unimmunised babies.  
If parents move area of residence.  
• Provide another opportunity to discuss TB/BCG with parents, provide information both verbal and written, advice and answer any queries before vaccination or discharge. | • Check or Identify need for BCG using National guidance on eligibility as per Green Book & NICE guidance.  
• Have access to list of countries with TB incidence of 40/100,000. Access to list of countries via HPA website: [http://www.hpa.org.uk/web/HPAweb bHPAwebStandard/HPAweb_C/119573 3837507](http://www.hpa.org.uk/web/HPAweb bHPAwebStandard/HPAweb_C/119573 3837507)  
• Discuss TB Infection and BCG vaccination with parents, (use interpreter if required) provide written information leaflet in appropriate language.  
• Have referral process in place to relevant departments/professional if required for vaccine contraindications, e.g. Born to HIV positive mothers |  |
| **2.2 BCG vaccination offered before discharge** | • To have easy and timely access to BCG vaccination through community or hospital based clinics.  
• To offer and administer BCG vaccination to identified eligible new born babies at the earliest opportunity following discharge to provide optimum protection as soon as possible.  
• Ensure all home birth babies are followed up, offered and have access to the BCG  
• To have a robust record of babies immunised with BCG  
• To have robust record of babies where BCG vaccination is contraindicated.  
• To have a robust record of babies where BCG vaccination has been refused.  
• To improve BCG vaccination coverage | • Ensure robust pathways and systems in place to: Record, appoint, follow up and recall all eligible babies following discharge from hospital including home births.  
Record/document all refusals  
Record/document any contraindications to BCG vaccination.  
Any other relevant clinical information  
• Ensure robust communication systems are in place within the acute sector, community services, GPs and any other agencies, in particularly across area boundaries  
• Ensure clinics/sessions are easily accessible both in location and times held  
• Following discussion gain informed consent to administer BCG vaccination or refusal.  
• Ensure only adequately trained and competent staff administer BCG vaccinations.  
• Ensure staff have knowledge of, work to, and have access to local and national policies e.g. Department of Health ‘Immunisation against infectious diseases’ (Green Book) online version: [http://immunisation.dh.gov.uk/category /the-green-book/](http://immunisation.dh.gov.uk/category /the-green-book/)  
• Ensure staff have knowledge of, work to, and have access to local clinical referral pathways.  
• Offer and vaccinate eligible babies. |  |
2.3 Accurate recording and documentation

- Ensure accuracy of data being entered and uploaded in both written and electronic records.
- Ensure confidentiality is maintained.
- Enable follow up of all missed vaccinations.
- Enable accurate denominator for BCG coverage data, via KC50.
- Enable accurate data for audit purposes.
- Reduce data errors.

Ensure the following is recorded and documented in: babies hospital record, hand held record, Child Health System, GP, Health Visitor:
- Eligibility
- Vaccination details including:
  - BCG vaccination offered
  - Details of vaccine given & by whom
  - If vaccine given but not eligible, record why given
- If eligible but not vaccinated state reason why:
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  - Reason why vaccination postponed
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3. Failsafe process

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<td>Ensure robust pathways and systems are in place to routinely check all infants and children under 5 years for BCG eligibility and vaccination status at the following milestones and take appropriate action:</td>
<td>Midwives/Health Visitors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 Days Check:</td>
<td>Health Visitors/GPs</td>
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<tr>
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<td>Midwives/Health Visitors</td>
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<td></td>
<td></td>
<td>6 – 8 Week Check:</td>
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<td></td>
<td>Primary Vaccinations (8/12/16 weeks):</td>
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<td></td>
<td></td>
<td>12 months vaccinations:</td>
<td>Practice Nurse/GP/Health Visitor/Other Provider</td>
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<td></td>
<td>Opportunistic contact:</td>
<td>Practice Nurse/GP/Health Visitor/Other Provider</td>
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<tr>
<td></td>
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<td>New Patient Registrations:</td>
<td>Practice Nurse/GP</td>
</tr>
<tr>
<td>3.2 Referral of unimmunised infants and children under 5 years</td>
<td>To ensure there are robust systems in place to refer unimmunised babies/infants and children under 5 years to clinics for BCG vaccination, to provide protection at the earliest opportunity.</td>
<td>Ensure robust referral and appointment system is in place.</td>
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<td>Ensure robust systems are in place to follow up, refer and re-appoint non responders.</td>
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<td>Ensure clinics and clinic times are both accessible and held at convenient times for parents.</td>
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<td>Ensure roles and responsibilities of staff within the systems and within the Neonatal pathway are clearly identified.</td>
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<td>Ensure communication pathways are in place across all agencies both within and outside local areas in particular cross boundaries.</td>
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</table>
3.3 Accurate recording and documentation

- Ensure accuracy of data being entered and uploaded in both written and electronic records.
- Ensure confidentiality is maintained.
- Enable follow up of all missed vaccinations.
- Enable accurate denominator for BCG coverage data, via KC50.
- Enable accurate data for audit purposes.
- Reduce data errors.

Ensure the following is recorded and documented in: babies hospital record, hand held record, Child Health System, GP, Health Visitor:

- Eligibility
- Vaccination details including:
  - BCG vaccination offered
  - Details of vaccine given & by whom
  - If vaccine given but not eligible, record why given

If eligible but not vaccinated state reason why:

- Refused vaccination
- Reason why BCG vaccination is contraindicated
- Reason why vaccination postponed
- Details of referral/appointments arranged

4. Training

<table>
<thead>
<tr>
<th>Actions</th>
<th>Rationale</th>
<th>Process</th>
<th>Person(s) responsible</th>
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<tbody>
<tr>
<td>• To ensure all staff have the skills and knowledge appropriate for role</td>
<td>• To ensure all staff have the skills and knowledge appropriate for role</td>
<td>• Ensure all staff are appropriately trained in line with the Health Protection Agency’s immunisation standards</td>
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<tr>
<td>• To ensure all staff are competent</td>
<td>• To ensure all staff are competent</td>
<td>• Ensure all staff have access to training</td>
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<tr>
<td>• To ensure a high quality provision of care</td>
<td>• To ensure a high quality provision of care</td>
<td>• Ensure competencies have been assessed by appropriate experienced assessor</td>
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<tr>
<td>• To ensure a safe delivery of care and service</td>
<td>• To ensure a safe delivery of care and service</td>
<td>• Ensure staff maintain competency i.e. keep up to date on at least an annual basis and keeping abreast of any changes to the programme</td>
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</tr>
<tr>
<td>• To prevent vaccine errors</td>
<td>• To prevent vaccine errors</td>
<td>• Ensure staff have access to appropriate resources e.g. Green Book online version, NICE guidance, local policies.</td>
<td></td>
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<tr>
<td>• To prevent incidents and near misses with the clinical pathway</td>
<td>• To prevent incidents and near misses with the clinical pathway</td>
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</table>

5. Audit

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<th>Actions</th>
<th>Rationale</th>
<th>Process</th>
<th>Person(s) responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>• To provide assurance that the processes and systems within the Neonatal BCG pathway are robust</td>
<td>• To provide assurance that the processes and systems within the Neonatal BCG pathway are robust</td>
<td>• Identify person(s) responsible for leading audits</td>
<td></td>
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<tr>
<td>• To proactively identify areas for improvement</td>
<td>• To proactively identify areas for improvement</td>
<td>• Ensure audits are devised and scheduled on a regular basis depending on local need</td>
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</tr>
<tr>
<td>• To identify and monitor actions required to improve the service/pathway</td>
<td>• To identify and monitor actions required to improve the service/pathway</td>
<td>• Ensure audits are carried out to schedule or more frequently if required</td>
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<td>• Ensure identified and appropriate actions are taken following an audit within agreed timescales</td>
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<td>• Ensure results of audit are communicated to relevant professionals / organisations / agencies</td>
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</table>
### Section 3: Developing robust pathways

#### 6. Significant incidents or near misses

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<tr>
<th>Actions</th>
<th>Rationale</th>
<th>Process</th>
<th>Person(s) responsible</th>
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</table>
| • To identify root causes of incidents  
• To ensure prompt response and investigation of any incidents that occur  
• To identify lessons to be learned and actions to be implanted to in order prevent recurrence of incidents | | • Ensure a non-blame culture is in place to encourage significant event reporting.  
• Ensure robust processes and procedures are in place to:  
  Report and investigate errors and near misses  
  To provide and record accurate findings  
  To ensure appropriate actions are taken and concluded.  
  Share findings to relevant departments and professionals.  
• Ensure all patients affected by any incident is informed immediately or as soon as practicable following the event.  
• Ensure all affected patients are offered the opportunity to discuss any aspect of the incident. | |
Improving service delivery and coverage of the neonatal BCG vaccination programme
Improving service delivery and coverage of the neonatal BCG vaccination programme
4 Conclusion and summary of recommendations

Selective programmes are difficult to implement, however, with careful planning involving representatives from all organisations involved in the pathway, it is possible to deliver a safe and effective programme.

The following recommendations along with the assurance frameworks and flow charts are designed to help commissioners and providers review their neonatal BCG programme and achieve full coverage of their eligible population.

In thinking about who should action these recommendations we have named the new organisations that are currently being formed and will take up their full statutory responsibilities on the 1st April 2013. The four actions which will deliver the highest impact are listed first.

The recommendations are designed to help commissioners and providers achieve full coverage of the eligible population.
High Impact Actions

1. **Vaccination should take place prior to discharge from Maternity Units.**

   In order to maximise vaccine uptake, minimise inconvenience for parents and to provide maximum protection against TB, babies should be vaccinated prior to discharge.

   In areas of low TB incidence where pre-discharge vaccination poses service delivery difficulties, or in the event of a home birth or unplanned discharge, it is essential that systems are in place to offer and vaccinate babies as soon as possible after birth. An acceptable timeframe would be within 2 weeks of birth. Areas that operate a post-discharge policy need to closely monitor their DNA rates to ensure that the model of delivery is not restricting access to BCG vaccination.

   For Action By: Maternity Services and Commissioners

2. **Identification of eligibility must commence during antenatal care.**

   100% of babies should have a written record of whether they are/are not eligible for BCG vaccination. This needs to be identified during the antenatal period, communicated to all agencies involved in the pathway and recorded accurately in the clinical and handheld notes. This is vital in order to produce an accurate denominator figure for the KC50 data set, and to ensure that no eligible children are missed.

   For Action By: Maternity Services and Commissioners of the BCG Programme
3. **Clear and robust, local clinical pathways need to be developed and commissioned.**

This will ensure that quality of the programme is high, incidents are minimised, eligibility and uptake are accurately monitored and measures are taken to ensure that all vulnerable babies are vaccinated. Arrangements need to include cross boundary issues, such as the maternity care package for women from outside of the area.

*For Action By:* Providers and commissioners should use the model pathways and assurance tools within this document to strengthen their local programme.

4. **Put in place robust processes for incident reporting and Root Cause Analysis.**

Ensure that robust systems are in place for reporting incidents and near misses, and that all staff are up to date with relevant processes. Root Cause Analysis should be carried out to detail the underlying cause of the incident and lessons learnt should be anonymised and shared widely.

*For Action By:* This recommendation should be implemented by provider organisations who are responsible for delivering any part of the BCG pathway. The Immunisation and Patient Safety leads within the NHS CB Local Area Teams should ensure that any incidents are properly investigated and lessons learnt are shared.
Supporting Recommendations

1. **Robust systems need to be in place to follow up unimmunised children.**
   
The North West Immunisation Quality Standards recommend that organisations should document their local procedures for follow up of non-attenders and unimmunised children and ensure that failsafe systems are in place to routinely check BCG eligibility and status at key milestones up to age 5.

   For Action By: Immunisation Teams within the NHS CB Local Area Teams should ensure that robust failsafe systems are in place.

2. **Accurate, robust and consistent recording processes need to be developed.**
   
   It is essential that all IT databases, electronic and paper recording systems can support all of the required information throughout the pathway, e.g. Maternity, Child Health, Acute Trusts, Community Services, GP systems.

   For Action By: Providers and commissioners need to assure that these processes are in place.

3. **Ensure that parents are able to give informed consent.**
   
   Information should be made readily available in a variety of formats and languages for prospective parents/parents/ families/ individuals, and the opportunity to discuss concerns or issues provided.

   For Action by: Provider organisations
4. **Ensure that systems are in place for regular audit.**

Regular audits should be completed in order provide assurance that the service and systems are in place to deliver an effective neonatal BCG pathway.

For Action By: Providers should regularly audit the part of the pathway which they deliver. The Immunisation Team, within the NHS CB Local Area Team should audit the entire pathway, including across providers and geographic boundaries, as appropriate.

5. **Ensure that staff are trained in line with the National Minimal Standards for Immunisation.**

All staff need to be skilled, knowledgeable and competent at the level appropriate for their role. This will range from raising awareness of TB infection and BCG vaccination to knowledge around the delivery of care including the administration of the intradermal BCG vaccination.

For Action By: Commissioners should include this requirement within their service specifications and providers should ensure that training is sourced in line with the National Minimal Standards.

6. **Local policies should clearly identify roles and responsibilities.**

These include; a named person responsible for the BCG programme and the named lead within each area, clinic or agency.

For Action By: All providers and commissioners.
7. **Share information with relevant agencies.**

Communication and information sharing is essential to ensure the safe passage of children throughout the health care system as well as to support a robust clinical pathway and to ensure that babies and children are easily followed up and not lost in the system, particularly when families move areas or GPs.

For Action By: All organisations should ensure that have a written policy for sharing data with relevant organisations and that implementation of the policy is regularly audited.

8. **100% of eligible babies should be vaccinated.**

In line with the NHS constitution and the new specification for the NHS CB, local plans should aim to achieve 100% coverage of eligible babies.

For Action By: Commissioners and Providers.
APPENDIX 1

QUESTIONNAIRE
## North West Neonatal BCG Programme & Service Delivery Questionnaire 2012

### Section 1: Contact Details

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### Section 2: Population (1/4/10 – 31/3/11)

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<th>No of Eligible Neonates 0–12mths</th>
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<th>No of Eligible Neonates 0–12mths Immunised</th>
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<th>% Uptake of Eligible 0–12mths (if available)</th>
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### Section 3: Service Delivery

**What settings are BCGs given?**

**Who administers BCGs?**

**How are eligible babies identified?**

- Antenatally by Midwife: Yes / No
- Postnatally by Midwife: Yes / No
- Health Visitor at 1st visit: Yes / No
- Paediatrician: Yes / No
- Other, please state:

**How are unimmunised infants up to and including school entry followed up, including movements into the local area or from outside the UK?**

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Appendix 1: Questionnaire

Section 4: Training and Education

What training is available for administering BCG vaccinations?

Who delivers the training?
Where is the training delivered?
To which professionals is the training available?

Section 5: Incidents and near misses – last two years

What are the key themes and lessons learnt from any incidents and how has this influenced service review?

Section 6: Audits

Please provide a summary of any BCG audits performed over the last 2 years:

How has this influenced practice/service delivery?

Please use additional sheets if required

Thank you very much for taking the time to complete this form. If you have any questions please contact me on:
Lynn Simpson, Immunisation Lead Nurse, Oldham Council, 0161 770 4681
Please return the questionnaire to: lynn.simpson1@nhs.net by 18th April 2012
TB is increasing. Let’s make the North West TB free.

www.tbsummit.wordpress.com