

Public health functions to be exercised by the NHS Commissioning Board

Service specification No. 4

Immunisation against diphtheria, tetanus, poliomyelitis, pertussis and Hib

November 2012



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Service specification No.4

This is a service specification within Part C of the agreement "Public health functions to be exercised by the NHS Commissioning Board" dated November 2012 (the "2013-14 agreement").

The 2013-14 agreement is made between the Secretary of State for Health and the National Health Service Commissioning Board (NHS CB) under section 7A of the National Health Service Act 2006 (the 2006 Act) as amended by the Health and Social Care Act 2012.

This service specification is to be applied by the NHS CB in accordance with the 2013-14 agreement. An update to this service specification may take effect on an agreed date as a variation made in accordance with the 2013-14 agreement.

This service specification is not intended to replicate, duplicate or supersede any other legislative provisions that may apply.

The 2013-14 agreement including all service specifications within Part C is available at www.dh.gov.uk/publications

1. Purpose of the immunisation programme

- 1.1. This document relates to the DTap/IPV/Hib vaccine that protects children from developing the following preventable childhood diseases; diphtheria, tetanus, poliomyelitis, pertussis (whooping cough) and *Haemophilus influenzae* type B (Hib). This vaccine forms part of the national childhood immunisation programme, which aims to prevent children from catching vaccine preventable childhood diseases that are associated with significant mortality and morbidity. The purpose of the service specification is to enable the NHS Commissioning Board (NHS CB) to commission DTaP/IPV/Hib immunisation services of sufficient quantity and quality to prevent the infections and outbreaks caused by these organisms. This means high levels of coverage across England as well as within upper tier local government areas and within the context of populations with protected characteristics as defined by the Equality Act 2010.
- 1.2. This specification forms two distinct parts. Part one (sections 1 and 2) provides a brief overview of the vaccines including the disease they protect against, the context, evidence base, and wider health outcomes.

Part 2 (sections 3, 4 and 5) sets out the arrangements for:

- front-line delivery
- the expected service and quality indicators, and
- the standards associated with the programme.

These underpin national and local commissioning practices and service delivery.

1.3. The existing, highly successful programme provides a firm platform on which local services can develop and innovate to better meet the needs of their local population and work towards improving outcomes. This specification is intended to inform a consistent and equitable approach to the provision of the commissioning and delivery of the DTaP/IPV/Hib vaccines across England. However, it is important to note that this programme can change and evolve in light of emerging best practice and scientific evidence. NHS CB and providers will be

required to reflect these changes accordingly in a timely way as directed by the national schedule.

1.4. *Immunisation against infectious disease* (known as 'The Green Book'), a UK document, issued by Public Health England provides guidance and the main evidence base for all immunisation programmes. This service specification must be read in conjunction with the electronic version of the Green Book, Chief Medical Officer (CMO) letters, Director of Immunisation letters, and any guidance issued by PHE or DH, and reflected in the commissioning of immunisation programmes. This specification must also be read in conjunction with additional evidence, advice and recommendations issued by the JCVI (Joint Committee on Vaccination and Immunisation).

(www.dh.gov.uk/greenbook)

(www.dh.gov.uk/ab/JCVI)

1.5. This service specification is not designed to replicate, duplicate or supersede any relevant legislative provisions that may apply e.g. the Health and Social Care Act 2012. The specification will be reviewed annually and amended in line with any new recommendations or guidance, and in line with wider reviews of the Section 7A agreement.

2. Population needs

Background

2.1 Immunisation is one of the most successful and cost effective health protection interventions and is a cornerstone of public health. High immunisation rates are key to preventing the spread of infectious disease, complications and possible early death among individuals and protecting the population's health through both individual and herd immunity. The DTaP/IPV/Hib vaccine is routinely used to protect against diphtheria, tetanus, pertussis (whooping cough), polio and Hib related infections. This vaccine was introduced in 2004 and replaced a similar combination vaccine. Current immunisation rates for England are at an all time high of 94.7% (June 2012).

Diphtheria

2.2 Diphtheria is a serious disease that usually starts with infection of the upper respiratory tract or the skin. The organism releases diphtheria toxin which can quickly cause cardiac, respiratory and neurological complications. In severe cases, it can be fatal and the case-fatality ratio remains high despite modern treatments. Prior to the 1940s, diphtheria was a common disease in the UK with more than 61,000 cases notified in 1940. The introduction of immunisation in the 1940s resulted in a dramatic fall in incidence and less than thirty cases have been reported in the last ten years. Most recently, reported cases have been imported from the Indian subcontinent or Africa, where diphtheria remains endemic, emphasising the importance of the vaccination.

Tetanus

2.3 Tetanus is a painful disease that causes muscle spasm and respiratory paralysis. It is caused when tetanus spores that are found in soil and manure get into the body through open cuts or burns. Tetanus affects the nervous system and can be fatal. The vaccine was nationally introduced in 1961 and the disease had almost disappeared in children under the age of 15 by the 1970s. Between 1984 and 2004, there were around 200 reported cases of tetanus, largely in the over-45 population, with the highest incidence in adults over 65. There have also been reported cases of tetanus in injecting drug users. Tetanus can never be eradicated because the spores are commonly present in the environment, including soil. Tetanus is not spread from person to person.

Poliomyelitis (polio)

2.4 Polio is a virus that attacks the nervous system and can lead to permanent paralysis, usually of the lower limbs. If the respiratory muscles are affected then it can be fatal. Before the polio vaccine was introduced, as many as 8000 cases of polio occurred in the UK in epidemic years (the early 1950s). The last case of natural polio acquired in the UK was in 1984. By 2004, polio remained endemic in only a small number of developing countries. Although the risk of importation to the UK is low, vaccination continues to be important.

Pertussis (whooping cough)

2.5 Whooping cough is a respiratory disease that causes paroxysms of coughing which may be followed by the characteristic whoop. It is not usually serious in older children, but leads to a prolonged and irritating cough. In babies under one year old the infection can be very serious and sometimes fatal. Before the introduction of immunisation in the 1950s, the average annual number of notifications exceeded 120,000 in the UK. Since the mid 1990s, vaccine coverage has been consistently over 90% by the second birthday, with fewer than 6000 notifications per year. In 2011, there were just over 1100 reported cases.

Haemophilus influenzae type b (Hib)

2.6 Hib is an infection that can cause invasive infections such as septicaemia, septic arthritis, pneumonia and meningitis. All of these illnesses can be fatal. Individuals can carry Hib bacteria in their nose and throat without showing signs of the disease. Hib is spread through coughing, sneezing or close contact with a carrier. Since the introduction of the Hib immunisation in the UK, disease incidence has fallen. In 2010, there were only 30 reported cases of confirmed invasive Hib infection in the England and Wales.

DTaP/IPV/Hib vaccine - key details

- 2.7 The key details are that:
 - DTaP/IPV/Hib was introduced in 2004 replacing a combination of similar vaccines.

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- DTaP/IPV/Hib has a strong evidence base, an excellent safety profile and is highly effective
- as of June 2012, coverage in England at 12 months stood at 94.7% (regional variation 90.7 – 96.6%). (HPA 2012)
- three doses of the vaccine are needed to provide maximum protection for infants against these diseases. Booster doses are required for longer-term protection
- continued high vaccine coverage is required in order to provide both individual and herd immunity.

3. Scope

Aims

3.1 The aim of the DTaP/IPV/Hib vaccine is to protect all children from five preventable childhood infections that are associated with significant mortality and morbidity.

Objectives

- 3.2 The aim will be achieved by delivering a population-wide, evidence-based, immunisation programme that:
 - identifies the eligible population and ensures effective timely delivery with optimal coverage based on the target population set out in paragraph 4.6
 - is safe, effective, of a high quality and is independently monitored
 - is delivered and supported by suitably trained, competent healthcare professionals who participate in recognised 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.

Direct health outcomes

- 3.3 In the context of health outcomes, the DTaP/IPV/Hib vaccine programme aims to:
 - protect the health of individuals and the wider population
 - reduce the number of preventable infections and their onward transmission

- achieve high coverage across all groups identified
- minimise adverse physical/psychological/clinical aspects of immunisation (e.g. anxiety, adverse reactions).

Baseline vaccine coverage

3.4 Local services should ensure that they maintain and improve current immunisation coverage (with reference to vaccine coverage public health outcomes framework indicators) with the aspiration of 100% of relevant individuals being offered immunisation in accordance with the Green Book and other official DH/PHE guidance.

Wider health outcomes

- 3.5 The national immunisation programme supports the commitment made in the *NHS Constitution* that everyone in England has 'the right to receive the vaccinations that the Joint Committee on Vaccination and Immunisation [JCVI] recommends that you should receive under an NHS provided national immunisation programme.'
- 3.6 This right is set out in the *NHS Constitution* that was originally published in 2009, and renewed in 2012. The right is underpinned by law (regulations and directions), the regulations require the Secretary of State for Health to fund and implement any cost-effective recommendation made by JCVI where the Secretary of State has asked JCVI to look at a vaccine. Where JCVI makes a recommendation that the vaccine should be offered as part of a national immunisation programme, the DH will fund and implement the programme.
- 3.7 The programme can be universal like Men C or a targeted programme like hep B, and those who fit the JCVI criteria (for example, HPV criteria include age and gender) will have a right to receive the vaccine. To balance this right, the *NHS Constitution* introduced a new patient responsibility that states 'You should participate in important public health programmes such as vaccination'. This does not mean that vaccination is compulsory. It simply reminds people that being vaccinated is a responsible way to protect your own health, as well as that of your family and community.

- 3.8 The NHS Health and Social Care Act 2012, is wholly consistent with the principles of the *NHS Constitution* and places new legal duties which require the NHS CB and clinical commissioning groups (CCGs) to actively promote it.
- 3.9 The DTaP/IPV/Hib vaccination also forms part of the childhood immunisation programme a key part of the Healthy Child Programme (HCP). The HCP is an early intervention and prevention public health programme that lies at the heart of universal services for children and families. The HCP offers all families a programme of screening tests, immunisations, developmental reviews, information and guidance to support parenting and healthy choices all services families need to receive if they are able to achieve their optimal health and wellbeing. NHS CB should therefore cross-reference to the provisions of the HCP. The service specification for the HCP is set out elsewhere in Part C of the agreement.
- 3.10 The programme also works towards achieving the World Health Organization's (WHO) *Global immunisation vision and strategy* (2006) which is a ten-year framework aimed at controlling morbidity and mortality from vaccine preventable diseases. The WHO has a strategy to eradicate poliomyelitis globally.

4. Service description / care pathway

Roles

- 4.1 The NHS CB will be responsible for the commissioning of local provision of immunisation services and the implementation of new programmes though general practice and all other providers. It will be accountable to the Secretary of State for Health for delivery of those services. Other bodies in the new comprehensive health system will also have key roles to play and it will be vital to ensure strong working relationships.
- 4.2 Public Health England (PHE) will undertake the purchase, storage and distribution of vaccines at a national level. It will also hold the coverage and surveillance data and have the public health expertise for analysing the coverage of, and other aspects of, immunisation services. It will also be responsible for the implementation of the national immunisation schedule, including the national communication strategy, setting standards and following recommendations as advised by JCVI and other relevant organisations.
- 4.3 Directors of public health (DsPH) based in local authorities play a key role in providing independent scrutiny and challenge and will publish reports on the health of the population in their areas, which could include information on local immunisation services and views on how immunisation services might be improved. The NHS CB should expect to support DsPH in their role by sharing information as appropriate and according to need, for example vaccine coverage within communities (such as, among populations with protected characteristics as defined by the Equalities Act).

Local service delivery

4.4 The delivery of immunisation services at the local level is based on evolving best practice that has been built since vaccinations were first introduced more than a hundred years ago. This section of the document specifies the high-level operational elements of the DTaP/IPV/Hib vaccine programme, based on that best practice that the NHS CB must use to inform local commissioning, contracts and service delivery. There is also scope to enable NHS CB and providers to enhance and build on specifications to incorporate national or local service aspirations that may include increasing local innovation in service delivery. It is essential, in order to promote a nationally aligned, high-quality programme focusing on

improved outcomes, increasing coverage and local take-up that all the following core elements are included in contracts and specifications.

4.5 The following elements must be covered:

- target population
- vaccine schedule
- consent
- assessment prior to immunisation
- vaccine administration
- vaccine storage and wastage
- vaccine ordering
- documentation
- reporting requirements (including adverse events and vaccine preventable diseases)
- staffing and training
- premises and equipment
- patient involvement
- governance
- service improvement
- interdependencies
- local communication strategies.

Most of these elements are covered in the Green Book, which must be read in conjunction with this service specification (www.dh.gov.uk/greenbook)

Target population

- 4.6 Providers will be required to make the DTaP/IPV/Hib vaccine available to:
 - all children both registered and unregistered with a GP, as part of the childhood immunisation programme's primary immunisation course
 - children up to the age of ten years, who have no immunisation, or incomplete
 immunisation status as indicated in the Green Book. This will include those in eligible
 age groups who move into the area, school or are newly registered with general
 practice after the initial invitations have been issued. Further information on those
 with uncertain or incomplete immunisation status can be obtained from the PHE
 website
 - there is no upper age limit for vaccination, and those at particular risk may require vaccination with a different product, even if above the age of the current national programme. Protection against diphtheria, tetanus and polio should be offered at any age. Protection against Hib and pertussis should be offered routinely to unvaccinated or partially vaccine individuals up to the age of ten years, or for those at particular risk as outlined in the Green Book
 - every appropriate opportunity should be taken to offer immunisation to individuals who have missed the routine schedule
 - children from hard to reach groups, for example gypsy traveller children or looked after children, who may require special and specific arrangements
 - children moving into the country from abroad who have incomplete or unknown vaccination status.

4.7 In addition:

- healthcare workers with direct patient contact should have their immunisation status checked and where needed should be offered appropriate immunisations through their occupational health service
- all new employees should undergo a pre-employment health assessment with their occupational health service, which should include a review of immunisation needs.

- arrangements should be in place to ensure that vaccine can be administered promptly as directed by PHE for susceptible contacts of cases or for outbreak control
- local 'catch-up' arrangements should be available to prevent outbreaks in areas with poor uptake
- health professionals must take all opportunities, particularly those contacts during the early years, to check vaccination status and remind parents and carers of the importance of immunisations and the need to have them at the appropriate times
- the vaccination status of every child or young person should be assessed at every contact including the time of each booster vaccination (for example, the pre-school and teenage booster) and if incomplete or missed then any necessary doses of vaccine should be offered (as outlined in the Green Book).

Vaccine schedule

4.8 A locally commissioned service should immunise the target population following the national vaccination schedule:

Dose 1	Two months
Dose 2	Three months
Dose 3	Four months

The vaccination status of every child or young person should be checked and missing doses offered as appropriate to ensure that everyone has completed an age-appropriate course. (http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1194947406156). Further information on scheduling is available in the relevant chapters of the Green Book (www.dh.gov.uk/greenbook).

4.9 In order to provide early protection, providers should aim to complete the schedule as near as possible to the recommended ages. Sufficient immunisation appointments must be available so that individuals can receive vaccinations on time – waiting lists are not acceptable.

Consent

- 4.10 Chapter 2 in the Green Book provides up to date and comprehensive guidance on consent, which relates to both adults and the immunisation of younger children. There is no legal requirement for consent to be in writing but sufficient information should be available to make an informed decision.
- 4.11 Therefore providers will be required to ensure that:
 - consent is obtained prior to giving any immunisation
 - consent is given voluntarily and freely. Individuals giving consent on behalf of young children must be capable of consenting to the immunisation in question
 - for young children not competent to give or withhold consent, such consent can be given by a person with parental responsibility, provided that person is capable of consenting to the immunisation in question and is able to communicate their decision. Although a person may not abdicate or transfer parental responsibility, they may arrange for some or all of it to be met by one or more persons acting on their behalf
 - relevant resources (leaflets/factsheets etc) in an appropriate format are to be used as part of the consent process to ensure that all parties (both parents/and where appropriate, individuals) have all the available information about the vaccine and the protection it offers. Professionals should be sufficiently knowledgeable about the disease and vaccine and to be able to answer any questions with confidence
 - the patient has access to the patient information leaflet (PIL).

Requirements prior to immunisation

- 4.12 As part of the commissioning arrangements NHS CB is required to ensure that the providers adhere to the following. That providers have:
 - systems in place to assess eligible individuals for suitability by a competent individual prior to each immunisation

- assessed each individual to ensure they are suitable for immunisation
- assessed the immunisation record of each individual to ensure that all vaccinations are up to date
- systems in place to identify, follow up and offer immunisation to eligible individuals.
 In some areas, contracts may be in place for Child Health Information Systems
 (CHIS) to invite children for vaccination. (For further information on CHIS see the service specification elsewhere in Part C of this agreement)
- arrangements in place that enable them to identify and recall under or un-immunised individuals and to ensure that such individuals are immunised in a timely manner. In some areas, the CHIS will supply practices with lists of unimmunised children
- systems in place to actively identify those in clinical risk groups and to optimise
 access for those in hard to reach groups (e.g. gypsy travellers, looked after children)
- arrangements in place to inform neighbouring areas when children move into their area
- arrangements in place to access specialist clinical advice so that immunisation is only withheld or deferred where a valid contraindication exists
- practices that do their own scheduling should ensure their systems allow them to fulfil the actions outlined above.

Vaccine administration

- 4.13 As part of the commissioning arrangements, NHS CB is required to ensure the provider adheres to the following:
 - professionals involved in administering the vaccine, have the necessary skills, competencies and annually updated training with regard to vaccine administration and the recognition and initial treatment of anaphylaxis
 - regular training and development (taking account of national standards) is routinely available. Training is likely to include diseases, vaccines, delivery issues, consent, cold chain, vaccine management and anaphylaxis. See section 5 of this document for reference to the HPA training standards

- the professional lead should ensure that all staff are legally able to supply and/or administer the vaccine by either:
 - working under an appropriate patient group direction (PGD)
 - working from a patient specific direction (PSD)/prescriptions
 - working as a nurse prescriber (if appropriate)

Vaccine storage and wastage

- 4.14 Effective management of vaccines is essential to ensure patient safety and reduce vaccine wastage. NHS CB should ensure that providers will:
 - have effective cold chain and administrative protocols that reduce vaccine wastage to a minimum reflecting DH national protocols(chapter 3 of the Green Book and the Guidelines for maintaining the vaccine cold chain) and includes:
 - how to maintain accurate records of vaccine stock;
 - how to record vaccine fridge temperatures;
 - what to do if the temperature falls outside the recommended range
 http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_130276.pdf
 and the ImmForm helpsheet http://immunisation.dh.gov.uk/files/2012/01/ImmForm-Helpsheet-18-v1.1-Jan-2012.pdf
 - ensure that all vaccines are delivered to an appointed place
 - ensure that at least one named individual is responsible for the receipt and safe storage of vaccines in each general practice or other appropriate location
 - ensure that an approved vaccine fridge is available for the storage of all vaccines
 - ensure that approved pharmaceutical grade cold boxes are used for transporting vaccines
 - ensure that only minimum stock levels (two to four weeks maximum) of vaccine will be held in local fridges, to reduce the risk of wastage caused by power cuts or inadvertent disconnection of fridges from power supplies
 - report any cold chain failures to the local coordinator, PHE and NHS CB.

4.15 Vaccine supply will be controlled by the PHE vaccine supply department.

Vaccine ordering

- 4.16 All centrally procured vaccines must be ordered via the online ordering system the ImmForm service.
- 4.17 Vaccines can be ordered by:
 - GP practices / hospital pharmacies for delivery to their location
 - appropriate providers (with a wholesale dealer's licence) for delivery to their location.
- 4.18 Further information
 - Providers can register to order vaccine via ImmForm:
 - online: http://www.immform.dh.org.uk/registration
 - via email: Send your request to immform@dh.gsi.gov.uk
 - Further help is available at:
 - http://immunisation.dh.gov.uk/immform-helpsheets/
 - ImmForm HelpDesk 0844 376 0040

Documentation

4.19 Accurate recoding of all vaccines given and good management of all associated documentation is essential. Providers should ensure that:

- the patient's medical records are updated with key information that includes:
 - any contra- indications to the vaccine and any alternative offered
 - any refusal of an offer of vaccination
 - details of consent and the relationship of the person who gave the consent
 - the batch number, expiry date and the title of the vaccination
 - the date of administration of the vaccine
 - the site and route of administration
 - any adverse reactions to the vaccine
 - name of immuniser.
- the parent-held record should be updated or the patient should be given an individual record which should include:
 - the batch number, expiry date and the title of the vaccination
 - the date of administration of the vaccine
 - the site and route of administration
 - any adverse reactions to the vaccine
 - name of immuniser.

Reporting requirements

4.20 The collection of data is essential. It has several key purposes including the local delivery of the programme and the monitoring of coverage at national and local level, outbreak investigation and response as well as providing information for Ministers and the public. Indepth analysis underpins any necessary changes to the programme, which may include the development of targeted programmes or campaigns to improve general coverage of the vaccination.

- The provider must ensure that information on vaccines administered is documented and that this information is also transferred to the general practice record. In most areas, the CHIS system will inform GPs that a patient on their list has been immunised via the current vaccination history printout.
- The provider must ensure that information on vaccines administered is submitted directly to any relevant population immunisation register, in most areas, the Child Health Information System (CHIS). The latter is a patient administration system that provides a clinical record for individual children, it records the vaccination details of each individual child resident in the local area from birth.
- Following an immunisation session/clinic or individual immunisation, local arrangements should be made for the transfer of data onto the relevant CHIS.
 Where possible this should aim to be within two working days.
- Arrangements will also be required to inform neighbouring areas when children resident in their area are immunised outside their local area through the CHIS system.
- Any reported adverse incidents, errors or events during or post vaccination must follow determined procedures. In addition, teams must keep a local log of reports and discuss such events with the local immunisation coordinator.
- Suspected adverse reactions must be reported to the MHRA via the Yellow Card Scheme www.mhra.gov.uk/yellow card, including the brand number and batch number in addition to following local and nationally determined procedures, including reporting through the NHS.
- Providers are required to report cases of suspected vaccine preventable diseases to the local PHE centre.
- Any cold chain failures must be documented and reported to the local coordinator and PHE/ImmForm as appropriate.

 The provider must report any significant concerns it has in relation to the delivery of services, including reports of serious failings, incidents or major risks to enable the NHS CB to inform the DH. This is in line with Part A of the Section 7A agreement.

Staffing including training

- 4.21. To deliver a national immunisation programme it is essential that all staff are appropriately trained. NHS CB must ensure that providers:
 - have an adequate number of trained, qualified and competent staff to deliver a high quality immunisation programme in line with best practice and national policy
 - are covered by appropriate occupational health policies to ensure adequate protection against vaccine preventable diseases (e.g. measles, flu and hepatitis B)
 - meet the HPA National minimum standards in immunisation training 2005 either through training or professional competence and to ensure that annual training is offered to all staff
 - have had training (and annual updates) for all staff with regard to the recognition and initial treatment of anaphylaxis
 - ensure that all staff are familiar with and have online access to the latest edition of the Green Book
 - ensure that all staff are registered to receive Vaccine Update (http://immunisation.dh.gov.uk/vu-190-jun-12/)
 - ensure that all staff are aware of the importance of and can access the CMO/CNO/CPhO letters that announce changes to or new programmes, the Director of Immunisation letters, and additional guidance on the (PHE) website.

Premises and equipment

4.22 Appropriate equipment and suitable premises are needed to deliver a successful immunisation programme. NHS CB must ensure that providers have:

- suitable premises and equipment provided for the immunisation programme
- disposable equipment meeting approved standards
- appropriate disposal arrangements in place (e.g. approved sharps bins etc)
- appropriate policies and contracts in place for equipment calibration, maintenance and replacement
- anaphylaxis equipment accessible at all times during an immunisation session and all staff should have appropriate training in resuscitation
- premises that are suitable and welcoming for young children, their carers and all individuals coming for immunisation including those for whom access may be difficult.

Governance

- 4.23 It will be essential to ensure that there are clear lines of accountability and reporting to assure the on-going quality and success of the national programme. Commissioning arrangements will ensure that:
 - there is a clear line of accountability from local providers to NHS CB
 - at the provider level there is appropriate internal clinical oversight of the programme's management
 - provider governance is overseen by a clinical lead, for example the local immunisation coordinator and the Immunisation system leader
 - there is regular monitoring and audit of the immunisation programme, including the
 establishment and review of a risk register as a routine part of clinical governance
 arrangements, in order to assure the NHS CB of the quality and integrity of the
 service
 - for providers to supply evidence of clinical governance and effectiveness arrangements on request for the NHS CB or its local offices
 - PHE will alert NHS CB to any issues that need further investigation
 - the provision of high quality, accurate and timely data to relevant parties including PHE, NHS CB and local authorities (LAs) is a requirement for payment

- data will be analysed and interpreted by PHE and any issues that arise will be shared quickly with NHS CB and others
- local co-ordinators will document, manage and report on programmatic or vaccine administration errors, including serious untoward incidents (SUIs), and escalate as needed. This may include involving the NHS CB and relevant partners and where appropriate for the NHS CB to inform DH
- That NHS CB press office will liaise closely with DH, PHE and MHRA press offices regarding the management of all press enquiries
- have a sound governance framework in place covering the following:
 - information governance/records management
 - equality and diversity
 - user involvement, experience and complaints
 - failsafe procedures
 - communications
 - on-going risk management
 - health and safety
 - insurance and liability.

Service improvement

- 4.24 NHS CB and providers will wish to identify areas of challenge within local vaccination programmes and develop comprehensive, workable and measurable plans for improvement. These may be locally or nationally driven and are likely to be directed around increased coverage and may well be focused on particular hard to reach groups. Suggestions for improving service and uptake include:
- 4.25 NICE guidelines (NICE 2009 *Reducing differences in the uptake of vaccines*) highlight evidence to show that there are particular interventions, which can increase immunisation rates and reduce inequalities. Providers should also consider the following suggestions:

- up-to-date patient reminder and recall systems (particularly for those being vaccinated in a non-school setting)
- well-informed healthcare professionals who can provide accurate and consistent advice
- high-quality patient education and information resources in a variety of formats (leaflets, internet forums and discussion groups)
- effective performance management of the commissioned service to ensure it meets requirements
- local coordinators or experts based in PHE to provide expert advice and information for specific clinical queries
- for NHS CB and providers to have clear expectations to improve and build upon existing immunisation rates.

Interdependencies

4.26 The immunisation programme is dependent upon systematic relationships between stakeholders, which include vaccine suppliers, primary care providers, NHS CB etc. The immunisation co-ordinator, based in the Local Area Team (LAT) of the NHS CB, will be expected to take the lead in ensuring that inter-organisational systems are in place to maintain the quality and the immunisation pathway. This will include, but is not limited to:

- ensuring all those involved in pathway are sure of their roles and responsibilities
- developing joint audit and monitoring processes
- agreeing joint failsafe mechanisms, where required, to ensure safe and timely processes along the whole pathway
- contributing to any initiatives led by the NHS CB/Public Health England to develop/improve the childhood immunisation programme
- maintaining an up-to-date population-based immunisation register to provide coverage data and for outbreak investigation and response
- maintaining robust electronic links with IT systems and relevant organisations along the pathway

Public health functions to be exercised by the NHS Commissioning Board

- local feedback and review of coverage and disease surveillance data
- clear description of and access to advice on the arrangements for provision of and reimbursement for immunisation services
- communication strategies.

Communication strategies

4.27 It will be important to develop and implement communication strategies to support both the introduction of new vaccines and the maintenance of existing programmes. Such strategies may be developed on a national basis. Local strategies may also be developed to further support national programmes or address specific issues.

5. Service standards and guidance

- 5.1 To support the delivery of an effective and high quality childhood immunisation programme NHS CB and providers must refer to and make comprehensive use of the following key resources:
 - Green Book Immunisation against infectious disease (DH 2006)
 www.dh.gov.uk/publichealth.immunisation,greenbook
 - Quality criteria for an effective immunisation programme (HPA, 2012)
 http://www.hpa.org.uk/Publications/InfectiousDiseases/Immunisation/1207Qualitycrit eriaforimmprogramme/
 - National minimum standards for immunisation training (HPA June 2005)

http://www.hpa.org.uk/Publications/InfectiousDiseases/0506NationalMinimumStandardsforImmunisationTraining

Protocol for ordering, storing and handling vaccines (DH Sept 2010)

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH 120010

National Patient Safety Agency – Advice on vaccine cold storage

http://www.nrls.npsa.nhs.uk/EasySiteWeb/getresource.axd?AssetID=66112&type=full&servicetype=.....

Official immunisation letters (DH)

http://immunisation.dh.gov.uk/category/letters/

Immform information

http://immunisation.dh.gov.uk/immform-helpsheets/

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

JCVI (Joint Committee on Vaccinations and Immunisations)
 http://www.dh.gov.uk/ab/JCVI/index.htm?ssSourceSiteId=en

 NICE guidance 21 Sept 2009 – Reducing differences in the uptake of immunisations (including targeted vaccines) among children and young people aged under 19.
 http://www.nice.org.uk/PH21

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

WHO- World Health Organization - Immunisations
 http://www.who.int/topics/immunization/en/

NICE – Shared learning resources

http://www.nice.org.uk/usingguidance/sharedlearningimplementingniceguidance/examplesofimplementation/eximpresults.jsp?o=575