Vaccination services
reducing inequalities in uptake
Reader information

<table>
<thead>
<tr>
<th>Policy</th>
<th>Estates</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR/Workforce</td>
<td>Performance</td>
</tr>
<tr>
<td>Management</td>
<td>IM&amp;T</td>
</tr>
<tr>
<td>Planning</td>
<td>Finance</td>
</tr>
<tr>
<td>Clinical</td>
<td>Partnership Working</td>
</tr>
</tbody>
</table>

Document Purpose: Good Practice Guide

ROCR Ref: Gateway Ref: 4659

Title: Vaccination services – Reducing inequalities in uptake

Author: Department of Health/HPIH and SD – HP

Publication Date: 1 March 2005

Target Audience: SHA and PCT CEs, NHS Trusts, NHS Trusts CEs, Care Trusts CEs, Medical Directors, Directors of PH, Directors of Nursing, Local Authority CEs, Directors of Social Services, Regional Directors of Public Health, Consultants in Communicable Disease Control, Immunisation Coordinators, SHA and PCT Children and Family Services leads, LA lead for Children’s Services.

Circulation List

Description: This document includes information about improving vaccination services. Subjects covered include advice on action that can be taken to improve the uptake of vaccinations particularly among disadvantaged and hard to reach groups.

Cross Ref: Tackling health inequalities: what works

Superseded Docs: N/A

Action required: N/A

Timing: N/A

Contact Details:
Zoltan Bozoky
HPIH and SD – HP
Room 608A Skipton House
80 London Road
London SE1 6LH
020 7972 1644
www.dh.gov.uk/publications

For recipient use

Further copies of this guidance note can be obtained from:

© Crown copyright 2005
First published March 2005
Produced by COI Communications for the Department of Health
The text in this document may be produced without formal permission or charge for personal or in-house use.
www.dh.gov.uk/publications
Contents

Summary 4
Aim of the note 4
Introduction 4
How inequalities affect immunisation 6
National support for local action 7
Delivering through Commissioning and assessing progress 8
Setting local targets and plans 9
Increasing impact on health inequalities 13
Conclusion 14
Case study 1 16
Case study 2 16
Case study 3 18
Background information to aid local planning 20
Summary

This guidance note provides information on how action can be taken to improve the uptake of vaccinations in the population generally, but particularly among disadvantaged and hard to reach groups.

Aim of the note

1. In February 2005, guidance was issued to NHS planners and commissioners on what they can do to reduce health inequalities.

2. The aim of this note is to help PCTs improve the overall effectiveness of local vaccination services, and in particular, increase uptake among disadvantaged groups.

3. The action outlined is aimed at all areas but is particularly relevant to the Spearhead Group of areas (see page 13) where the pace of improvement of immunisation services may be slower.

Introduction

4. The Public Health White Paper on improving health, *Choosing health*, recognises that immunisation is important in protecting individuals and the population against diseases that can kill or cause serious long-term ill-health.

5. Nationally the uptake of immunisation has resulted in a significant reduction in the rate of infectious diseases. However, even in areas with high immunisation uptake there will be groups of children, young people and adults that are either unimmunised or not completely immunised and therefore at risk.

6. The White Paper calls for better organisation of local services and highlights the need for measures to be taken in order to identify and improve rates within areas of low uptake.

7. Nationally, the immunisations of the childhood programme, and those recommended for adults and older people, are offered routinely through primary medical services. However, evidence shows that those at risk of low take up of immunisation...
experience barriers to access. Those individuals at risk include:

- children in care
- young people who missed previous immunisations
- children with physical or learning difficulties
- children of lone parents
- children not registered with a general practitioner
- children in larger families

- children who are hospitalised
- minority ethnic groups
- vulnerable adults such as asylum-seekers and the homeless.

8. PCTs are encouraged to examine uptake rates and identify the differences between population groups and geographical areas in terms of completion rates and access. Closer examination of local data may reveal hidden variation and help to prioritise action needed to improve the situation for those most in need of immunisation.

Impact of immunisation in preventing infectious diseases

- A complete course of diphtheria, tetanus, pertussis, polio, *Haemophilus influenzae* type b (Hib) and meningitis C immunisations is highly effective in preventing these infections.\(^2\)
- BCG immunisation of newborns and infants significantly reduces the risk of tuberculosis by over 50% on average.\(^3\)
- A single dose of the MMR vaccine gives around 90% protection against measles and mumps and 95-99% against rubella. Adding a second dose increases the protection to over 99% of the population.\(^4\)

- Hepatitis B immunisation of babies born to infected mothers is 90-95% effective in preventing the development of chronic hepatitis B infection, which can lead to cirrhosis and primary liver cancer in later life.\(^5\)
- Each year, influenza immunisation gives 70-80% protection against infection with influenza virus strains related to those in the vaccine.\(^6\)
- Immunisation against pneumococcal infection is around 50% effective in older age groups.\(^7\)
9. In England, inequalities in immunisation uptake are persistent and result in lower coverage in poorer families. Studies reveal those who remain unimmunised, or not fully up to date, are more likely to live in disadvantaged areas and less likely to use primary care services.

10. Evidence of the way in which inequalities in immunisation affect health is highlighted in studies that show poorer children or households with low up-take rates are at increased risk of developing vaccine-preventable diseases. Sub-regional and small area comparisons show:

- *Haemophilus influenzae* type b infection is significantly more common among black and Asian people.

- In July 2003, the Health protection Agency reported clusters of measles cases among traveller gypsies in Bedfordshire, Suffolk, Hertfordshire, Hampshire and Lancashire. Ongoing outbreaks were also reported in Wales and Ireland. In Gloucestershire the cases were aged between 8 months and 25 years.

**Comparison of pattern of health measures with deprivation**


Reproduced with permission from the BMJ Publishing Group

---

**How inequalities affect immunisation**

**Immunisation uptake among disadvantaged groups and areas**

- Practices serving populations living in socially deprived areas and with poorer health were less likely to achieve the 90% target for childhood immunisations.

- Non-completion of DTP and polio immunisation was significantly associated with local deprivation.

- Children with physical or learning difficulties were significantly less likely to be immunised and the more severe the disability, the less likely the child was vaccinated.

- In 2000, uptake for influenza was lower among women and people aged over 85 and those in the most deprived areas.

- There is a slight gradient in the up-take of flu vaccination among over 65s by area deprivation, with the most deprived fifth of PCTs having the lowest uptake and the least deprived fifth having the highest uptake.
11. There is evidence that some people from ethnic minority backgrounds face difficulties accessing services. For example, a recent report from the Social Exclusion Unit highlighted that people from ethnic minority backgrounds are more likely to find physical access to their GP difficult, compared with white people. Some minority ethnic groups may face longer waiting times in GP surgeries, feel that the time spent with them was not adequate and were less satisfied with the outcome of the consultation.

12. In addition, there are studies that describe how various access issues can lead to individuals not taking up immunisation including:

- a difference in beliefs about the need to seek medical advice
- a lack of communication, and
- a lack of communication skills already disadvantaged families often have.

13. Unless the local design and delivery of immunisation services are able to reach disadvantaged groups effectively, those people most in need will continue to be left behind.

National support for local action

14. PCTs and partner organisations are encouraged to take account of the markers of good practice as set out in the National Service Framework for Children (NSF) when setting local targets and apply these more widely.
15. The NSF sets out a range of measures for improving delivery, such as following up children registered with the primary care system who fail to attend for a scheduled immunisation. Failure to attend should trigger an assessment and is an important opportunity for primary medical care services to review needs.

16. PCTs that are considering developing immunisation services or working to raise existing standards will be supported as part of National standards, local action. As part of the new public health standards, the Healthcare Commission will be inspecting PCTs on their work to address the differences in health and access to health services between different communities.

**Delivering through commissioning and assessing progress**

17. PCTs will recognise the need to assess the effectiveness of vaccination services and extend the reach of what works to those who need it most.

18. Routine childhood uptake data can be obtained from local child health systems. Information about key sub-groups, such as looked-after children or vulnerable adults, may be available either from child health systems or from other sources.

19. National coverage data is available yearly on all routine child and adult immunisations and from 1 April 2005 will include hepatitis B immunisation of babies born to infected mothers (Data Set Change Notice 25/200; ROCR/OR/0105/002).

20. The recently released *Health poverty index*, http://www.hpi.org.uk/, which is a single summary of health poverty within a PCT can be used to review the overall effectiveness of vaccination services and flu vaccine uptake locally in relation to neighbouring PCTs or the national average.

21. Based on the local situation, PCTs are encouraged to involve a range of partners including local government and community groups in order to improve service design and delivery. By agreeing joint action within multi-agency partnership arrangements such as children’s trusts partnerships, local strategic partnerships (LSPs) or through local public service agreements (LPSA) the pace of improvement can be increased.

---

*a* Child health systems typically include data on all resident children and can differ from the GP registered populations. The accuracy of the data is dependent on robust systems in place for GP practices reporting details of those children who transfer in and out of a practice list.

**Uptake of diphtheria immunisation versus overcrowding**


Reproduced with permission from the BMJ Publishing Group
22. PCTs are encouraged to support local innovation and the entrepreneurial flair of front-line staff in the delivery of services by exploring the most cost-effective and efficient way of delivering these services such as through the use of immunisation teams.

23. The four primary medical care contracting routes, including general medical services (GMS), personal medical services (PMS), alternative provider medical services (APMS) and PCT medical services (PCTMS), can be used flexibly.

24. Under GMS, childhood immunisations are provided as part of a Directed Enhanced Services (a nationally directed service specification). Under these contracting arrangements, the provider is required to undertake an annual review of uptake rates and to identify possible reasons for changes in these. Adult immunisations form part of the core contractual responsibilities in most cases.

25. Where uptake rates are low, PCTs have the option to commission supporting services from either of the contracting routes or self provide immunisation and other medical services via PCTMS. In addition, where a specific and specialist immunisation service is required for vulnerable groups or unregistered patients, PCTs could commission a separate Local Enhanced Service, defining the population to be served and routes to achieve uptake.

26. Under the PMS, PCTMS and APMS contracting routes, PCTs also have the flexibility to use a locally derived Quality and Outcome Framework (which is different from the nationally negotiated QOF). This could use indicators, targets and incentives towards immunising hard-to-reach or vulnerable groups.

The Quality and Outcomes Framework (QOF) is a voluntary system of financial incentives. It is not about achieving targets or PCT performance management, but rewarding contractors for good practice through participation in an annual quality review.

Setting local targets and plans

27. PCTs are responsible for the performance management of immunisation services and for specifying the level and quality of services provided. PCTs will in turn be held to account for their performance, through their commissioning arrangements with service providers, by the Strategic Health Authority.
28. There is a variety of new approaches (such as neighbourhood renewal programmes) that can be used to improve the design and delivery of vaccination services.

29. The Local basket of health inequalities indicators and Better metrics projects are useful resources to support the development of measurable local immunisation uptake targets and other quality indicators needed to improve services. The indicators in the basket are not mandatory and can be supplemented with additional local analysis.

30. A Health equity audit (HEA) for immunisation can be used to consider how fairly resources are distributed in relation to the needs of different groups in terms of areas, socio-economic groups, gender, and number of children in the household or ethnicity. It is important to increase understanding of why some immunisation services may fail to meet the needs of people facing disadvantage. For an example of planning an HEA for immunisation, see case study 2.

31. PCTs may wish to use local indicators and targets to help ensure those on the front-line of services have the right incentives and capacity to deliver, such as

- dedicated local co-ordination of immunisation services for the routine programme, for at-risk groups and during catch-up campaigns.
- clear advice being distributed to patients, parents and carers about the nature and purpose of the programme including special catch-up campaigns
- practitioners who give immunisations provide consistent and authoritative advice
- local immunisation data being available for analysis
- health visitors and other community nurses following up parents, families and patients who do not attend or complete an immunisation course.

---

It is possible to extract person-specific data, including postcodes, from some Child Health Systems. This can be linked with deprivation data and broken down into quintiles to compare coverage between them.
‘...It is often easier to reach vulnerable groups and different communities by adopting a flexible approach to delivering services...’

32. Based on evidence presented in this guidance note and good practice, immunisation services should be in line with population needs.

33. PCTs can achieve stronger performance in delivery through commissioning by:

- making specific provisions to improve access for vulnerable children (such as children in care, children of young parents or children of problem drug users) and adults who remain unimmunised: it is often easier to reach vulnerable groups and different communities by adopting a flexible approach to delivering services. See case study 3. Effective access includes providing:
  - safe and affordable transport to services
  - adequate information
  - flexible opening times, and
  - opportunistic immunisation.
- improving service organisation for children and families with complex needs: immunisation should be delivered to recipients in a setting with which they are culturally comfortable and explained in a language they understand. See case study 1.

**Childhood immunisation and influenza and pneumococcal scheme: the commissioning context**

- Annually, each PCT must enter into arrangements with GMS or PMS contractors in its areas to provide childhood immunisation services and improve uptake. The requirements are set out in the GMS or PMS contract.

- As part the arrangements for the annual influenza and pneumococcal immunisation scheme, each PCT must enter into arrangements with GMS or PMS contractors to provide immunisation to at-risk patients in line with national guidelines.
increasing equity: PCTs can address health inequalities by assessing immunisation equity within their areas and carrying out a health equity audit. The results can be used to ensure that action plans are incorporated into the recommendations that are developed to address service gaps.

developing partnerships: PCTs can identify opportunities for joint action with local authorities and the voluntary sector, such as:

- ensuring data records within areas are accurate
- reviewing immunisation uptake in those practices serving deprived areas
- ensuring policies and procedures are in place for identifying and following up unimmunised individuals
- making better use of available information such as leaflets and websites, including www.immunisation.org.uk, and
- providing training for health and social care professionals.

34. PCTs' planners and commissioners are also encouraged to link immunisation service delivery more closely to other services in order to increase opportunities for access. The local planning process can be used to:

- create specific statements about immunisation within the context of inequalities in order to link the design and delivery of immunisation services into other services
- encourage reporting immunisation rates by area deprivation, and by risk groups, on a quarterly basis to the senior management team, the executive committee and to the PCT board within the finance and performance reports
- strengthen partnership arrangements with local authorities, the voluntary sector and other initiatives such as Sure Start, Early Years, Children's Trusts and Extended Schools.
35. PCTs are already well advanced in developing their Local Delivery Plan (LDP). Several of the specific health and population lines will provide opportunities to support multi-service commissioning which will help to address Immunisation Service gaps, and narrow health inequalities within their areas.

36. The Spearhead Group of areas may also wish to consider identifying immunisation objectives within those relevant LDP lines to help achieve strong performance.

The Spearhead Group is made up of 70 local authorities and 88 Primary Care Trusts, based upon the local authority areas that are in the bottom fifth nationally for three or more of the following indicators

- male life expectancy at birth
- female life expectancy at birth
- cardiovascular disease mortality rate in under 75s
- index of multiple deprivation 2004 (Local Authority Summary), average score

Increasing impact on health inequalities

37. As part of the delivery of local services, the interventions suggested, within existing LDP lines, are not mandatory but may offer operational advantages and increase impact on health inequalities.

LDP line: Cardiovascular disease mortality and cancer mortality.

The national Public Service Agreement (PSA) sub-targets on inequalities in cardiovascular disease mortality and cancer are based on narrowing the gap between the areas with the worst health and deprivation indicators and the average; and ensuring that prevention and treatment services for CHD and cancer reach those in greatest need or with poorest health outcomes including disadvantaged groups and ethnic groups with high prevalence.

An immunisation check can be made to ensure individuals from disadvantaged groups and ethnic groups who are at increased risk of CHD and cancer have been immunised against major diseases.
‘...An immunisation check can be made to ensure children who live in smoking households are up to date with their immunisations and referrals offered if required...’
39. If unprotected individuals gather within geographical areas or social groups, sudden outbreaks can still occur despite current national coverage. Now is not the time to relax efforts. The take-up rates achieved can be maintained and the pockets of low uptake addressed.

40. Action is needed to:
- sustain progress achieved so far,
- maintain momentum where services work and consider where services should be delivered differently to improve areas of low uptake with special emphasis on deprived and at risk communities.

Key features of effective service planning – what success will look like

- Looked-after children complete their course of immunisations
- People who are aged 65 and older, are offered immunisation against influenza and pneumococcal infections (older people who are fuel poor or live in poor housing conditions remain a priority)
- A register is compiled for those whom flu and pneumococcal immunisation is recommended
- Materially deprived areas are targeted and geographic access to services improved (such as providing immunisation opportunistically at home or in other settings outside primary care) particularly for families who experience barriers to service
- The reliability of immunisation data is checked and greater effort made to improve transfer of records between areas
- Health equity audit on immunisation is conducted in order to identify what would work best to improve equity in provision
- There will be better integration of immunisation services with Sure Start and Neighbourhood Renewal programmes (by co-locating services for children according to need, access can be improved), and
- Those who live outside the more deprived local authority areas but face difficulty in completing immunisation are targeted to ensure they do not miss out.
Case study 1

The Leeds Hepatitis B Screening Programme for babies born to hepatitis B positive mothers

The protection of babies from vertical transmission of hepatitis B is a significant contribution to some of our more vulnerable children.

A series of locally applicable algorithms have been developed to guide the management of both the mothers and their babies. The aim is to ensure that all hepatitis B positive pregnant women are followed up and the babies immunised at birth and thereafter.

Many of these women either are IV drug users or have other problems making the provision of care difficult, in part because they do not remain for long in one location. Some of the mothers have very limited English making another barrier to care; while others are asylum seekers, who are initially cared for by the Leeds Asylum Health Access Team (a programme developed within the LDP).

The Hepatitis B Screening Programme is managed by the Leeds Teaching Hospitals Trust but involves primary care, PCTs, Child Health Computing and the Health Protection Agency. Each Trust or agency pays for its own contribution. There is now an issue about increasing the amount of dedicated health visitor time and resources are yet to be identified.

Case study 2

Newham PCT

Childhood immunisation rates are low in Newham in comparison to both London and national rates. For the quarter July-September 2004, the MMR uptake rate for children reaching two years of age was 77% while the DTP3 rate was 88%. The immunisation rates for children registered with local practices vary considerably. These variations are unlikely to be due solely to variations in parental refusal rates between practices; they are more likely to be due to systematic differences in clinical policy and management between individual practices.
As an inner city area in London, Newham faces health inequalities in childhood immunisation that are linked to high population mobility, high levels of ethnic diversity and deprivation, and methods of recording that may underestimate coverage.

In the past, priorities for increasing uptake have included: improving data quality and reporting, following up on defaulters, opportunistic vaccination, supporting practices and raising awareness amongst staff and public.

A health equity audit (HEA) on childhood immunisation will focus on how fairly resources are distributed in relation to health needs of different communities in Newham. It will examine if resources and interventions are targeted in a way that offsets inequities based on differences in opportunity that can lead to health inequalities in childhood immunisation up-take rates. The HEA findings and recommendations will be presented to the senior management team and at the PCT Board for approval.

Lack of transport is known to be a barrier to immunisation uptake amongst deprived communities. As part of the PCT’s immunisation action plan, health visiting teams are immunising children opportunistically, following up on immunisation status during home visits, and documenting reasons for non-attendance.

Lack of understanding and inadequate communication materials are known to be factors in parents not accessing services.

Plans are in progress to adapt DH materials (including relevant translation) and set up a proactive telephone helpline to contact parents not presenting for immunisation appointments.

Immunisation uptake by ethnicity will be monitored and the advocacy service will work to identify hard-to-reach groups. A performance monitoring system for GP practices is already in place and will be used to identify practice-related barriers to service usage.
Case study 3

Strategic planning for immunisation

In September 2002, Swindon Social Services and Swindon PCT recognised that they were not meeting the health needs of their looked-after children, with only 54% of those who had been in care for more than 12 months being up to date with their immunisations. By September 2004, this number had risen to 84%.

- Swindon Borough Council is a unitary authority with co-terminus boundaries with Swindon Primary Care Trust.
- The key local priority was to improve the health of looked-after children and to reach the enhanced LPSA target of an average of 90% of children who had been looked after for more than 12 months having had a health assessment and dental check in the previous 12 months and their immunisations being up to date by September 2004. The LPSA target was reached in September 2004.
- The enhanced LPSA target enabled Swindon Social Services and Swindon Primary Care Trust to use the draw-down moneys to employ a full-time Health Liaison Worker for Looked After Children to implement the key local priority. This post started in September 2002 and it is the intention to use the reward grant to continue this post beyond March 2005.
- The health liaison worker post is joint funded - the worker is employed by the PCT and is based in social services. The post is managed by social services with professional supervision provided by a team manager in the PCT.
- Information sharing has been vital for the post especially with regard to immunisations. Social services provides a monthly list of the looked-after children to the Child Health Department Manager (PCT) who then provides the health liaison worker with a print-out recording the immunisation status of each looked-after child.
The ability of the health liaison worker to work across both agencies has been pivotal, as has the support of the senior management in both services. Access to the databases of the PCT and social services has been vital to the improvement in the up-take of immunisations in the looked-after population.

Having a dedicated, joint-funded post with support from both agencies has now been used as a model for other posts across Swindon Borough Council and the Primary Care Trust.

Communication has been very important, the health liaison worker spent the first few months in post talking to all the groups of professionals and carers involved, including social worker, health visitors, school nurses, community paediatricians, GP’s, foster carers, residential placements, child health department and the looked-after children, young people and parents.

Flexibility has also been key with the health liaison worker being able to immunise including in the home, and ensuring that the community paediatricians had access to a supply of immunisations so they could immunise as part of the initial health assessment if required.
Background information to aid local planning


2 Diphtheria, tetanus, pertussis, polio and Hib (Haemophilus influenzae type b) vaccines for babies, young children and teenagers. Factsheet, 2004, Department of Health.


4 MMR Factsheet 1, February 1997, pages 1-8. Produced by the Department of Health and Health Education Authority.


25 http://www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/ChildrenServices/ChildrenServicesInformation/ChildrenServicesInformationArticle/fs/en?CONTENT_ID=4089111&chk=U8EcIn

26 http://www.chai.org.uk/Homepage/fs/en

27 http://www.hpi.org.uk/index.php

28 http://www.everychildmatters.gov.uk/

29 http://www.neighbourhood.gov.uk/page.asp?id=531


32 http://www.dh.gov.uk/PolicyAndGuidance/OrganisationPolicy/PrimaryCare/PrimaryCareContracting/fs/en


34 http://www.lho.org.uk/Health_Inequalities/Basket.htm

35 http://www.osha.nhs.uk


37 http://www.socialexclusionunit.gov.uk/downloaddoc.asp?id=42

38 http://www.dfes.gov.uk/teenagepregnancy/dsp_content.cfm?pageId=139


40 http://www.dh.gov.uk/PublicationsAndStatistics/LettersAndCirculars/ProfessionalLetters/ChiefMedicalOfficerLetters/ChiefMedicalOfficerLettersArticle/fs/en?CONTENT_ID=4005012&chk=is62ZC