

CHILDHOOD IMMUNISATION AND VACCINATION REPORT

1. Purpose of this report

This report provides an overview of the routine childhood immunisation and vaccination programme uptake rates for NHS BEN for April 2007-March 2008, and quarter 1 data 2009, and seeks to assure the Board that mitigating actions are being put in place to help achieve the national targets set.

Non routine childhood immunisations such as Tuberculosis (BCG) and Hepatitis B will not be addressed in this report, as this update will be provided at the next scheduled Board report for seasonal influenza update; where immunisation training will also be covered.

2. Childhood Immunisation

Immunisations are the most effective and economical way to protect children from serious and incurable diseases provided by the NHS. Current recommendations by the World Health Organisation (WHO) are that:-

- at least 95% of children receive three primary doses of diphtheria, tetanus, polio and pertussis (whooping cough) in the first year of life;
- at least 95% of children receive a first dose of a mumps containing vaccine (e.g. MMR) at age 12-18 months;
- at least 95% of children receive a measles containing vaccine (e.g. MMR) by 1 year of age.

The childhood immunisation programme in 2009 is seen below:

Vaccine	Age	Notes
Diphtheria, Tetanus, Pertussis, Polio and Hib (dTaP/IPV/Hib)	1st dose: 2 months	primary course
Diphtheria, tetanus, pertussis, polio and Hib (dTaP/IPV/Hib)	2nd dose: 3 months	primary course
Diphtheria, tetanus, pertussis, polio and Hib (dTaP/IPV/Hib)	3rd dose: 4 months	primary course
Pneumococcal disease (PCV)	1st dose: 2 months 2nd dose: 4 months	primary course
Meningitis C (MenC)	1st dose: 3 months 2nd dose: 4 months	primary course
Hib / MenC	around 12 months	Booster
Measles/Mumps/Rubella (MMR)	around 13 months	Primary course
Pneumococcal disease (PCV)	around 13 months	Booster
Diphtheria, tetanus, pertussis, and polio (dTaP/IPV or DTaP/IPV)	3yrs/4 mths to 5yrs	Booster: 3 yrs after completion of primary course
MMR second dose	3yrs/4 mths to 5yrs	Booster
Cervical cancer (HPV)	Girls aged 12-13 yrs	primary course
Diphtheria, Tetanus and Polio (Td/IPV)	13 to 18yrs	Booster

Overview 2008-09

The mainstream service delivery for the childhood immunisations in NHS BEN is Primary Care with vaccines administered by practice nurses. One practice in the Trust has continued to opt out of childhood immunisation service delivery, (this practice is covered by the local Health Visiting team).

Table one below indicates that of the eight vital signs target for routine childhood immunisations we are below the target for all. However, there continues to be an upwardly increasing trend in seven of the eight vital signs targets (VSB code) with the largest increase in Hib MenC of 41% in a two year period.

Table1. NHS BEN VSB 10 Targets 08/09

Vital sign code	Vital Sign Description	2007-08 uptake	2008-09 target	2008-09 uptake	Improvement 07-08 to 08-09	Target 09/10
VSB10_03	DTaP/IPV at 1 year	86.2%	88.0%	89.881%	+3.681%	91.0%
VSB10_08	PCV at 2 years	77.8%	88.0%	87.667%	+9.867%	91.0%
VSB10_09	Hib/Men C at 2 years	44.4%	88.0%	85.405%	+41.005%	91.0%
VSB10_10	MMR1 at 2 years	86.4%	88.0%	87.971%	+1.571%	91.0%
VSB10_14	DTaP/IPV (booster) at 5 years	77.1%	88.0%	81.894%	+4.794%	91.0%
VSB10_15	MMR2 at 5 years	73.6%	92.0%	78.235%	+4.635%	94.0%
VSB10_18	HPV at 12-13 years 3 rd Dose	N/A	51.0%	1.77%	N/A	70.0%
VSB10_21	Td/IPV (school booster) at 13 – 18 years	29.40	82.0%	19.89%	-9.51%	86.0%

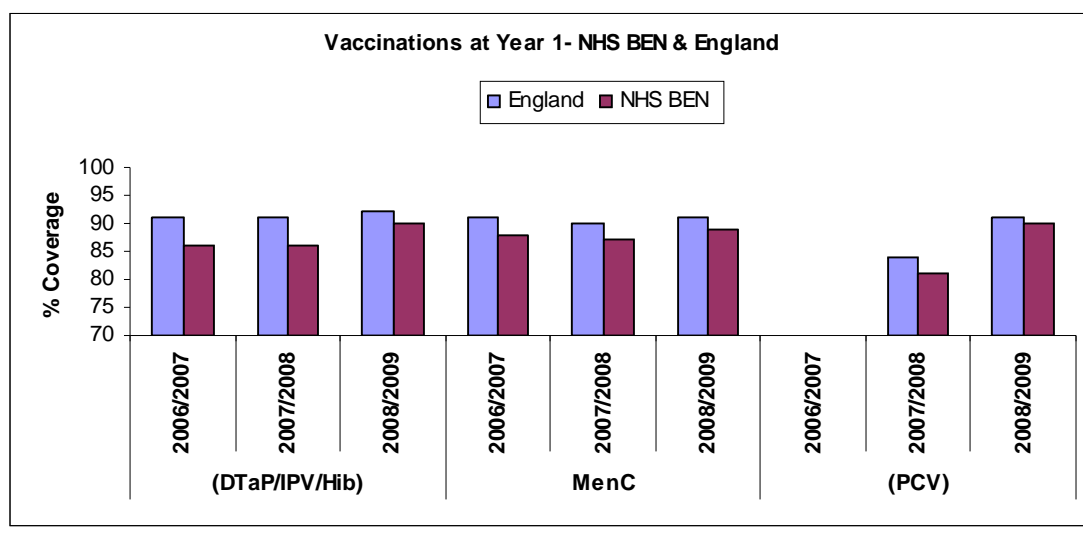
Overview 2009-10

Table two below illustrates the projection for the increase in targets required across all eight routine childhood immunisation vital signs targets over the remaining three quarters of this financial year. DTaP/IPV requires a minimal increase of 0.09% in the next quarter to meet the 91% target; it is felt that this is achievable in the next quarter. However, whilst the remaining targets for under five years immunisations are achievable by quarter four; Td/IPV school leaving teenage booster is not likely to hit the target this financial year and is the only vital signs target that is showing a decrease in uptake of 9.5% as seen in table 1.

Table 2 NHS BEN VSB 10 Targets 09/10

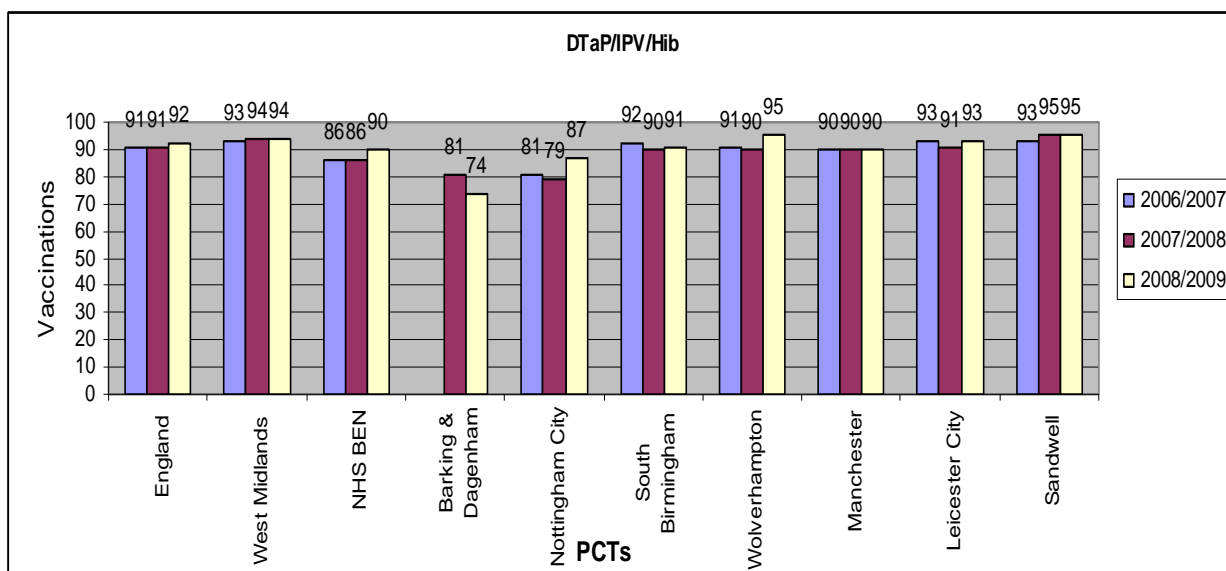
Vital sign code	Vital Sign Description	Q1-09/10 uptake	Q2-09/10 required increase	Q3-09/10 required increase	Q4-09/10 required increase	Target 09/10
VSB10_03	DTaP/IPV at 1 year	90.9%	0.03%	0.03%	0.03%	91.0%
VSB10_08	PCV at 2 years	86.7%	1.40%	1.40%	1.40%	91.0%
VSB10_09	Hib/Men C at 2 years	87.9%	1.00%	1.00%	1.00%	91.0%
VSB10_10	MMR1 at 2 years	88.7%	0.76%	0.76%	0.76%	91.0%
VSB10_14	DTaP/IPV (booster) at 5 years	86.5%	1.50%	1.50%	1.50%	91.0%
VSB10_15	MMR2 at 5 years	82.6%	3.8%	3.8%	3.8%	94.0%
VSB10_18	HPV at 12-13 years 3 rd Dose	30.8%	13.0%	13.0%	13.0%	70.0%
VSB10_21	Td/IPV (school booster) at 13 – 18 years	2.74%	27.75%	27.75%	27.75%	86.0%

Chart 1: Primary immunisation uptake rates NHS BEN comparative to England.



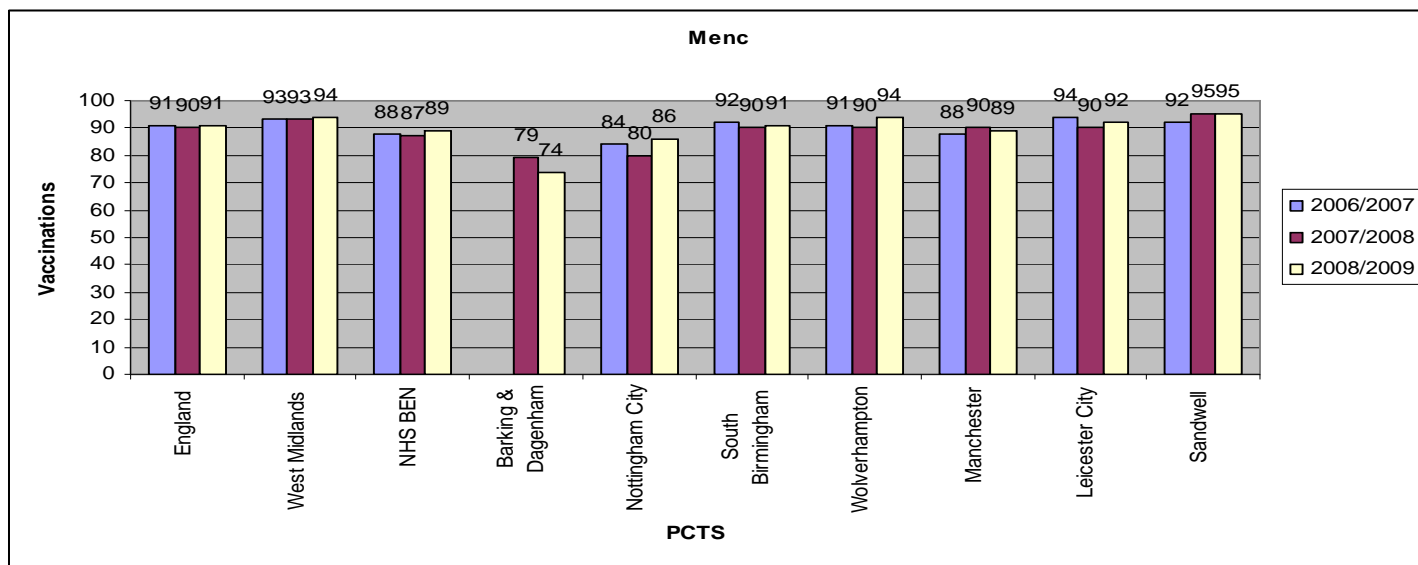
NHS BEN has shown a marked increase in DTaP/IPV/Hib; MenC and PCV as shown in Chart 1. When compared to the England national average for all three of these immunisations the trend shows that the gap is narrowing year on year since 2006-2009, and as such it is expected that with this continued trend NHS BEN should supersede the National average by 2010-11.

Chart 2: Primary Immunisation 1st Birthday NHS BEN compared with Office of National Statistics (ONS) Cluster.



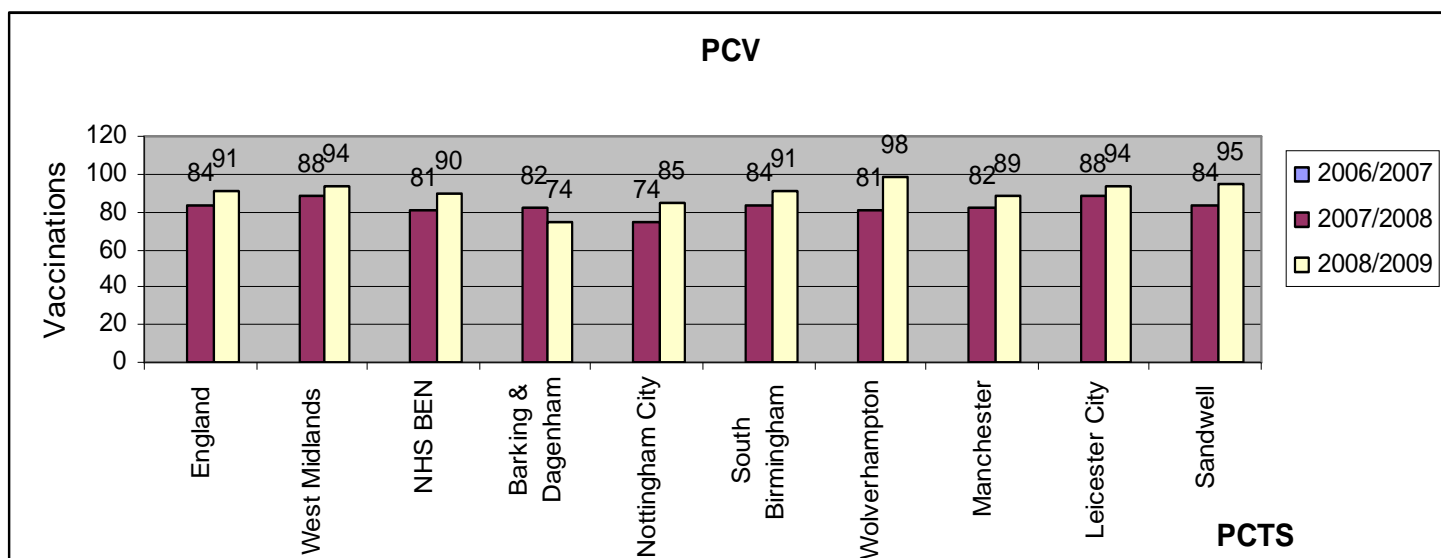
NHS BEN uptake rates for DtaP/IPV/Hib when evaluated against PCTs of similar profile at the end of the financial year March 2009 shows an increase in trend to 90% from 2007-09 an overall increase of 4%.

Chart 3. NHS BEN MenC uptake in comparison to National average & ONS Cluster



MenC uptake rate in contrast to the national average in 2007 at 93% showed an increase above the national level of 2% standing at 95%. However in 2007 this figures dropped by 1% to 91% for 2008 and is currently below national average 92% revealing a marginal drop of 1%. Sandwell PCT has the MenC uptake and has consistently maintained a high up take rate in the ONS cluster the highest peak being 97% in 2007 dropping to 95% in 2008.

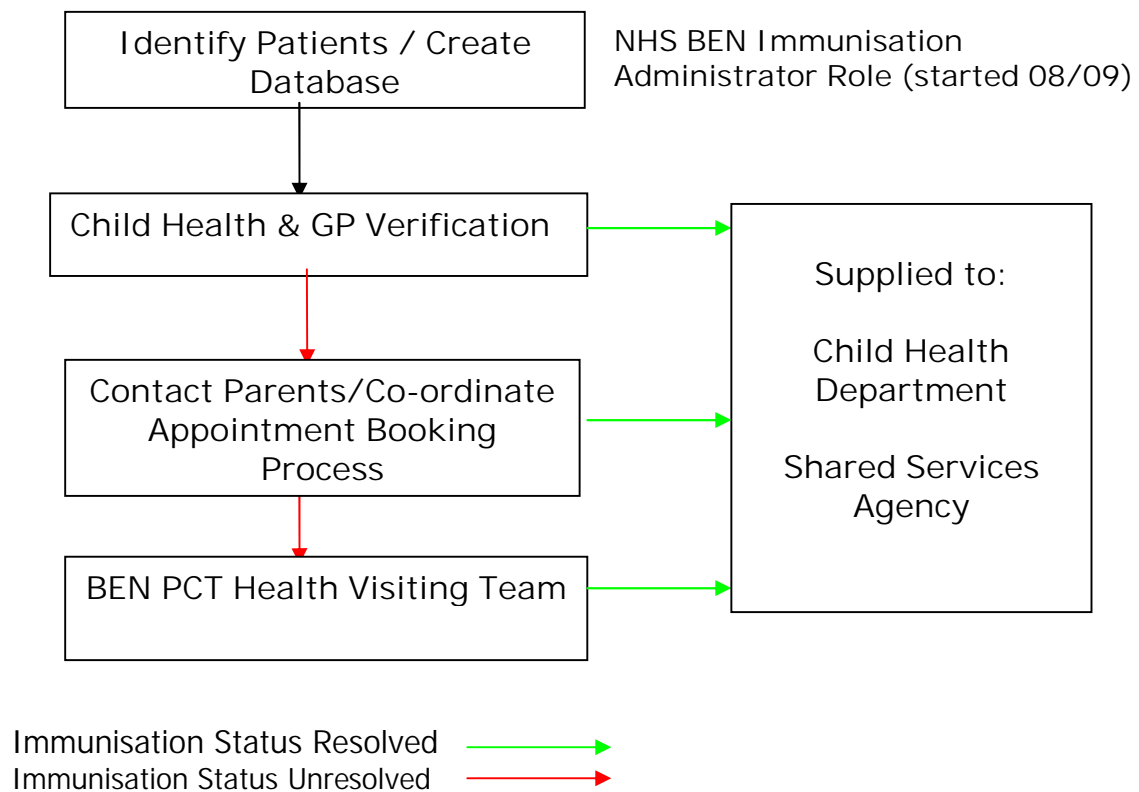
Chart 4. NHS BEN PCV uptake in comparison to national average & ONS Cluster



PCV vaccine was introduced into the routine childhood immunisation schedule in 2007 NHS BEN has made remarkable progress in uptake rates in 2008 increasing uptake by 9%, this number is below national average by 1%. In comparison to the ONS cluster Wolverhampton PCT has the highest uptake at 98%.

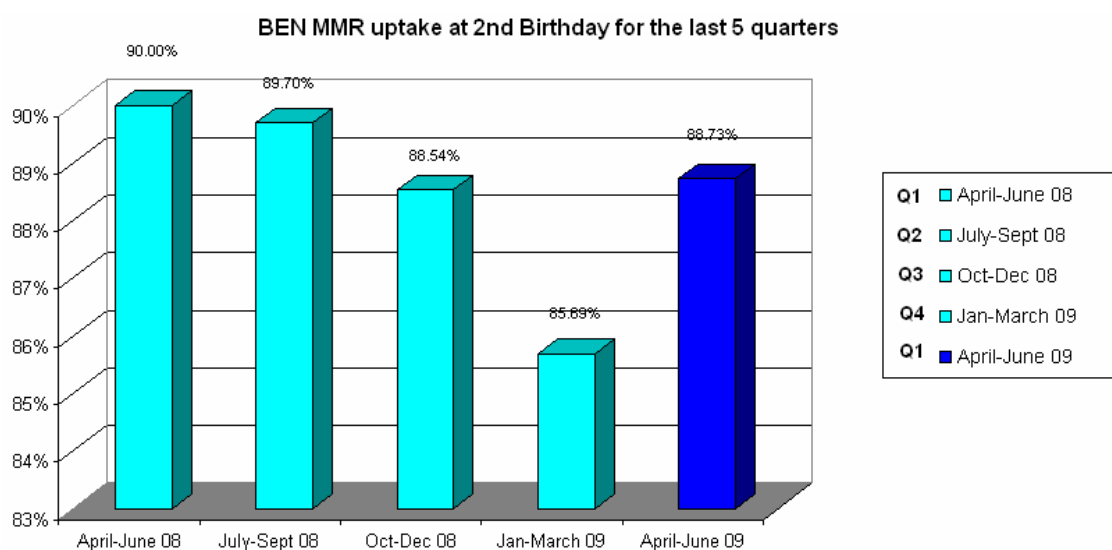
'Tail gunning' Project to improve MMR uptake rates.

The Service Level Agreement (SLA) with Birmingham Failsafe unit concluded in September 08, and proved to be effective in increasing MMR vaccine uptake rates. This approach is now adopted by the Trust and a successful appointment of an immunisation administrator was established in August 2009. A definition of "Tail-Gunning" (strategy) is an active patient management programme designed to increase MMR dose 1 uptake at 24 months old. As illustrated in the diagram below:



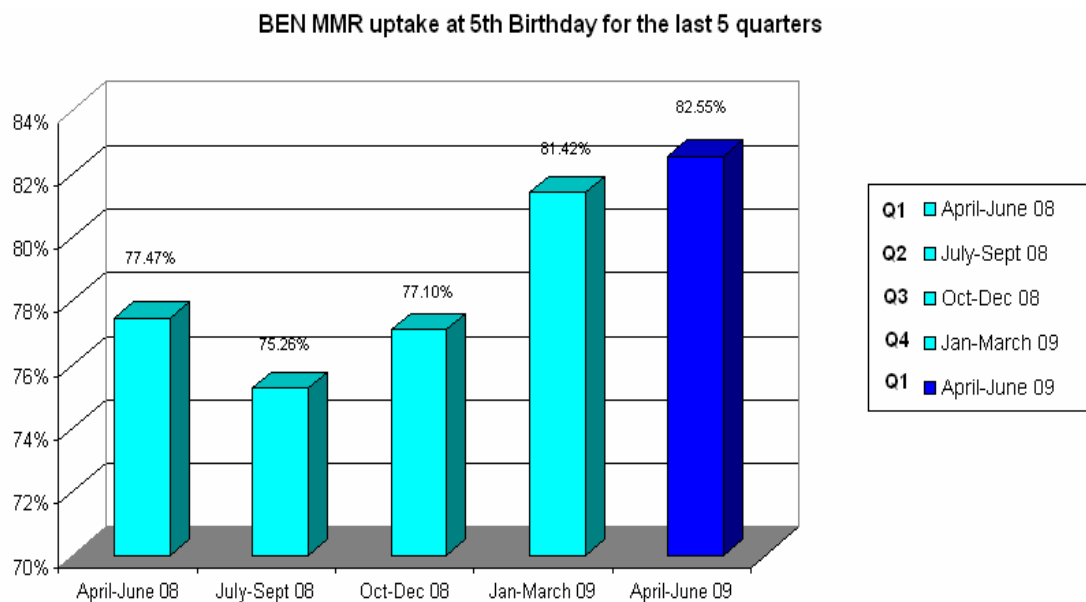
The chart 5 below shows a significant drop in uptake rates in quarter 3 and quarter 4, this can be directly correlated staffing issues (nurse consultant post being vacant; Immunisation coordinator sick leave), A substantive increase was made in quarter one this year, when staff were appointed to the vacant positions and the recent investment of a full time band 4 immunisation. It is envisaged that the tail gunning strategy which will gain 'momentum'.

Chart 5. MMR uptake at 2nd Birthday 2008 and Q1 2009



The numbers of measles cases in England continued to rise in 2008 with a reported school outbreak in July 2008 in a neighbouring PCT (South Birmingham PCT). Confirming that large numbers of unprotected children will lead to a high risk of a large measles epidemic. The World Health Organisation (WHO) estimates suggest this could be between 30,000 and 100,000 cases. NHS BEN has 19% population of unprotected children from MMR and as such this is being given a priority in terms of the 'tail gunning' strategy.

Chart 6. MMR uptake at 5th Birthday 2008 and Q1 2009



NHS BEN has an upward trend in uptake for the booster MMR vaccine increasing by 4.6% at the end of 2008. However, a significant increase for the remaining 3 quarters of 2009 is needed of almost 12% if we are to hit the vital signs target of 94%. Increasing MMR uptake has been identified as a priority for NHS BEN, and as such is evident in the appointment of a band 4 immunisation administrator to begin the ‘tail gunning strategy’ to help achieve this target.

Chart 7. MMR uptake compared to national average & ONS cluster

NHS BEN is above the national average for MMR uptake at 88% compared to national average of 85%, Leicester City PCT achieved the highest uptake at 90%.

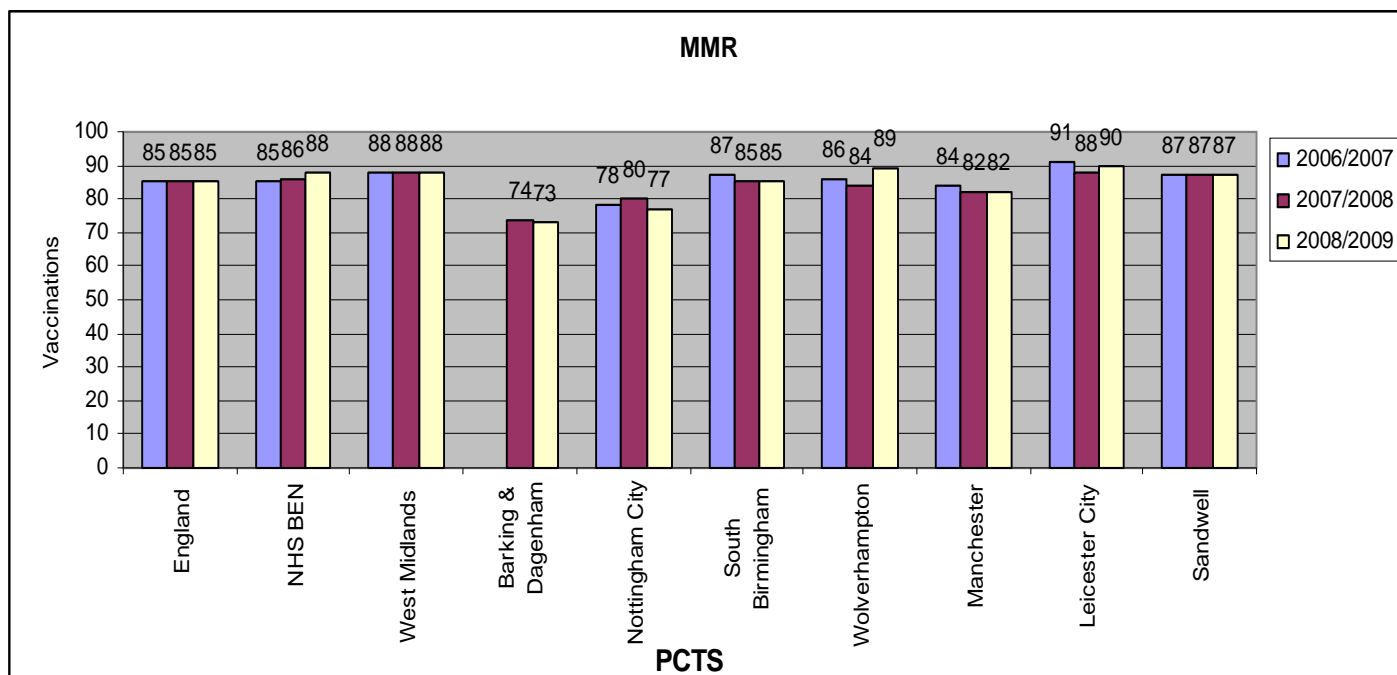


Chart 8. NHS BEN vaccine uptake Year 5 compared to national average.

In 2007 NHS BEN achieved 2% above the national average for DTap/IPV at 95% compared to national average of 93%. NHS BEN achieved 4% above the national average for Hib vaccine as seen in chart 8 below. The Trust also achieved above the national average for MMR 1st dose by 3%; however was 1% below the national average for booster Td/IPV at 77% compared to 78%.

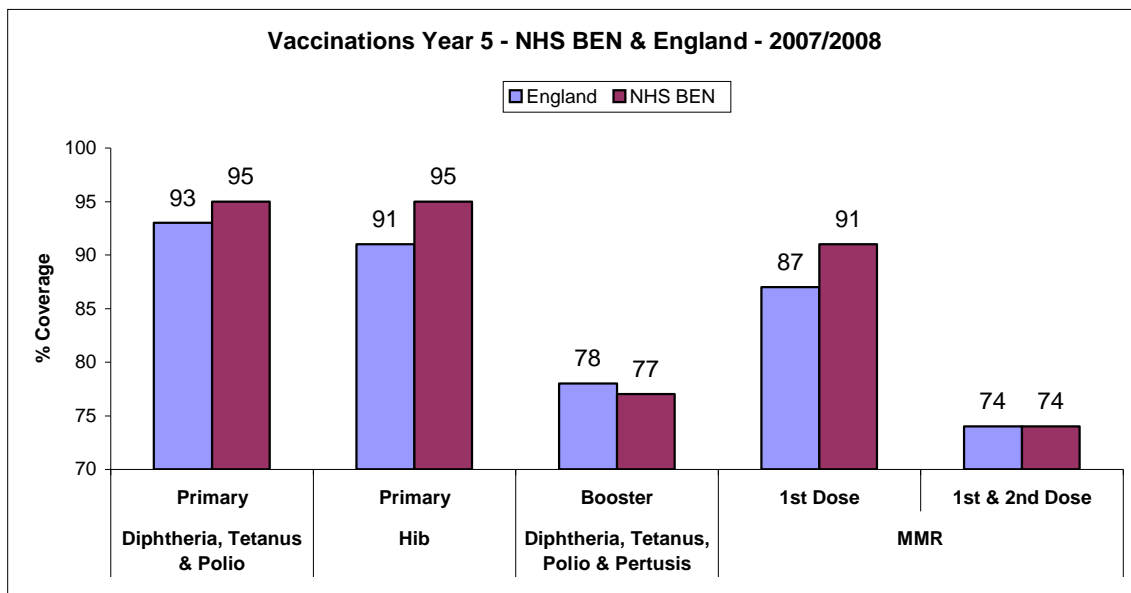
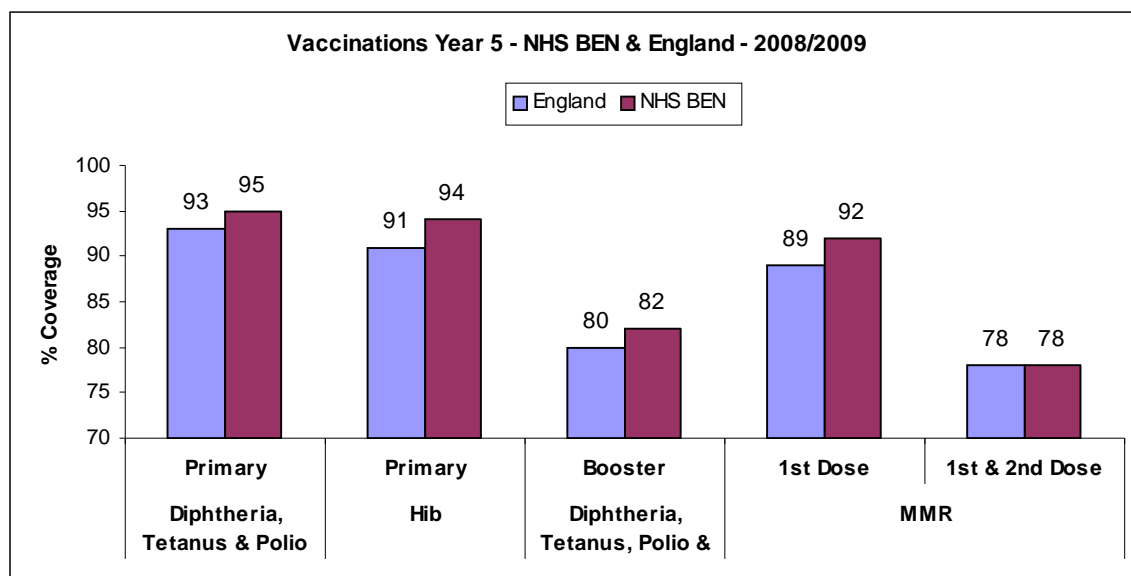


Chart 8. NHS BEN vaccine uptake Year 5 compared to national average.

NHS BEN figures seen below continue to show an upward trend in uptake with all vaccines in Year 5 continuing to increase above the national average.



HPV Implementation

In September 2008 the Department of Health (DH) introduced the Human Papilloma Virus (HPV) vaccination to the UK routine childhood schedule for all girls aged 12-13 year (School Year 8). Alongside the year 8 programme, an accelerated catch up programme commenced for girls aged 17-18yrs (School Year 13). The accelerated cohorts are not part of the vital signs target for childhood immunisations and as such will not be discussed in this report. The HPV vaccine is administered as a 3 dose schedule usually within 0-6months; the definition of immunised being uptake of all 3 doses.

The HPV immunisation programme in 2008 for NHS BEN was implemented via a GP delivery model through a Local Enhanced Services (LES) agreement. Four GP practices opted out of this arrangement and Community Health Services (CHS)– School Nurses provided community clinics at two locations within the Trust at Warren Farm & Partners in Health; to assist with delivery of the HPV vaccine for girls registered with these GP practices and to vaccinate approx. 20% of girls in the cohort, who may be without a local GP, or are vulnerable and hard to reach, resident in NHS BEN.

The current NHS BEN data indicates that the uptake rates of the vaccine is 46% as shown in the chart below; this figure has not met the 51% vital signs target 2008. The HPV returns are reported monthly to the Health Protection Agency (HPA) and the figures are not collated quarterly, the final annual figures are yet to be reported end of September 09, and as such the current percentage for HPV 3rd dose NHS BEN is classed as experimental data only.

Chart 9. Uptake rate for HPV VSB_18 (girls 12-13yrs)

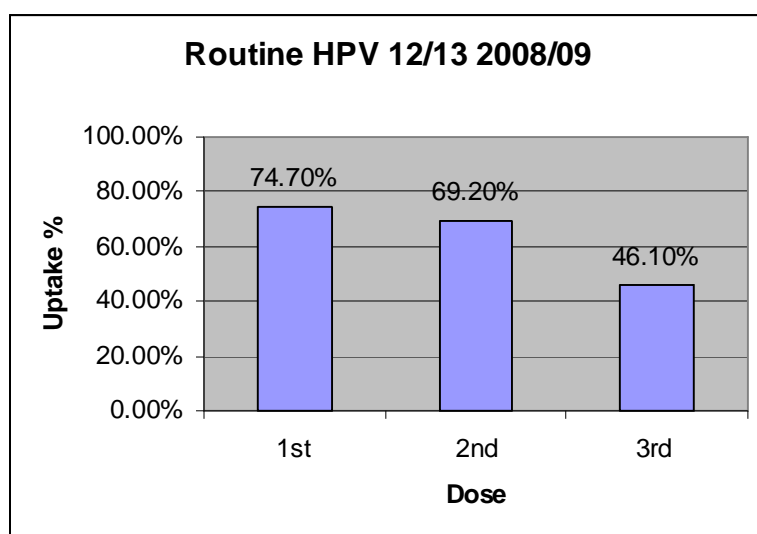
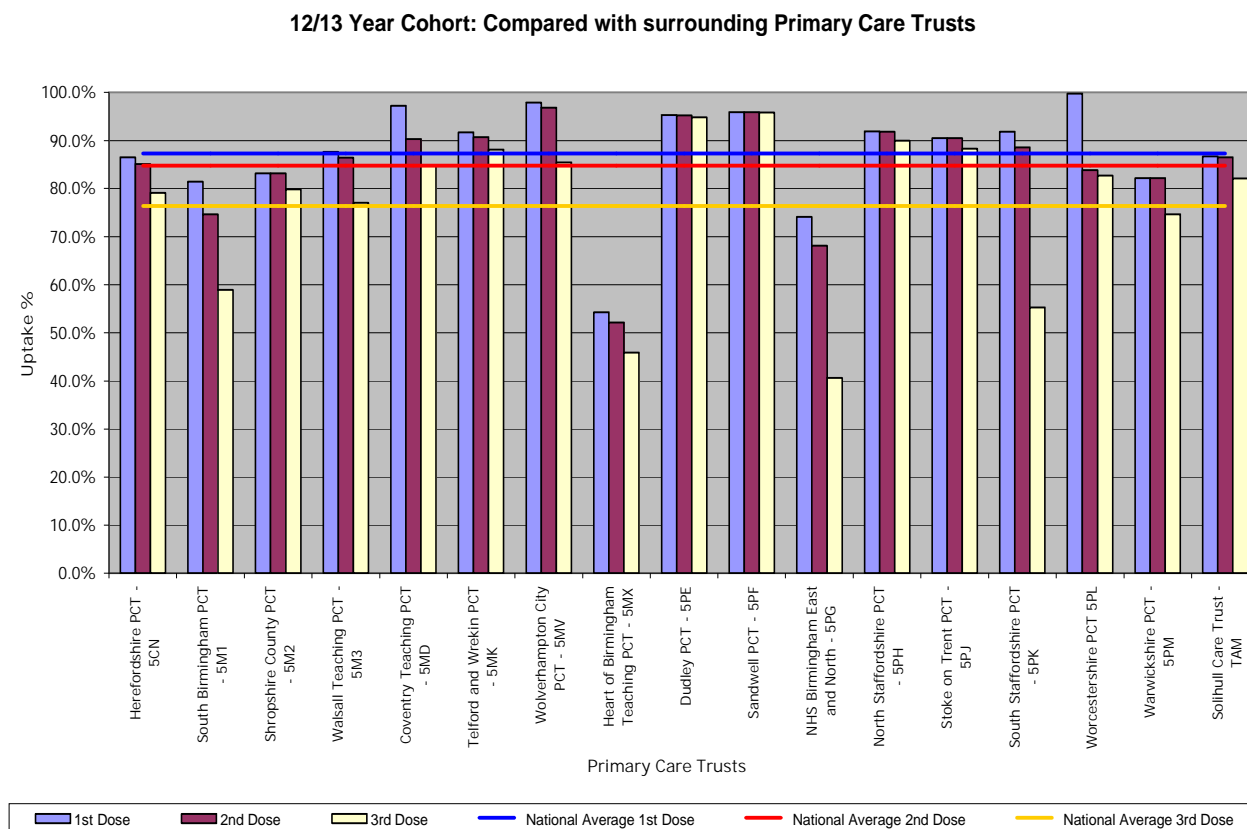


Chart 10 below illustrates the results for HPV 12/13 Year Cohort NHS BEN compared to neighbouring West Midlands PCTs. The results are below targets achieved by many PCTs ; most West Midlands PCTs managed to achieve over

and above the 51% vital sign national target for 2008/09 the majority reaching a 70% target for 3rd dose.

Chart 10. NHS BEN 12/13 Year HPV Cohort compared to West Midlands PCTs



It is significant to note that current NHS BEN results are skewed, the denominator used was not based on the school roll, in view of the fact that a GP model of service delivery was chosen. The Department of Health (DH) has recognised that there is a possibility of some PCTs duplicating numbers in the returns i.e. NHS BEN special school services are delivered by South Birmingham PCT, which delivers HPV vaccines through a school based programme, and appear to have counted this activity in their denominator. The DH has now instructed that all PCTs review and recalculate their denominator in light of the findings. It is not unclear how much of a difference these numbers will make in the final annual submission data for NHS BEN.

The implementation model of the HPV programme in September 2009 has been reviewed and will now fall in line with neighbouring PCTs delivering the service through a school based programme; this decision was influenced by the evidence of the results shown in school based programme both on a National and West Midlands region level. Chart 11 confirms that NHS BEN uptake for HPV Year 12/13 (June data); is considerably lower than the ONS Cluster PCTs and national average.

In the main, PCTS delivering the HPV vaccine through a school based programme have achieved an uptake of 70% and above. It is envisaged that the Trust will increase uptake of this vaccine through redesigning the service through a school based programme.

Chart 11. NHS BEN HPV uptake 12/13 Year Cohort compared to ONS Cluster

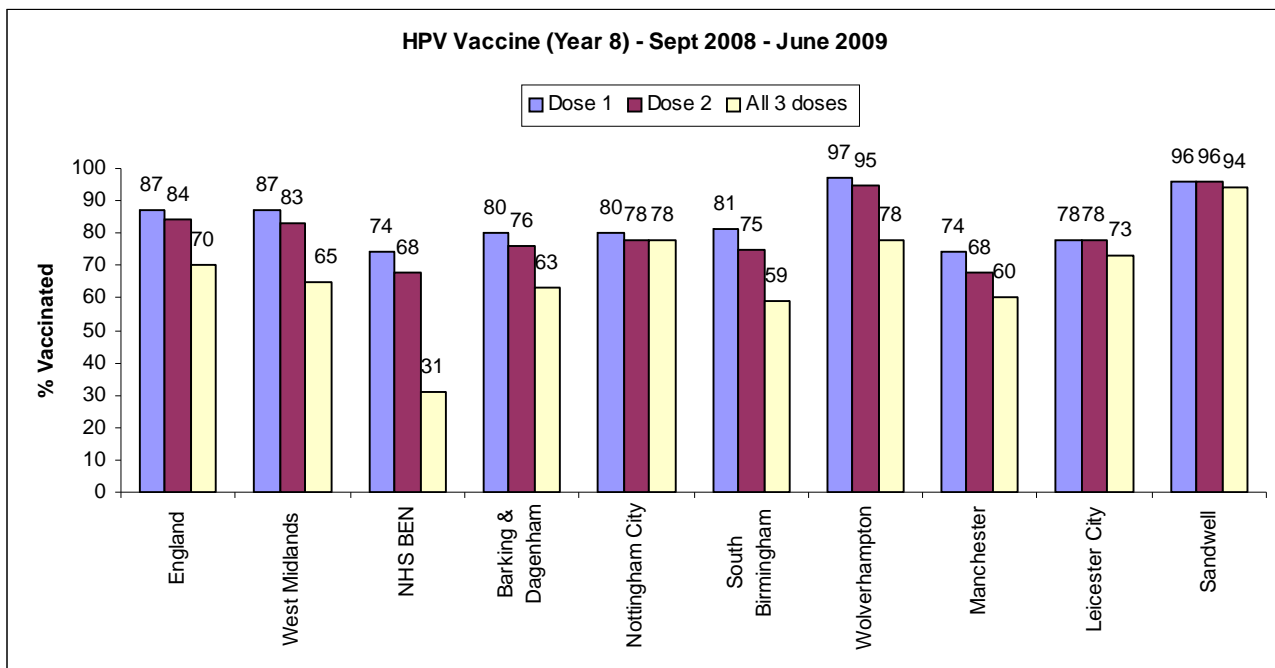
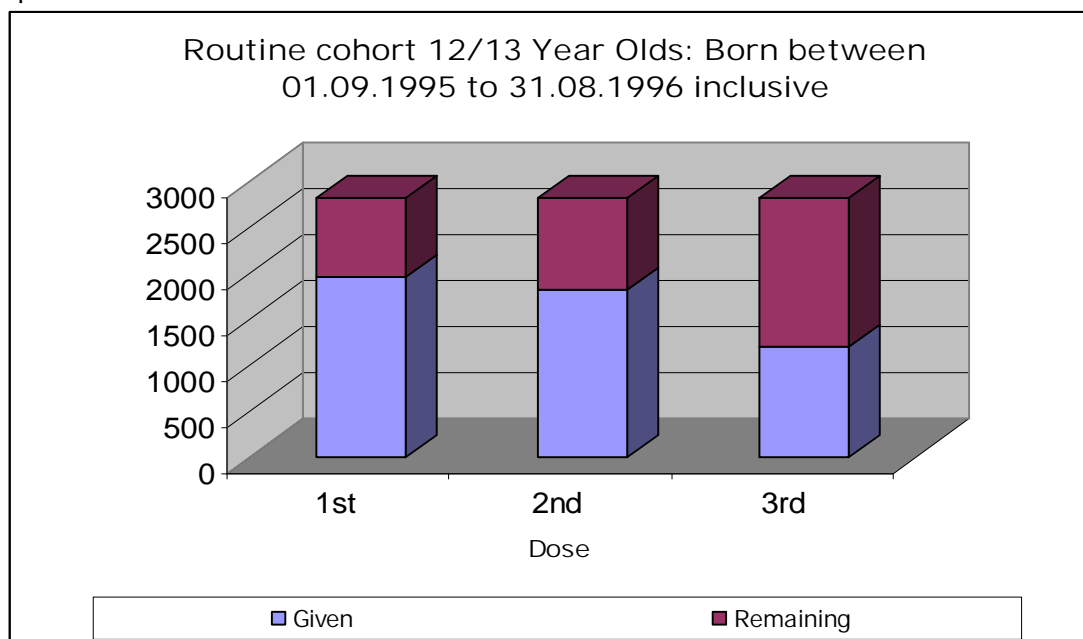


Chart 12. Calculations of number of HPV doses remaining "mop ups"

The totals below have been calculated using the monthly denominator on immform and the August 2009 uptake results submitted by the GP Practices. These numbers will be discussed at a planned meeting in October to review options.



Summary

Low immunisation uptake rates in the recent Trust quarterly data 08/09 (Q3, Q4) is parallel to a number of factors relating to workforce issues, organisation of services, and Child Health Information Systems and are summarised as follows:

1. Immunisation Coordinator on Long Term Sick Leave
2. Nurse Consultant post vacant for six month period
3. Little evidence of opportunistic vaccines being offered
4. Health Visitors do not routinely immunise in the community
5. Data quality issues Primary Care and Child Health Information Systems

In 2009-10 the Trust will be giving priority to achieving the 2009-10 uptakes of immunisation targets.

Action Plan

It is anticipated that a small project team consisting primary care, provider services, informatics, and communications key stakeholders needs to be established to achieve the vaccination targets. However, it needs to be noted progress on this initiative may be limited due to the long term absence of the Trust immunisation coordinator; and current competing priorities such as swine flu pandemic and the planned 'swine flu vaccination programme' autumn 2009.

The action plan to improve immunisations splits into three main streams:

1. Enhancing Service Delivery
2. Improving data quality, run and reporting
3. Communications

Enhancing Service Delivery

An action plan has been devised to tackle the dropping MMR vaccine rates (submitted SHA May 2009). The plan is running to target- a F/T Band 4 Immunisation administrator was appointed August-this post is critical to deploying the 'tail gunning strategy' which has proven success.

Improving Data Quality, Run & Reporting

Data from CHIS on DNA will be 'cleansed' and children appointed for vaccine, GPs will also be targeted who have low up take figures as part of strategy. Locality reports are currently being sent out to the practice based clusters, for action by the practices that continue to have low uptake rates.

Communications

The Nurse Consultant post in Health Improvement was vacant for a six month period prior; with the new post holder starting in March 2009. In addition to this the Immunisation Coordinator went on long term sick leave; currently this post is seconded one day a week. In light of these man power issues there have not been in place regular Trust Immunisation Group meetings, with key stakeholders to discuss vital signs targets and address operational issues that may impact on this. A meeting is planned November 2009, though; swine flu pandemic appears to be a significant competing priority that may impede on progress with these regular meetings.

Key Focus for the next six months

- Maintain and Improve current immunisation levels
- Focus on Booster immunisation rates
- MMR catch up Programme
- Oversee the implementation of HPV Vaccination 2009-10

Recommendations for the future

A review of the NHS BEN standard procedure for dealing with all aspects of immunisation data quality necessary for achievement of optimum data quality is undertaken with all stakeholders

The Immunisation Activity Sheet, used by the majority of GP practices, should be completed after each immunisation/baby clinic by the Practice Nurse who normally gives the vaccination and given to the Health Visitor at the end of the clinic for inputting to HV records both manual and computer.

At quarterly *clean-up* time GPs should run a computer report for the relevant cohort (e.g. children born between 1 April and 31 June 2009) which should be collected by Health Visitors and passed to Immunisation/Health Visitor Administrator for comparison with the corresponding CHIS report. (To be discussed at November 09 Immunisation Group meeting)

The uptake rate for rate for school leaving booster is significantly low, this data is collected via the KC50 annual returns, the vital signs target for 2009-10 is 86%, and it is unlikely that this target will be met. The current LES agreement for GPs indicates that data returns must be sent to CHIS as per 'Green Book' guidance, Primary Contracting have a significant role to play in helping to achieve the target and withhold payment from GPs unless this data is shared as per LES agreement

This service model of delivery will need to be scrutinised carefully with a view of changing redesign if results do not improve radically.