

NE LINCOLNSHIRE JSNA INDICATOR SUMMARY

TITLE:	Population vaccination coverage
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SUBTITLE:	3.3iii – 3.3x vaccination coverage (one, two and five year olds)
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Domain:	3. Health Protection
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Frequency of Availability:	Quarterly, Annually
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Time Period Of Data Analysis:	1 st April 2013 – 31 st March 2014
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AVAILABLE COMPARISONS

TYPE	AVAILABLE
National, Regional or Peer Group	Yes
Electoral Ward / NELCCG Practice	Yes
Neighbourhood	No
Socioeconomic Differences	Yes
Targets, Trends & Projections	Yes

KEY POINTS

- *Immunisation levels for diphtheria, tetanus, pertussis, polio and haemophilus influenzae type b vaccine (DTaP/IPV/Hib '5 in 1'), are within the top three regionally for the percentage of children vaccinated by the time they have reached their 1st, 2nd birthday, and 5th birthday.*
- *North East Lincolnshire LA are also higher than Yorkshire and Humber and National levels for uptake of (DTaP/IPV/Hib '5 in 1') at all these ages.*
- *All immunisations by the time a child reaches their first birthday are higher than National or Regional and within the region North East Lincolnshire ranks number 1. (1 being highest uptake).*
- *By the time a child reaches their 5th birthday uptake of MMR for 1st and 2nd dose reached 97.8% and 95% consecutively, 1st dose is the highest levels in the region and 2nd dose ranks joint 2nd in the region*
- *Immunisations for PCV follows the same line as the other childhood immunisations reported here and is also joint highest for those reaching age 1 or age 2.*

DESCRIPTION

Children in England should receive a primary course of three doses of diphtheria, tetanus, pertussis, polio and haemophilus influenzae type b vaccine (DTaP/IPV/Hib '5 in 1' at two, three and four months and then a booster dose of DTaP/IPV vaccine three years after completion of the primary course. Rotavirus is given at 2 months and 3 months However this is not yet reportable. MenC is no longer offered at 4 months, however, a new teenage booster jab given at around 14 years has replace the

NE LINCOLNSHIRE JSNA INDICATOR SUMMARY

vaccine dose that is currently given at 4 months of age – as evidence shows the routine four-month meningitis C vaccine dose is no longer required. The teenage booster jab will be offered in the 2013/14 academic year, and therefore is not reportable within this update.

(Hib is boosted as part of the Hib/MenC vaccine given at between 12 and 13 months) This indicator measures the coverage of the primary dose in One, two and five year olds.

Diphtheria is an upper respiratory tract bacterial infection which can cause potentially fatal complications in up to 20% of cases. Diphtheria used to be a common illness, but post war immunisation has made it exceptionally rare in the UK.

Tetanus is a bacterial infection which causes extreme muscular contraction, which when untreated is usually fatal. The bacteria which causes Tetanus is fairly common, however since vaccination in the western world has high coverage, deaths are usually in developing countries, or people with no vaccination history.

Pertussis is more commonly known as 'Whooping Cough', and is a highly prevalent bacterial infection, which causes chronic coughing fits, characterised by a distinctive 'whoop' noise as the individual struggles to draw air. Infection can cause dangerous side effects, especially in very young children.

Poliomyelitis, usually shortened to Polio, is the diseases caused by poliovirus, which although asymptomatic in the majority of cases, can cause paralysis and deformity, particularly in children.

Haemophilus influenzae is a prevalent bacteria which can cause 'opportunistic' infection in individuals with lowered immunity, babies and children are therefore at risk. Infection can cause severe meningitis and pneumonia.¹

NE LINCOLNSHIRE JSNA INDICATOR SUMMARY

Meningococcal meningitis is a bacterial form of meningitis, a serious infection of the meninges that affects the brain membrane. It can cause severe brain damage and is fatal in 50% of cases if untreated.ⁱⁱ As of June 2013, Meningitis C vaccination is offered at 3 months and 12/13 months as part of a combined Dose with Hib, with a further follow up at 13/14 year of age.

The Pneumococcal vaccine protects against pneumococcal infections. Pneumococcal infections are caused by the bacterium *Streptococcus pneumoniae* and can lead to pneumonia, septicemia (a kind of blood poisoning) and meningitis. Babies receive the pneumococcal vaccine as three separate injections, at 2 months, 4 months and as a booster 12-13 months.ⁱⁱⁱ The pneumococcal conjugate vaccine (PCV13) contains the 13 most common serotypes of pneumococcal bacteria.^{iv}

Haemophilus influenzae type b (Hib) is a bacteria responsible for severe pneumonia, meningitis and other invasive diseases almost exclusively in children aged less than 5 years. It is transmitted through the respiratory tract from infected to susceptible individuals.

Meningococcal meningitis is a bacterial form of meningitis, a serious infection of the meninges that affects the brain membrane. It can cause severe brain damage and is fatal in 50% of cases if untreated.^v

MMR is a combined vaccine that protects against three separate illnesses - measles, mumps and rubella (German measles) - in a single injection. The full course of MMR vaccination requires two doses. Measles, mumps and rubella are very common, highly infectious, conditions that can have serious, potentially fatal, complications, including meningitis, swelling of the brain (encephalitis) and deafness. They can also lead to complications in pregnancy that affect the unborn baby and can lead to miscarriage.^{vi} MMR vaccine is given as a single injection to babies as part of their routine vaccination schedule, usually within a month of their first birthday. A second dose of the vaccine is administered before starting school, usually between the ages of three and five. Due to a controversial report published in 1998, which has since been discredited, national uptake of MMR fell abruptly between 1998 and 2005, a drop from which it has now fully recovered.^{vii}

NE LINCOLNSHIRE JSNA INDICATOR SUMMARY

NATIONAL, REGIONAL OR PEER GROUP

Table 1: DTaP/IPV/Hib first dose uptake 1, 2 and 5 years, MMR 1st and 2nd and Hib/MenC uptake at 5 years, England, Yorkshire and Humber and North East Lincolnshire 2013-14

	DTaP/IPV/Hib	DTaP/IPV/Hib	DTaP/IPV (hib) Primary	DTaP/IPV Booster	MMR 1st and 2nd	Hib MenC
	By 1st Birthday	By 2nd Birthday	By 5th Birthday			
2013-14						
England	94.3%	96.1%	95.6%	88.8%	88.3%	91.9%
Yorkshire & the Humber	96.1%	97.3%	97.2%	92.2%	91.7%	95.1%
North East Lincolnshire LA	97.3%	98.3%	98.2%	95.1%	95.0%	95.2%

North East Lincolnshire area continues to report higher uptake of immunisations than both regional and nationally, for 1st, 2nd and 5th birthday for all childhood vaccinations.

NE LINCOLNSHIRE JSNA INDICATOR SUMMARY

Percentage immunised by their 1st birthday 2013-14*			
	Number of children aged 1 (thousands) (=100%)	Diphtheria, Tetanus, Polio, Pertussis, Hib	Pneumococcal Disease
		(DTaP/IPV/Hib)	(PCV)
		<i>primary</i> %	<i>primary</i> %
England	686.2	94.3	94.1
Yorkshire & the Humber	66.3	96.1	95.8
North East Lincolnshire	2.0	97.3	97.1
Kirklees	5.5	97.2	97.0
East Riding of Yorkshire	2.9	97.2	97.1
Wakefield	4.3	97.1	96.7
Barnsley	3.2	97.1	96.9
Calderdale	2.7	96.7	96.0
North Lincolnshire	2.0	96.7	96.1
Rotherham	3.1	96.4	96.1
Leeds	10.3	96.2	95.7
Kingston upon Hull	4.0	96.1	95.7
North Yorkshire	5.8	95.9	95.8
York	2.0	95.9	95.8
Doncaster	3.7	95.8	95.5
Bradford	8.0	95.2	94.9
Sheffield	6.8	94.1	93.6

* Figures reported by LA are for the LA responsible population and in some cases have been estimated - see the 'Notes on LA data' tab for more information. Source: COVER. Copyright © 2014. Health and Social Care Information Centre. All rights reserved.

All immunisations by the time a child reaches their first birthday are higher than National or Regional uptake, and within the region North East Lincolnshire ranks number 1. (1 being highest uptake).

NE LINCOLNSHIRE JSNA INDICATOR SUMMARY

Percentage immunised by their 2nd birthday* 2013-14					
Local Authority (LA)	Number of children aged 2 (thousands)	Diphtheria, Tetanus, Polio, Pertussis, Hib (DTaP/IPV/Hib)	MMR	Hib/MenC	Pneumococcal Conjugate Vaccine (PCV)
	(=100%)	<i>primary</i>	<i>1st dose</i>	<i>booster</i>	<i>booster</i>
		%	%	%	%
England	697.2	96.1	92.7	92.5	92.4
Yorkshire & the Humber	67.3	97.3	94.7	95.0	95.0
Barnsley	3.2	98.6	96.2	97.5	96.7
Kirklees	5.6	98.4	98.0	97.0	96.4
North East Lincolnshire	2.1	98.3	96.2	96.5	96.7
East Riding of Yorkshire	3.1	98.2	96.3	96.8	96.7
Kingston upon Hull	4.0	98.0	95.0	94.7	94.8
Leeds	10.3	97.9	95.3	95.7	95.5
North Lincolnshire	1.9	97.9	94.7	95.5	94.9
Calderdale	2.6	97.7	93.6	94.8	94.7
Wakefield	4.2	97.6	95.4	95.8	95.7
Rotherham	3.1	97.3	93.0	94.5	93.3
Doncaster	3.8	96.8	93.1	94.2	94.1
Bradford	8.3	96.8	94.6	94.8	94.6
Sheffield	6.9	96.2	90.8	93.7	90.7
York	2.1	95.8	94.5	92.4	96.7
North Yorkshire	6.1	95.8	94.5	92.4	96.7

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NE LINCOLNSHIRE JSNA INDICATOR SUMMARY

Percentage immunised by their 5th birthday 2013-14*						
Local Authority (LA)	Number of children aged 5 (thousands) (=100%)	Diphtheria, Tetanus, Polio, Pertussis, Hib	Diphtheria, Tetanus, Polio, Pertussis	MMR	MMR	Hib/MenC
		(DTaP/IPV/Hib)			1st and 2nd dose	
		<i>primary</i>	<i>booster</i>	<i>1st dose</i>	<i>2nd dose</i>	<i>booster</i>
		%	%	%	%	%
England	681.9	95.6	88.8	94.1	88.3	91.9
Yorkshire & the Humber	66.3	97.2	92.2	96.0	91.7	95.1
Barnsley	2.9	98.7	96.0	97.3	95.1	97.5
North East Lincolnshire	2.0	98.2	95.4	97.8	95.0	95.2
Bradford	8.0	98.1	93.8	97.2	93.2	96.4
North Lincolnshire	2.0	98.0	92.2	96.5	91.4	96.2
Kirklees	5.6	98.0	95.4	97.3	95.0	96.8
Kingston upon Hull	3.6	97.9	92.3	96.7	91.8	94.6
East Riding of Yorkshire	3.2	97.7	94.2	96.2	93.2	95.8
Wakefield	4.1	97.5	93.1	96.4	92.0	96.4
Leeds	10.0	97.1	90.9	95.2	90.3	95.0
Calderdale	2.8	97.0	91.9	95.5	93.8	95.2
Doncaster	3.9	96.6	89.4	94.1	88.2	94.6
Rotherham	3.2	96.5	91.9	95.3	90.7	95.2
Sheffield	6.7	96.4	89.5	95.3	89.4	95.0
North Yorkshire	6.3	95.2	90.6	95.0	90.1	91.4
York	2.1	95.2	90.6	95.0	90.1	91.4

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NE LINCOLNSHIRE JSNA INDICATOR SUMMARY

North East Lincolnshire LA portrays that within the region our immunisation levels are within the top three, and by the time a child reaches their 5th birthday the percentage of those that have had the 5 in 1 reaches 98.2%.

NORTH EAST LINCOLNSHIRE

Electoral Wards

	Percentage immunised by their 1st birthday 2013-14*		
	Number of children aged 1 (=100%)	Diphtheria, Tetanus, Polio, Pertussis, Hib (DTaP/IPV/Hib)	Pneumococcal Disease (PCV)
		<i>primary</i> %	<i>primary</i> %
Croft Baker	137	97.1%	97.1%
East Marsh	199	94.0%	93.5%
Freshney	111	100.0%	100.0%
Haverstoe	63	100.0%	100.0%
Heneage	171	97.1%	97.1%
Humberston and New Waltham	75	98.7%	98.7%
Immingham	137	99.3%	98.5%
Park	120	96.7%	96.7%
Scartho	110	98.2%	98.2%
Sidney Sussex	187	95.7%	95.2%
South	189	96.3%	96.8%
Waltham	52	100.0%	100.0%
West Marsh	157	99.4%	98.7%
Wolds	41	97.6%	95.1%
Yarborough	166	96.4%	96.4%
NEL Total	1915	97.3%	97.1%
CTP Total	1980	97.3%	97.1%

NE LINCOLNSHIRE JSNA INDICATOR SUMMARY

Electoral Wards in North East Lincolnshire all score above 95% with the exception of the East Marsh Ward scoring 94% and 93.5% for the DTaP/IPV/Hib and PCV vaccines respectively. This ward is in an area of high deprivation, without a single LSOA within the ward outside the IMD top 20% most deprived. Three wards (Haverstoe, Freshney and Waltham) scored 100% for both vaccinations.

Percentage immunised by their 2nd birthday* 2013-14						
Ward	Number of children aged 2 (=100%)	Diphtheria, Tetanus, Polio, Pertussis, Hib			Pneumococcal Conjugate Vaccine	
		(DTaP/IPV/Hib)	MMR	Hib/MenC	(PCV)	
		<i>primary</i> %	<i>1st dose</i> %	<i>booster</i> %	<i>booster</i> %	
Croft Baker	159	97.5%	95.0%	95.0%	95.0%	
East Marsh	201	98.0%	96.0%	96.0%	95.5%	
Freshney	113	100.0%	98.2%	98.2%	98.2%	
Haverstoe	69	98.6%	98.6%	97.1%	98.6%	
Heneage	202	99.5%	96.0%	97.0%	97.0%	
Humberston and New Waltham	63	100.0%	96.8%	100.0%	100.0%	
Immingham	132	98.5%	95.5%	95.5%	93.9%	
Park	149	96.6%	92.6%	93.3%	94.0%	
Scartho	114	100.0%	98.2%	99.1%	100.0%	
Sidney Sussex	236	97.9%	95.8%	95.8%	96.2%	
South	208	97.6%	95.2%	93.8%	95.2%	
Waltham	51	98.0%	98.0%	98.0%	98.0%	
West Marsh	118	98.3%	97.5%	97.5%	97.5%	
Wolds	65	96.9%	92.3%	98.5%	98.5%	
Yarborough	170	99.4%	99.4%	98.8%	99.4%	
NEL Total	2050	98.4%	96.2%	96.4%	96.7%	
CTP Total	2117	98.3%	96.2%	96.5%	96.7%	

Every ward scored above 95% for DTaP/IPV/Hib vaccinations by the 2nd birthday. Park ward scored below 95% on MMR, Hib/MenC and PCV vaccinations. Again, some wards scored 100% (Humberston and New Waltham, Freshney and Scartho) for DtaP/IPV/Hib vaccinations with

NE LINCOLNSHIRE JSNA INDICATOR SUMMARY

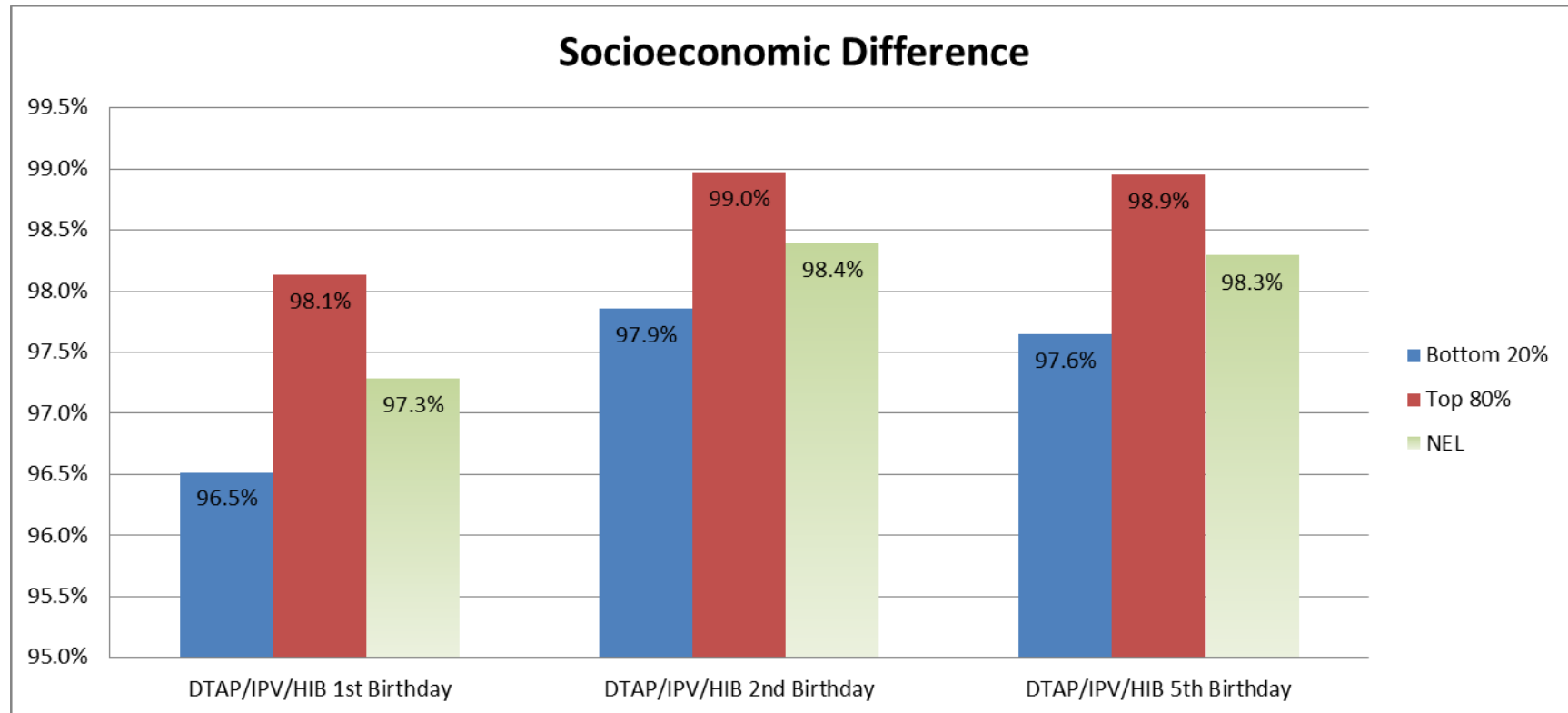
Humberston and New Waltham and Scartho also scoring 100% for PCV vaccinations. These are both affluent areas, with only 40 postcodes within the IMD top 30% most deprived.

Percentage immunised by their 5th birthday 2013-14*						
Ward	Number of children aged 5 (=100%)	Diphtheria, Tetanus, Polio, Pertussis, Hib	Diphtheria, Tetanus, Polio, Pertussis	MMR	MMR	Hib/MenC
		(DTaP/IPV/Hib)				
		<i>primary</i>	<i>booster</i>	<i>1st dose</i>	<i>1st and 2nd dose</i>	<i>booster</i>
		%	%	%	%	%
Croft Baker	119	99.2%	95.0%	100.0%	95.8%	97.5%
East Marsh	164	96.3%	92.7%	97.6%	91.5%	92.1%
Freshney	103	99.0%	95.1%	99.0%	95.1%	96.1%
Haverstoe	72	100.0%	97.2%	97.2%	94.4%	98.6%
Heneage	174	98.3%	93.7%	98.3%	93.7%	95.4%
Humberston and New Waltham	91	98.9%	96.7%	98.9%	96.7%	96.7%
Immingham	156	98.7%	96.8%	97.4%	96.2%	96.8%
Park	147	98.6%	94.6%	95.9%	91.2%	94.6%
Scartho	113	99.1%	97.3%	99.1%	95.6%	98.2%
Sidney Sussex	185	97.3%	95.7%	98.4%	96.8%	95.7%
South	211	98.1%	95.7%	98.1%	96.2%	92.4%
Waltham	58	96.6%	94.8%	94.8%	93.1%	94.8%
West Marsh	120	97.5%	95.8%	97.5%	95.0%	93.3%
Wolds	71	100.0%	97.2%	97.2%	95.8%	97.2%
Yarborough	142	98.6%	95.8%	97.9%	94.4%	96.5%
NEL Total	1926	98.3%	95.4%	97.9%	94.8%	95.4%
CTP Total	2014	98.2%	95.4%	97.8%	94.7%	95.2%

NE LINCOLNSHIRE JSNA INDICATOR SUMMARY

All wards indicated 95% uptake for DTaP/IPV/Hib vaccinations by the 5th Birthday. Four wards scored below 95% for the DTaP/IPV Booster (East Marsh, Heneage, Park and Waltham), these wards are diverse in their demographic and IMD composition. Two wards scored as low as 91% for MMR 1st and 2nd dose vaccinations (East Marsh 91.5% and Park 91.2%). Again, these 2 wards are varied in their demographic and IMD composition.

Socioeconomic Differences



The above chart shows the Socioeconomic differences between coverage of the DTaP/IPV/Hib vaccination. Difference is based on the IMD deprivation rating of the Lower Super Output Area containing the patient's residence. Ratings have been split into quintiles, with the top four quintiles combining to form the Top 80% (Least deprived) and the bottom quintile representing the Bottom 20% (Most deprived). Firstly, it is important to note that all areas of deprivation score above 95%. There is an average split between vaccination scores of 1.3%, with the Top

NE LINCOLNSHIRE JSNA INDICATOR SUMMARY

80% (Least deprived) scoring higher than the Bottom 20% (Most deprived) on each indicator. The NEL overall score is also included for each indicator.

TRENDS, TARGETS & PROJECTIONS

Uptake of DTaP/IPV/Hib immunisation given by 1st Birthday						
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
England	92.0%	93.6%	94.2%	94.7%	94.7%	94.3%
Yorkshire and Humber	93.9%	94.8%	95.5%	95.8%	96.3%	96.1%
NEL	93.8%	95.1%	93.4%	95.7%	97.2%	97.3%

Uptake of DTaP/IPV/Hib immunisation given by 2nd Birthday						
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
England	92.0%	95.3%	96.0%	96.1%	96.3%	96.1%
Yorkshire and Humber	93.9%	96.3%	96.8%	97.1%	97.5%	97.3%
NEL	96.0%	96.2%	97.1%	97.2%	98.8%	98.3%

Uptake of PCV Vaccination given by 1st birthday 2013 -14						
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
England	91.3%	92.9%	93.6%	94.2%	94.4%	94.1%
Yorkshire and Humber	92.9%	94.0%	94.7%	95.7%	95.9%	95.8%
NEL LA	94.0%	95.1%	92.9%	95.6%	97.2%	97.1%

NE LINCOLNSHIRE JSNA INDICATOR SUMMARY

Uptake of PCV immunisation given by 2nd birthday						
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
England	81.5%	87.6%	89.3%	91.5%	92.5%	92.4%
Yorkshire and Humber	84.7%	89.8%	91.5%	94.0%	94.9%	95.0%
NEL CTP	85.0%	88.5%	88.3%	94.8%	96.9%	96.7%

Uptake of Hib/MenC Vaccination given by 2nd birthday 2012-13						
	2008-09	2009-10	2010-11	2012-12	2012-13	2013-14
England	85.4%	90.0%	91.6%	92.3%	92.7%	92.5%
Yorkshire and Humber	88.6%	93.0%	94.2%	94.6%	95.0%	95.0%
NELCTP	89.0%	91.3%	96.4%	94.8%	96.8%	96.5%

Uptake of MMR (dose 1) Vaccination given by 2nd birthday						
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
England	84.9%	88.2%	89.1%	91.2%	92.3%	92.7%
Yorkshire and Humber	86.6%	89.2%	90.7%	93.1%	94.2%	94.7%
NEL PCT	89.6%	88.5%	88.9%	93.9%	96.5%	96.2%

Public Data Sources:	http://www.ons.gov.uk/ons/index.html
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ⁱ <http://www.who.int/immunization/diseases/en/>

ⁱⁱ <http://www.who.int/mediacentre/factsheets/fs141/en/>

ⁱⁱⁱ NHS Website - <http://www.nhs.uk/Conditions/vaccinations/Pages/pneumococcal-vaccination.aspx>

^{iv} Health Protection Agency - <http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/Pneumococcal/GuidelinesPneumococcal/pneumoFAQs/>

^v <http://www.who.int/mediacentre/factsheets/fs141/en/>

^{vi} NHS Choices - <http://www.nhs.uk/Conditions/vaccinations/Pages/mmr-vaccine.aspx>

^{vii} Health and Social Care Information Centre - <http://www.hscic.gov.uk/catalogue/PUB11665>