

# Immunisation uptake report for Ireland

hpsc

A report by the Health Protection Surveillance Centre

### Summary

#### Children 12 months of age in Quarter 2-2013

- National immunisation uptake rates were 91% for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub>, HepB<sub>3</sub>, MenC<sub>2</sub> and PCV<sub>2</sub>. Compared to Q1-2013, national uptake rates in Q2-2013 for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub> were unchanged while HepB<sub>3</sub>, MenC<sub>2</sub> and PCV<sub>2</sub> increased by 1%.
- The HSE Midland Area reached the target of ≥95% for all vaccines while the HSE North Western Area reached the target for all vaccines except MenC<sub>2</sub>.
- Among the Local Health Offices, the target uptake rate of ≥95% was reached in Longford/Westmeath, Donegal and Roscommon for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub>, HepB<sub>3</sub>, MenC<sub>2</sub> and PCV<sub>2</sub> and in Sligo/Leitrim for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub>, HepB<sub>3</sub> and PCV<sub>2</sub>.
- BCG uptake data were available for seven of the eight HSE Areas in Q2-2013; these areas cover approximately 90% of the national birth cohort. Where data were available, national uptake was 86% for the BCG vaccination. This is a decline of 1% compared to Q1 2013. The target uptake of ≥95% was reached in the HSE Midland, Mid Western, North Western and South Eastern Areas i.e. in ll LHOs. An additional three LHOs (in the HSE Eastern Area) also reached the target uptake rate.

#### Children 24 months of age in Quarter 2-2013

- National uptake rates were 96% for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub>, 95% for HepB<sub>3</sub>, 92% for MMR<sub>1</sub>, 91% for PCV<sub>3</sub>, 89% for Hib<sub>b</sub> and 86% for MenC<sub>3</sub>.
   Compared to the previous quarter, national uptake rates in Q2 2013 increased by 1% for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub> and were unchanged for the remainder.
- The target uptake of  $\geq$ 95% was reached for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub> in seven of the eight HSE Areas, for HepB<sub>3</sub> in six of the HSE Areas, for MMR<sub>1</sub> in three HSE Areas and for Hib<sub>b</sub> in two HSE Areas. The target uptake of  $\geq$ 95% was not reached in any HSE Area for MenC<sub>3</sub> or PCV<sub>3</sub>.
- Six of the eight HSE Areas were able to provide uptake data on  $MenC_b$  (one dose of MenC at  $\geq 12$  months of age) and  $PCV_b$  (one dose of PCV at  $\geq 12$  months of age) in Quarter 2 2013. These Areas cover approximately 80% of the national birth cohort. Where data were available, national uptake was 90% for MenC<sub>b</sub> and 93% for PCV<sub>b</sub>. The target uptake of  $\geq 95\%$  was reached for  $PCV_b$  in three HSE Areas and in one for  $MenC_b$ .
- The target uptake of ≥95% was reached in 26 LHOs for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub>, 24 LHOs for HepB<sub>3</sub>, 9 for Hib<sub>b</sub>, PCV<sub>b</sub> and MMR<sub>1</sub>, 4 for MenC<sub>b</sub>, 2 for PCV<sub>3</sub>, and in one for MenC<sub>3</sub>.

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### Introduction

Since September 1st 2008, the childhood immunisation schedule outlined in table 1 has been implemented for children born on or after 1<sup>st</sup> July 2008.

Compared to the previous schedule (table 1), the changes to the primary schedule for children born on or after 1<sup>st</sup> July 2008 include; Introduction of a hepatitis B vaccine (as part of a 6 in 1 vaccine) given at 2, 4 and 6 months of age

Introduction of pneumococcal conjugate vaccine given at 2, 6 and 12 months of age

Change in timing of meningococcal serogroup C conjugate vaccination, now given at 4, 6 and 13 months of age

Change in timing of the *Haemophilus influenzae* type b booster vaccination, now given at 13 months of age.

Please see www.immunisation.ie for complete information on the Irish childhood immunisation schedule.

The immunisation uptake statistics presented in this report relate to children 12 and 24 months of age in Quarter 2-2013.

The immunisation uptake rates presented in this report for children at 12 months of age in Quarter 2-2013 are children born between 01/04/2012 and 30/06/2012 and who have received three doses of vaccines against diphtheria (D<sub>3</sub>), pertussis (P<sub>3</sub>), tetanus (T<sub>3</sub>), *Haemophilus influenzae* type b (Hib<sub>3</sub>), polio (Polio<sub>3</sub>), hepatitis B (HepB<sub>3</sub>), two doses of meningococcal serogroup C conjugate vaccine (MenC<sub>2</sub>), two doses of pneumococcal conjugate vaccine (PCV<sub>2</sub>) and one dose of BCG vaccine.

The immunisation uptake rates presented in this report for children at 24 months of age in Quarter 2-2013 are children born between 01/04/2011 and 30/06/2011 and who have received three doses of vaccines against diphtheria (D<sub>3</sub>), pertussis (P<sub>3</sub>), tetanus (T<sub>3</sub>), *Haemophilus influenzae* type b (Hib<sub>3</sub>), polio (Polio<sub>3</sub>), hepatitis B (HepB<sub>3</sub>), meningococcal group C (MenC<sub>3</sub>) and pneumococcal conjugate vaccine (PCV<sub>3</sub>), one booster dose of vaccine against *Haemophilus influenzae* type b on or after 12 months of age (Hib<sub>b</sub>), one dose of vaccine against meningococcal group C (MenC<sub>b</sub>) on or after twelve months of age, one dose of vaccine against pneumococcal conjugate vaccine (PCV<sub>b</sub>) on or after twelve months of age and one dose of vaccine against measles, mumps and rubella (MMR<sub>1</sub>). The Quarter 2-2013 cohort of children at 24 months was therefore the twelfth cohort recommended the new immunisation schedule. (Children that were 24 months of age in Quarter 3-2010 were children born between July 1st and September 30th 2008 and were therefore the first cohort recommended the new immunisation schedule.)

The national immunisation uptake statistics, based on available data, for Quarter 2-2013 are presented in this document, the uptake statistics are also presented by HSE Area and Local Health Office (LHO).

The uptake rates presented here were rounded to zero decimal place.

While there are 32 LHOs the immunisation uptake data for North Lee and South Lee are combined in this report.

Age	Children born before 01/07/2008	Children born on or after 01/07/2008						
Birth	BCG	BCG						
2 months	DTaP/Hib/IPV + MenC	DTaP/Hib/IPV/HepB + PCV						
4 months	DTaP/Hib/IPV + MenC	DTaP/Hib/IPV/HepB + MenC						
6 months	DTaP/Hib/IPV + MenC	DTaP/Hib/IPV/HepB + PCV + MenC						
12 months	MMR + Hib	MMR + PCV						
13 months	-	MenC + Hib						
	munisation.ie for complete information on the Irish ch	ildhood immunisation schedule and the						
immunisation guid BCG	Bacille Calmette Guerin vaccine							
DTaP	Diptheria, Tetanus and acellular Pertussis vaccine							
Hib	Haemophilus influenzae type b vaccine							
НерВ	Hepatitis B vaccine							
IPV	Inactivate Polio Virus vaccine							
MMR	Measles, Mumps and Rubella vaccine							
MenC	Meningococcal group C vaccine							
PCV	Pneumococcal Conjugate Vaccine							

### Immunisation uptake at 12 months

#### National and HSE Area uptake

Immunisation uptake rates in children 12 months of age in Q2-2013 are presented by HSE Area in table 2. National uptake rates were 91% for  $D_3$ ,  $P_3$ , P

BCG uptake data were available for seven of the eight HSE Areas in Q2-2013; these areas cover approximately 90% of the national birth cohort. Where data were available, national uptake was 86% for the BCG vaccination. The target uptake of ≥95% was reached in the HSE Midland, Mid Western, North Western and South Eastern Areas i.e. in ll LHOs. An additional three LHOs (in the HSE Eastern Area) also reached the target uptake rate.

#### National & HSE Area trends

Figure 1 presents the national uptake rates at 12 months for each vaccine from Q3-2000 to Q2-2013. Compared to Q1-2013, national uptake rates in Q2-2013 for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub> were unchanged while HepB<sub>3</sub>, MenC<sub>2</sub> and PCV<sub>2</sub> increased by 1%.

In Q2-2013, compared to the previous quarter, uptake rates in the: HSE-Eastern Area increased by 1% for MenC2 and 2% for PCV2 and were unchanged for the remainder; HSE-Midland Area were unchanged for all vaccines except BCG which increased by 1%; HSE-Mid Western Area increased by 1% for all vaccines except BCG which was unchanged; HSE-North-Eastern Area decreased by 1% for all vaccines except MenC2 which increased by 2% and PCV2 which increased by 3%; HSE-North-Western Area increased by 1-2% for all vaccines; HSE-South Eastern Area decreased by 1% for all vaccines except BCG which was unchanged; HSE-Southern Area increased by 1-2% for all vaccines except BCG which decreased by 1% and PCV2 which was unchanged; HSE-Western were unchanged except BCG which increased by 1% and PCV2 which increased by 2%.

### LHO uptake

The immunisation uptake rates by LHO are shown in appendix 1.  $D_3$ ,  $MenC_2$  and  $PCV_2$  immunisation uptake rates are mapped by LHO in figures 2-4.

Among the 25 LHOs reporting BCG data, BCG uptake ranged from 91% to 99% with 14 reporting uptake of  $\geq$ 95%.

 $D_3, P_3, T_3, Hib_3, Polio_3$  and HepB\_3, uptake rates ranged from 79% (Dublin North West) to 96% (Longford/Westmeath and Roscommon). MenC\_2 and PCV\_2 uptake rates ranged from 79% (Dublin North West) to 98% (Roscommon).

The target uptake rate of  $\geq$ 95% was reached in Longford/Westmeath, Donegal and Roscommon for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub>, HepB<sub>3</sub>, MenC<sub>2</sub> and PCV<sub>2</sub> and in Sligo/Leitrim for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub>, HepB<sub>3</sub> and PCV<sub>2</sub>.

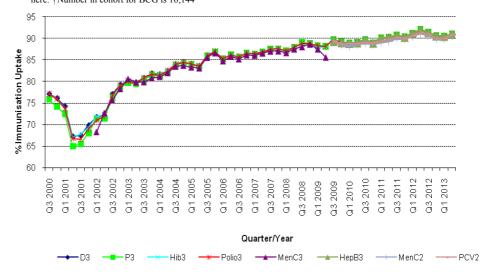
Twenty-three LHOs had  $\geq 90\%$  uptake of D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub>, HepB<sub>3</sub>, MenC<sub>2</sub> and PCV<sub>2</sub>.

Table 2. Immunisation uptake (%) at 12 months in cohort born 01/04/2012-30/06/2012

HSE Area	No. in cohort*	BCG	$D_3T_3$	P <sub>3</sub>	Hib <sub>3</sub>	Polio <sub>3</sub>	HepB <sub>3</sub>	MenC <sub>2</sub>	PCV <sub>2</sub>
Eastern	6665	94	89	89	89	89	89	89	90
Midland	1188	96	95	95	95	95	95	95	95
Mid Western	1383	98	94	94	94	94	94	94	94
North Eastern	1855	na	89	89	89	89	89	90	91
North Western	897	96	95	95	95	95	95	94	95
South Eastern	1865	96	92	92	92	92	92	92	92
Southern	2473	93	90	90	90	90	90	87	86
Western	1645	13	92	92	92	92	92	92	93
Ireland	17971†	86	91	91	91	91	91	91	91

na = not available at this time

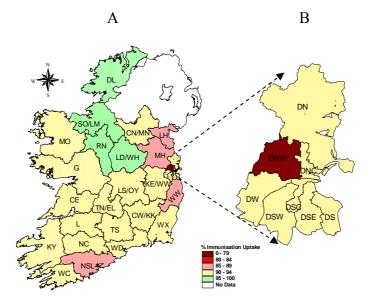
<sup>\*</sup>As the denominator/number in cohort varied slightly according to vaccine, most commonly used number is presented here. †Number in cohort for BCG is 16,144



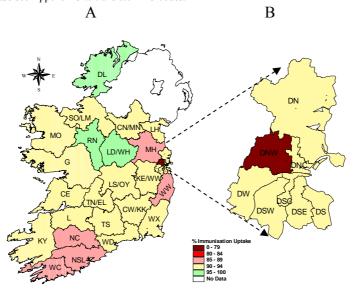
**Figure 1.** National quarterly immunisation uptake rates at 12 months
Since  $T_3$  uptake identical to  $D_3$  uptake only  $D_3$  uptake figures presented. The Q3-2008 Men $C_3$  uptake figure is based on data from six of the eight HSE Areas. The Q1-2009 HSE-Eastern Area  $D_3$ ,  $P_3$ ,  $T_3$ , Polio $_3$  and MMR $_1$  uptake figures exclude those born on the 31/03/2007. The Q3-2009 figures are incomplete as two HSE Areas were unable to provide data, two additional areas were unable to provide Men $C_2$  data and one additional area was unable to provide PCV $_2$  data. The Q4-2009 figures are incomplete as three HSE Areas were unable to provide data. The Q1-2010 figures are incomplete as two HSE Areas were unable to provide data. The Q4-2010 figures are incomplete as two HSE Areas were unable to provide data. The Q4-2010 figures are incomplete as one HSE Area was unable to provide data.

### Internationally

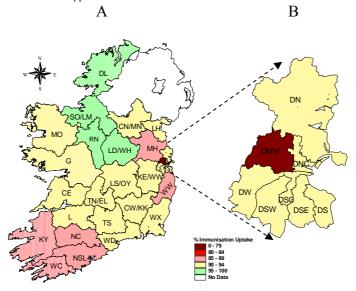
Vaccination coverage statistics for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub> for children 12 months of age in Quarter 2-2013 were 94.7% in England, 96.7% in Wales, 97.7% in Northern Ireland and 97.6% in Scotland. MenC<sub>2</sub> uptake was 94.1% in England, 96.4% in Wales, 97.7% in Northern Ireland and 97.3% in Scotland. PCV<sub>2</sub> uptake was 94.6% in England, 96.2% in Wales, 97.7% in Northern Ireland and 97.7% in Scotland.



**Figure 2.** D<sub>3</sub> immunisation uptake rates (%) by LHO, in those 12 months of age in Quarter 2-2013, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.



**Figure 3.** MenC<sub>2</sub> immunisation uptake rates (%) by LHO, in those 12 months of age in Quarter 2-2013, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.



**Figure 4.** PCV<sub>2</sub> immunisation uptake rates (%) by LHO, in those 12 months of age in Quarter 2-2013, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

### Immunisation uptake at 24 months

### National and HSE Area uptake

Immunisation uptake rates in children 24 months of age in Q2-2013 are presented (Table 3). National uptake rates were 96% for  $D_3$ ,  $P_3$ ,  $T_3$ , Hib3 and Polio3, 95% for HepB3, 92% for MMR1, 91% for PCV3, 89% for Hibb and 86% for MenC3. Among the HSE Areas the uptake of  $D_3$ ,  $P_3$ ,  $T_3$ , Hib3, Polio3 and HepB3 ranged from 94-98%, MMR1 ranged from 90-96%, PCV3 ranged from 89-94%, MenC3 ranged from 83-90% and Hibb ranged from 82-98%. The target uptake of  $\geq$ 95% was reached for  $D_3$ ,  $P_3$ ,  $T_3$ , Hib3 and Polio3 in seven of the eight HSE Areas, for HepB3 in six of the HSE Areas, for Hibb in two HSE Areas, for MMR1 in three HSE Areas and in none for MenC3 or PCV3. Six of the eight HSE Areas were able to provide uptake data on MenCb (one dose of MenC at  $\geq$ 12 months of age) and PCVb (one dose of PCV at  $\geq$ 12 months of age) in Quarter 2 2013. These Areas cover approximately 80% of the national birth cohort. Where data were available, national uptake was 90% for MenCb and 93% for PCVb. The target uptake of  $\geq$ 95% was reached for PCVb in three HSE Areas and in one for MenCb.

#### National & HSE Area trends

Figure 5 presents the national uptake rates at 24 months for each vaccine from Q1-1999 to Q2-2013. Compared to the previous quarter, national uptake rates in Q2 2013 increased by 1% for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub> and were unchanged for the remainder.

In Q2-2013, compared to the previous quarter, uptake rates in the: HSE-Eastern Area decreased by 1% for Hibb, MenC3 and MenCb but were unchanged for the remainder; HSE-Midland Area decreased for MenC<sub>3</sub> (by 2%), PCV<sub>b</sub> (by 1%) and MMR<sub>1</sub> (by 1%) but were unchanged for the remainder; HSE-Mid Western Area increased by 2% for  $D_3,\,P_3,\,T_3,\,Hib_3,\,Polio_3$  and HepB<sub>3</sub>, were unchanged for PCV<sub>b</sub> and decreased for Hib<sub>b</sub> (by 2%), MenC<sub>3</sub> (by 4%), MenC<sub>b</sub> (by 2%), PCV<sub>3</sub> (by 1%) and MMR<sub>1</sub> (by 1%); HSE-North-Eastern Area increased by 1% for MenC<sub>3</sub> and were unchanged for the remainder; HSE-North-Western Area increased by 1-2% for all vaccines except MenC<sub>b</sub> which was unchanged; HSE-South Eastern Area increased by 1% for Hibb and MenCb, decreased by 1% for PCV3 and were unchanged for the remainder; HSE-Southern Area increased by 1% for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Polio<sub>3</sub> and MMR<sub>1</sub>, were unchanged for Hib<sub>3</sub>, HepB<sub>3</sub>, PCV<sub>3</sub> and PCV<sub>b</sub> and decreased by 2% for Hibb, MenC3, and MenCb; HSE-Western increased by 2% for the majority of vaccines except Hibb which increased by 7%, MenC3 increased by 4%, PCV3 increased by 3% and MMR<sub>1</sub> which was unchanged.

### LHO uptake

Immunisation uptake rates in children 24 months of age in Q2-2013 are presented by LHO in Appendix 2. D<sub>3</sub>, Hib<sub>b</sub>, MenC<sub>3</sub>, MenC<sub>b</sub>, PCV<sub>3</sub>, PCV<sub>b</sub> and MMR<sub>1</sub> immunisation uptake rates are mapped by LHO in figures 6-12.

Among the LHOs, uptake of  $D_3$ ,  $T_3$ ,  $P_3$  and Polio<sub>3</sub> ranged from 90-98%, HepB<sub>3</sub> ranged from 89% to 98%, Hib<sub>3</sub> ranged from 88-98%, PCV<sub>3</sub> ranged from 86-97%, PCV<sub>b</sub> ranged from 85-97%, MMR<sub>1</sub> ranged from 84-98%, MenC<sub>b</sub> ranged from 78-96%, MenC<sub>3</sub> ranged from 77-96% and Hib<sub>b</sub> ranged from 74-99%.

The target uptake of  $\geq$ 95% was reached in 26 LHOs for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub>, 24 LHOs for HepB<sub>3</sub>, 9 for Hib<sub>b</sub>, MMR<sub>1</sub> and PCV<sub>b</sub>, 4 for MenC<sub>b</sub>, 2 for PCV<sub>3</sub>, and in one for MenC<sub>3</sub>.

All LHOs had  $\geq$ 90% uptake of D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub> and Polio<sub>3</sub>, 30 had  $\geq$ 90% uptake of Hib<sub>3</sub> and HepB<sub>3</sub>, 25 had  $\geq$ 90% uptake of MMR<sub>1</sub>, 22 had  $\geq$ 90% of PCV<sub>3</sub>, 21 had  $\geq$ 90% uptake of PCV<sub>b</sub>, 18 had  $\geq$ 90% of Hib<sub>b</sub> and MenC<sub>b</sub> and 8 had  $\geq$ 90% uptake of MenC<sub>3</sub>.

Table 3. Immunisation uptake (%) at 24 months in cohort born 01/04/2011-30/06/2011

HSE Area	No. in Cohort*	D <sub>3</sub> /T <sub>3</sub> /P <sub>3</sub> /Polio <sub>3</sub>	Hib <sub>3</sub>	Hibb	HepB <sub>3</sub>	MenC <sub>3</sub>	MenC <sub>b</sub>	PCV <sub>3</sub>	PCV <sub>b</sub>	$MMR_1$
Eastern	6778	95	95	88	95	85	88	90	92	92
Midland	1253	98	98	98	98	90	93	94	95	96
Mid Western	1375	97	97	91	97	87	91	92	94	93
North Eastern	2042	94	94	86	94	84	na	89	na	90
North Western	887	97	97	94	96	90	94	93	95	96
South Eastern	1945	96	96	97	96	90	95	93	96	95
Southern	2551	96	95	82	94	83	85	90	91	92
Western	1665	96	96	89	96	86	na	92	na	90
Ireland	18496	96	96	89	95	86	90	91	93	92

<sup>\*</sup> As the denominator/number in cohort varied slightly according to vaccine, most commonly used number is presented here.

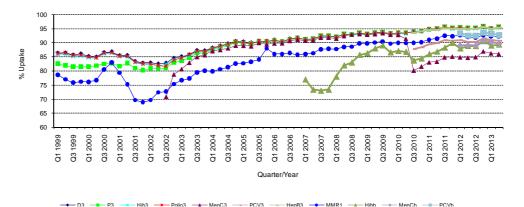


Figure 5. National quarterly immunisation uptake rates at 24 months

Notes: The Q4-2005 MMR, figure is based on data from seven of the eight HSE-Areas. The Q1-2006 MMR, figure includes the HSE-Eastern Area figure that is an estimate only. The Q1-2007, Q3-2007, Q2-2008 and Q3-2008 Hib<sub>8</sub> figures are based on data from seven of the eight HSE Areas. In Q1-2008 the HSE-SE changed their Hib<sub>8</sub> data extraction method compared to previous quarters; in Q1-2008 the uptake of Hib<sub>8</sub> in the HSE-SE was 83% compared to 53% in Q4-2007. The Q3-2008 MenC<sub>3</sub> figure is based on data from six of the eight HSE Areas. The Q1-2009 HSE-Eastern Area Hib<sub>8</sub> uptake figures exclude those born on the 31/03/2007. The Q2-2009 HSE-Eastern Area Hib<sub>8</sub> uptake figures exclude uptake figures from Dublin North. The Q4-2009 figures are based on data from seven of the eight HSE Areas. The Q4-2009 Hib<sub>8</sub> figures also exclude uptake figures from Dublin North. The Q1-2010 figures are based on data from seven of the eight HSE Areas. The Q1-2010 Hib<sub>8</sub> figures also exclude uptake figures from Dublin North. The Q2-2010 figures are based on data from seven of the eight HSE Areas. The Q1-2010 Hib<sub>8</sub> figures are based on data from seven of the eight HSE Areas. The Q1-2010 Hib<sub>8</sub> figures are based on data from seven of the eight HSE Areas.

#### Internationally

In Q2-2013, vaccination coverage statistics at 24 months for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub> were 96.3% in England, 97.4% in Wales, 98.7% in Northern Ireland and 98.3% in Scotland. <sup>1</sup> PCV booster was 92.8% in England, 95.8% in Wales, 96.2% in Northern Ireland and 95.8% in Scotland. Hib/MenC booster was 92.9% in England, 94.9% in Wales, 96.4% in Northern Ireland and 96.0% in Scotland. <sup>1</sup> MMR<sub>1</sub> uptake was 92.6% in England, 95.9% in Wales, 96.1% in Northern Ireland and 95.2% in Scotland. <sup>1</sup> Please see HPA report for caveats. <sup>1</sup>

### Conclusions

In Quarter 2-2013, national uptake rates at 24 months for  $D_3$ ,  $P_3$ ,  $T_3$ ,  $Hib_3$ ,  $Polio_3$  and  $HepB_3$  reached the target of  $\geq$ 95%. Since the introduction of the new childhood schedule in September 2008 Men $C_3$  and  $Hib_b$  uptake are lower than the uptake of the other recommended vaccines both of which should be given at 13 months of age suggesting that parents are less likely to get the necessary vaccines for their children at this age.

### Acknowledgements

HPSC would like to thank the HSE Areas for providing data and special thanks to the Specialists in Public Health Medicine, Immunisation Co-ordinators, Surveillance Scientists and Systems Analysts for their assistance.

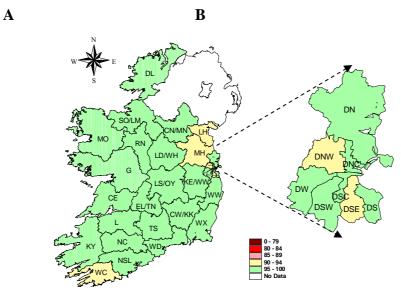


Figure 6.  $D_3$  immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 2-2013, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

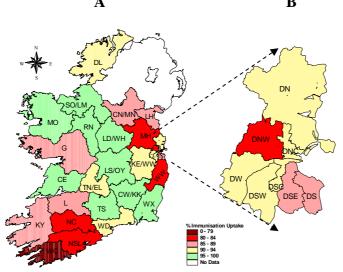
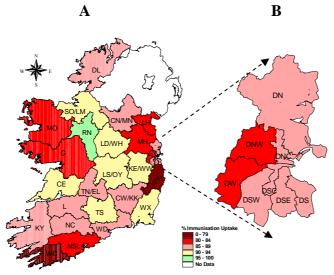


Figure 7.  $\text{Hib}_b$  immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 2-2013, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.



**Figure 8.** MenC<sub>3</sub> immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 2-2013, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

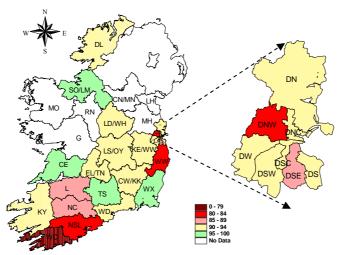
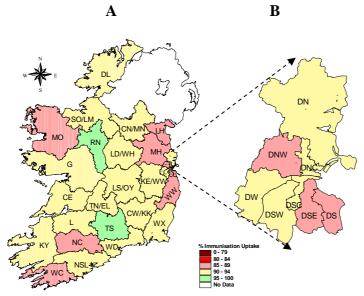
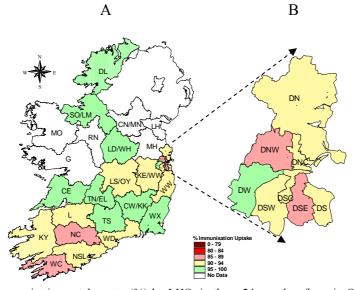


Figure 9.  $MenC_b$  immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 2-2013, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.



**Figure 10.** PCV<sub>3</sub> immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 2-2013, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.



**Figure 11.** PCV<sub>b</sub> immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 2-2013, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

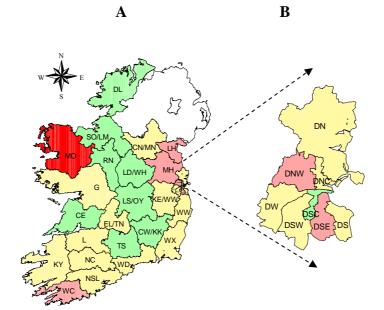


Figure 12.  $MMR_1$  immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 2-2013, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

## Appendix 1

Immunisation U									Jptake (%)					
HSE Area	LHO/HSE Area	No. in cohort for BCG	No. in cohort for other vaccines*	BCG	D <sub>3</sub> T <sub>3</sub>	P <sub>3</sub>	Hib <sub>3</sub>	Polio <sub>3</sub>	HepB <sub>3</sub>	MenC <sub>2</sub>	PCV <sub>2</sub>			
	Dublin South	433	433	91	92	92	92	92	92	90	91			
	Dublin South East	413	413	95	91	91	91	91	91	91	91			
	Dublin South City	457	457	92	91	91	91	91	91	91	92			
	Dublin South West	681	681	96	93	93	93	93	93	93	94			
	Dublin West	701	701	94	93	93	93	93	93	93	94			
	Dublin North West	1009	1009	93	79	79	79	79	79	79	79			
	Dublin North Central	444	444	93	91	91	91	91	91	91	92			
	Dublin North	1062	1062	94	91	91	91	91	91	91	91			
	Kildare/West Wicklow	977	977	95	91	91	91	91	91	91	91			
	Wicklow	488	488	92	88	88	88	88	88	88	88			
	HSE-E Total	6665	6665	94	89	89	89	89	89	89	90			
		-300	5500	<b>~</b> T			. 50		1 30	, 50				
	Laois/Offaly	664	664	95	94	94	94	94	94	94	94			
Midland	Longford/Westmeath	524	524	95	96	96	96	96	96	96	96			
williand	HSE-M Total	1188	1188	96	95	95 95	95	95	95 95	95	95			
	IIOL-III TOTAI	1100	1100	30	33	30	33	33	33	33	33			
	Clara	444	448	97	94	94	94	94	94	93	94			
	Clare	488	448	99	94	94	94	94	94	93	94			
Mid	Limerick				_	94	94	<u> </u>	94	_	94			
western	Tipperary NR/East Limerick	430	440	97	94			94		94				
	HSE-MW Total	1362	1383	98	94	94	94	94	94	94	94			
		1			1	•	T		,					
North Eastern	Cavan/Monaghan	na	499	na	91	91	91	91	91	93	93			
	Louth	na	500	na	89	89	89	89	89	91	92			
		na	856	na	87	87	87	87	87	88	88			
	HSE-NE Total	na	1855	na	89	89	89	89	89	90	91			
North	Donegal	544	544	95	95	95	95	95	95	95	95			
Western	Sligo/Leitrim	353	353	98	95	95	95	95	95	94	96			
western	HSE-NW Total	897	897	96	95	95	95	95	95	94	95			
	Carlow/Kilkenny	506	506	96	93	93	93	93	93	92	93			
0	South Tipperary	297	297	97	93	93	93	93	93	93	92			
South	Waterford	493	493	96	92	92	92	92	92	92	91			
Eastern	Wexford	569	569	95	92	92	92	92	91	92	92			
	HSE-SE Total	1865	1865	96	92	92	92	92	92	92	92			
	North Cork	368	356	92	90	90	90	90	88	88	88			
	North South Lee	1415	1387	93	89	89	89	89	89	85	86			
Southern	West Cork	212	212	93	90	90	90	90	90	86	86			
	Kerry	527	518	92	92	92	92	92	92	90	88			
	HSE-S Total	2522	2473	93	90	90	90	90	90	87	86			
	Galway	na	967	na	92	92	92	92	92	92	92			
	Mayo	na	465	na	92	91	91	91	92	90	92			
Western	Roscommon	na	213	na	96	96	96	96	96	98	98			
	HSE-W Total	1645	1645	13	90	90	90	90	90	90	93			
	IIOL-W IOIAI	1040	1040	13	32	JL	32	32	J 32	32	33			

na=not available

\* As the denominator/number in cohort varied slightly according to vaccine, most commonly used number is presented here.

Please note w hile North Lee and South Lee are two separate LHOs their combined immunisation uptake data are reported here.

## Appendix 2

		Immunis	ation upta	ake (%) at	24 month	s of age in	cohort bo	rn 01/04/2	011-30/06	/2011			
				Immunisation Uptake (%)									
		No. in	D <sub>3</sub> T <sub>3</sub>	P <sub>3</sub>	Hib <sub>3</sub>	Hibh	Polio <sub>3</sub>	HepB₃	MenC₂	MenC <sub>h</sub>	PCV <sub>3</sub>	PCV <sub>b</sub>	MMR <sub>4</sub>
HSE Area	LHO/HSE Area	cohort*		-			•		3		ŭ	- <b>D</b>	
	Dublin South	433 473	95 91	95 91	95 91	88 86	95 91	95 91	87 85	90 86	89	91 89	91 88
	Dublin South East	441	98	98	98	90	98	98	86	90	88 91	94	95
	Dublin South City	697	98	98	98	90	98	98	87	90	90	94	95
	Dublin South West Dublin West	703	97	97	97	90	97	96	84	90	90	95 95	93
Eastern	Dublin West Dublin North West	972	94	94	94	82	94	94	80	82	87	89	88
Eastern	Dublin North Central	427	96	96	96	90	96	96	88	90	91	92	92
	Dublin North	1128	95	95	95	90	95	95	87	90	90	92	92
	Kildare/West Wicklow	1041	95	95	95	92	95	95	90	92	93	94	94
	Wicklow	463	95	95	95	83	95	94	78	82	88	91	90
	HSE-E Total	6778	95	95	95	88	95	95	85	88	90	92	92
		01.10	50					1 00	1 00	1 00		- V-	- V-
	Laois/Offaly	727	97	97	97	97	97	97	90	93	93	94	95
Midland	Longford/Westmeath	526	98	98	98	98	98	98	90	94	94	97	96
	HSE-M Total	1253	98	98	98	98	98	98	90	93	94	95	96
	lou	437	95	95	95	95	95	95	92	95	94	95	95
Mid	Clare	437	96	96	96	89	96	95	92 85	89	90	95	95
Western	Limerick	467	98	98	98	91	98	98	86	90	93	92	91
	Tipperary NR/East Limeric HSE-MW Total	1375	97	90	97	91	90	90	87	90	93	96	93
	HSE-WW Total	13/3	97	97	9/	91	97	97	8/	91	92	94	93
	Cavan/Monaghan	542	96	96	96	88	96	96	86	na	91	na	92
North	Louth	531	92	92	92	86	92	92	83	na	88	na	88
Eastern	Meath	969	94	94	94	84	94	94	82	na	88	na	89
	HSE-NE Total	2042	94	94	94	86	94	94	84	na	89	na	90
	In	500	07	07	07	- 00	07	- 00	- 00	- 00	00	0.5	05
North	Donegal	580	97	97	97	93	97	96	89	92	93	95	95
Western	Sligo/Leitrim HSE-NW Total	307 <b>887</b>	97 <b>97</b>	97 <b>97</b>	97 <b>97</b>	96 94	97 <b>97</b>	98 <b>96</b>	91 <b>90</b>	96 <b>94</b>	93 <b>93</b>	96 <b>95</b>	98 <b>96</b>
	NOL IVI TOLLI	001				J		- 50	30	04		30	30
	Carlow/Kilkenny	517	95	95	95	97	95	95	88	94	92	96	96
South	South Tipperary	402	98	98	98	99	98	98	92	96	95	96	95
Eastern	Waterford	479	96	96	96	94	96	96	89	93	94	94	94
	Wexford	547	97	97	97	99	97	97	90	96	92	96	94
	HSE-SE Total	1945	96	96	96	97	96	96	90	95	93	96	95
	North Cork	378	96	96	95	84	96	94	85	88	88	88	90
	North South Lee	1476	96	96	96	82	96	95	82	84	91	91	90
Southern	West Cork	183	90	90	88	74	90	89	77	78	86	85	89
Journelli	Kerry	514	97	97	96	86	97	96	87	90	90	93	93
	HSE-S Total	2551	96	96	95	82	96	94	83	85	90	91	92
										•			
	Galway	990	96	96	96	85	96	96	84	na	92	na	91
Western	Мауо	437	95	95	95	95	95	95	84	na	89	na	84
western	Roscommon	238	98	98	98	97	98	98	96	na	97	na	97
	HSE-W Total	1665	96	96	96	89	96	96	86	na	92	na	90
	Ireland	18496	96	96	96	89	96	95	86	90	91	93	92

na=not available
\*As the denominator/number in cohort varied slighly according to vaccine. The most commonly used number is reported here.
Rease note while North Lee and South Lee are two separate LHOs their combined immunisation uptake data are reported here.

## Appendix 3

Local Health Office (LHO) Abbreviations (used in maps in this report)	Local Health Office (LHO)
CE	Clare
CN/MN	Cavan/Monaghan
CW/KK	Carlow/Kilkenny
DL	Donegal
DN	Dublin North
DNC	Dublin North Central
DNW	Dublin North West
DS	Dublin South
DSC	Dublin South City
DSE	Dublin South East
DSW	Dublin South West
DW	Dublin West
G	Galway
KE/WW	Kildare/West Wicklow
KY	Kerry
L	Limerick
LD/WD	Longford/Westmeath
LH	Louth
LS/OY	Laois/Offaly
MH	Meath
MO	Mayo
NC	North Cork
NSL*	North South Lee*
RN	Roscommon
SO/LM	Sligo/Leitrim
TN/EL	Tipperary North /East Limerick
TS	South Tipperary
WC	West Cork
WD	Waterford
WX	Wexford
WW	Wicklow

<sup>\*</sup>Please note while North Lee and South Lee are two separate LHOs their combined immunisation uptake data are reported here