

Background

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

Compared to the previous schedule (table 1), the changes to the primary schedule for children born on or after July 1st 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.

For children at 12 months of age, immunisation uptake rates of three doses of vaccines against diphtheria (D₃), pertussis (P₃), tetanus (T₃), *Haemophilus influenzae* type b (Hib₃), polio (Polio₃), hepatitis B (HepB₃), two doses of meningococcal serogroup C conjugate vaccine (MenC₂), two doses of pneumococcal conjugate vaccine (PCV₂) and one dose of BCG vaccine are reported.

For children at 24 months of age, immunisation uptake rates of three doses of vaccines against diphtheria (D₃), pertussis (P₃), tetanus (T₃), *Haemophilus influenzae* type b (Hib₃), polio (Polio₃), hepatitis B (HepB₃), meningococcal group C (MenC₃) and pneumococcal conjugate vaccine (PCV₃) and one dose of vaccine against measles, mumps and rubella (MMR₁) are reported. As one dose of vaccine against *Haemophilus influenzae* type b, one dose of meningococcal group C vaccine and one dose of pneumococcal conjugate vaccine given on or after 12 months of age provide protection against these diseases, regardless of the number of previous doses, the uptake rates of one dose of each of these vaccines, on or after 12 months of is also reported (Hib_b, MenC_b and PCV_b respectively).

The national immunisation uptake statistics, based on available data, for Quarter 4-2014 are presented in this document. The uptake statistics are also presented by HSE Area and Local Health Office (LHO). While there are 32 LHOs the immunisation uptake data for North Lee and South Lee are reported as a combined figure.

The immunisation uptake statistics presented in this report relate to children 12 (born between 01/10/2013 and 31/12/2013) and 24 (born between 01/10/2012 and 31/12/2012) months of age in Quarter 4-2014.

The Quarter 4-2014 cohort of children at 24 months are the eighteenth 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 uptake rates presented here were rounded to zero decimal place.

Table 1. Change in Primary Childhood Immunisation Schedule (introduced on September 1st 2008)

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

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

BCG	Bacille Calmette Guerin vaccine
DTaP	Diphtheria, Tetanus and acellular Pertussis vaccine
Hib	<i>Haemophilus influenzae</i> type b vaccine
HepB	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 among children 12 months of age in Quarter 4-2014

National

- Immunisation uptake rates in children 12 months of age in Q4-2014 are presented by HSE Area in table 2.
- National immunisation uptake rates were 92% for D₃, P₃, T₃, Hib₃, Polio₃, HepB₃, PCV₂ and MenC₂. BCG uptake data were available for 27 LHOs in Q4-2014; these areas cover approximately 90% of the national birth cohort. Where data were available, national uptake was 88% for the BCG vaccination.
- Figure 1 presents the national uptake rates at 12 months for each vaccine from Q3-2000 to Q4-2014. Compared to Q3-2014, national uptake rates in Q4-2014 for D₃, P₃, T₃, Hib₃, Polio₃, HepB₃ and PCV₂ were unchanged while MenC₂ increased by 1%.

HSE Area

- Among the HSE Areas, the uptake rates for D₃, P₃, T₃, Hib₃, Polio₃ and HepB₃ ranged from 91-95% and MenC₂ ranged from 89% to 95% and PCV₂ ranged from 88% to 96%.
- The HSE Midland Area reached the target of ≥95% for all vaccines, the HSE North Western Area reached the target of ≥95% for all vaccines except MenC₂ and the HSE Western Area reached it for all vaccines except BCG.

Local Health Office (LHO)

- The immunisation uptake rates by LHO are shown in appendix 1.
- D₃, MenC₂ and PCV₂ immunisation uptake rates are mapped by LHO in figures 2-4.
- The target uptake rate of ≥95% was reached in 13 LHOs for BCG, 6 LHOs for D₃, P₃, T₃, Hib₃, Polio₃, HepB₃, in 7 for MenC₂ and in 8 PCV₂.

Table 2. Immunisation uptake (%) at 12 months in cohort born 01/10/2013–31/12/2013

HSE Area	No. in cohort*	BCG [†]	D ₃ T ₃	P ₃	Hib ₃	Polio ₃	HepB ₃	MenC ₂	PCV ₂
Eastern	6599	91	91	91	91	91	91	91	91
Midland	1151	96	95	95	95	95	95	95	95
Mid Western	1230	94	92	92	92	92	92	92	92
North Eastern	1825	na	93	93	93	93	93	94	94
North Western	857	96	95	95	95	95	95	94	95
South Eastern	1849	96	92	92	92	92	92	92	93
Southern	2465	93	91	91	91	91	91	89	88
Western	1576	21 ^{††}	95	95	95	95	95	95	96
Ireland	17552	88	92	92	92	92	92	92	92

na = not available at this time

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

[†]Number in cohort for BCG is 15,311 ^{††}HSE Western Area BCG data are for Galway and Roscommon only

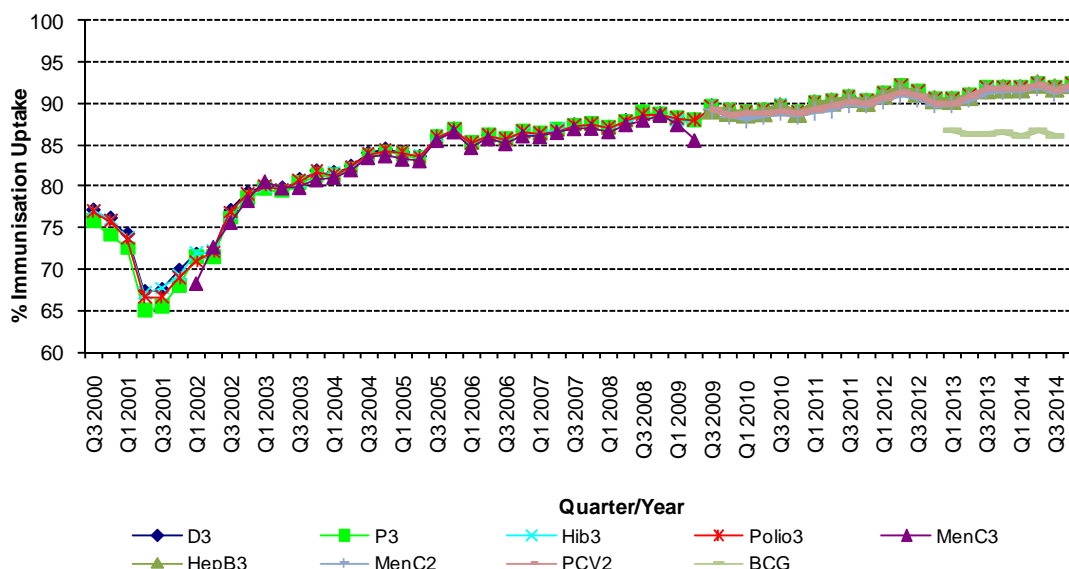


Figure 1. National quarterly immunisation uptake rates at 12 months

Since T₃ uptake is identical to D₃ uptake only D₃ uptake figures presented. The Q3-2008 MenC₃ uptake figure is based on data from six of the eight HSE Areas. The Q1-2009 HSE-Eastern Area D₃, P₃, T₃, Polio₃ and MMR₁ 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 MenC₂ data and one additional area was unable to provide PCV₂ 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 and three were unable to provide MenC₂ data. The Q2-2010 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. BCG uptake data are only displayed in this graph from Q1 2013 as BCG uptake data were available for only five of the eight HSE-Areas (this includes data from the HSE-Southern Area which relates to Kerry data only) from Q3 2003 to Q2 2009 (except Q3 2004 when HSE-Southern Area data were not available), for three HSE-Areas in Q3 2009, for two HSE-Areas in Q4 2009, for three HSE-Areas in Q1 2010 and Q2 2010, for five HSE-Areas in Q4 2010, Q1 2011 and Q2 2011, for six HSE-Areas in Q3 2011 to Q4 2012, for seven HSE-Areas from Q1 2013-Q4 2014. Since Q4 2014 HSE Western Area BCG data are available by LHO; data are available for Galway and Roscommon only.

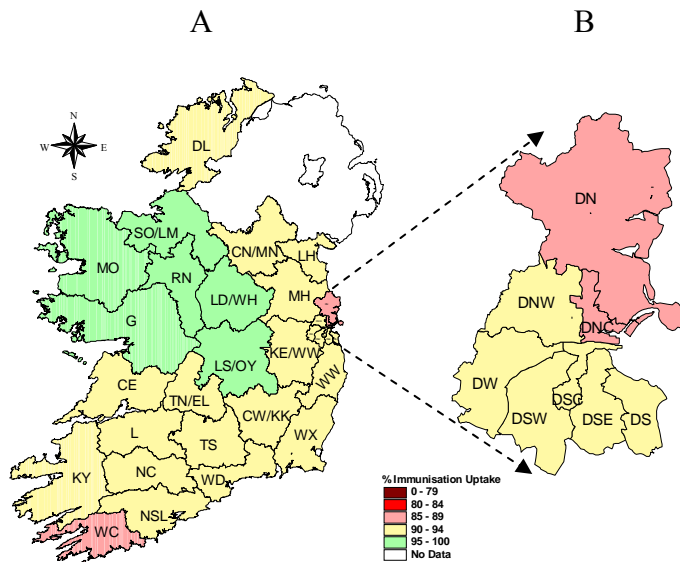


Figure 2. D₃ immunisation uptake rates (%) by LHO, in those 12 months of age in Quarter 4-2014, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

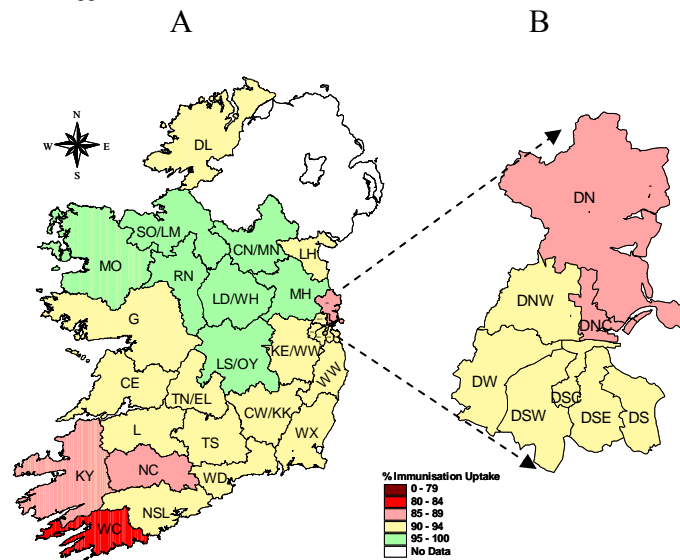


Figure 3. MenC₂ immunisation uptake rates (%) by LHO, in those 12 months of age in Quarter 4-2014, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

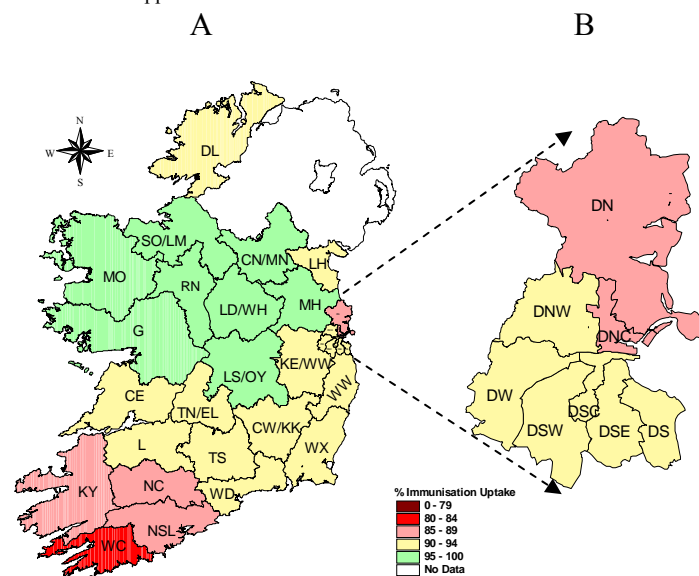


Figure 4. PCV₂ immunisation uptake rates (%) by LHO, in those 12 months of age in Quarter 4-2014, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

Immunisation uptake among children 24 months of age in Quarter 4-2014

National

- National uptake rates were 96% for D₃, P₃, T₃, Hib₃ and Polio₃ and 95% for HepB₃, 93% for MMR₁, 92% for PCV₃, 91% for Hib_b and 88% for MenC₃. Compared to the previous quarter, national uptake rates in Q4-2014 were unchanged except for Hib_b and HepB₃ which decreased by 1%.

Figure 5 presents the national uptake rates at 24 months for each vaccine from Q1-1999 to Q4-2014.

HSE Area

- The target uptake of $\geq 95\%$ was reached for D₃, P₃, T₃, Hib₃, Polio₃ and HepB₃ in seven of the eight HSE Areas, for Hib_b in three HSE Areas, for MMR₁ in two HSE Areas, in one for PCV₃ and in none for MenC₃.
- Six of the eight HSE Areas were able to provide uptake data on MenC_b (one dose of MenC at ≥ 12 months of age) and PCV_b (one dose of PCV at ≥ 12 months of age) in Q4-2014. These Areas cover approximately 81% of the national birth cohort. Where data were available, national uptake was 91% for MenC_b and 93% for PCV_b. The target uptake of $\geq 95\%$ was reached for PCV_b in three HSE Areas and in none for MenC_b.

Local Health Office (LHO)

- Immunisation uptake rates in children 24 months of age in Q4-2014 are presented by LHO in Appendix 2.
- D₃, Hib_b, MenC₃, MenC_b, PCV₃, PCV_b and MMR₁ immunisation uptake rates are mapped by LHO in figures 6-12.
- The target uptake of $\geq 95\%$ was reached in 26 LHOs for D₃, P₃, T₃, Hib₃ and Polio₃, 24 for HepB₃, 9 for MMR₁, 8 for PCV_b, 7 for Hib_b, 4 for PCV₃ and MenC_b, and in one for MenC₃.

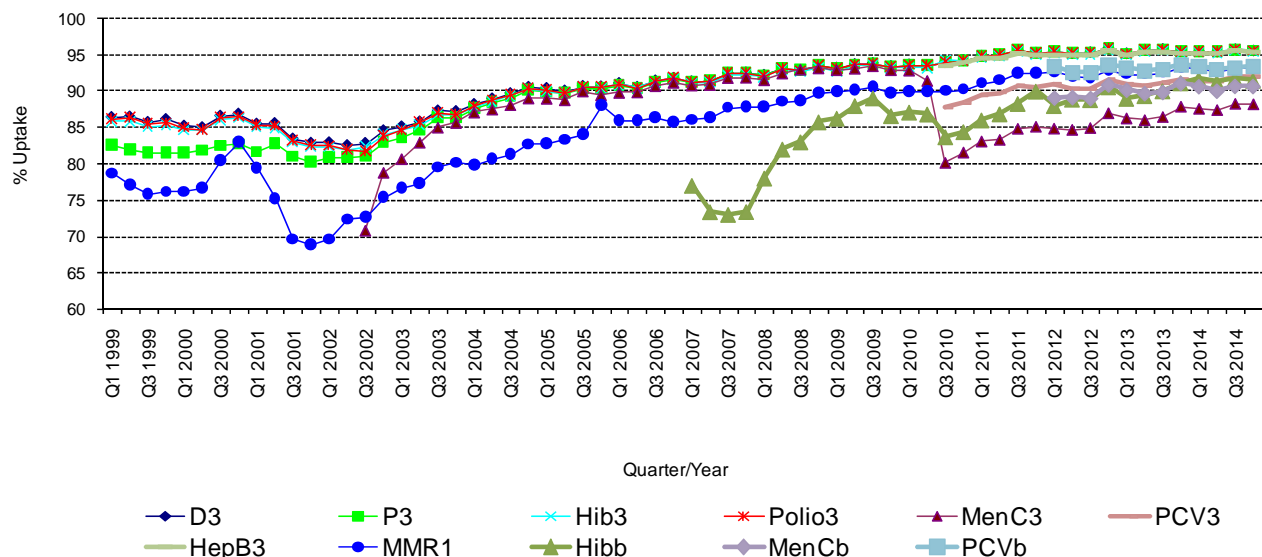


Table 3. Immunisation uptake (%) at 24 months in cohort born 01/10/2012–31/12/2012

HSE Area	No. in Cohort*	D ₃ /T ₃ / P ₃ / Polio ₃	Hib ₃	HepB ₃	Hib _b	MenC ₃	MenC _b	PCV ₃	PCV _b	MMR ₁
Eastern	6572	95	95	95	90	87	90	91	93	93
Midland	1151	97	97	97	97	92	94	94	96	96
Mid Western	1372	94	94	94	89	86	89	91	92	91
North Eastern	1834	96	96	96	89	86	na	91	na	92
North Western	852	96	96	95	95	90	94	92	95	94
South Eastern	1819	96	96	96	95	88	93	92	95	94
Southern	2490	96	96	96	90	88	89	92	92	93
Western	1580	97	97	97	93	94	na	97	na	95
Ireland	17670	96	96	95	91	88	91	92	93	93

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

Conclusions

In Quarter 4-2014, national uptake rates at 24 months for D₃, P₃, T₃, Hib₃, Polio₃ and HepB₃ reached the target of $\geq 95\%$. Since the introduction of the new childhood schedule in September 2008 MenC₃ and to a lesser extent Hib₆, 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 Immunisation Co-ordinators, Specialists in Public Health Medicine, Surveillance Scientists and Systems Analysts for their assistance.

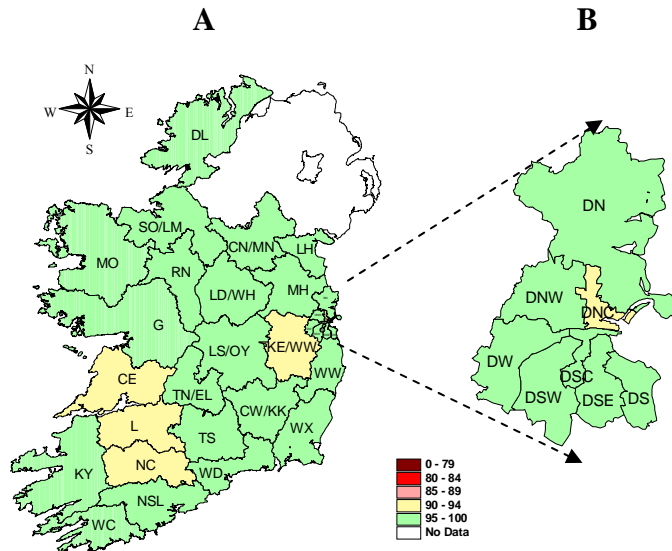


Figure 6. D₃ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 4-2014, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

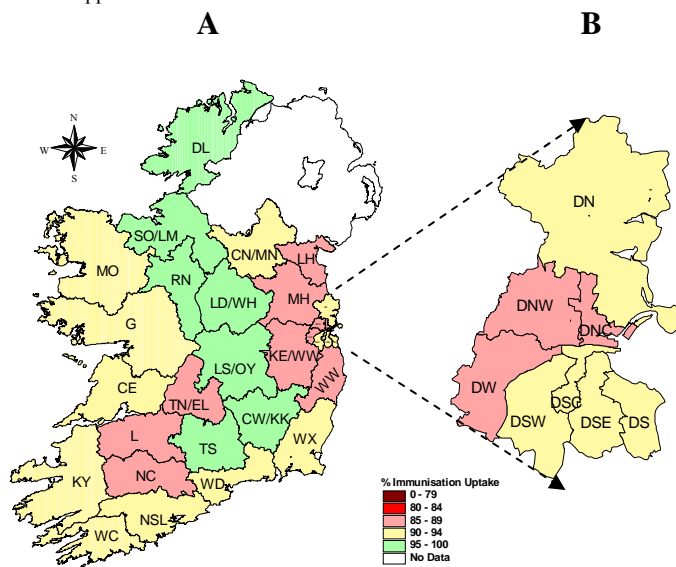


Figure 7. Hib₆ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 4-2014, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

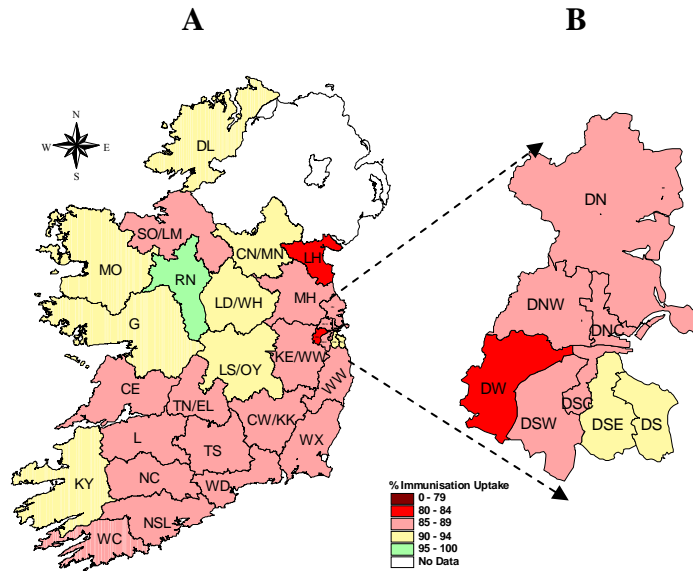


Figure 8. MenC₃ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 4-2014, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

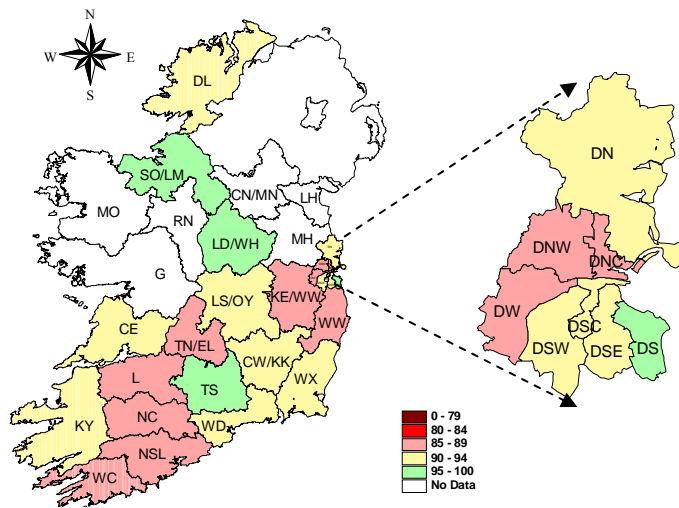


Figure 9. MenC_b immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 4-2014, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

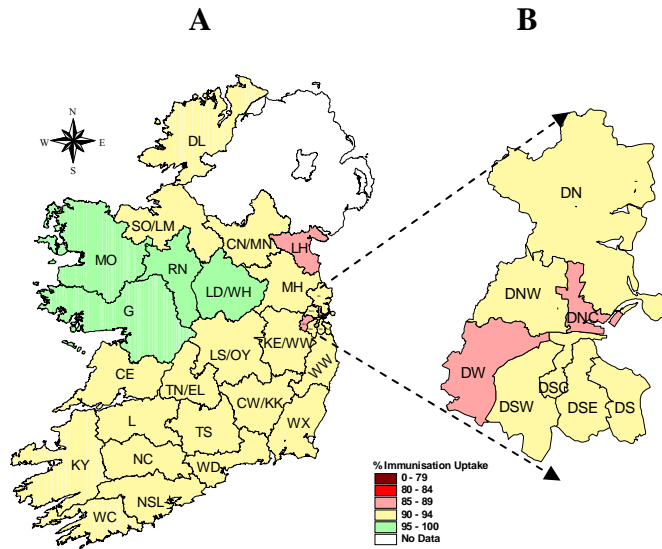


Figure 10. PCV₃ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 4-2014, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

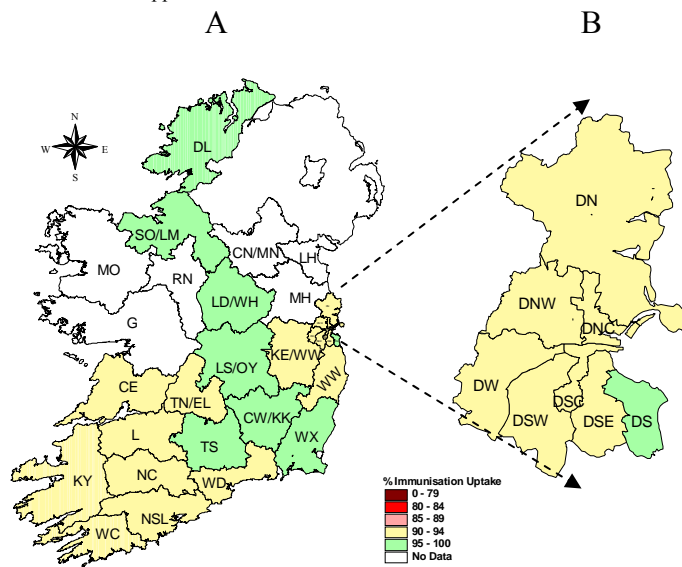


Figure 11. PCV₆ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 4-2014, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

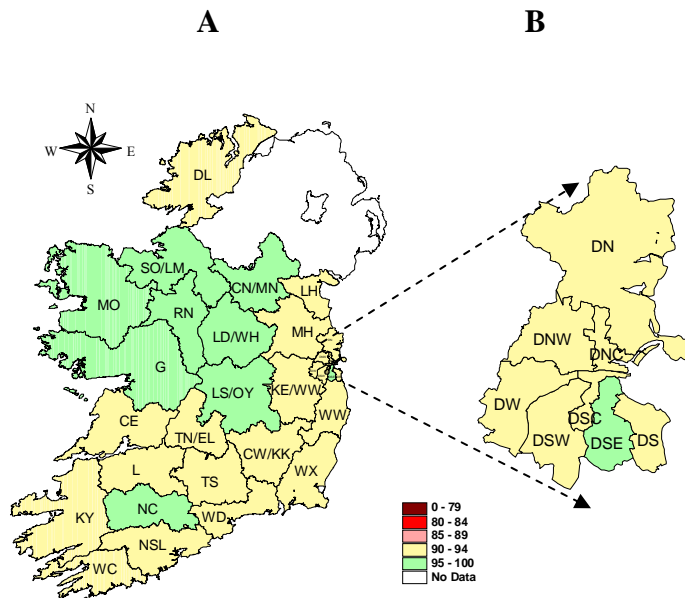


Figure 12. MMR₁ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 4-2014, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

Appendix 1

Immunisation Uptake at 12 Months in Cohort Born 01/10/2013-31/12/2013											
HSE Area	LHO/HSE Area	No. in cohort for BCG	No. in cohort for other vaccines*	Immunisation Uptake (%)							
				BCG	D ₃ T ₃	P ₃	Hib ₃	Polio ₃	HepB ₃	MenC ₂	PCV ₂
Eastern	Dublin South	439	439	82	92	92	92	92	92	92	93
	Dublin South East	426	426	85	94	94	94	94	94	93	93
	Dublin South City	495	495	93	93	93	93	93	93	93	92
	Dublin South West	643	643	97	91	91	91	91	91	91	91
	Dublin West	702	702	86	93	93	93	93	93	93	93
	Dublin North West	957	957	93	90	90	90	90	90	90	90
	Dublin North Central	489	489	90	86	86	86	86	86	86	86
	Dublin North	1067	1067	92	88	88	88	88	88	88	89
	Kildare/West Wicklow	913	913	96	92	92	92	92	92	92	93
Wicklow	468	468	94	92	92	92	92	92	92	93	
HSE-E Total	6599	6599	91	91	91	91	91	91	91	91	91
Midland	Laos/Offaly	641	641	96	95	95	95	95	95	95	95
	Longford/Westmeath	510	510	96	96	96	96	96	96	96	96
	HSE-M Total	1151	1151	96	95	95	95	95	95	95	95
Mid Western	Clare	351	354	92	92	92	92	92	92	92	92
	Limerick	423	456	95	91	91	91	91	91	91	91
	Tipperary NR/East Limerick	436	420	95	93	93	93	93	93	93	93
	HSE-MW Total	1210	1230	94	92	92	92	92	92	92	92
North Eastern	Cavan/Monaghan	na	525	na	94	94	94	94	94	95	95
	Louth	na	478	na	91	91	91	91	91	92	93
	Meath	na	822	na	94	94	94	94	94	95	95
	HSE-NE Total	na	1825	na	93	93	93	93	93	93	94
North Western	Donegal	529	529	95	94	94	94	94	93	92	94
	Sligo/Leitrim	328	328	97	97	97	97	97	97	97	97
	HSE-NW Total	857	857	96	95	95	95	95	95	95	95
South Eastern	Carlow/Kilkenny	499	499	95	91	91	91	91	91	92	93
	South Tipperary	332	332	97	93	93	93	93	93	93	94
	Waterford	504	504	95	92	92	92	92	92	91	92
	Wexford	514	514	96	94	94	94	94	93	93	94
	HSE-SE Total	1849	1849	96	92	92	92	92	92	92	93
Southern	North Cork	381	379	92	91	91	91	91	91	89	88
	North South Lee	1459	1447	95	92	92	92	92	92	90	89
	West Cork	179	176	88	87	87	87	87	87	84	83
	Kerry	468	463	91	90	90	90	90	90	87	85
	HSE-S Total	2487	2465	93	91	91	91	91	91	91	89
Western	Galway	935	935	12	95	95	95	95	95	94	95
	Mayo	na	418	na	95	95	95	95	95	95	95
	Roscommon	223	223	62	98	98	98	98	99	98	98
	HSE-W Total	1158	1576	21	95	95	95	95	95	95	96
Ireland	15311	17552	88	92	92	92	92	92	92	92	92

na=not available

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

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

Appendix 2

Immunisation uptake (%) at 24 months of age in cohort born 01/10/2012-31/12/2012													
HSE Area	LHO/HSE Area	No. in cohort*	Immunisation Uptake (%)										
			D ₃ T ₃	P ₃	Hib ₃	Hib _b	Polio ₃	HepB ₃	MenC ₃	MenC _b	PCV ₃	PCV _b	MMR ₁
Eastern	Dublin South	415	96	96	96	94	96	96	93	95	94	95	94
	Dublin South East	396	97	97	97	94	97	97	92	94	93	94	95
	Dublin South City	451	96	96	96	91	96	96	89	91	93	93	93
	Dublin South West	639	95	95	95	92	95	94	88	92	91	93	92
	Dublin West	694	96	96	96	89	96	96	84	89	89	93	93
	Dublin North West	954	95	95	95	89	95	95	86	89	92	93	92
	Dublin North Central	487	93	93	93	87	93	93	86	88	89	91	90
	Dublin North	1084	95	95	95	91	95	95	88	91	91	94	93
	Kildare/West Wicklow	983	94	94	94	88	94	94	85	88	90	92	91
	Wicklow	469	96	96	96	89	96	96	87	89	92	93	94
HSE-E Total	6572	95	95	95	90	95	95	87	90	91	93	93	
Midland	Laois/Offaly	636	97	97	97	97	97	97	91	94	93	95	95
	Longford/Westmeath	515	98	98	98	98	98	98	93	95	95	97	96
	HSE-M Total	1151	97	97	97	97	97	97	92	94	94	96	96
Mid Western	Clare	431	93	93	93	90	93	93	86	90	92	94	92
	Limerick	467	93	93	93	88	93	93	86	88	90	90	90
	Tipperary NR/East Limerick	474	95	95	95	88	95	95	86	89	91	92	92
	HSE-MW Total	1372	94	94	94	89	94	94	86	89	91	92	91
North Eastern	Cavan/Monaghan	519	97	97	97	92	97	97	90	na	94	na	95
	Louth	479	95	95	95	87	95	95	83	na	89	na	90
	Meath	836	96	96	96	89	96	96	86	na	91	na	92
	HSE-NE Total	1834	96	96	96	89	96	96	86	na	91	na	92
North Western	Donegal	520	96	96	96	95	96	95	90	94	93	95	94
	Sligo/Leitrim	332	97	97	96	95	97	97	89	95	90	95	95
	HSE-NW Total	852	96	96	96	95	96	95	90	94	92	95	94
South Eastern	Carlow/Kilkenny	462	95	95	95	96	95	94	87	94	92	95	94
	South Tipperary	358	96	96	96	95	96	96	89	95	94	96	94
	Waterford	447	96	96	96	93	96	96	89	92	93	94	93
	Wexford	552	96	96	96	94	96	96	86	92	91	95	94
	HSE-SE Total	1819	96	96	96	95	96	96	88	93	92	95	94
Southern	North Cork	406	94	94	94	89	94	94	89	88	93	91	95
	North South Lee	1386	96	96	96	90	96	96	87	89	91	93	93
	West Cork	194	95	95	95	91	95	95	89	87	91	91	93
	Kerry	504	96	96	96	92	96	96	90	90	92	93	94
	HSE-S Total	2490	96	96	96	90	96	96	88	89	92	93	93
Western	Galway	935	97	97	97	94	97	97	94	na	96	na	95
	Mayo	416	98	98	98	92	98	98	93	na	99	na	95
	Roscommon	229	97	97	97	96	97	97	95	na	97	na	96
	HSE-W Total	1580	97	97	97	93	97	97	94	na	97	na	95
Ireland	17670	96	96	96	91	96	95	88	91	92	93	93	

na=not available

*As the denominator/number in cohort varied slightly according to vaccine. The most commonly used number is reported here.

Please note w hile 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

*Please note while North Lee and South Lee are two separate LHOs their combined immunisation uptake data are reported here