

Background

The national immunisation uptake statistics, based on available data, for Quarter 1 2015 are presented in this report. These immunisation uptake statistics relate to children at 12 (born between 01/01/2014 and 31/03/2014) and 24 (born between 01/01/2013 and 31/03/2013) months of age in Quarter 1-2015. These children were recommended the vaccines outlined in table 1. Please note the immunisation schedule changed in 2015 for children born on or after July 1st 2015. Please see the HSE-National Immunisation Office (NIO) website at <http://www.hse.ie/eng/health/immunisation/> for current and detailed information on the Irish primary childhood immunisation schedule and also recommended vaccinations for older children and adults.

For children at 12 months of age in Quarter 1 2015, 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 in Quarter 1 2015, 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 uptake statistics are also presented in this report 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 uptake rates presented here were rounded to zero decimal place.

Table 1. Primary childhood immunisation schedule for children born between 01/07/2008 and 30/06/2015

Age	Vaccines
Birth	BCG
2 months	DTaP/Hib/IPV/HepB (6 in 1) + PCV
4 months	DTaP/Hib/IPV/HepB (6 in 1) + MenC
6 months	DTaP/Hib/IPV/HepB (6 in 1) + PCV + MenC
12 months	MMR + PCV
13 months	MenC + Hib

Please note the primary immunisation schedule changed in 2015 for children born on or after 01/07/2015. Please see the HSE-National Immunisation Office (NIO) website at <http://www.hse.ie/eng/health/immunisation/> for current and detailed information on the Irish primary childhood immunisation schedule and also recommended vaccinations for older children and adults

BCG	Bacille Calmette Guerin vaccine
DTaP	Diphtheria, Tetanus and acellular Pertussis vaccine
HepB	Hepatitis B vaccine
Hib	<i>Haemophilus influenzae</i> type b vaccine
IPV	Inactivated Polio Virus vaccine
MenC	Meningococcal group C vaccine
MMR	Measles, Mumps and Rubella vaccine
PCV	Pneumococcal Conjugate Vaccine

Immunisation uptake among children at 12 months of age in Quarter 1-2015

National

- Immunisation uptake rates in children 12 months of age in Q1-2015 are presented by HSE Area in table 2.
National immunisation uptake rates were 91% for D₃, T₃, P₃, Hib₃, Polio₃, HepB₃, PCV₂ and MenC₂. BCG uptake data were available for 28 LHOs in Q1-2015; these areas cover approximately 90% of the national birth cohort. Where data were available, national uptake was 87% for the BCG vaccination. Resource issues impacted BCG data input onto local databases in the HSE-Eastern Area (Dublin South and Dublin South East) and HSE-Western Area (Roscommon) in Q1 2015.
- Figure 1 presents the national uptake rates at 12 months for each vaccine from Q3-2000 to Q1-2015. Compared to Q4-2014, national uptake rates in Q1-2015 for D₃, T₃, P₃, Hib₃, Polio₃, HepB₃, MenC₂ and PCV₂ decreased by 1%.

HSE Area

- Among the HSE Areas, the uptake rates for D₃, T₃, P₃, Hib₃, Polio₃ and HepB₃ ranged from 90-96% and MenC₂ 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 HepB₃ and MenC₂ and the HSE Western Area reached it for all vaccines except BCG and MenC₂.

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 11 LHOs for BCG, 5 LHOs for D₃, T₃, P₃, Hib₃, Polio₃, HepB₃ and MenC₂ and in 6 for PCV₂.

Table 2. Immunisation uptake (%) at 12 months in cohort born 01/01/2014–31/03/2014

HSE Area	No. in cohort*	BCG†	D ₃ T ₃	P ₃	Hib ₃	Polio ₃	HepB ₃	MenC ₂	PCV ₂
Eastern	6251	90	90	90	90	90	90	90	90
Midland	1063	96	96	96	96	96	96	96	96
Mid Western	1279	97	92	92	92	92	92	92	92
North Eastern	1671	na	92	92	92	92	92	93	93
North Western	802	96	95	95	95	95	94	94	95
South Eastern	1660	95	90	90	90	90	90	89	90
Southern	2246	92	91	91	91	91	91	88	88
Western	1489	38	95	95	95	95	95	94	95
Ireland	16461	87	91	91	91	91	91	91	91

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 14,736

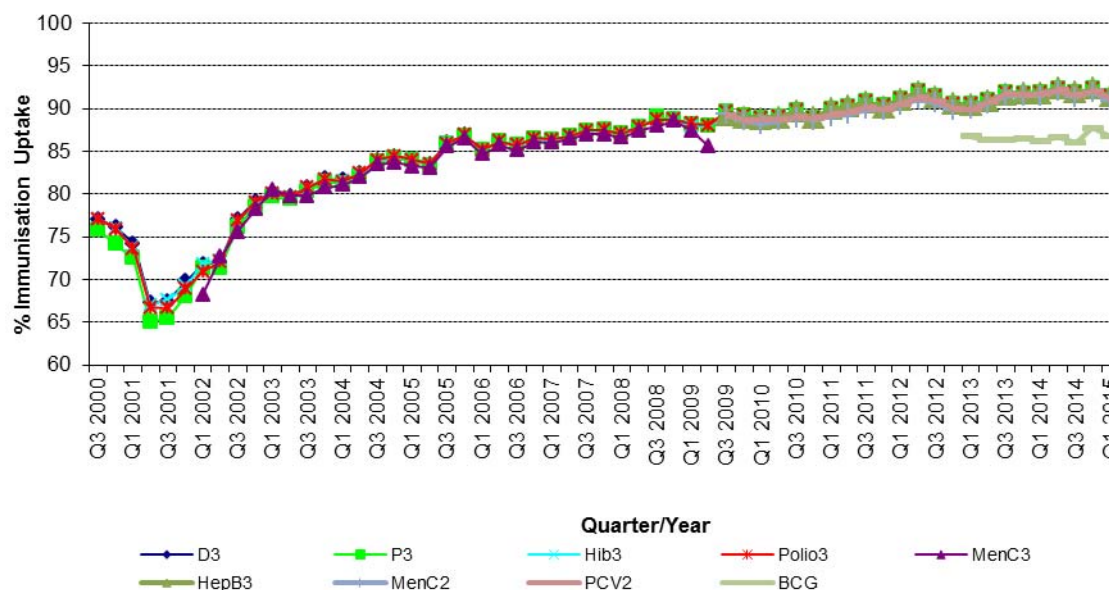


Figure 1. National quarterly immunisation uptake rates at 12 months

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. From Q3 2011 to Q4 2014 HSE Western Area BCG data was not available by LHO, uptake was provided for the HSE Western Area as a whole. In Q4 2014 BCG data was available for Galway and Roscommon- the BCG denominator for HSE Western Area in Q4 2014 was the sum of the Galway and Roscommon denominators. In Q1 2015 BCG data was available for Galway, Mayo and Roscommon.

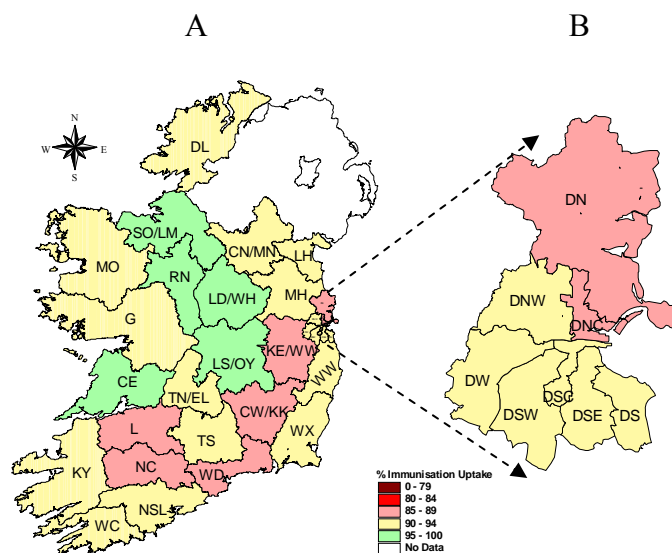


Figure 2. D₃ immunisation uptake rates (%) by LHO, in those 12 months of age in Quarter 1-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

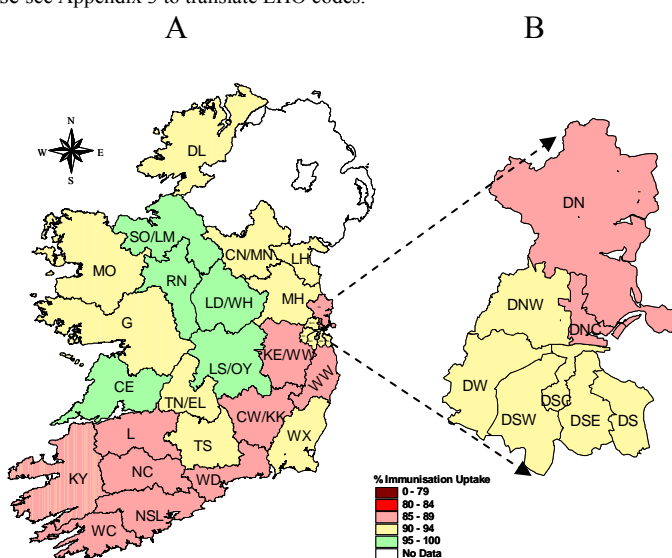


Figure 3. MenC₂ immunisation uptake rates (%) by LHO, in those 12 months of age in Quarter 1-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

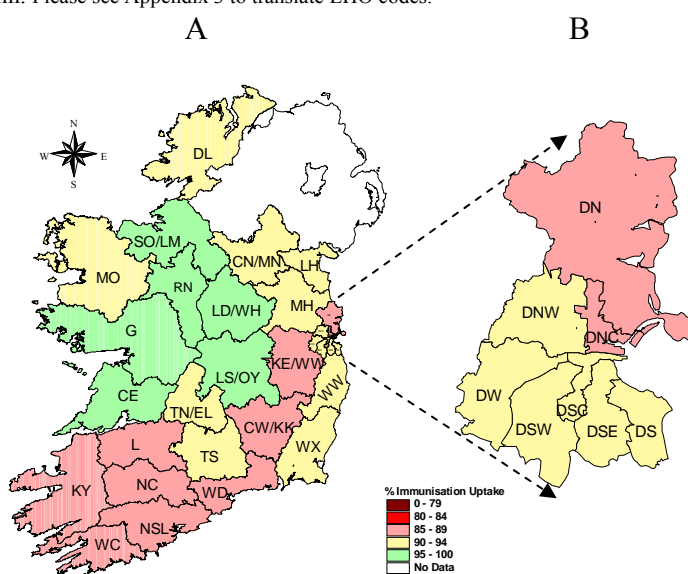


Figure 4. PCV₂ immunisation uptake rates (%) by LHO, in those 12 months of age in Quarter 1-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

Immunisation uptake among children 24 months of age in Quarter 1-2015

National

- National uptake rates were 95% for D₃, T₃, P₃, Hib₃, Polio₃ and HepB₃, 93% for MMR₁, 92% for PCV₃, 91% for Hib_b and 87% for MenC₃. Compared to the previous quarter, national uptake rates in Q1-2015 decreased by one per cent for D₃, T₃, P₃, Hib₃, Polio₃ and MenC₃ and were unchanged for Hib_b, HepB₃, PCV₃ and MMR₁.
- The HSE NE was in a position to provide data on MenC_b (one dose of MenC on or after first birthday and before second birthday) and PCV_b (one dose of PCV on or after first birthday and before second birthday) for the first time in Q1 2015. In total, seven of the eight HSE Areas were able to provide uptake data on MenC_b and PCV_b in Q1-2015. These Areas cover approximately 91% of the national birth cohort. Where data were available, national uptake was 90% for MenC_b and 93% for PCV_b. Compared to the previous quarter MenC_b declined by 1% while PCV_b was unchanged.
- Figure 5 presents the national uptake rates at 24 months for each vaccine from Q1-1999 to Q1-2015.

HSE Area

- The target uptake of $\geq 95\%$ was reached for D₃, P₃ and T₃ in seven HSE Areas, for Hib₃, Polio₃ and HepB₃ in six HSE Areas, for MMR₁ in two HSE Areas, in one for Hib_b, PCV₃ and PCV_b and in none for MenC₃ and MenC_b.

Local Health Office (LHO)

- Immunisation uptake rates in children 24 months of age in Q1-2015 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 19 LHOs for D₃, T₃ and P₃, 18 for Hib₃ and Polio₃, 17 for HepB₃, 8 for MMR₁, 7 for PCV_b, 6 for Hib_b, 4 for PCV₃ and in one for MenC₃ and MenC_b.

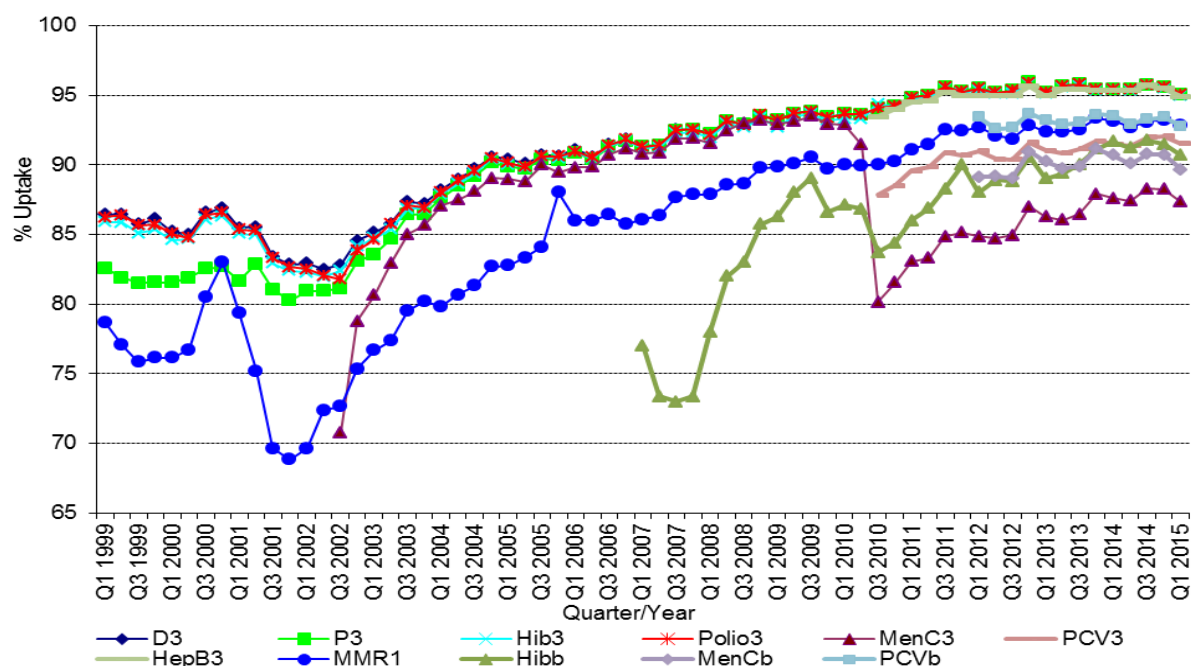


Figure 5. National quarterly immunisation uptake rates at 24 months

Notes: The Q4-2005 MMR₁ figure is based on data from seven of the eight HSE Areas. The Q1-2006 MMR₁ figure includes the HSE-Eastern Area figure that is an estimate only. The Q1-2007, Q3-2007, Q2-2008 and Q3-2008 Hib_b figures are based on data from seven of the eight HSE Areas. In Q1-2008 the HSE-SE changed their Hib_b data extraction method compared to previous quarters; in Q1-2008 the uptake of Hib_b in the HSE-SE was 83% compared to 53% in Q4-2007. The Q2-2008 MenC₃ 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 Q2-2009 HSE-Eastern Area Hib_b 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_b figures also exclude uptake figures from Dublin North. The Q1-2010 figures are based on data from six of the eight HSE Areas. The Q1-2010 Hib_b figures also exclude uptake figures from Dublin North. The Q2-2010 and Q4-2010 figures are based on data from seven of the eight HSE Areas. The MenC_b and PCV_b figures are based on data from six of the eight HSE Areas.

Table 3. Immunisation uptake (%) at 24 months in cohort born 01/01/2013–31/03/2013

HSE Area	No. in Cohort*	D ₃ /T ₃ / P ₃	Hib ₃	HepB ₃	Polio ₃	Hib _b	MenC ₃	MenC _b	PCV ₃	PCV _b	MMR ₁
Eastern	6135	94	94	94	94	88	85	88	90	92	91
Midland	1037	97	97	97	97	97	92	94	94	97	96
Mid-Western	1328	95	94	94	94	90	87	91	91	92	93
North Eastern	1759	95	95	95	95	90	87	89	91	93	92
North Western	827	96	96	95	96	93	85	93	89	94	94
South Eastern	1727	95	95	95	95	93	89	92	92	93	94
Southern	2424	95	95	96	95	91	88	90	92	93	93
Western	1512	98	98	98	98	94	94	na	97	na	95
Ireland	16749	95	95	95	95	91	87	90	92	93	93

* As the denominator/number in cohort varied slightly according to vaccine D₃, T₃ and P₃ cohorts are shown here

Conclusions

In Quarter 1-2015, national uptake rates at 24 months for D₃, T₃, P₃, Hib₃, Polio₃ and HepB₃ reached the target of $\geq 95\%$. Compared to the previous quarter, national uptake rates at 24 months in Q1-2015 decreased by one per cent for D₃, T₃, P₃, Hib₃, Polio₃, MenC₃ and MenC_b and were unchanged for Hib_b, HepB₃, PCV₃, PCV_b and MMR₁.

MenC_b and to a lesser extent 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 Immunisation Co-ordinators, Specialists in Public Health Medicine, Surveillance Scientists and Systems Analysts for their assistance.

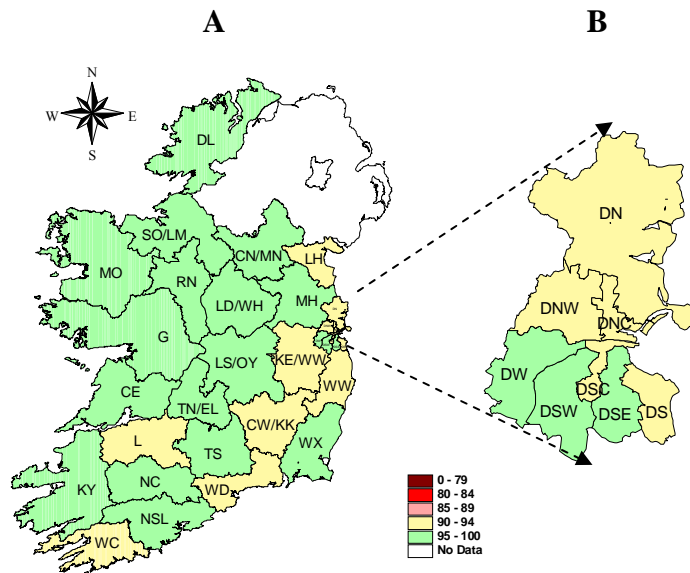


Figure 6. D₃ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 1-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

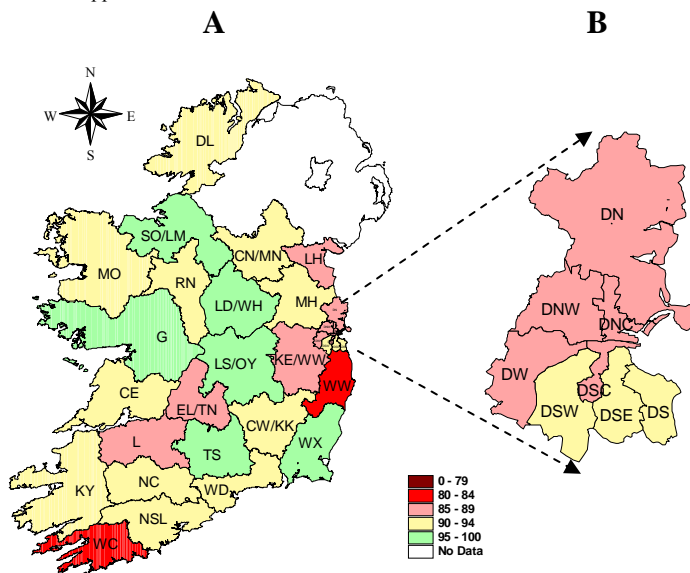


Figure 7. Hib_b immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 1-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

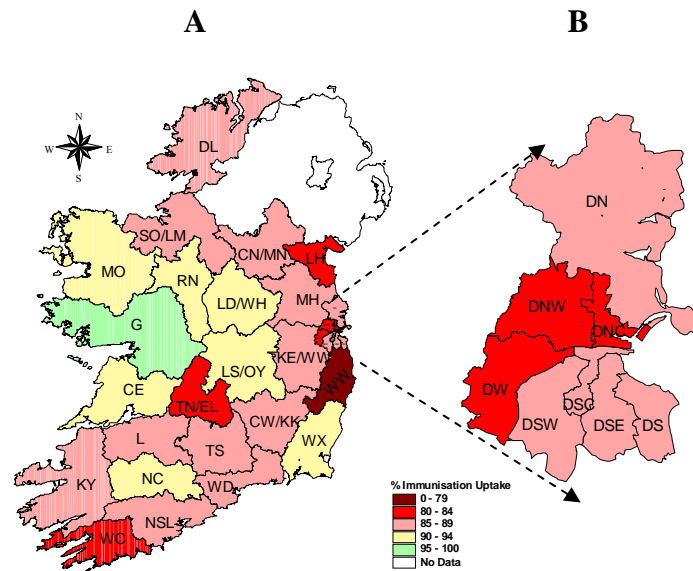


Figure 8. MenC₃ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 1-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

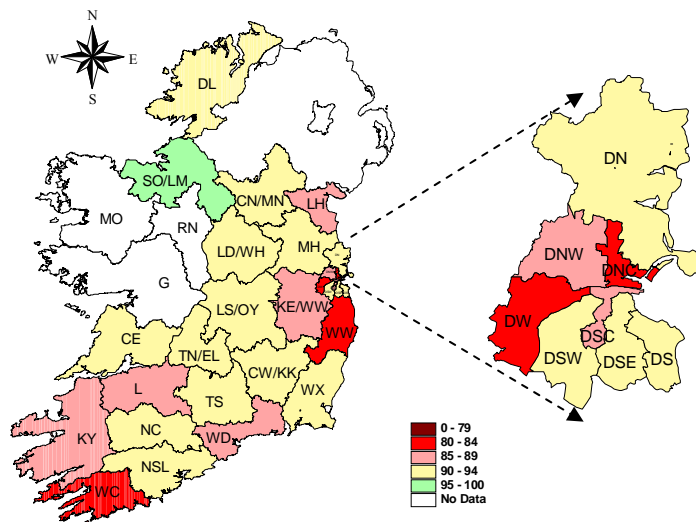


Figure 9. MenC_b immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 1-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

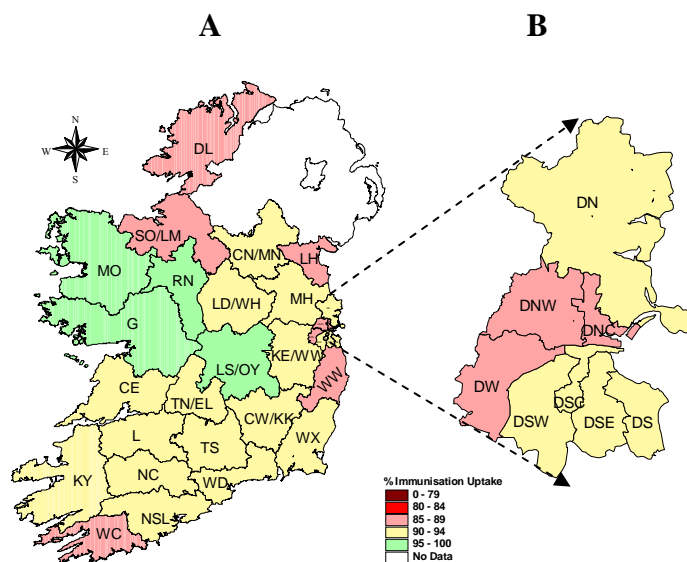


Figure 10. PCV₃ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 1-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

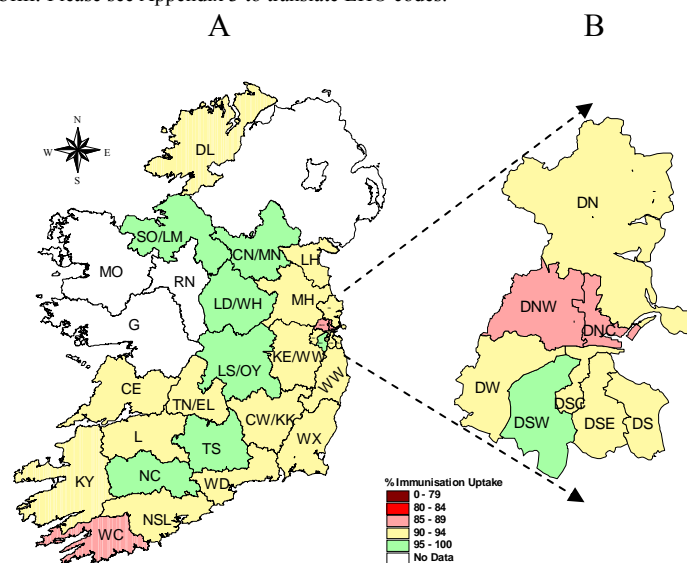


Figure 11. PCV₆ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 1-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

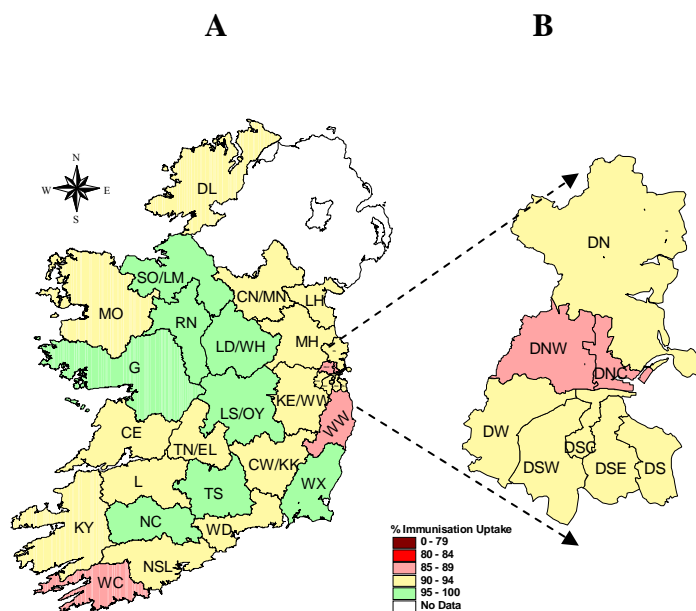


Figure 12. MMR₁ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 1-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

Appendix 1

Immunisation Uptake at 12 Months in Cohort Born 01/01/2014-31/03/2014											
HSE Area	LHO/HSE Area	No. in cohort for BCG	No. in cohort for D ₃ , T ₃ & P ₃ *	Immunisation Uptake (%)							
				BCG	D ₃ T ₃	P ₃	Hib ₃	Polio ₃	HepB ₃	MenC ₂	PCV ₂
Eastern	Dublin South	411	411	70	93	93	93	93	93	92	94
	Dublin South East	444	444	70	91	91	91	91	91	90	91
	Dublin South City	420	420	92	91	91	91	91	91	90	90
	Dublin South West	633	633	97	91	91	91	91	91	91	91
	Dublin West	618	618	91	90	90	90	90	90	90	90
	Dublin North West	867	867	93	92	92	92	92	92	91	91
	Dublin North Central	486	486	90	87	87	87	87	87	86	87
	Dublin North	1010	1010	94	89	89	89	89	89	89	89
	Kildare/West Wicklow	930	930	94	88	88	88	88	88	89	89
	Wicklow	432	432	91	90	90	90	90	90	88	90
	HSE-E Total	6251	6251	90	90	90	90	90	90	90	90
Midland	Laois/Offaly	604	604	96	95	95	95	95	95	95	95
	Longford/Westmeath	459	459	96	97	97	97	97	97	97	97
	HSE-M Total	1063	1063	96	96	96	96	96	96	96	96
Mid Western	Clare	361	366	97	96	96	96	96	96	95	95
	Limerick	434	505	96	89	89	89	89	89	89	89
	Tipperary NR/East Limerick	402	408	97	93	93	93	93	93	94	94
	HSE-MW Total	1197	1279	97	92	92	92	92	92	92	92
North Eastern	Cavan/Monaghan	na	458	na	92	92	92	92	92	94	94
	Louth	na	419	na	91	91	91	91	91	93	93
	Meath	na	794	na	91	91	91	91	91	93	92
	HSE-NE Total	na	1671	na	92	92	92	92	92	93	93
North Western	Donegal	498	498	95	93	93	93	93	93	92	93
	Sligo/Leitrim	304	304	96	97	97	97	97	97	96	98
	HSE-NW Total	802	802	96	95	95	95	95	94	94	95
South Eastern	Carlow/Kilkenny	444	444	95	87	87	87	87	87	86	86
	South Tipperary	277	277	98	93	93	93	93	92	92	93
	Waterford	421	421	94	88	88	88	88	88	88	88
	Wexford	518	518	94	92	92	92	92	92	91	93
	HSE-SE Total	1660	1660	95	90	90	90	90	90	89	90
Southern	North Cork	323	315	92	89	89	89	89	89	87	86
	North South Lee	1360	1349	93	91	91	91	91	91	88	88
	West Cork	172	167	92	90	90	90	90	90	88	87
	Kerry	419	415	91	92	92	92	92	92	89	87
	HSE-S Total	2274	2246	92	91	91	91	91	91	88	88
Western	Galway	913	913	11	94	94	94	94	94	94	95
	Mayo	380	380	97	93	93	93	93	93	93	93
	Roscommon	196	196	48	98	98	98	98	98	98	98
	HSE-W Total	1489	1489	38	95	95	95	95	95	94	95
Ireland		14736	16461	87	91	91	91	91	91	91	91

na=not available

* The denominator/number in cohort varied slightly according to vaccine. D3, T3 and P3 cohorts are shown 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 2015 (i.e. cohort born 01/01/2013-31/03/2013)													
HSE Area	LHO/HSE Area	No. in cohort for D ₃ & T ₃ & P ₃ *	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	418	94	94	94	91	94	94	89	91	92	94	93
	Dublin South East	416	95	95	95	91	95	95	89	91	92	93	93
	Dublin South City	404	94	94	94	88	94	94	87	88	90	91	91
	Dublin South West	590	96	96	96	92	96	96	87	92	92	95	94
	Dublin West	608	95	95	95	85	95	95	80	84	88	90	90
	Dublin North West	869	92	92	92	85	92	92	81	85	86	89	88
	Dublin North Central	468	93	93	93	85	93	93	82	84	87	89	89
	Dublin North	957	93	93	93	89	93	93	88	90	91	93	93
	Kildare/West Wicklow	969	94	94	94	89	94	94	87	89	91	93	92
	Wicklow	436	93	93	93	82	93	93	78	82	88	90	89
	HSE-E Total	6135	94	94	94	88	94	94	85	88	90	92	91
Midland	Laois/Offaly	569	98	98	98	98	98	98	93	93	95	97	97
	Longford/Westmeath	468	96	96	96	96	96	96	92	94	94	96	95
	HSE-M Total	1037	97	97	97	97	97	97	92	94	94	97	96
Mid Western	Clare	415	95	95	94	93	94	94	91	93	92	93	94
	Limerick	431	93	93	93	89	93	93	87	88	90	91	92
	Tipperary NR/East Limerick	482	95	95	95	89	95	95	84	91	91	93	93
	HSE-MW Total	1328	95	95	94	90	94	94	87	91	91	92	93
North Eastern	Cavan/Monaghan	471	96	96	96	91	96	96	88	91	93	95	94
	Louth	471	94	94	94	87	94	94	83	87	89	91	90
	Meath	817	95	95	95	90	95	95	88	90	91	93	92
	HSE-NE Total	1759	95	95	95	90	95	95	87	89	91	93	92
North Western	Donegal	492	96	96	96	91	96	94	85	90	89	93	93
	Sligo/Leitrim	335	96	96	96	97	96	96	86	97	89	96	96
	HSE-NW Total	827	96	96	96	93	96	95	85	93	89	94	94
South Eastern	Carlow/Kilkenny	479	94	94	94	93	94	94	88	92	92	94	94
	South Tipperary	294	98	98	98	95	98	98	88	94	94	96	95
	Waterford	433	93	93	93	90	93	93	86	88	91	90	91
	Wexford	521	97	97	97	95	97	96	91	93	94	94	95
	HSE-SE Total	1727	95	95	95	93	95	95	89	92	92	93	94
Southern	North Cork	372	95	95	95	94	95	96	91	93	94	95	95
	North South Lee	1424	96	96	96	92	96	96	88	90	92	93	93
	West Cork	191	91	91	91	83	91	91	84	83	87	85	88
	Kerry	437	96	96	96	92	96	97	89	89	93	94	93
	HSE-S Total	2424	95	95	95	91	95	96	88	90	92	93	93
Western	Galway	870	98	98	98	95	98	98	95	na	98	na	96
	Mayo	420	98	98	98	92	98	98	92	na	97	na	94
	Roscommon	222	97	97	97	93	97	97	92	na	96	na	95
	HSE-W Total	1512	98	98	98	94	98	98	94	na	97	na	95
Ireland †		16749	95	95	95	91	95	95	87	90	92	93	93

na=not available

*The denominator/number in cohort varied slightly according to vaccine. D₃, T₃ and P₃ cohorts shown here.

Please 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

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