

Background

The national immunisation uptake statistics, based on available data, for Quarter 3 2015 are presented in this report. These immunisation uptake statistics relate to children at 12 (born between 01/07/2014 and 30/09/2014) and 24 (born between 01/07/2013 and 30/09/2013) months of age in Quarter 3-2015. 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 3 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 3 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. One dose of vaccine against *Haemophilus influenzae* type b (Hib_b), one dose of meningococcal group C vaccine (MenC_b) and one dose of pneumococcal conjugate vaccine (PCV_b) given on or after 12 months of age are also reported.

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 3-2015

National

- Immunisation uptake rates in children 12 months of age in Q3-2015 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 Q3-2015; these areas cover approximately 90% of the national birth cohort. Where data were available, national uptake was 87% for the BCG vaccination.
- Figure 1 presents the national uptake rates at 12 months for each vaccine from Q3-2000 to Q3-2015. Compared to Q2-2015, national uptake rates in Q3-2015 for D₃, T₃, P₃ and Polio₃ decreased by 1% while HepB₃, MenC₂ and PCV₂ were unchanged.

HSE Area

- Among the HSE Areas, the uptake rates for D₃, T₃, P₃, Hib₃, Polio₃ and HepB₃ ranged from 89-95% and MenC₂ and PCV₂ ranged from 86% to 95%.
The HSE Western Area reached the target of ≥95% for D₃, T₃, P₃, Hib₃, Polio₃, HepB₃, PCV₂ 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 7 LHOs for BCG, 5 LHOs for D₃, T₃, P₃, Polio₃ and HepB₃ and in 4 LHOs for Hib₃, MenC₂ and PCV₂.

Table 2. Immunisation uptake (%) at 12 months in cohort born 01/07/2014–30/09/2014

HSE Area	No. in cohort*	BCG [†]	D ₃ T ₃	P ₃	Hib ₃	Polio ₃	HepB ₃	MenC ₂	PCV ₂
Eastern	6595	93	90	90	90	90	90	90	90
Midland	1154	94	94	94	94	94	94	94	94
Mid Western	1336	94	90	90	90	90	90	89	90
North Eastern	1815	na	92	92	92	92	92	92	92
North Western	806	96	94	94	93	94	93	92	93
South Eastern	1908	95	93	93	93	93	93	93	93
Southern	2505	91	89	89	89	89	89	86	86
Western	1547	28	95	95	95	95	95	95	95
Ireland	17666	87	91	91	91	91	91	91	91

na = not available at this time

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

† Number in cohort for BCG is 15,860

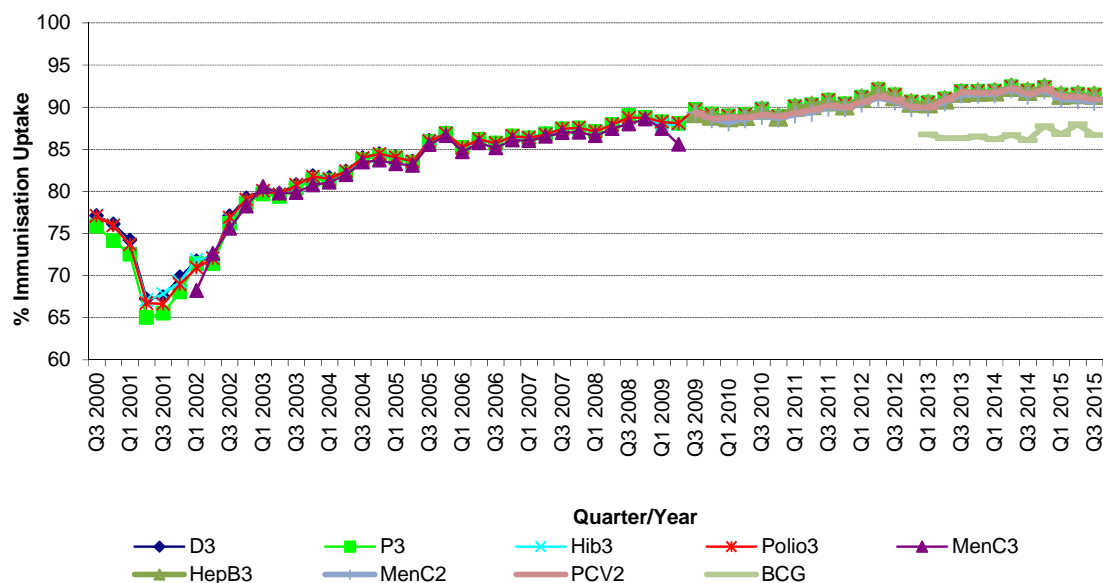


Figure 1. National quarterly immunisation uptake rates at 12 months

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 and for seven HSE-Areas from Q1 2013. From Q3 2011 to Q3 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. Since Q1 2015 BCG data was available for Galway, Mayo and Roscommon LHOs.

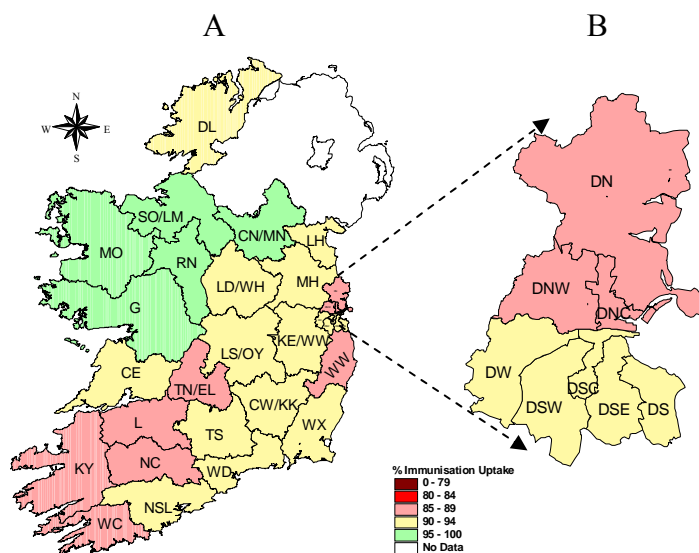


Figure 2. D₃ immunisation uptake rates (%) by LHO, in those 12 months of age in Quarter 3-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

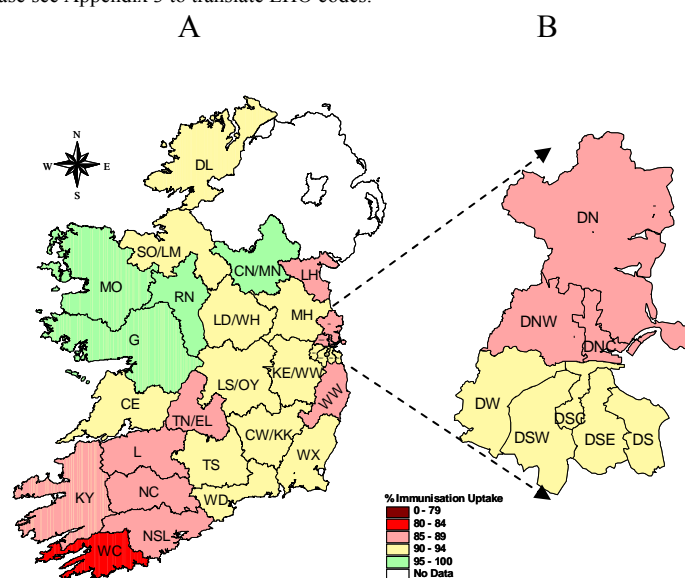


Figure 3. MenC₂ immunisation uptake rates (%) by LHO, in those 12 months of age in Quarter 3-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

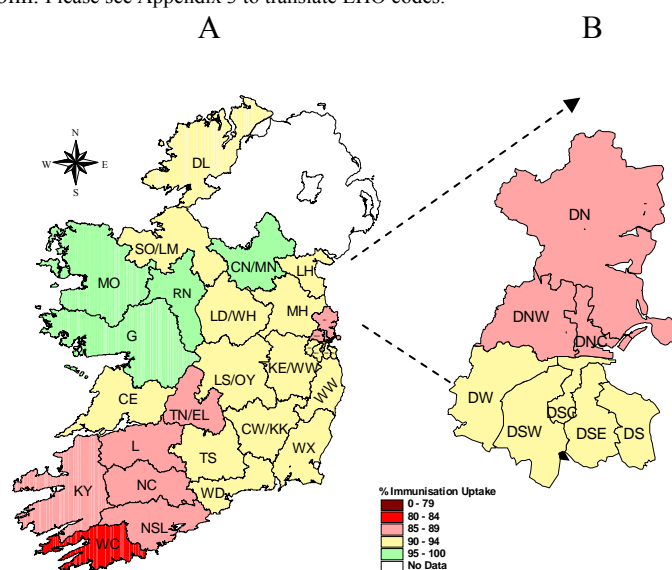


Figure 4. PCV₂ immunisation uptake rates (%) by LHO, in those 12 months of age in Quarter 3-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

Immunisation uptake among children 24 months of age in Quarter 3-2015

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 88% for MenC₃ (table 3). Compared to the previous quarter, national uptake rates in Q3-2015 were unchanged (figure 5).
- In total, seven of the eight HSE Areas were able to provide uptake data on MenC_b and PCV_b in Q3-2015. These Areas cover approximately 90% 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 and PCV_b uptake were unchanged (figure 5).
- Figure 5 presents the national uptake rates at 24 months for each vaccine from Q1-1999 to Q3-2015.

HSE Area

- The target uptake of $\geq 95\%$ was reached for D₃, P₃, T₃, Hib₃, Polio₃ and HepB₃ in six HSE Areas, for Hib_b and PCV_b in three HSE Areas, MMR₁ in two HSE Areas, for MenC₃ and PCV₃ in one and in none for MenC_b (table 3).

Local Health Office (LHO)

- Immunisation uptake rates in children 24 months of age in Q3-2015 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 20 LHOs for D₃, T₃, P₃, Hib₃ and Polio₃, 19 for HepB₃, 11 for MMR₁, 8 for Hib_b and PCV_b, 4 for PCV₃, in two for MenC₃ and one for MenC_b.

Table 3. Immunisation uptake (%) at 24 months in cohort born 01/07/2013–30/09/2013

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	6705	94	94	94	94	94	88	85	88	90	92	91
Midland	1164	96	96	96	96	96	96	90	93	94	96	96
Mid-Western	1373	93	93	93	93	93	88	85	88	89	91	90
North Eastern	1984	96	96	96	96	96	92	90	92	93	95	94
North Western	945	96	96	96	95	96	91	85	90	90	94	93
South Eastern	1935	96	96	96	95	96	95	89	92	93	95	94
Southern	2503	95	96	95	96	96	91	87	89	91	92	93
Western	1708	98	98	98	98	98	95	95	na	97	na	96
Ireland	18317	95	95	95	95	95	91	88	90	92	93	93

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

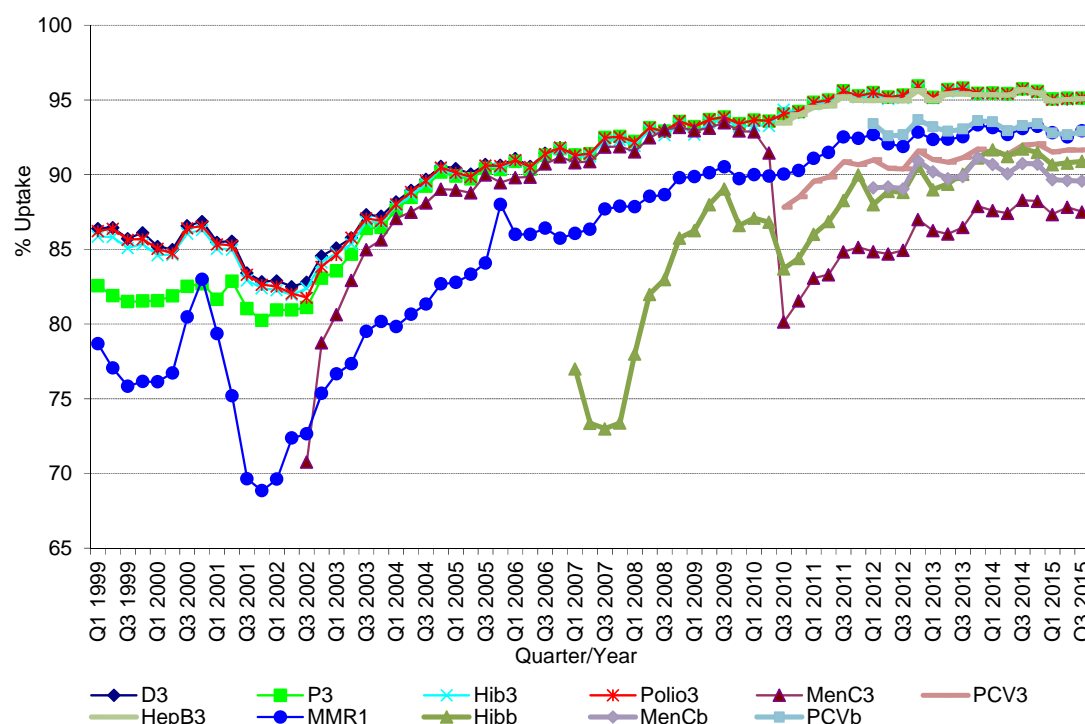


Figure 5. National quarterly immunisation uptake rates at 24 months

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 Q3-2008 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. MenC_b and PCV_b data are only available for 6 of the 8 HSE Areas from Q1 2012 to Q4 2014 and for 7 HSE Areas since Q1 2015

Conclusions

In Quarter 3-2015, 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 Q3-2015 were unchanged. 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 all those involved in childhood immunisation including the General Practitioners, Practice Nurses, HSE Areas, Public Health Nurses, Immunisation Co-ordinators, Specialists in Public Health Medicine, Surveillance Scientists and Systems Analysts for their assistance.

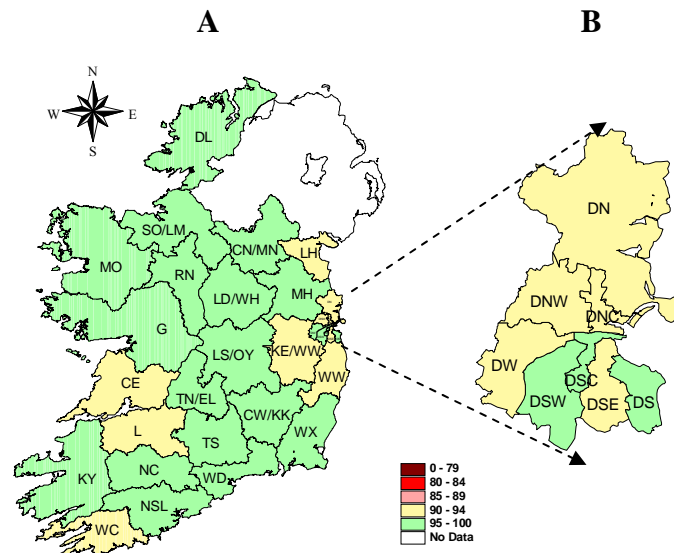


Figure 6. D₃ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 3-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

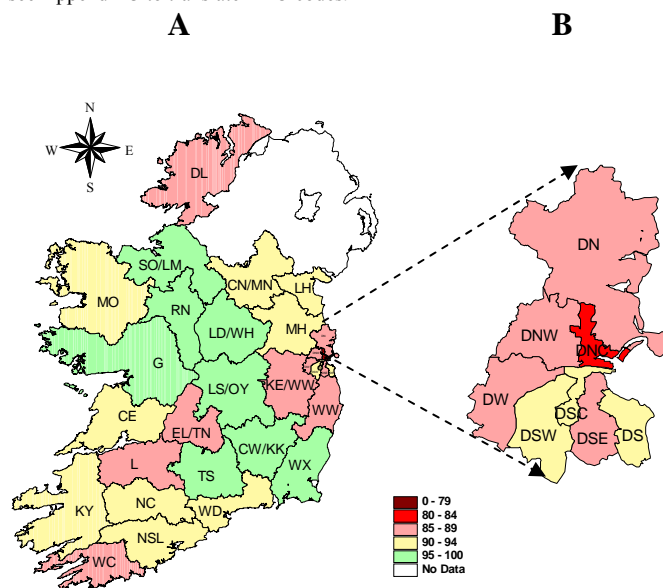


Figure 7. Hib₆ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 3-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

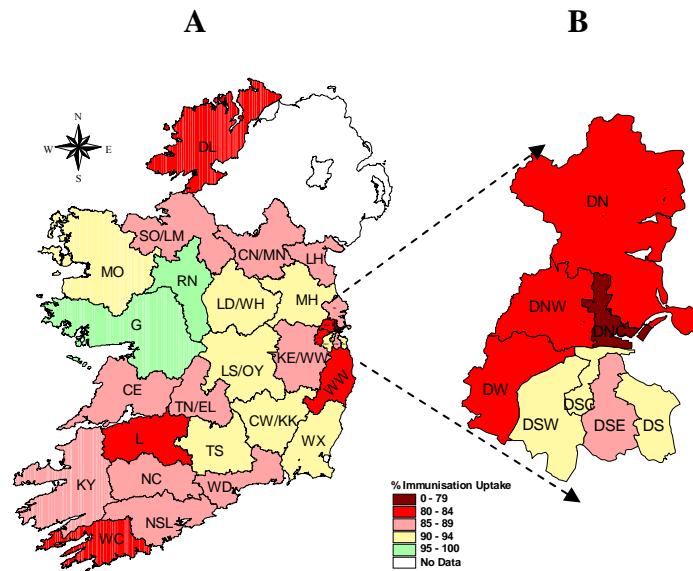


Figure 8. MenC₃ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 3-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

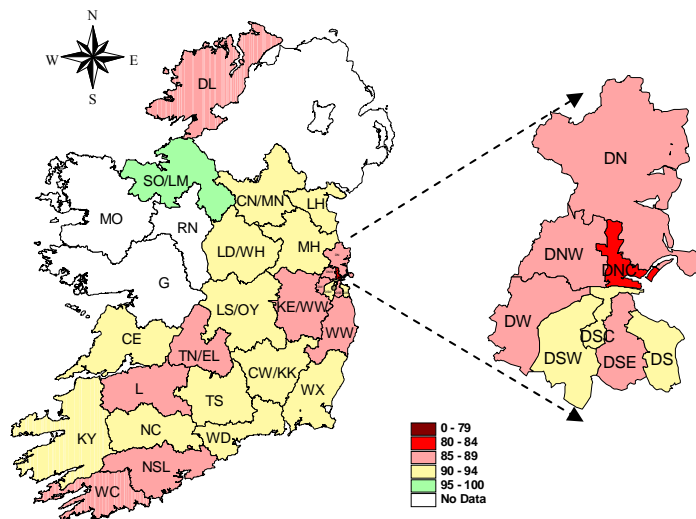


Figure 9. MenC_b immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 3-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

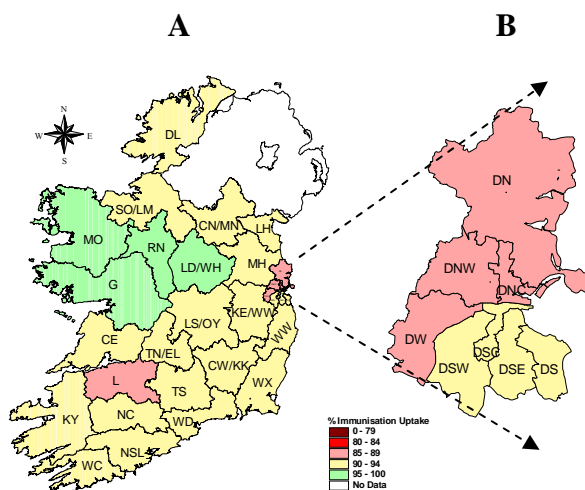


Figure 10. PCV₃ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 3-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

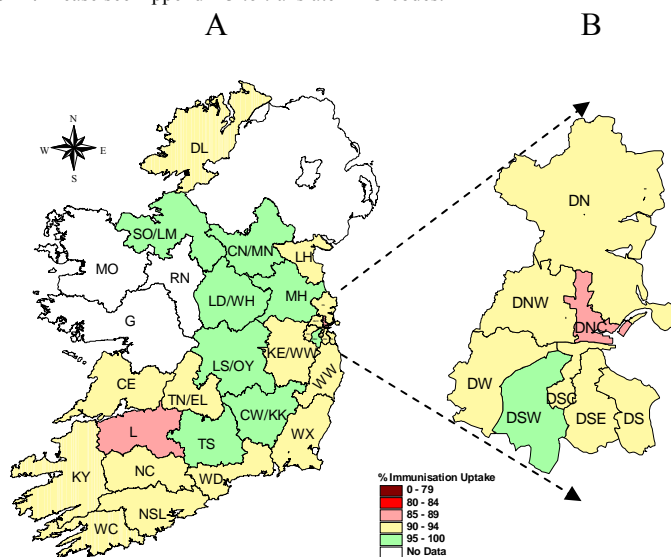


Figure 11. PCV₆ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 3-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

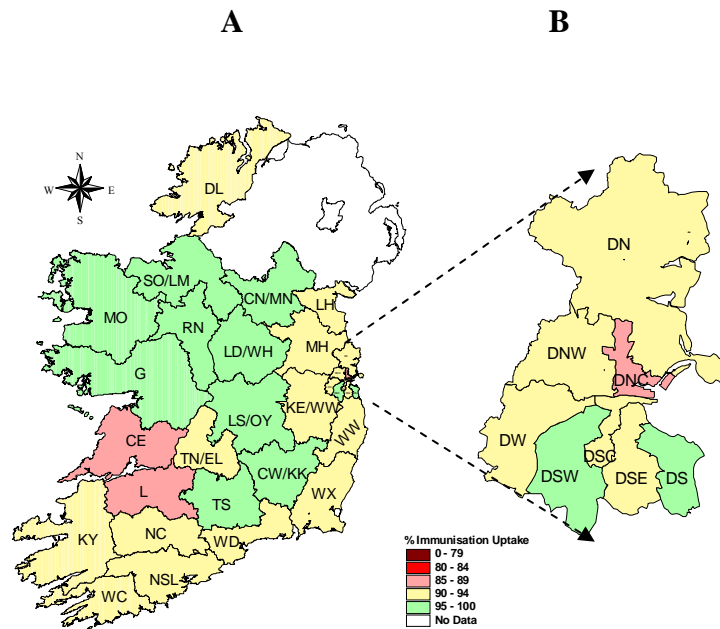


Figure 12. MMR₁ immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 3-2015, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

Appendix 1

Immunisation Uptake at 12 Months in Cohort Born 01/07/2014-30/09/2014											
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	443	443	88	90	90	90	90	90	90	91
	Dublin South East	445	445	90	94	94	94	94	94	94	94
	Dublin South City	483	483	94	94	94	94	94	94	94	94
	Dublin South West	619	619	96	92	92	92	92	92	92	92
	Dublin West	729	729	91	91	91	91	91	91	91	91
	Dublin North West	961	961	92	88	88	88	88	88	87	88
	Dublin North Central	490	490	91	86	86	86	86	86	86	86
	Dublin North	1009	1009	93	88	88	88	88	88	88	89
	Kildare/West Wicklow	984	984	94	92	92	92	92	92	92	92
	Wicklow	432	432	94	89	89	89	89	89	89	91
	HSE-E Total	6595	6595	93	90	90	90	90	90	90	90
Midland	Laois/Offaly	635	635	96	94	94	94	94	94	94	94
	Longford/Westmeath	519	519	92	94	94	94	94	94	94	94
	HSE-M Total	1154	1154	94	94	94	94	94	94	94	94
Mid Western	Clare	416	411	93	92	92	92	92	92	91	91
	Limerick	408	449	96	89	89	89	89	89	88	88
	Tipperary NR/East Limerick	492	476	92	89	89	89	89	89	89	89
	HSE-MW Total	1316	1336	94	90	90	90	90	90	89	89
North Eastern	Cavan/Monaghan	na	491	na	95	95	95	95	95	95	95
	Louth	na	497	na	90	90	90	90	90	89	90
	Meath	na	827	na	92	92	92	92	92	92	92
	HSE-NE Total	na	1815	na	92	92	92	92	92	92	92
North Western	Donegal	486	486	95	93	93	93	93	92	91	93
	Sligo/Leitrim	320	320	97	95	95	94	95	95	94	94
	HSE-NW Total	806	806	96	94	94	93	94	93	92	93
South Eastern	Carlow/Kilkenny	558	558	95	92	92	92	92	92	91	91
	South Tipperary	329	329	97	94	94	94	94	94	94	94
	Waterford	498	498	93	94	94	94	94	94	93	92
	Wexford	523	523	94	93	93	93	93	93	93	94
	HSE-SE Total	1908	1908	95	93	93	93	93	93	93	93
Southern	North Cork	339	332	92	87	87	87	87	87	85	85
	North South Lee	1530	1516	92	90	90	90	90	90	86	87
	West Cork	178	176	90	85	85	85	85	85	81	82
	Kerry	487	481	90	89	89	89	89	89	85	85
	HSE-S Total	2534	2505	91	89	89	89	89	89	86	86
Western	Galway	902	902	10	95	95	95	95	95	95	95
	Mayo	420	420	53	95	95	95	95	95	96	95
	Roscommon	225	225	52	96	96	96	96	96	96	97
	HSE-W Total	1547	1547	28	95	95	95	95	95	95	95
Ireland		15860	17666	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 cohort born 01/07/2013-30/09/2013													
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	435	95	95	95	93	95	95	90	93	93	94	95
	Dublin South East	410	94	94	94	88	94	94	86	88	91	92	91
	Dublin South City	427	96	96	96	91	96	96	90	91	93	94	94
	Dublin South West	629	97	97	97	94	97	97	91	93	94	96	96
	Dublin West	729	93	93	93	85	93	93	82	85	88	90	90
	Dublin North West	946	94	94	94	86	94	94	83	86	89	91	90
	Dublin North Central	492	92	92	92	82	92	92	78	81	87	89	88
	Dublin North	1135	93	93	93	88	93	93	84	87	89	90	90
	Kildare/West Wicklow	1036	94	94	94	89	94	94	87	89	91	92	92
	Wicklow	466	94	94	94	86	94	94	81	85	90	92	91
HSE-E Total		6705	94	94	94	88	94	94	85	88	90	92	91
Midland	Laois/Offaly	668	96	96	96	96	96	96	90	93	94	96	96
	Longford/Westmeath	496	96	96	96	96	96	96	91	94	95	96	96
	HSE-M Total	1164	96	96	96	96	96	96	90	93	94	96	96
Mid Western	Clare	383	92	92	92	91	92	92	89	91	90	92	89
	Limerick	495	92	92	92	86	92	92	82	85	87	89	88
	Tipperary NR/East Limerick	495	95	95	95	89	95	95	85	88	91	93	93
	HSE-MW Total	1373	93	93	93	88	93	93	85	88	89	91	90
North Eastern	Cavan/Monaghan	552	97	97	97	92	97	97	89	92	93	95	95
	Louth	526	94	94	94	91	94	94	89	92	91	93	92
	Meath	906	96	96	96	92	96	96	90	92	94	95	94
	HSE-NE Total	1984	96	96	96	92	96	96	90	92	93	95	94
North Western	Donegal	581	96	96	96	88	96	94	83	87	91	93	91
	Sligo/Leitrim	364	97	97	97	95	97	97	87	96	90	95	96
	HSE-NW Total	945	96	96	96	91	96	95	85	90	90	94	93
South Eastern	Carlow/Kilkenny	514	96	96	96	96	96	96	90	93	94	96	95
	South Tipperary	372	96	96	96	96	96	96	90	93	94	96	95
	Waterford	480	95	95	95	91	95	95	88	90	92	93	92
	Wexford	569	95	95	95	96	96	95	90	93	93	94	94
	HSE-SE Total	1935	96	96	96	95	96	95	89	92	93	95	94
Southern	North Cork	375	97	97	97	94	97	97	88	91	91	94	94
	North South Lee	1496	95	95	95	90	95	95	87	89	91	92	93
	West Cork	179	94	94	94	89	94	94	84	89	90	92	94
	Kerry	453	96	96	96	92	96	96	87	90	90	91	94
	HSE-S Total	2503	95	96	95	91	96	96	87	89	91	92	93
Western	Galway	1001	97	97	97	95	97	97	95	na	96	na	96
	Mayo	463	98	98	98	93	98	98	94	na	98	na	95
	Roscommon	244	98	98	98	98	98	98	98	na	98	na	98
	HSE-W Total	1708	98	98	98	95	98	98	95	na	97	na	96
Ireland †		18317	95	95	95	91	95	95	88	90	92	93	93

na=not available

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