

# Immunisation uptake report for Ireland



A report by the Health Protection Surveillance Centre

## **Summary**

#### Children 12 months of age in Quarter 3-2009

The immunisation uptake figures for children at 12 months of age presented in this report are incomplete as two HSE Areas were unable to provide data, two additional areas were unable to provide  $MenC_2$  data and one additional area was unable to provide  $PCV_2$  data. Therefore, all cohort numbers are incomplete and the numbers in the  $MenC_2$  and  $PCV_2$  cohorts are approximately half those in the available  $D_3$ ,  $P_3$ ,  $T_3$ , T

- Based on the available data the national immunisation uptake rates were 90% for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub> and 89% for HepB<sub>3</sub>, MenC<sub>2</sub> and PCV<sub>2</sub>
  - The highest uptake rates for  $D_3$ ,  $P_3$ ,  $T_3$ , Hib<sub>3</sub>, Polio<sub>3</sub>, HepB<sub>3</sub> and PCV<sub>2</sub> was in the **HSE**-Mid Western Area (92%). Four HSE Areas had  $\geq$ 90% uptake of  $D_3$ ,  $P_3$ ,  $T_3$ , Hib<sub>3</sub>, Polio<sub>3</sub> and HepB<sub>3</sub>.
    - Eight of the nine Local Health Offices (LHOs) reporting BCG had uptake of ≥95%. One LHO had ≥95% uptake of D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub>, MenC<sub>2</sub> and PCV<sub>2</sub>. None of the LHOs had ≥95% of HepB<sub>3</sub>.
    - Of the 25 LHOs, where  $D_3$ ,  $P_3$ ,  $T_3$ ,  $\overline{Hib_3}$ ,  $Polio_3$  and  $Polio_4$  and  $Polio_5$  and

Of the 12 LHOs, where MenC<sub>2</sub> data were available, seven had uptake of  $\geq$ 90%.

Of the 15 LHOs, where PCV<sub>2</sub> data were available, eight had uptake of  $\geq$ 90%.

All nine LHOs, where BCG data were available, had ≥90% uptake.

### Children 24 months of age in Quarter 3-2009

The **national** immunisation uptake rates were 94% for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub>, 93% for MenC<sub>3</sub> and 89% for Hib<sub>b</sub>. When compared to the previous quarter, uptake of D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Polio<sub>3</sub> and MenC<sub>3</sub> were unchanged and uptake of Hib<sub>3</sub> and Hib<sub>b</sub> increased by 1%.

The national immunisation uptake rate for MMR<sub>1</sub> was 91%, an increase of 1% when compared to the previous quarter.

All eight **HSE Areas** 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> and MenC<sub>3</sub>. The target uptake rate of 95% was reached or exceeded for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub> and MenC<sub>3</sub> in the HSE-Midland, North Eastern and Southen Areas, for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub> and Polio<sub>3</sub> in the HSE-Mid Western Area and for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub> in the HSE-North Western Area.

Seven HSE Areas had ≥90% uptake of MMR<sub>1</sub> with the highest uptake in the HSE-Midland Area (93%).

Five HSE Areas had ≥90% uptake of Hib<sub>b</sub> with the target uptake rate of 95% reached in the HSE-North Eastern Area (95%).

- Sixteen Local Health Offices (LHOs) had ≥95% uptake of D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, and Polio<sub>3</sub>. Thirteen LHOs had ≥95% uptake of Hib<sub>3</sub> Twelve LHOs had ≥95% uptake of MenC<sub>3</sub> Four LHOs had ≥95% uptake of Hib<sub>b</sub> Four LHOs had ≥95% uptake of MMR<sub>1</sub>
- Thirty LHOs had ≥90% uptake of D<sub>3</sub> and T<sub>3</sub>
  Twenty nine LHOs had ≥90% uptake of P<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub> and MenC<sub>3</sub>
  Twenty one LHOs had ≥90% uptake of MMR<sub>1</sub>
  Seventeen LHOs had ≥90% uptake of Hib<sub>b</sub>

## Introduction

Since September 1st 2008 the new primary childhood immunisation schedule has been implemented (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, 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 vaccination, now given at 2, 4, 6 and 13 months of age.

Please see <a href="https://www.immunisation.ie">www.immunisation.ie</a> for complete information on the Irish childhood immunisation schedule and changes to the schedule introduced in September 2008.

The immunisation uptake statistics presented in this report relate to children 12 and 24 months of age in Quarter 3-2009.

The immunisation uptake rates presented in this report for children at 12 months of age in Quarter 3-2009 are children born between 01/07/2008 and 30/09/2008 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 3-2009 are children born between 01/07/2007 and 30/09/2007 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>) and meningococcal group C (MenC<sub>3</sub>), one booster dose of vaccine against *Haemophilus influenzae* type b given after 12 months of age (Hib<sub>b</sub>) and one dose of vaccine against measles, mumps and rubella (MMR<sub>1</sub>).

The national immunisation uptake statistics for Quarter 3-2009 are presented in this document, the uptake statistics are also presented by HSE Area and Local Health Office (LHO).

Table 1.	Change in	Primary (	Childhood	Immunisation	Schedule
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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							
schedule introduced in BCG; DTaP Hib IPV HepB PCV MenC	TaP Diptheria, Tetanus and acellular Pertussis vaccine ib Haemophilus influenzae type b vaccine Inactivate Polio Virus vaccine epB Hepatitis B vaccine EV Pneumococcal Conjugate Vaccine enC Meningococcal group C vaccine							

## Immunisation uptake at 12 months

## National and HSE Area uptake

Plesae note: The immunisation uptake figures for children at 12 months of age presented in this report are incomplete as two HSE Areas were unable to provide data, two additional areas were unable to provide MenC<sub>2</sub> data and one additional area was unable to provide PCV<sub>2</sub> data. Therefore, all cohort numbers are incomplete and the numbers in the MenC<sub>2</sub> and PCV<sub>2</sub> cohorts are approximately half those in the available  $D_3$ ,  $P_3$ ,  $T_3$ , Hib<sub>3</sub> and Polio<sub>3</sub> cohorts. Immunisation uptake rates in children 12 months of age in Q3-2009 are presented by HSE Area in Table 1. National uptake rates were 90% for  $D_3$ ,  $P_3$ ,  $T_3$ , Hib<sub>3</sub> and Polio<sub>3</sub> and 89% for HepB<sub>3</sub>, MenC<sub>2</sub> and PCV<sub>2</sub>. The highest uptake rates for these vaccines (except MenC<sub>2</sub>) at 12 months were in the HSE- Mid Western Area (92%) while the lowest rates (except PCV<sub>2</sub>) were in the HSE-Western Area (87%). Four HSE Areas had  $\geq$ 90% uptake of  $D_3$ ,  $P_3$ ,  $T_3$ , Hib<sub>3</sub>, Polio<sub>3</sub> and HepB<sub>3</sub> (table 1). BCG uptake data were available for three of the eight HSE-Areas. These areas cover approximately a third of the national birth cohort. Where data were available, national uptake was 96% for the BCG vaccination. This is unchanged compared to O2-2009.

**Table 1.** Immunisation uptake (%) at 12 months in cohort born 01/07/2008–30/09/2008

#### National & HSE Area trends

Figure 1 presents the national uptake rates at 12 months for each vaccine from Q3-2000 to Q3-2009. In Q3-2009 national uptake rates for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub> increased by 2% compared to the previous quarter, however, due to incompleteness of data this increase may not be genuine.

In Q3-2009, D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub> uptake rates, in children 12 months of age, increased by 3% in the HSE-Eastern, increased by 1% in the Mid Western, North Eastern and South Eastern Areas and were unchanged in the HSE-Western Area when compared to the previous quarter. In Q3 2009 in the HSE North Western Area D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub> and Polio<sub>3</sub> uptake rates decreased by 1% while Hib<sub>3</sub> were unchanged compared to the previous quarter.

#### LHO uptake

The immunisation uptake rates by LHO are shown in appendix 1.

All nine LHOs reporting BCG data had  $\geq$ 90% uptake with uptake of  $\geq$ 95% in eight of these LHOs.

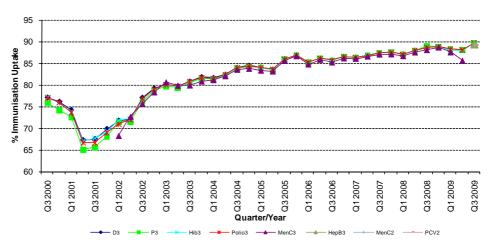
The immunisation uptake target rate of 95% was reached or exceeded in one LHO (Roscommon) for  $D_3$ ,  $P_3$ ,  $T_3$ , Hib<sub>3</sub>, Polio<sub>3</sub>, MenC<sub>2</sub> and PCV<sub>2</sub>. None of the LHOs had  $\geq$ 95% of HepB<sub>3</sub>.

Of the 25 LHOs reporting  $D_3$ ,  $P_3$ ,  $T_3$ , Hib<sub>3</sub>, Polio<sub>3</sub> and HepB<sub>3</sub> data 17 had  $\geq$ 90% uptake of  $D_3$ ,  $P_3$ ,  $T_3$ , Hib<sub>3</sub> and Polio<sub>3</sub> and 16 had  $\geq$ 90% uptake of HepB<sub>3</sub>.  $D_3$  immunisation uptake rates are mapped by LHO in figure 2. Of the 12 LHOs, where MenC<sub>2</sub> data were available, seven had uptake of  $\geq$ 90%. Of the 15 LHOs, where PCV<sub>2</sub> data were available, eight had uptake of  $\geq$ 90%. All nine LHOs, where BCG data were available, had  $\geq$ 90% uptake.

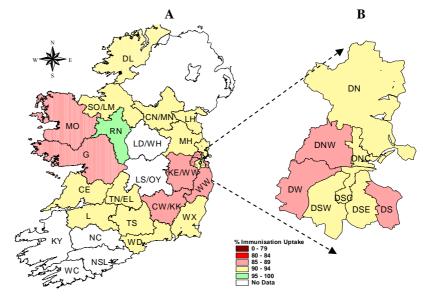
HSE Area	No. in cohort*	BCG	$\mathbf{D}_3$	<b>P</b> <sub>3</sub>	<b>T</b> <sub>3</sub>	Hib <sub>3</sub>	Polio <sub>3</sub>	HepB <sub>3</sub>	MenC <sub>2</sub>	PCV <sub>2</sub>
Eastern	7058	na	89	89	89	89	89	88	na	na
Midland	na	na	na	na	na	na	na	na	na	na
Mid Western	1562	97	92	92	92	92	92	92	na	92
North Eastern	2192	na	92	92	92	92	92	91	91	87
North Western	997	95	91	91	91	92	91	91	90	91
South Eastern	2200	95	90	90	90	90	90	90	90	90
Southern	na	na	na	na	na	na	na	na	na	na
Western	1774	na	87	87	87	87	87	87	87	88
Ireland	15783†	96	90	90	90	90	90	89	89	89

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, HepB<sub>3</sub>, MenC<sub>2</sub> and PCV<sub>2</sub> is 4,741, 15,785, 7,143 and 8,711, respectively,



**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 MenC<sub>3</sub> 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<sub>3</sub> and MMR<sub>1</sub> uptake figures exclude those born on the 31/03/2007.
The Q3 2009 figuresare incomplete as two HSE Areas were unable to provide data, two additional areas were unable to provide MenC<sub>2</sub> data and one additional area was unable to provide PCV<sub>2</sub> data.



**Figure 2.** D<sub>3</sub> immunisation uptake rates (%) by LHO, in those 12 months of age in Quarter 3 2009, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO abbreviations.

## Immunisation uptake at 24 months

### National and HSE Area uptake

Immunisation uptake rates in children 24 months of age in Q3-2009 are presented (Table 2). National uptake rates were 94% for  $D_3$ ,  $P_3$ ,  $T_3$ ,  $Hib_3$  and Polio<sub>3</sub> and 93% for MenC<sub>3</sub>. All eight HSE Areas had  $\geq$ 91% uptake of  $D_3$ ,  $P_3$ ,  $T_3$ ,  $Hib_3$ , Polio<sub>3</sub> and MenC<sub>3</sub>. The target uptake of 95% was reached/exceeded in the HSE-Midland, North Eastern and Southern Areas for  $D_3$ ,  $P_3$ ,  $T_3$ ,  $Hib_3$ , Polio<sub>3</sub> and MenC<sub>3</sub>, in the HSE-Mid Western Area for  $D_3$ ,  $P_3$ ,

#### **Trends**

Figure 3 presents the national uptake rates at 24 months for each vaccine from Q1-1999 to Q3-2009. In Q3-2009, compared to the previous quarter, national uptake rates for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Polio<sub>3</sub> and MenC<sub>3</sub> were unchanged while Hib<sub>3</sub> and Hib<sub>b</sub> increased by 1%.

In Q3-2009, the national MMR<sub>1</sub> uptake rate at 24 months was 91%, an increase of 1% compared to the previous quarter. In Q3-2009, when compared to Q2-2009, the MMR<sub>1</sub> uptake rate was unchanged in the HSE Eastern and Western Areas, decreased in the HSE-Midland Area (by 3%) and North Western Area (by 4%) and increased in the HSE-Mid Western (by 2%), North Eastern (by 1%), South Eastern (by 1%) and Southern (by 1%) Areas.

## LHO uptake

Immunisation uptake rates for  $D_3$ ,  $P_3$ ,  $T_3$ ,  $Hib_3$ ,  $Hib_5$ ,  $Polio_3$ ,  $MenC_3$  and  $MMR_1$  in children 24 months of age in Q3-2009 are presented by LHO in Appendix 2.

The immunisation uptake target rate of 95% was reached or exceeded in the Local Health Offices (LHOs) of: Tipperary North/East Limerick and Roscommon for all vaccines i.e. D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub>, Hib<sub>b</sub>, Polio<sub>3</sub>, MenC<sub>3</sub> and MMR<sub>1</sub>; Cavan/Monaghan for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib3, Hibb, Polio3 and MenC3; North/South Lee for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub>, MenC<sub>3</sub> and MMR<sub>1</sub>; Dublin South, Dublin South East, North Central, Laois/Offaly, Longford/Westmeath and North Cork for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub> and MenC<sub>3</sub>; Dublin South West for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub> and MMR<sub>1</sub>; Sligo/Leitrim and Tipperary South for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub>; Dublin South City, Dublin North and Donegal for D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub> and Polio<sub>3</sub>; Louth for Hib<sub>3</sub> and MenC<sub>3</sub> and Meath for MenC<sub>3</sub>.

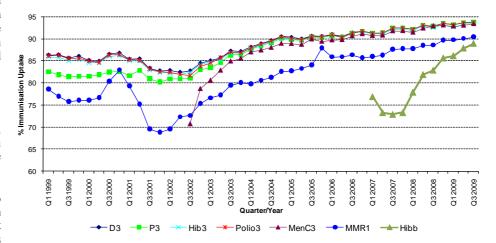
Sixteen LHOs had  $\geq$ 95% uptake of D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, and Polio<sub>3</sub>. Thirteen LHOs had  $\geq$ 95% uptake of Hib<sub>3</sub>, 12 LHOs had  $\geq$ 95% uptake of MenC<sub>3</sub>, four LHOs had  $\geq$ 95% uptake of Hib<sub>b</sub> and four had  $\geq$ 95% uptake of MMR<sub>1</sub>.

Thirty LHOs had  $\geq 90\%$  uptake of  $D_3$  and  $T_3$ . Twenty nine LHOs had  $\geq 90\%$  uptake of  $P_3$ , Hib<sub>3</sub>, Polio<sub>3</sub> and MenC<sub>3</sub>. Twenty one LHOs had  $\geq 90\%$  uptake of MMR<sub>1</sub>. Seventeen LHOs had  $\geq 90\%$  uptake of Hib<sub>b</sub>

Table 2. Immunisation uptake (%) at 24 months in cohort born 01/07/2007 – 30/09/2007

HSE Area	No. in Cohort*	$\mathbf{D}_3$	<b>P</b> <sub>3</sub>	<b>T</b> <sub>3</sub>	Hib <sub>3</sub>	Hib <sub>b</sub>	Polio <sub>3</sub>	MenC <sub>3</sub>	$MMR_1$
Eastern	6972	93	93	93	93	85	93	92	89
Midland	1342	95	95	95	95	91	95	95	91
Mid Western	1583	95	95	95	94	92	95	94	93
North Eastern	2037	95	95	95	95	95	95	96	92
North Western	986	95	95	95	95	92	95	93	90
South Eastern	2051	92	92	92	92	92	92	91	90
Southern	2684	95	95	95	95	89	95	95	92
Western	1804	94	94	94	94	87	94	94	90
Ireland	19459	94	94	94	94	89	94	93	91

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



**Figure 3.** National quarterly immunisation uptake rates at 24 months **Notes:** The Q4-2005 MMR<sub>1</sub> figure is based on data from seven of the eight HSE-Areas. The Q1-2006 MMR<sub>1</sub> figure includes the HSE-Eastern Area figure that is an estimate only. The Q1-2007, Q3-2007, Q2-2008 and Q3-2008 Hib<sub>b</sub> figures are based on data from seven of the eight HSE Areas. In Q1-2008 the HSE-SE changed their Hib<sub>b</sub> data extraction method compared to previous quarters; in Q1-2008 the uptake of Hib<sub>b</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 D<sub>3</sub>, P<sub>3</sub>, T<sub>3</sub>, Polio<sub>3</sub> and MMR<sub>1</sub> uptake figures exclude those born on the 31/03/2007. The Q2-2009 HSE-Eastern Area Hib<sub>b</sub> uptake figures exclude uptake figures from Dublin North.

#### **Conclusions**

In Q3-2009, the national  $Hib_b$ ,  $MMR_1$  and  $MenC_3$  uptake rates were 6%, 4% and 2%, respectively, below the target uptake rates of 95%. National uptake rates for all other vaccines at 24 months were 1% below the target rates.

### **Further information**

A complete listing of national and regional immunisation uptake statistics at 12 and 24 months for each HSE Area is also available at <a href="http://www.hpsc.ie">http://www.hpsc.ie</a>.

# 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.

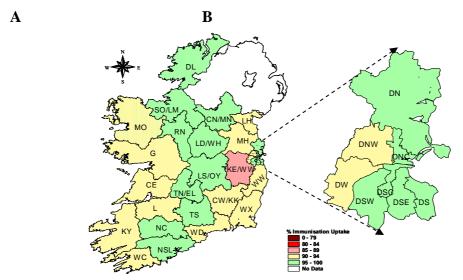
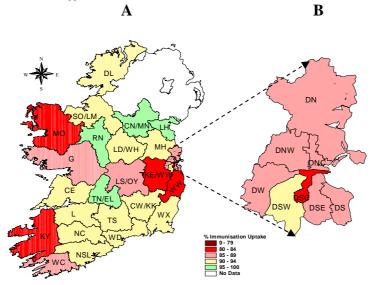


Figure 4. D<sub>3</sub> immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 3 2009, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.



**Figure 5.** Hib<sub>b</sub> immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 3 2009, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

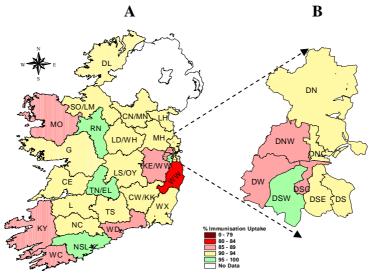


Figure 6.  $MMR_1$  immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 3 2009, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

## Appendix 1

Eastern‡ Du Du Du Du Du Kii Wi HS Midland La	LHO/HSE Area ublin South ublin South East ublin South City ublin South West ublin North West ublin North Central ublin North ildare/West Wicklow licklow SE-E Total aois/Offaly ongford/Westmeath SE-M Total	No. in cohort for BCG  na	No. in cohort for other vaccines†  385  429  456  627  802  1050  489  1152  1119  549  7058	BCG na	D <sub>3</sub> 88 93 92 94 87 86 92 90 85	P <sub>3</sub> 88 93 92 94 87 86 92 90		Hib <sub>3</sub> 88  93  92  93  87  86		HepB <sub>3</sub> 88  93  91  92  86  86	MenC <sub>2</sub> na  na  na  na  na	PCV <sub>2</sub> na na na na na na
Area  Du Du Du Du Eastern‡ Du Kii Wi HS  Midland La	ublin South ublin South East ublin South City ublin South West ublin West ublin West ublin North West ublin North Central ublin North ildare/West Wicklow //icklow SE-E Total aois/Offaly ongford/Westmeath	cohort for BCG  na	cohort for other vaccines†  385 429 456 627 802 1050 489 1152 1119 549	na na na na na na na na na	88 93 92 94 87 86 92 90 85	88 93 92 94 87 86 92 90	T <sub>3</sub> 88  93  92  94  87  86	Hib <sub>3</sub> 88  93  92  93  87  86	Polio <sub>3</sub> 88  93  92  94  87	88 93 91 92 86	na na na na na	na na na na na
Area  Du Du Du Du Eastern‡ Du Kii Wi HS  Midland La	ublin South ublin South East ublin South City ublin South West ublin West ublin West ublin North West ublin North Central ublin North ildare/West Wicklow //icklow SE-E Total aois/Offaly ongford/Westmeath	cohort for BCG  na	other vaccines† 385 429 456 627 802 1050 489 1152 1119 549	na na na na na na na na na	88 93 92 94 87 86 92 90 85	88 93 92 94 87 86 92 90	88 93 92 94 87 86	88 93 92 93 87 86	88 93 92 94 87	88 93 91 92 86	na na na na na	na na na na na
Area  Du Du Du Du Eastern‡ Du Kii Wi HS  Midland La	ublin South ublin South East ublin South City ublin South West ublin West ublin West ublin North West ublin North Central ublin North ildare/West Wicklow //icklow SE-E Total aois/Offaly ongford/Westmeath	for BCG  na	vaccines†  385  429  456  627  802  1050  489  1152  1119  549	na na na na na na na na na	88 93 92 94 87 86 92 90 85	88 93 92 94 87 86 92 90	88 93 92 94 87 86	88 93 92 93 87 86	88 93 92 94 87	88 93 91 92 86	na na na na na	na na na na na
Eastern‡ Du Du Du Eastern‡ Du Kii Wi HS	ublin South ublin South East ublin South City ublin South West ublin West ublin West ublin North West ublin North Central ublin North ildare/West Wicklow //icklow SE-E Total aois/Offaly ongford/Westmeath	na n	385 429 456 627 802 1050 489 1152 1119 549	na na na na na na na na na	88 93 92 94 87 86 92 90 85	88 93 92 94 87 86 92 90	88 93 92 94 87 86	88 93 92 93 87 86	88 93 92 94 87	88 93 91 92 86	na na na na na	na na na na na
Eastern‡ Du Du Du Du Du Kii Wi HS Midland La	ublin South East ublin South City ublin South West ublin North West ublin North West ublin North Central ublin North ildare/West Wicklow //icklow SE-E Total aois/Offaly ongford/Westmeath	na n	429 456 627 802 1050 489 1152 1119 549	na	93 92 94 87 86 92 90 85	93 92 94 87 86 92 90	93 92 94 87 86	93 92 93 87 86	93 92 94 87	93 91 92 86	na na na na	na na na na
Eastern‡ Du Du Du Kil Wi HS Midland Lo	ublin South City ublin South West ublin West ublin North West ublin North Central ublin North ildare/West Wicklow licklow SE-E Total aois/Offaly ongford/Westmeath	na n	456 627 802 1050 489 1152 1119 549	na na na na na na na	92 94 87 86 92 90 85	92 94 87 86 92 90	92 94 87 86	92 93 87 86	92 94 87	91 92 86	na na na	na na na
Eastern‡ Du Du Kili Wi HS Midland La	ublin South West ublin West ublin North West ublin North Central ublin North ildare/West Wicklow //icklow SE-E Total aois/Offaly ongford/Westmeath	na n	627 802 1050 489 1152 1119 549	na na na na na na	94 87 86 92 90 85	94 87 86 92 90	94 87 86	93 87 86	94	92 86	na na	na na
Eastern‡ Du Du Kill Wi HS Midland Lo	ublin West ublin North West ublin North Central ublin North ildare/West Wicklow /icklow SE-E Total aois/Offaly ongford/Westmeath	na	802 1050 489 1152 1119 549	na na na na na	87 86 92 90 85	87 86 92 90	87 86	87 86	87	86	na	na
Eastern‡ Du Du Kil Wi HS Midland Lo	ublin North West ublin North Central ublin North ildare/West Wicklow /icklow SE-E Total aois/Offaly ongford/Westmeath	na na na na na na	1050 489 1152 1119 549	na na na na na	86 92 90 85	86 92 90	86	86				
Du Du Kil Wi HS	ublin North Central ublin North ildare/West Wicklow /icklow SE-E Total aois/Offaly ongford/Westmeath	na na na na na	489 1152 1119 549	na na na na	92 90 85	92 90			00	00		
Du Kil Wi HS La Midland	ublin North ildare/West Wicklow licklow SE-E Total aois/Offaly ongford/Westmeath	na na na na	1152 1119 549	na na na	90 85	90		92	92	91	na na	na na
Kii Wi HS La Midland Lo	ildare/West Wicklow /icklow SE-E Total aois/Offaly ongford/Westmeath	na na <b>na</b> na	1119 549	na na	85		90	90	90	90	na	na
Wi HS La Midland Lo	/icklow SE-E Total aois/Offaly ongford/Westmeath	na na na	549	na		1 X5	85	85	85	84	na	na
HS La Midland Lo	SE-E Total aois/Offaly ongford/Westmeath	na na				87	87	87	87	87	na	na
La Midland Lo	aois/Offaly ongford/Westmeath	na	1000		89	89	89	89	89	88	na	na
Midland Lo	ongford/Westmeath											
Midland Lo	ongford/Westmeath		na	na	na	na	na	na	na	na	na	na
		na	na	na	na	na	na	na	na	na	na	na
		na	na	na	na	na	na	na	na	na	na	na
l l												i
Cla	lare	467	466	99	93	93	93	93	93	93	na	93
Mid Lir	imerick	550	561	97	92	92	92	92	92	92	na	91
Western Tip	ipperary NR/East Limerick	527	535	95	91	91	91	91	91	91	na	92
HS	SE-MW Total	1544	1562	97	92	92	92	92	92	92	na	92
Ca	avan/Monaghan	na	587	na	94	94	94	94	94	93	93	89
North Lo	outh	na	610	na	91	91	91	91	91	91	89	86
Eastern Me	leath	na	995	na	91	91	91	91	91	91	91	87
HS	SE-NE Total	na	2192	na	92	92	92	92	92	91	91	87
	onegal	618	618	94	92	92	92	93	92	92	91	92
Wostorn Sli	ligo/Leitrim	379	379	97	90	90	90	90	90	89	87	88
HS	SE-NW Total	997	997	95	91	91	91	92	91	91	90	91
	arlow/Kilkenny	567	567	96	88	88	88	88	88	88	87	87
	outh Tipperary	388	388	95	91	91	91	91	91	90	90	90
	/aterford	576	576	95 96	90 92	90 92	90 92	90 92	90 92	90 92	90 92	90 92
	/exford SE-SE Total	669 <b>2200</b>	669 <b>2200</b>	96 <b>95</b>	92	92	92	92	92 <b>90</b>	92 <b>90</b>	92	92
по	SE-SE TOTAL	2200	2200	30	30	90	90	30	90	90	30	90
181-	orth Cork	na	na	na	na	na	na	na	na	na	na	na
	orth Cork	na	na na	na	na	na	na	na	na	na	na	na
Southern We		na	na	na	na	na	na	na	na	na	na	na
	erry	na	na	na	na	na	na	na	na	na	na	na
	SE-S Total	na	na	na	na	na	na	na	na	na	na	na
		II.u		- IIu	II.u			- IIu	114	114	114	- IIu
Ga	alway	na	1055	na	85	85	85	85	85	85	86	86
Ma	layo	na	471	na	88	88	88	88	88	87	86	88
	oscommon	na	248	na	96	96	96	95	96	94	95	95
	SE-W Total	na	1774	na	87	87	87	87	87	87	87	88
1	* ***					-						
	Ireland *	4741	15783	96	90	90	90	90	90	89	89	89

na=not available

<sup>\*</sup> HSE-Eastern Area were unable to provide MenC<sub>2</sub> and PCV<sub>2</sub> data; HSE-Midland and Southern Areas were unable to provide data; HSE-Mid Western Area were unable to provide MenC<sub>2</sub> data. BCG uptake data were available for three of the eight HSE-Areas only.

uptake data were available for three of the eight HSE-Areas only.
† As the denominator/number in cohort varied slightly according to vaccine, most commonly used number is presented here. Number in national cohort for HepB<sub>3</sub>, MenC<sub>2</sub> and PCV<sub>2</sub> is 15785, 7143 and 8711, respectively.

Appendix 2

	Appendix 2										
	Immunisation Uptake at 24 Months in Cohort Born 01/07/2007-30/09/2007										
		No. in	No. in cohort for			lmn	nunisatio	n Uptake	(%)		
HSE Area	LHO/HSE Area	cohort for Hib <sub>b</sub>	other vaccines*	$D_3$	$P_3$	T <sub>3</sub>	Hib <sub>3</sub>	Hib <sub>b</sub>	Polio <sub>3</sub>	MenC <sub>3</sub>	MMR <sub>1</sub>
	Dublin South	428	428	96	96	96	96	88	96	96	94
	Dublin South East	351	351	97	97	97	97	86	97	97	91
	Dublin South City	458	458	95	95	95	94	84	95	93	89
	Dublin South West	655	655	96	96	96	95	90	96	94	95
	Dublin West	735	735	93	93	93	93	86	93	92	89
Eastern†	Dublin North West	947	947	92	92	92	91	87	92	92	87
	Dublin North Central	438	438	97	97	97	96	87	97	95	91
	Dublin North	1198	1198	95	95	95	94	88	95	93	92
	Kildare/West Wicklow	1196	1196	88	88	88	88	81	88	88	85
	Wicklow	566	566	91	91	91	91	80	91	90	82
	HSE-E Total †	6972	6972	93	93	93	93	85	93	92	89
	Laois/Offaly	768	775	95	95	95	95	89	95	95	91
Midland	Longford/Westmeath	552	567	95	95	95	95	93	95	95	91
	HSE-M Total	1320	1342	95	95	95	95	91	95	95	91
	Clare	516	516	94	94	94	94	93	94	94	94
Mid	Limerick	554	554	94	94	94	94	90	94	94	90
	Tipperary NR/East Limerick	513	513	96	96	96	96	95	96	95	95
	HSE-MW Total	1583	1583	95	95	95	94	92	95	94	93
					0.7						
	Cavan/Monaghan	564	564	96	96	96	96	95	96	96	93
	Louth	557	557	94	94	94	94	96	94	96	92
	Meath HSE-NE Total	916 <b>2037</b>	916 <b>2037</b>	94 <b>95</b>	94 <b>95</b>	94 <b>95</b>	94 <b>95</b>	94 <b>95</b>	94 <b>95</b>	96 <b>96</b>	92 <b>92</b>
	HOL-NE TOTAL	2037	2031	90	90	90	90	90	95	30	92
	Donegal	616	616	95	95	95	94	93	95	93	90
North	Sligo/Leitrim	370	370	95	95	95	96	91	96	92	91
Western	HSE-NW Total	986	986	95	95	95	95	92	95	93	90
					-						
	Carlow/Kilkenny	552	552	91	91	91	91	92	91	91	91
South	South Tipperary	355	355	95	95	95	95	93	95	94	91
Eastorn	Waterford	522	522	90	89	90	89	90	89	89	87
	Wexford	622	622	93	93	93	93	92	93	93	92
	HSE-SE Total	2051	2051	92	92	92	92	92	92	91	90
	North Corl	404	400	00	00	00	00	00	00	00	00
	North Cork	421 1498	420 1516	96 97	96 97	96 97	96 97	90 92	96 97	96 97	93 95
Southorn	North South Lee West Cork	1498	194	91	97	91	91	92 85	91	90	95 85
	Kerry	566	554	92	92	92	92	83	92	91	86
	HSE-S Total	2681	2684	95	95	95	95	89	95	95	92
								"	1	-	<u> </u>
	Galway	1066	1066	93	93	93	93	87	93	93	90
Western	Mayo	505	505	93	93	93	93	84	93	93	89
	Roscommon	233	233	98	98	98	97	98	98	98	96
	HSE-W Total	1804	1804	94	94	94	94	87	94	94	90
	Ireland †	19434	19459	94	94	94	94	89	94	93	91

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 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