

## Immunisation uptake at 12 and 24 months of age, Quarter 1 2020

Quarter 4 2019 tables are also included in Appendix 4

September 2020

### Summary

On Thursday, March 12<sup>th</sup> 2020, the government introduced measures as part of the national effort to interrupt the transmission of COVID-19. This report details immunisation uptake among children who were aged 12 or 24 months during this time.

#### Immunisation uptake rates in children 12 months of age in Quarter 1-2020

- National immunisation uptake rates were (and changes compared to Quarter 4 2019)
  - 93% for MenB<sub>2</sub> (↓1%)
  - 90% for D<sub>3</sub>, T<sub>3</sub>, P<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub>, HepB<sub>3</sub>, MenC<sub>1</sub> and PCV<sub>2</sub> (↓1%)

#### Immunisation uptake rates in children 24 months of age in Quarter 1-2020

- National uptake rates in Q1 2020 were (and changes compared to Quarter 4-2019):
  - 94% for D<sub>3</sub>, T<sub>3</sub>, P<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub> and HepB<sub>3</sub> (unchanged);
  - 91% for MMR<sub>1</sub> and MenB<sub>complete</sub> (↓1%);
  - 90% for MenB<sub>3</sub> (↓1%) and Rota<sub>2</sub> (unchanged);
  - 89% for Hib<sub>b</sub> (↓2%); and MenC<sub>b</sub> (↓1%);
  - 88% for PCV<sub>b</sub> (↓1%);
  - 86% for PCV<sub>3</sub> (↓1%) and MenC<sub>2</sub> (unchanged);
  - 77% for Hib<sub>4</sub> (↓9%)

*MenB<sub>complete</sub> rates based on data from 20 LHOs in Q4 and Q1;*  
*Hib<sub>b</sub> rates based on data from 28 LHOs in Q4 and 31 in Q1;*  
*Hib<sub>4</sub> rates based on data from 18 LHOs in Q4 and Q1;*  
*MenC<sub>2</sub> rates based on data from 18 LHOs in Q4 and Q1;*  
*Remainder based on data from 31 LHOs.*
- MMR<sub>1</sub> was 91% similar to Q3, Q2 and Q1 2019, however, prior to Q1 2019 MMR<sub>1</sub> was previously 91% in Quarter 2 2011.
- PCV<sub>3</sub> and PCV<sub>b</sub> declined by 1% compared to Q4 2019. They had both declined in Quarter 3 2018, Quarter 4 2018 and Quarter 1 2019 by a total of 5% but improved by 1% in Q2 2019 and Q4 2019; both are now 4% lower in Quarter 1 2020 compared to Quarter 2 2018.
- While uptake rates of D<sub>3</sub>, T<sub>3</sub>, P<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub> and HepB<sub>3</sub> were 94% uptake of the remaining vaccines in Quarter 1 2020 are lower. Doses of these remaining vaccines (except Rota<sub>2</sub>) are given at 12 and 13 months of age suggesting that parents are less likely to get the recommended vaccines for their children at this age.
- Hib<sub>4</sub> was 77% based on data from 18 LHOs and is a decline of 9% compared to Q4 2019. Hib<sub>4</sub> declined by 7% in West Cork and by 1-4% in Donegal, Clare, NSL, Kerry, Tipperary South, Waterford, Wexford, Laois/Offaly and Longford/Westmeath. (Hib<sub>4</sub> data are not available for 13 LHOs)

## Table of Contents

Introduction.....	3
Caveats to data.....	6
Uptake rates.....	7
Immunisation uptake rates at 12 months.....	7
Immunisation uptake rates at 24 months.....	10
Further information available on HPSC website.....	14
Acknowledgements.....	14
Report prepared by:.....	14

## Introduction

The national immunisation uptake statistics, based on available data, for Quarter 1 2020 are presented in this report. Appendix 4 shows the Quarter 4 2019 data. The Quarter 4 2019 immunisation uptake statistics relate to children at 12 (born between 01/10/2018 and 31/12/2018) and 24 (born between 01/10/2017 and 31/12/2017) months of age in Quarter 4-2019. The Quarter 1 2020 immunisation uptake statistics relate to children at 12 (born between 01/01/2019 and 31/03/2019) and 24 (born between 01/01/2018 and 31/03/2018) months of age in Quarter 1-2020. These children were recommended the vaccines outlined in the right hand section of table 1.

The latest immunisation schedule was introduced for babies born on or after October 1<sup>st</sup> 2016. Changes to the schedule included the introduction of the Meningococcal group B and Rotavirus vaccines, a change in the recommended timing of the first MenC vaccine, a change in the recommended timing of the third PCV vaccine and introduction of a combined Hib/MenC vaccine at 13 months instead of the previous separate single doses of these vaccines. Changes to the schedule are outlined in Table 1. The Quarter 4 2019 and Q1 2020 12 month cohort are the ninth and tenth 12 month cohort recommended this immunisation schedule and the Quarter 4 2019 and Quarter 1 2020 24 month cohort are the fifth and sixth 24 month cohort recommended the new schedule.

Further vaccinations are recommended for older children and adults. Please see the HSE- National Immunisation Office website at [www.immunisation.ie](http://www.immunisation.ie) for current and detailed information on the Irish primary childhood immunisation schedule and also recommended vaccinations for older children and adults and guidelines for late entrants.

The uptake statistics are also presented in this report by Community Healthcare Organisation (CHO) 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.

For children at 12 months of age in Quarter 4 2019 and Quarter 1 2020, immunisation uptake rates of 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 pneumococcal conjugate vaccine (PCV<sub>2</sub>), two doses of meningococcal serogroup B vaccine (MenB<sub>2</sub>), two doses of rotavirus vaccine (Rota<sub>2</sub>), one dose of meningococcal serogroup C conjugate vaccine (MenC<sub>1</sub>) and one dose of BCG vaccine are reported. The BCG vaccine stock in all areas expired at the end of April 2015. Please see <https://www.hse.ie/eng/health/immunisation/news/bcg17.html> for further information.

For children at 24 months of age in Quarter 4 2019 and Quarter 1 2020, immunisation uptake rates of 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>), pneumococcal conjugate vaccine (PCV<sub>3</sub>)\*, meningococcal group B (MenB<sub>3</sub>)\*, two doses of vaccine against

meningococcal group C (MenC<sub>2</sub>)\* and rotavirus (Rota<sub>2</sub>)\*, four doses of vaccines against *Haemophilus influenzae* type b (Hib<sub>4</sub>)\* and one dose of vaccine against measles, mumps and rubella (MMR<sub>1</sub>) are reported. One dose of vaccine against *Haemophilus influenzae* type b (Hib<sub>b</sub>), one dose of meningococcal group C vaccine (MenC<sub>b</sub>) and one dose of pneumococcal conjugate vaccine (PCV<sub>b</sub>) given on or after 12 months of age are also reported. MenB<sub>complete</sub> data was not flagged prior to Quarter 4 2018 with the Community Healthcare Organisations to be provided, and as a result some were not in a position to provide it. MenB<sub>complete</sub> are those given MenB<sub>3</sub> plus those given two doses with the first given on or after 10 months of age and the second dose two or more months later i.e. they are completely vaccinated against MenB.

\*For a more detailed description of the measures of vaccine coverage requested since Quarter 4 2018 please see Appendix 2.

**Table 1. Irish primary childhood immunisation schedules for children born from 01/07/2015**

Age	Children born 01/07/2015 to 30/09/2016	Children born from 01/10/2016
Birth	BCG	BCG
2 months	DTaP/Hib/IPV/HepB (6 in 1) + PCV	DTaP/Hib/IPV/HepB (6 in 1) + PCV+ MenB+ Rota
4 months	DTaP/Hib/IPV/HepB (6 in 1) + MenC	DTaP/Hib/IPV/HepB (6 in 1) + MenB+ Rota
6 months	DTaP/Hib/IPV/HepB (6 in 1) + PCV	DTaP/Hib/IPV/HepB (6 in 1) + PCV+ MenC
12 months	MMR + PCV	MMR + MenB
13 months	MenC + Hib	Hib/MenC+ PCV

Please see the HSE-National Immunisation Office (NIO) website at [www.immunisation.ie](http://www.immunisation.ie) for current and detailed information on the Irish primary childhood immunisation schedule, guidelines for late entrants, also recommended vaccinations for older children and adults.

The HSE-NIO website at <https://www.hse.ie/eng/health/immunisation/whoweare/vacchistory.html> shows the primary childhood immunisation programme schedules introduced since 1995 in Ireland and the school immunisation programme schedules since 2010 in Ireland.

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
MenB	Meningococcal group B vaccine
MenC	Meningococcal group C vaccine
MMR	Measles, Mumps and Rubella vaccine
PCV	Pneumococcal Conjugate Vaccine (13 valent vaccine recommended for babies born since 01/10/2010; and 7 valent vaccine prior to this)
Rota	Rotavirus oral vaccine

## Caveats to data

The percentages/rates are rounded to zero decimal places and presented and analysed by this rounded rate.

CHO4, CHO5 and, since Q2 2019, the former HSE-NW (i.e. Donegal and Sligo/Leitrim) provide uptake on those at 12 and 24 months of age, while the remaining areas provided uptake in the relevant birth cohorts at the time the local report is run.

In Quarter 2 2019 CHO2 indicated their Community PAS system is unable to report on Hib<sub>b</sub> and MenC<sub>2</sub> at 24 months as required by HPSC and are not reporting Hib<sub>4</sub> and MenB<sub>complete</sub> at 24 months due to concerns over the accuracy of the denominator. Hib<sub>b</sub> was reported by CHO2 in Q1 2020 (but not in Q2-Q4 2019).

The former HSE-NW (i.e. Donegal and Sligo/Leitrim) and CHO3 data caveats are included in Appendix 3. Due to COVID-19 being a priority Q4 2019 and Q1 2020 Donegal/Sligo/Leitrim data was extracted approx. 14-15 weeks after quarter end.

Due to changes in the Irish primary childhood immunisation schedule (table 1) MenB<sub>3</sub> (and Rota<sub>2</sub>) for children at 24 months of age was first requested in Quarter 4 2018. MenB<sub>complete</sub> was also requested in Quarter 4 2018 but was not previously flagged with the CHOs to be provided and as a result not all were in a position to provide it. MenB<sub>complete</sub> data was reported for 25 LHOs in Quarter 1 2019 and 20 LHOs since then. In Quarter 2 2019-Quarter 1 2020 an additional 5 LHOs (former HSE-NE and HSE-NW) reported MenB<sub>complete</sub> data but as these included children who had received two doses at any age before 24 months they were excluded here from the national MenB<sub>complete</sub> data.

Hib<sub>4</sub> was requested in Quarter 4 2018 but not in previous quarters. Hib<sub>4</sub> was reported for 14 LHOs in Quarter 1 2019 and 18 LHOs since then.

For children born on or after October 1<sup>st</sup> 2016 (Quarter 4 2018 24 month cohort) the combined Hib/MenC vaccine was introduced and recommended at 13 months of age. Since Quarter 4 2018 not all areas are in a position to provide MenC<sub>2</sub> data as not all databases/reports were configured to count the combined Hib/MenC vaccine where it is the second dose of MenC. MenC<sub>2</sub> was reported for 18 LHOs since Quarter 3 2019, 14 LHOs in Quarter 2 2019, and for 10 LHOs in Quarter 1 2019.

## Uptake rates

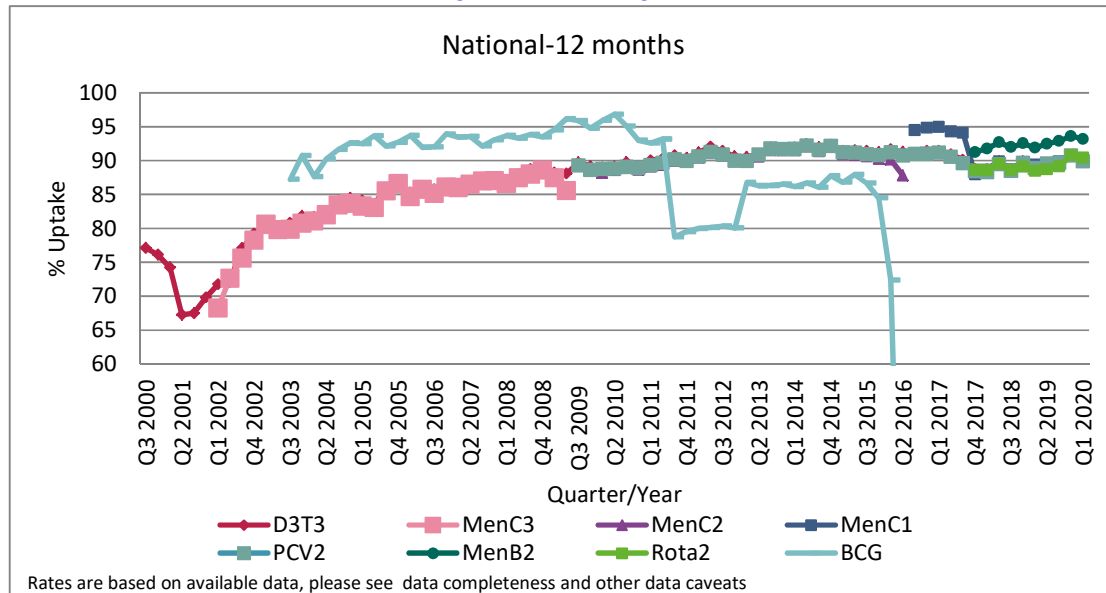
### Immunisation uptake rates at 12 months in Q1 2020

#### National

- National immunisation uptake rates were (and changes compared to Quarter 4 2019)
  - 93% for MenB<sub>2</sub> (↓1%)
  - 90% for D<sub>3</sub>, T<sub>3</sub>, P<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub>, HepB<sub>3</sub>, MenC<sub>1</sub> and PCV<sub>2</sub> (↓1%)
- Uptake rates in Q1 2020 are shown in table 2.
- Uptake rates at 12 months by quarter are shown in Figure 1.
- This is the tenth 12 month cohort recommended the new immunisation schedule. The new immunisation schedule and changes in the schedule are shown in Table 1. The Q4 2017 12 month cohort were the first cohort recommended the new schedule. In Q4 2017, compared to Q2 2017, uptake rates at 12 months of age for MenC<sub>1</sub> had declined by 6%, PCV<sub>2</sub> declined by 3% and D<sub>3</sub>, T<sub>3</sub>, P<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub> and HepB<sub>3</sub> rates declined by 2%.
- In Q1 2020, compared to Q2 2017, MenC<sub>1</sub> was 4% lower, and D<sub>3</sub>, T<sub>3</sub>, P<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub>, HepB<sub>3</sub> and PCV<sub>2</sub> were 1% lower
- MenC previously declined in Q3 2010 for those at 24 months of age (and there was low uptake of Hib<sub>b</sub>). These were the first cohort recommended hepatitis B and pneumococcal conjugate vaccines. In addition, there was a change in timing of the meningococcal serogroup C vaccines and *Haemophilus influenzae* type b booster vaccine for this cohort. The Q3 2010 report is [https://www.hpsc.ie/a-z/vaccinepreventable/vaccination/immunisationuptakestatistics/immunisationuptakestatisticsat12and24monthsofage/quarterlyreports/2010/File\\_12327\\_en.pdf](https://www.hpsc.ie/a-z/vaccinepreventable/vaccination/immunisationuptakestatistics/immunisationuptakestatisticsat12and24monthsofage/quarterlyreports/2010/File_12327_en.pdf).

The reasons for this decline and actions taken are described

<https://ndsc.newsweaver.ie/epiinsight/1i8qi6mq9g3?a=1&p=17742945&t=17517774>



**Figure 1.** National quarterly immunisation uptake rates at 12 months

X-axis ranges from 60-100%.

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<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 Q3-2009 figures 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. 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 MenC<sub>2</sub> 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. See page 2 regarding BCG vaccine stock in Ireland since April 2015. Q1-Q4 2018 CN/MN, LH and MH data were not available at the time of data extraction for the report. Due to COVID-19 taking priority Q4 2019 and Q1 2020 Donegal/Sligo/Leitrim data were extracted approx. 14-15 weeks after quarter end. See also Caveats to Data section of this report.

**Table 2. Immunisation uptake (%) at 12 months of age in Quarter 1 2020, cohort born 01/01/2019-31/03/2019, by LHO and CHO in Ireland**

Community Healthcare Organisation (CHO)	Local Health Office/CHO	Number in cohort for		Immunisation Uptake (%)									
		BCG	D <sub>3</sub> T <sub>3</sub>	BCG	DT <sub>3</sub>	P <sub>3</sub>	Hib <sub>3</sub>	Polio <sub>3</sub>	HepB <sub>3</sub>	MenB <sub>2</sub>	MenC <sub>1</sub>	PCV <sub>2</sub>	Rota <sub>2</sub>
CHO1	Cavan/Monaghan	na	442	na	88	88	88	88	88	91	94	87	86
	Donegal	479	479	0	84	84	84	84	84	90	83	84	78
	Sligo/Leitrim	301	301	0	90	90	90	90	90	95	91	90	89
	<b>CHO1 Total</b>	<b>780</b>	<b>1222</b>	<b>0</b>	<b>87</b>	<b>87</b>	<b>87</b>	<b>87</b>	<b>87</b>	<b>87</b>	<b>92</b>	<b>89</b>	<b>86</b>
CHO2	Galway	783	783	0	93	93	93	93	93	97	93	93	95
	Mayo	354	354	0	95	95	95	95	95	97	95	98	97
	Roscommon	216	216	0	97	97	97	97	97	97	97	97	96
	<b>CHO2 Total</b>	<b>1353</b>	<b>1353</b>	<b>0</b>	<b>94</b>	<b>94</b>	<b>94</b>	<b>94</b>	<b>94</b>	<b>94</b>	<b>97</b>	<b>94</b>	<b>95</b>
CHO3	Clare	327	327	0	93	93	93	93	93	95	92	92	94
	Limerick	393	393	0	90	90	90	90	90	93	89	90	90
	Tipperary NR/EL	364	364	0	88	88	88	88	88	93	89	89	90
	<b>CHO3 Total</b>	<b>1084</b>	<b>1084</b>	<b>0</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>94</b>	<b>90</b>	<b>90</b>
CHO4	North Cork	282	282	0	90	90	90	90	90	93	90	90	88
	North South Lee	1173	1173	0	90	90	90	90	90	95	90	90	92
	West Cork	165	165	0	79	79	79	79	79	82	79	79	77
	Kerry	401	401	0	87	87	87	87	87	87	90	88	87
<b>CHO4 Total</b>	<b>2021</b>	<b>2021</b>	<b>0</b>	<b>88</b>	<b>88</b>	<b>88</b>	<b>88</b>	<b>88</b>	<b>88</b>	<b>92</b>	<b>89</b>	<b>88</b>	<b>89</b>
CHO5	Carlow/Kilkenny	414	414	0.2	90	90	90	90	90	93	90	91	91
	South Tipperary	285	285	1.1	92	92	92	92	92	96	92	92	92
	Waterford	379	379	0.3	92	92	92	92	92	94	92	91	92
	Wexford	424	424	0.0	92	92	92	92	92	96	91	91	92
<b>CHO5 Total</b>	<b>1502</b>	<b>1502</b>	<b>0.3</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>95</b>	<b>91</b>	<b>91</b>	<b>92</b>
CHO6	Dublin South	329	329	0	94	94	94	94	94	95	94	94	94
	Dublin South East	365	365	0	92	92	92	92	92	94	93	92	91
	Wicklow	387	387	0	89	89	89	89	89	89	89	89	86
	<b>CHO6 Total</b>	<b>1081</b>	<b>1081</b>	<b>0</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>92</b>	<b>92</b>	<b>90</b>
CHO7	Dublin South City	365	365	0	91	91	91	91	91	93	90	90	92
	Dublin South West	513	513	0	88	88	88	88	88	92	88	88	89
	Dublin West	554	554	0	85	85	85	85	85	89	85	85	88
	Kildare/West	791	791	0	93	93	93	93	93	93	93	92	91
<b>CHO7 Total</b>	<b>2223</b>	<b>2223</b>	<b>0</b>	<b>89</b>	<b>89</b>	<b>89</b>	<b>89</b>	<b>89</b>	<b>89</b>	<b>92</b>	<b>89</b>	<b>89</b>	<b>90</b>
CHO8	Laois/Offaly	529	529	0	96	96	96	96	96	96	96	96	93
	Longford/Westmeath	402	402	0	95	95	95	95	95	95	95	95	94
	Louth	na	366	na	90	90	90	90	90	90	95	91	92
	Meath	na	734	na	88	88	88	88	88	88	93	87	88
<b>CHO8 Total</b>	<b>931</b>	<b>2031</b>	<b>0</b>	<b>92</b>	<b>92</b>	<b>92</b>	<b>92</b>	<b>92</b>	<b>92</b>	<b>94</b>	<b>92</b>	<b>92</b>	<b>92</b>
CHO9	Dublin North West	689	689	0	92	92	92	92	92	94	91	91	93
	Dublin North Central	389	389	0	88	88	88	88	88	90	88	88	89
	Dublin North	897	897	0	82	82	82	82	82	82	82	83	88
	<b>CHO9 Total</b>	<b>1975</b>	<b>1975</b>	<b>0</b>	<b>87</b>	<b>87</b>	<b>87</b>	<b>87</b>	<b>87</b>	<b>87</b>	<b>92</b>	<b>87</b>	<b>87</b>
<b>Ireland</b>		<b>12950</b>	<b>14492</b>	<b>0.04</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>93</b>	<b>90</b>	<b>90</b>	<b>90</b>

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

The denominator/number in cohort varied slightly according to vaccine. D<sub>3</sub>T<sub>3</sub> cohort is shown here.

The BCG vaccine stock in all areas expired at the end of April 2015. Please see <https://www.hse.ie/eng/health/immunisation/news/bcg17.html> for further information.

na=not available

Rates are rounded to zero decimal places

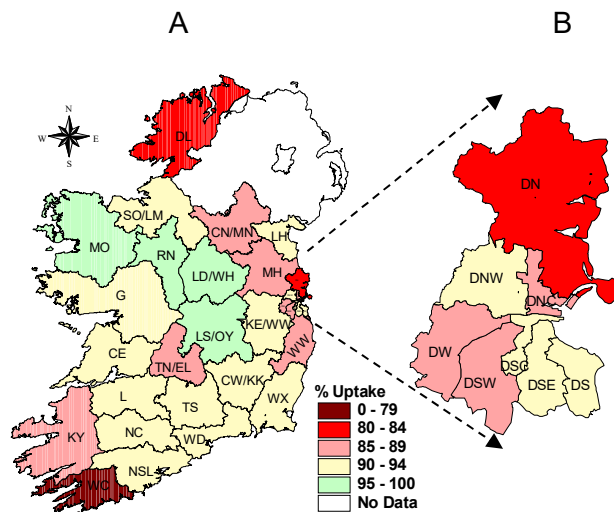
Please also see Caveats to Data section of this report

Due to COVID-19 being a priority Q1 2020 Donegal/Sligo/Leitrim data was extracted approx. 15 weeks after quarter end



**Local Health Office (LHO)**

- The immunisation uptake rates by LHO are shown in Table 2.
- D<sub>3</sub> immunisation uptake rates are mapped by LHO in figure 2.
- The immunisation uptake rates by Quarter and LHO are available in tables and graphs at <https://www.hpsc.ie/a-z/vaccinepreventable/vaccination/immunisationuptakestatistics/immunisationuptakestatisticsat12and24monthsofage/>
- Uptake rates among only some of the LHOs in Q1 2020 are described below. Rates are for Q1 2020 compared to Q4 2019, unless otherwise stated:
  - Among the Local Health Offices, the target uptake rate of ≥95% was reached in Q1 2020 in Mayo and Roscommon for all vaccines and in Laois/Offaly Longford/Westmeath for all vaccines except Rota<sub>2</sub>
  - Wicklow uptake rates improved by approx. 2-6% to 86-89% and were all above 85% for the first time since Q4 2017
  - Donegal and Dublin North had <85% uptake of a number of vaccines
  - West Cork had <80% uptake of most vaccines
  - Donegal uptake rates for all vaccines declined by 3-5%
  - Dublin North uptake rates declined by approx.1-3% with D<sub>3</sub>, T<sub>3</sub>, P<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub>, and HepB<sub>3</sub> at their lowest since the reporting of LHO data at a national level began in Q1 2007 but were similar to Q3 2019
  - Cavan/Monaghan D<sub>3</sub>, T<sub>3</sub>, P<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub>, HepB<sub>3</sub>, MenB<sub>2</sub>, and PCV<sub>2</sub> uptake rates declined by 4-5%



**Figure 2.** D<sub>3</sub> immunisation uptake rates (%) by LHO, in those 12 months of age in Quarter 1-2020, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

# Immunisation uptake among children 24 months of age in Quarter 1-2020

## National

- National uptake rates in Q1 2020 were (table 3)- and changes compared to Q4-2019 (figure 3):

- 94% for D<sub>3</sub>, T<sub>3</sub>, P<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub> and HepB<sub>3</sub> (unchanged);
- 91% for MMR<sub>1</sub> and MenB<sub>complete</sub> (↓1%);
- 90% for MenB<sub>3</sub> (↓1%) and Rota<sub>2</sub> (unchanged);
- 89% for Hib<sub>b</sub> (↓2%); and MenC<sub>b</sub> (↓1%);
- 88% for PCV<sub>b</sub> (↓1%);
- 86% for PCV<sub>3</sub> (↓1%) and MenC<sub>2</sub> (unchanged);
- 77% for Hib<sub>4</sub> (↓9%)

MenB<sub>complete</sub> rates based on data from 20 LHOs in Q4 and Q1;

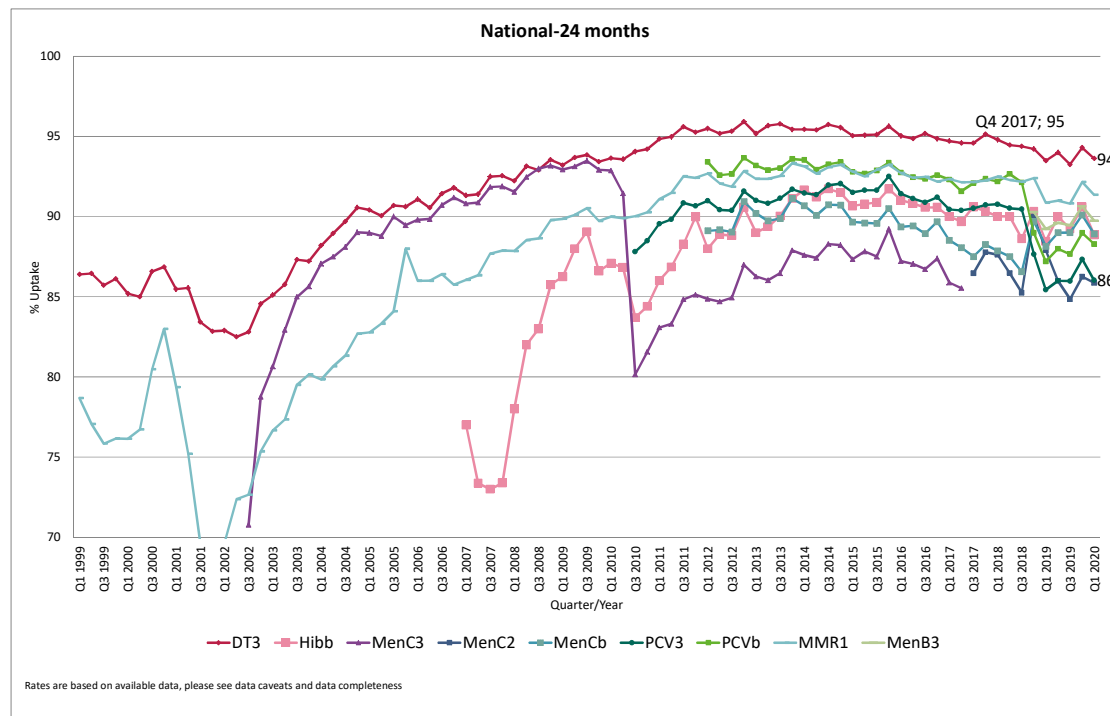
Hib<sub>b</sub> rates based on data from 28 LHOs in Q4 and 31 in Q1;

Hib<sub>4</sub> rates based on data from 18 LHOs in Q4 and Q1;

MenC<sub>2</sub> rates based on data from 18 LHOs in Q4 and Q1;

Remainder based on data from 31 LHOs.

- Figure 3 presents the national uptake rates at 24 months for each vaccine from Q1-1999 to Q1-2020



**Figure 3.** National quarterly immunisation uptake rates at 24 months

**Notes:** The Q4-2005 MMR, figure is based on data from seven of the eight HSE Areas. The Q1-2006 MMR, figure includes the HSE-Eastern Area figure that is an estimate only. The Q1-2007, Q3-2007, Q2-2008 and Q3-2008 Hib, figures are based on data from seven of the eight HSE Areas. In Q1-2008 the HSE-SE changed their Hib, data extraction method compared to previous quarters; in Q1-2008 the uptake of Hib, 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, 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, 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, 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<sub>2</sub> and PCV<sub>b</sub> data were only available for 6 of the 8 HSE Areas from Q1 2012 to Q4 2014. MenC<sub>2</sub> and PCV<sub>b</sub> data were only available for 8 CHOs from Q1 2015-Q1 2017 but are available for all since Q2 2017. Q2 2017 CHO3 Hib, figures were unavailable. CN/MN, LH and MH Q1, Q2 & Q3 2018 data were unavailable. For children born on or after 1<sup>st</sup> October 2016 (Quarter 4 2016 24 month cohort) the combined Hib/MenC vaccine is recommended at 13 months. For children born prior to the 1<sup>st</sup> October 2016 individual Hib and MenC vaccines were recommended. However, some children in these cohorts (born prior to the 1<sup>st</sup> October 2016) were given the combined Hib/MenC vaccine but the databases/reports were not always configured to include the combined Hib/MenC vaccine in the uptake statistics. Prior to Q3 2018 the combined Hib/MenC booster was not counted in the MenC<sub>2</sub> uptake statistics **except** in CHO4 and it was not counted in the MenC<sub>2</sub> and Hib, uptake statistics in CHO2/3/6/7/8/9. In Q3 2018 the combined Hib/MenC booster was not counted in the MenC<sub>2</sub> uptake statistics in CHO3/6/7/9 and it was not counted in the MenC<sub>2</sub>/Hib, statistics in CHO6/7/9. MenC<sub>2</sub> uptake was available for only 7 LHOs in Q4 2018 and 10 in Q1 2019. Please see the Caveats to Data section of the quarterly reports for caveats to data from Q2 2019.

**Table 3. Immunisation uptake (%) at 24 months of age in Quarter 1 2020, cohort born 01/01/2018-31/03/2018, by LHO and CHO in Ireland**

Community Healthcare Organisation (CHO)	Local Health Office/CHO	No. in cohort for DT <sub>3</sub>	Immunisation Uptake (%)											
			DT <sub>3</sub>	HepB <sub>3</sub>	Hib <sub>4</sub>	Hib <sub>b</sub>	MenB <sub>3</sub>	MenB complete	MenC <sub>2</sub>	MenC <sub>b</sub>	PCV <sub>3</sub>	PCV <sub>b</sub>	Rota <sub>2</sub>	MMR <sub>1</sub>
CHO1	Cavan/Monaghan	442	95	95	88	91	92	na	88	91	87	87	87	93
	Donegal	489	90	89	79	85	84	na	79	85	79	84	80	86
	Sligo/Leitrim	318	95	95	83	89	91	na	84	89	88	88	89	93
	<b>CHO1 Total</b>	<b>1249</b>	<b>93</b>	<b>93</b>	<b>83</b>	<b>88</b>	<b>89</b>	<b>na</b>	<b>83</b>	<b>88</b>	<b>84</b>	<b>86</b>	<b>85</b>	<b>90</b>
CHO2	Galway	816	94	94	na	87	91	na	na	87	90	89	94	92
	Mayo	383	95	95	na	94	94	na	na	93	96	93	95	93
	Roscommon	173	91	91	na	88	88	na	na	87	92	91	94	90
	<b>CHO2 Total</b>	<b>1372</b>	<b>94</b>	<b>94</b>	<b>na</b>	<b>89</b>	<b>91</b>	<b>na</b>	<b>na</b>	<b>88</b>	<b>92</b>	<b>90</b>	<b>94</b>	<b>92</b>
CHO3	Clare	346	94	94	86	90	88	na	85	89	85	89	90	90
	Limerick	461	95	95	90	95	94	na	90	94	90	93	94	94
	Tipperary NR/ELimerick	422	95	95	89	95	93	na	90	94	89	93	91	94
	<b>CHO3 Total</b>	<b>1229</b>	<b>95</b>	<b>95</b>	<b>88</b>	<b>93</b>	<b>92</b>	<b>na</b>	<b>88</b>	<b>93</b>	<b>88</b>	<b>92</b>	<b>92</b>	<b>93</b>
CHO4	North Cork	317	97	97	89	92	95	96	89	92	88	92	91	95
	North South Lee	1258	95	95	85	91	91	93	85	88	85	88	92	92
	West Cork	152	95	95	77	89	89	93	77	85	74	85	85	93
	Kerry	404	95	95	86	94	89	92	88	92	85	91	88	92
	<b>CHO4 Total</b>	<b>2131</b>	<b>95</b>	<b>95</b>	<b>85</b>	<b>91</b>	<b>91</b>	<b>93</b>	<b>85</b>	<b>89</b>	<b>85</b>	<b>89</b>	<b>90</b>	<b>92</b>
CHO5	Carlow/Kilkenny	430	93	93	82	87	91	92	82	87	84	88	85	93
	South Tipperary	337	93	92	86	90	90	91	86	90	86	89	90	93
	Waterford	380	88	88	77	86	87	89	79	86	82	85	82	90
	Wexford	457	94	94	86	90	91	92	87	90	88	90	88	92
	<b>CHO5 Total</b>	<b>1604</b>	<b>92</b>	<b>92</b>	<b>83</b>	<b>88</b>	<b>90</b>	<b>91</b>	<b>84</b>	<b>88</b>	<b>85</b>	<b>88</b>	<b>86</b>	<b>92</b>
CHO6	Dublin South	351	92	92	na	88	86	88	na	91	87	89	89	90
	Dublin South East	414	94	94	na	92	93	93	na	94	91	92	94	94
	Wicklow	365	89	89	na	85	87	87	na	87	84	86	85	88
	<b>CHO6 Total</b>	<b>1130</b>	<b>92</b>	<b>92</b>	<b>na</b>	<b>88</b>	<b>89</b>	<b>89</b>	<b>na</b>	<b>91</b>	<b>88</b>	<b>89</b>	<b>90</b>	<b>91</b>
CHO7	Dublin South City	361	93	93	na	85	86	88	na	88	84	87	86	89
	Dublin South West	551	94	94	na	83	88	90	na	87	83	86	89	90
	Dublin West	520	92	92	na	79	87	89	na	84	79	82	88	89
	Kildare/West Wicklow	853	93	93	na	93	89	90	na	91	86	89	90	91
	<b>CHO7 Total</b>	<b>2285</b>	<b>93</b>	<b>93</b>	<b>na</b>	<b>86</b>	<b>88</b>	<b>90</b>	<b>na</b>	<b>88</b>	<b>84</b>	<b>86</b>	<b>89</b>	<b>90</b>
CHO8	Laois/Offaly	506	97	97	90	95	95	97	89	93	89	93	89	96
	Longford/Westmeath	420	96	96	92	97	95	97	91	95	93	95	93	95
	Louth	411	92	92	82	89	86	na	88	82	82	82	89	88
	Meath	696	94	94	86	89	89	na	86	88	86	85	91	91
	<b>CHO8 Total</b>	<b>2033</b>	<b>95</b>	<b>95</b>	<b>88</b>	<b>92</b>	<b>91</b>	<b>97</b>	<b>88</b>	<b>90</b>	<b>87</b>	<b>89</b>	<b>90</b>	<b>92</b>
CHO9	Dublin North West	700	94	94	na	85	89	91	na	88	84	87	91	91
	Dublin North Central	377	96	96	na	87	90	92	na	92	87	90	92	92
	Dublin North	942	91	91	na	83	87	88	na	86	83	86	88	89
	<b>CHO9 Total</b>	<b>2019</b>	<b>93</b>	<b>93</b>	<b>na</b>	<b>84</b>	<b>88</b>	<b>90</b>	<b>na</b>	<b>87</b>	<b>84</b>	<b>87</b>	<b>90</b>	<b>90</b>
<b>Ireland</b>		<b>15052</b>	<b>94</b>	<b>94</b>	<b>77</b>	<b>89</b>	<b>90</b>	<b>91</b>	<b>86</b>	<b>89</b>	<b>86</b>	<b>88</b>	<b>90</b>	<b>91</b>

As the denominator/number in cohort varied slightly according to vaccine the DT<sub>3</sub> cohort is shown here

Since P<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub> uptake very similar to DT<sub>3</sub> uptake only DT<sub>3</sub> uptake figures are presented

While North Lee and South Lee are two separate Local Health Offices their combined immunisation uptake data are reported here

Rates are rounded to zero decimal places

na=not available

Hib<sub>4</sub> 'national' uptake rate is based on data from 18 LHOs only

MenB<sub>complete</sub> 'national' rate is based on data from 20 LHOs.

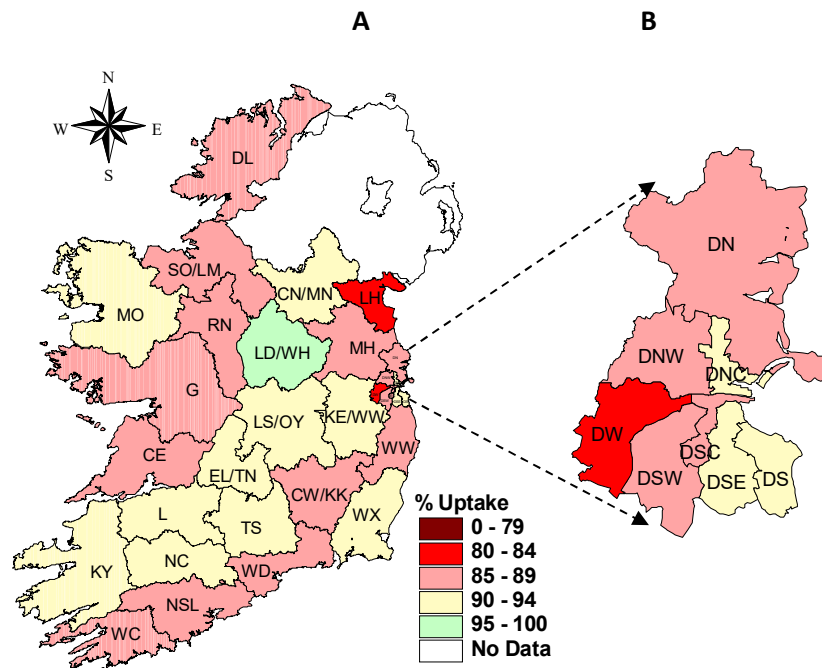
MenC<sub>2</sub> 'national' uptake is based on data from 18 LHOs only. Lack of complete MenC<sub>2</sub> data is a reporting issue associated with the second dose of MenC now given at 13 months as part of the combined Hib/MenC vaccine and CHO reports not including this vaccine in MenC uptake rates

Please also see Caveats to Data section of this report

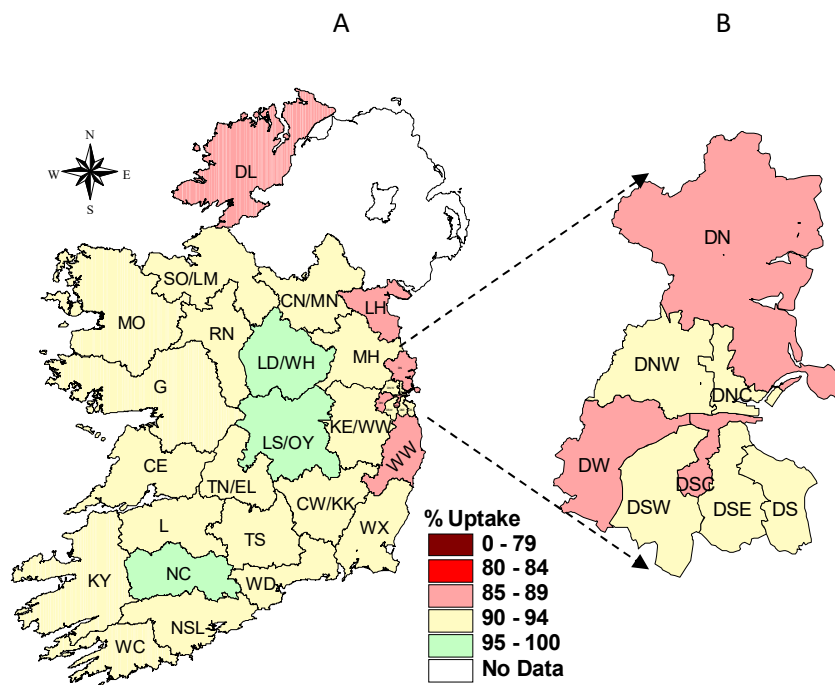
Due to COVID-19 being a priority Q1 2020 Donegal/Sligo/Leitrim data was extracted approx. 15 weeks after quarter end

### Local Health Office (LHO)

- Immunisation uptake rates in children 24 months of age in Q1-2020 are presented by LHO in Table 3.
- Immunisation uptake rates of some vaccines/measures of coverage are mapped by LHO in figures 4 and 5.
- Uptake rates among only some of the LHOs in Q1 2020 are described below  
Rates are for Q1 2020 and compared to Q4 2019, unless otherwise stated:  
Quarterly LHO data are tabulated and graphed in the document 'Quarterly 24 months LHO Tables & Graphs- Data up to Q1 2020' available [here](#)
  - Galway uptake rates declined by 2-7% (except Rota<sub>2</sub>); MenC<sub>b</sub> (87%) is the lowest since it was first measured in Q2 2017
  - Uptake rates in Roscommon declined by 2-9% and were all <95%; this is the first time since the reporting of LHO data began in Q1 2007 that Roscommon uptake was below 95%. The cohort eligible for vaccination in Roscommon is 173 children.
  - Clare uptake rates declined by 2-5%; MMR<sub>1</sub> was 90%.
  - NSL PCV<sub>3</sub> uptake rate declined to 85%, it was previously 85% in Q3 2010
  - West Cork DTPHibPolioHepB<sub>3</sub> improved to 95% and MMR<sub>1</sub> improved to 93% however, the remaining vaccines (except Rota<sub>2</sub>) declined by 1-7% with lows of 77% for Hib<sub>4</sub>/MenC<sub>2</sub> and 74% for PCV<sub>3</sub>
  - TS uptake rates declined by 2-5% to 86% ( Hib<sub>4</sub>, MenC<sub>2</sub> and PCV<sub>3</sub>)-93% (DTPHibPolio<sub>3</sub>/MMR<sub>1</sub>)
  - Waterford DTPHibPolioHepB<sub>3</sub> uptake rates were below 90% for the third quarter in a row; Hib<sub>4</sub> declined by 4% to 77%; MenC<sub>2</sub> declined by 2% to 79%
  - Wicklow uptake rates improved by 3-7% and ranged from 84% (for PCV<sub>3</sub>)- 89% (for DTPHibPolioHepB<sub>3</sub>)
  - Dublin South City Rota<sub>2</sub> declined by 4% to 86%
  - Dublin South West Hib<sub>b</sub> declined by 6% to 83%
  - Dublin West Hib<sub>b</sub> declined by 6% to 79%
  - Dublin North West uptake rates declined by 3-11% with rates ranging from 84% for PCV<sub>3</sub> to 94% for DTPHibPolioHepB<sub>3</sub>



**Figure 4.** MenC<sub>5</sub> immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 1-2020, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.



**Figure 5.** MMR<sub>1</sub> immunisation uptake rates (%) by LHO, in those 24 months of age in Quarter 1-2020, in (A) Ireland and (B) Dublin. Please see Appendix 3 to translate LHO codes.

## Further information available on HPSC website

On the HPSC website under *Topics A-Z* and under the heading *immunisation uptake statistics* further data are available. Included on the website are the LHO, CHO and national data:

by quarter

<https://www.hpsc.ie/a-z/vaccinepreventable/vaccination/immunisationuptakestatistics/immunisationuptakestatisticsat12and24monthsofage/>

by year

<https://www.hpsc.ie/a-z/vaccinepreventable/vaccination/immunisationuptakestatistics/immunisationuptakestatisticsat12and24monthsofage/annualreports/>

## Acknowledgements

HPSC would like to thank all those involved in childhood immunisation including the General Practitioners, Practice Nurses, CHOs, Public Health Nurses, Immunisation Co-ordinators, Immunisation System Administrators, Specialists in Public Health Medicine, Surveillance Scientists and Systems Analysts for their assistance.

## Report prepared by:

Sarah Gee and Suzanne Cotter, HPSC

## Appendix 1. Local Health Office (LHO) abbreviations used in this chapter

Local Health Office Abbreviations	Local Health Office
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

\*While North Lee and South Lee are two separate LHOs their combined immunisation uptake data are reported here

**Appendix 2. Measures of vaccine coverage requested since Quarter 4 2018**

<b>Vaccine</b>
<b>24 months</b>
D3, T3, P3, Hib3, Polio3, HepB3, -three doses of each of the vaccines D, T, P, Hib, Polio, HepB, before their 2nd birthday;
Hib4-four doses of Hib with the first three doses given before 1st birthday and the 4th dose given on or after first birthday and before 2nd birthday. A dose of Hib includes Hib given as part of 5:1, 6:1, stand alone Hib, combined Hib/MenC vaccine etc;
Hibb- one dose of Hib (any dose of Hib e.g. as part of 5:1, 6:1, stand alone Hib, combined Hib/MenC vaccine etc) on or after 1st birthday (irrespective of the number of doses before that age) and before 2nd birthday;
MenB3-three doses of MenB with the first two doses given before 1st birthday and the 3rd dose given on or after first birthday and before 2nd birthday;
MenB2-two doses of MenB on or after 10 months of age and before 2nd birthday with doses 2 months apart;
MenBcomplete-MenB3 and MenB2 i.e. children who are completely vaccinated with MenB. MenB3 and MenB2 are defined above.
MenC2-two doses of MenC with the first dose given before 1st birthday and the 2nd dose given on or after first birthday and before 2nd birthday. A dose of MenC is a MenC dose given as part of the combined Hib/MenC vaccine or as a single MenC vaccine;
MenCb- one dose of MenC on or after 1st birthday (irrespective of the number of doses before that age) and before 2nd birthday. A dose of MenC is a MenC dose given as part of the combined Hib/MenC vaccine or as a single MenC vaccine;
PCV3-three doses of PCV with the first two doses given before 1st birthday and the 3rd dose given on or after first birthday and before 2nd birthday;
PCVb- one dose of PCV on or after 1st birthday (irrespective of the number of doses before that age) and before 2nd birthday;
Rota2- two doses of Rota before 8 months and 0 days;
MMR1- one dose of MMR on or after 1st birthday and before 2nd birthday (i.e. excludes MMR given before 1st birthday);
* No. eligible children = No. children born + No. moved in - (No. deceased + No. moved out)
Number of eligible children is the number of eligible children reaching their 2nd birthday during the quarter specified.
** % immunised = (No. immunised /No. eligible children) x 100
<b>12 MONTHS</b>
BCG- one dose of BCG at birth;
D3, T3, P3, Hib3, Polio3, HepB3-three doses of D, T, P, Hib, Polio, HepB, respectively, before their first birthday;
MenB2- two doses of MenB before their first birthday;
MenC1 - one dose of MenC before their first birthday;
PCV2- two doses of PCV before their first birthday;
Rota2- two doses of Rota before 8 months and 0 days.
* No. eligible children = No. children born + No. moved in - (No. deceased + No. moved out)
Number of eligible children is the number of eligible children reaching their 1st birthday during the quarter specified.
** % immunised = (No. immunised /No. eligible children) x 100



### Appendix 3. Data caveats reported by Donegal/Sligo-Leitrim and CHO3

#### Donegal/Sligo-Leitrim:

Vaccine	HSE-NW's ability to report on this
<b>24 months</b>	
D3, T3, P3, Hib3, Polio3, HepB3, -three doses of each of the vaccines D, T, P, Hib, Polio, HepB, before their 2nd birthday;	yes as of 2nd quarter 2019
Hib4-four doses of Hib with the first three doses given before 1st birthday and the 4th dose given on or after first birthday and before 2nd birthday. A dose of Hib includes Hib given as part of 5:1, 6:1, stand alone Hib, combined Hib/MenC vaccine etc;	no as two dates involved - would need a manual report
Hibb- one dose of Hib (any dose of Hib e.g. as part of 5:1, 6:1, stand alone Hib, combined Hib/MenC vaccine etc) on or after 1st birthday (irrespective of the number of doses before that age) and before 2nd birthday;	yes as of 2nd quarter 2019
MenB3-three doses of MenB with the first two doses given before 1st birthday and the 3rd dose given on or after first birthday and before 2nd birthday;	no as two dates involved - would need a manual report
MenB2-two doses of MenB on or after 10 months of age and before 2nd birthday with doses 2 months apart;	no as two dates involved - would need a manual report
MenBcomplete-MenB3 and MenB2 i.e. children who are completely vaccinated with MenB. MenB3 and MenB2 are defined above.	yes as of 2nd quarter 2019
MenC2-two doses of MenC with the first dose given before 1st birthday and the 2nd dose given on or after first birthday and before 2nd birthday. A dose of MenC is a MenC dose given as part of the combined Hib/MenC vaccine or as a single MenC vaccine;	no as two dates involved - would need a manual report
MenCb- one dose of MenC on or after 1st birthday (irrespective of the number of doses before that age) and before 2nd birthday. A dose of MenC is a MenC dose given as part of the combined Hib/MenC vaccine or as a single MenC vaccine;	yes as of 2nd quarter 2019
PCV3-three doses of PCV with the first two doses given before 1st birthday and the 3rd dose given on or after first birthday and before 2nd birthday;	no as two dates involved - would need a manual report
PCVb- one dose of PCV on or after 1st birthday (irrespective of the number of doses before that age) and before 2nd birthday;	yes as of 2nd quarter 2019
Rota2- two doses of Rota before 8 months and 0 days;	yes as of 2nd quarter 2019
MMR1- one dose of MMR on or after 1st birthday and before 2nd birthday (i.e. excludes MMR given before 1st birthday);	yes as of 2nd quarter 2019
* No. eligible children = No. children born + No. moved in - (No. deceased + No. moved out)	Yes
Number of eligible children is the number of eligible children reaching their 2nd birthday during the quarter specified.	Yes
** % immunised = (No. immunised /No. eligible children) x 100	Yes
<b>12 MONTHS</b>	
BCG- one dose of BCG at birth;	
D3, T3, P3, Hib3, Polio3, HepB3-three doses of D, T, P, Hib, Polio, HepB, respectively, before their first birthday;	yes as off quarter 2 2019
MenB2- two doses of MenB before their first birthday;	yes as off quarter 2 2019
MenC1 - one dose of MenC before their first birthday;	yes as off quarter 2 2019
PCV2- two doses of PCV before their first birthday;	yes as off quarter 2 2019
Rota2- two doses of Rota before 8 months and 0 days.	yes as off quarter 2 2019
* No. eligible children = No. children born + No. moved in - (No. deceased + No. moved out)	Yes
Number of eligible children is the number of eligible children reaching their 1st birthday during the quarter specified.	Yes
** % immunised = (No. immunised /No. eligible children) x 100	Yes

#### CHO3 (24months):

D3, T3, P3, Hib3, Polio3, HepB3, -three doses of each of the vaccines D, T, P, Hib, Polio, HepB, before their 2nd birthday;	Available
Hib4-four doses of Hib with the first three doses given before 1st birthday and the 4th dose given on or after first birthday and before 2nd birthday. A dose of Hib includes Hib given as part of 5:1, 6:1, stand alone Hib, combined Hib/MenC vaccine etc;	* Can add Hib Booster + Hib/MenC. However it isn't possible to tell that the first 3 doses were given before a year
Hibb- one dose of Hib (any dose of Hib e.g. as part of 5:1, 6:1, stand alone Hib, combined Hib/MenC vaccine etc) on or after 1st birthday (irrespective of the number of doses before that age) and before 2nd birthday;	* Not available from report. Hib booster + Hib/MenC + 5-in-1 / 6-in-1 > 1yr + Hib vac > 1yr, however a child who gets two of these is counted twice – an overestimate
MenB3-three doses of MenB with the first two doses given before 1st birthday and the 3rd dose given on or after first birthday and before 2nd birthday;	* Can give a figure from report – no. given a 3 <sup>rd</sup> dose of MenB, can't say that 2 doses were given < 1 year and 1 dose > 1 year
MenB2-two doses of MenB on or after 10 months of age and before 2nd birthday with doses 2 months apart;	Not available from report
MenBcomplete-MenB3 and MenB2 i.e. children who are completely vaccinated with MenB. MenB3 and MenB2 are defined above. Reporting of MenB2 and MenBcomplete figures in template above: If MenB3 and MenB2 are entered above the excel sheet will automatically calculate MenBcomplete. If MenBcomplete is available and not MenB2 then type MenBcomplete into the MenBcomplete row and leave MenB2 row blank. If MenB2 and MenBcomplete are both unavailable then leave the MenBcomplete row blank	Will be calculated from MenB3 + MenB2, so as we can't give MenB2 it will be the same as MenB3
MenC2-two doses of MenC with the first dose given before 1st birthday and the 2nd dose given on or after first birthday and before 2nd birthday. A dose of MenC is a MenC dose given as part of the combined Hib/MenC vaccine or as a single MenC vaccine;	* Not available from report. Hib/ MenC recorded. Cannot tell if they have already had a dose of MenC and that it was before 1 <sup>st</sup> birthday
MenCb- one dose of MenC on or after 1st birthday (irrespective of the number of doses before that age) and before 2nd birthday. A dose of MenC is a MenC dose given as part of the combined Hib/MenC vaccine or as a single MenC vaccine;	* Not available from report. MenC1 > 1 yr + MenC2 > 1 yr + MenC3 > 1 yr + Hib/MenC. However a child who gets any two is counted twice i.e. an overestimate
PCV3-three doses of PCV with the first two doses given before 1st birthday and the 3rd dose given on or after first birthday and before 2nd birthday;	* Can give a figure - the number given a 3 <sup>rd</sup> dose of PCV, can't say that 2 doses were given < 1 year and 1 dose > 1 year
PCVb- one dose of PCV on or after 1st birthday (irrespective of the number of doses before that age) and before 2nd birthday;	* Not available from report. PCV1 > 1 yr + PCV2 > 1yr + PCV3 > 1 yr, however a child who gets a 2 doses > 1 yr is counted twice i.e. an overestimate
Rota2- two doses of Rota before 8 months and 0 days;	Available
MMR1- one dose of MMR on or after 1st birthday and before 2nd birthday (i.e. excludes MMR given before 1st birthday);	Available

## Appendix 4.

Immunisation uptake (%) at 12 months of age in Quarter 4 2019- cohort born 01/10/2018 - 31/12/2018

Community Healthcare Organisation (CHO)	Local Health Office/CHO	Number in cohort for		Immunisation Uptake (%)									
		BCG	D <sub>3</sub> T <sub>3</sub>	BCG	DT <sub>3</sub>	P <sub>3</sub>	Hib <sub>3</sub>	Polio <sub>3</sub>	HepB <sub>3</sub>	MenB <sub>2</sub>	MenC <sub>1</sub>	PCV <sub>2</sub>	Rota <sub>2</sub>
CHO1	Cavan/Monaghan	na	494	na	93	93	93	93	93	95	92	91	85
	Donegal	526	526	0	89	89	89	89	89	93	88	89	83
	Sligo/Leitrim	340	340	0	92	92	92	92	92	94	92	93	91
	<b>CHO1 Total</b>	<b>866</b>	<b>1360</b>	<b>0</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>94</b>	<b>90</b>	<b>91</b>	<b>86</b>
CHO2	Galway	811	811	0	94	94	94	94	94	96	93	94	95
	Mayo	373	373	0	95	95	95	95	95	98	94	97	97
	Roscommon	195	195	0	95	95	95	95	95	96	94	95	98
	<b>CHO2 Total</b>	<b>1379</b>	<b>1379</b>	<b>0</b>	<b>94</b>	<b>94</b>	<b>94</b>	<b>94</b>	<b>94</b>	<b>96</b>	<b>94</b>	<b>95</b>	<b>96</b>
CHO3	Clare	373	373	0	93	93	93	93	93	95	93	93	91
	Limerick	428	428	0	92	92	92	92	92	95	93	93	92
	Tipperary NR/EL	425	425	0	91	91	91	91	91	95	92	91	90
	<b>CHO3 Total</b>	<b>1226</b>	<b>1226</b>	<b>0</b>	<b>92</b>	<b>92</b>	<b>92</b>	<b>92</b>	<b>92</b>	<b>95</b>	<b>92</b>	<b>92</b>	<b>91</b>
CHO4	North Cork	276	276	0	93	93	93	93	93	96	94	94	93
	North South Lee	1338	1338	0	90	90	90	90	90	93	90	90	91
	West Cork	186	186	0	76	76	76	76	76	88	76	75	83
	Kerry	435	435	0	90	90	90	90	90	91	90	90	89
<b>CHO4 Total</b>	<b>2235</b>	<b>2235</b>	<b>0</b>	<b>89</b>	<b>89</b>	<b>89</b>	<b>89</b>	<b>89</b>	<b>89</b>	<b>93</b>	<b>89</b>	<b>89</b>	<b>90</b>
CHO5	Carlow/Kilkenny	420	420	0.0	91	91	91	91	91	95	91	91	89
	South Tipperary	332	332	0.3	94	94	94	94	94	97	94	94	93
	Waterford	401	401	0.0	90	90	90	90	90	94	91	90	98
	Wexford	497	497	0.2	92	92	92	93	92	95	93	93	91
<b>CHO5 Total</b>	<b>1650</b>	<b>1650</b>	<b>0.1</b>	<b>92</b>	<b>92</b>	<b>92</b>	<b>92</b>	<b>92</b>	<b>95</b>	<b>92</b>	<b>92</b>	<b>93</b>	
CHO6	Dublin South	399	399	0	90	90	90	90	90	93	92	90	92
	Dublin South East	381	381	0	91	91	91	91	91	94	91	91	94
	Wicklow	389	389	0	83	83	83	83	83	86	83	83	84
	<b>CHO6 Total</b>	<b>1169</b>	<b>1169</b>	<b>0</b>	<b>88</b>	<b>88</b>	<b>88</b>	<b>88</b>	<b>88</b>	<b>88</b>	<b>91</b>	<b>89</b>	<b>88</b>
CHO7	Dublin South City	386	386	0	93	93	93	93	93	94	92	92	91
	Dublin South West	568	568	0	89	89	89	89	89	93	90	90	90
	Dublin West	528	528	0	89	89	89	89	89	93	89	89	89
	Kildare/West	889	889	0	93	93	93	93	93	94	92	93	93
<b>CHO7 Total</b>	<b>2371</b>	<b>2371</b>	<b>0</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>94</b>	<b>91</b>	<b>91</b>	<b>91</b>	
CHO8	Laois/Offaly	523	523	0	95	95	95	95	95	95	95	95	93
	Longford/Westmeath	457	457	0	95	95	95	95	95	95	95	95	92
	Louth	na	430	na	89	89	89	89	89	92	88	89	90
	Meath	na	760	na	91	91	91	91	91	93	91	91	90
<b>CHO8 Total</b>	<b>980</b>	<b>2170</b>	<b>0</b>	<b>93</b>	<b>93</b>	<b>93</b>	<b>93</b>	<b>93</b>	<b>93</b>	<b>94</b>	<b>92</b>	<b>91</b>	
CHO9	Dublin North West	787	787	0	91	91	91	91	91	93	91	90	91
	Dublin North Central	414	414	0	88	88	88	88	88	91	88	88	89
	Dublin North	943	943	0	85	85	85	85	85	91	86	86	89
	<b>CHO9 Total</b>	<b>2144</b>	<b>2144</b>	<b>0</b>	<b>88</b>	<b>88</b>	<b>88</b>	<b>88</b>	<b>88</b>	<b>88</b>	<b>92</b>	<b>88</b>	<b>88</b>
<b>Ireland</b>		<b>14020</b>	<b>15704</b>	<b>0.01</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>91</b>	<b>94</b>	<b>91</b>	<b>91</b>	<b>91</b>

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

The denominator/number in cohort varied slightly according to vaccine. D<sub>3</sub>T<sub>3</sub> cohort is shown here.

The BCG vaccine stock in all areas expired at the end of April 2015. Please see <https://www.hse.ie/eng/health/immunisation/new/s/bcg17.html> for further information.

na=not available

Rates are rounded to zero decimal places

Please see the Caveats to Data section of the report for information on data completeness and caveats

Due to COVID-19 being a priority in early 2020 HSE-NW data were extracted >8 weeks after quarter end

## Immunisation uptake (%) at 24 months of age in Quarter 4 2019- cohort born 01/10/2017 - 31/12/2017

Community Healthcare Organisation (CHO)	Local Health Office/CHO	No. in cohort for DT <sub>3</sub>	Immunisation Uptake (%)											
			DT <sub>3</sub>	HepB <sub>3</sub>	Hib <sub>4</sub>	Hib <sub>5</sub>	MenB <sub>3</sub>	MenB <sub>complete</sub>	MenC <sub>2</sub>	MenC <sub>5</sub>	PCV <sub>3</sub>	PCV <sub>5</sub>	Rota <sub>2</sub>	MMR <sub>1</sub>
CHO1	Cavan/Monaghan	429	94	94	85	90	89	na	85	90	85	85	87	89
	Donegal	495	92	92	81	87	86	na	81	87	80	86	84	88
	Sligo/Leitrim	313	94	94	83	91	93	na	84	89	89	89	86	94
	<b>CHO1 Total</b>	<b>1237</b>	<b>93</b>	<b>93</b>	<b>83</b>	<b>89</b>	<b>89</b>	<b>na</b>	<b>83</b>	<b>89</b>	<b>84</b>	<b>86</b>	<b>86</b>	<b>90</b>
CHO2	Galway	843	96	96	na	na	93	na	na	91	97	89	97	94
	Mayo	365	96	96	na	na	94	na	na	90	96	94	94	94
	Roscommon	217	99	99	na	na	97	na	na	93	98	97	96	98
	<b>CHO2 Total</b>	<b>1425</b>	<b>97</b>	<b>97</b>	<b>na</b>	<b>na</b>	<b>94</b>	<b>na</b>	<b>na</b>	<b>91</b>	<b>97</b>	<b>92</b>	<b>96</b>	<b>95</b>
CHO3	Clare	378	97	97	89	93	94	na	89	94	90	93	90	95
	Limerick	433	95	95	90	93	92	na	90	94	90	93	90	93
	Tipperary NR/Eimerick	412	94	94	89	92	92	na	88	92	88	90	91	92
	<b>CHO3 Total</b>	<b>1223</b>	<b>95</b>	<b>95</b>	<b>89</b>	<b>93</b>	<b>92</b>	<b>na</b>	<b>89</b>	<b>93</b>	<b>90</b>	<b>92</b>	<b>90</b>	<b>93</b>
CHO4	North Cork	294	96	96	86	91	92	94	87	91	87	91	89	95
	North South Lee	1288	97	97	88	92	92	95	87	91	88	91	91	94
	West Cork	164	94	94	84	90	91	96	82	88	83	88	85	92
	Kerry	401	95	95	87	92	91	93	88	90	87	90	89	91
	<b>CHO4 Total</b>	<b>2147</b>	<b>96</b>	<b>96</b>	<b>87</b>	<b>92</b>	<b>92</b>	<b>95</b>	<b>87</b>	<b>90</b>	<b>87</b>	<b>91</b>	<b>90</b>	<b>93</b>
CHO5	Carlow/Kilkenny	472	94	94	82	87	92	93	83	89	85	87	88	93
	South Tipperary	264	97	97	89	92	95	96	90	92	91	92	92	96
	Waterford	401	89	89	81	87	87	90	81	87	83	86	84	89
	Wexford	476	95	95	87	91	91	92	87	91	88	91	92	94
	<b>CHO5 Total</b>	<b>1613</b>	<b>93</b>	<b>93</b>	<b>84</b>	<b>89</b>	<b>91</b>	<b>92</b>	<b>85</b>	<b>89</b>	<b>86</b>	<b>89</b>	<b>89</b>	<b>93</b>
CHO6	Dublin South	400	92	92	na	91	87	88	na	91	86	89	88	91
	Dublin South East	404	96	96	na	96	91	93	na	96	93	94	94	94
	Wicklow	447	85	85	na	80	83	84	na	80	77	78	82	84
	<b>CHO6 Total</b>	<b>1251</b>	<b>90</b>	<b>90</b>	<b>na</b>	<b>89</b>	<b>87</b>	<b>88</b>	<b>na</b>	<b>89</b>	<b>85</b>	<b>87</b>	<b>88</b>	<b>90</b>
CHO7	Dublin South City	401	94	94	na	87	89	89	na	87	86	87	90	91
	Dublin South West	570	93	93	na	89	89	90	na	88	82	86	91	91
	Dublin West	538	93	93	na	85	86	88	na	84	79	82	90	88
	Kildare/West Wicklow	895	94	94	na	90	91	92	na	90	86	89	90	92
	<b>CHO7 Total</b>	<b>2404</b>	<b>93</b>	<b>93</b>	<b>na</b>	<b>88</b>	<b>89</b>	<b>90</b>	<b>na</b>	<b>87</b>	<b>84</b>	<b>86</b>	<b>90</b>	<b>91</b>
CHO8	Laois/Offaly	572	96	96	91	97	95	97	90	95	91	95	91	96
	Longford/Westmeath	490	97	97	93	96	94	95	91	95	93	96	91	96
	Louth	442	92	92	83	88	88	na	83	88	83	83	90	90
	Meath	725	92	92	83	88	87	na	83	87	83	83	90	88
	<b>CHO8 Total</b>	<b>2229</b>	<b>94</b>	<b>94</b>	<b>88</b>	<b>92</b>	<b>91</b>	<b>96</b>	<b>87</b>	<b>91</b>	<b>88</b>	<b>89</b>	<b>90</b>	<b>92</b>
CHO9	Dublin North West	716	98	98	na	96	93	94	na	96	92	94	95	95
	Dublin North Central	410	97	97	na	95	91	94	na	94	89	92	94	95
	Dublin North	912	93	93	na	89	89	90	na	88	86	87	89	90
	<b>CHO9 Total</b>	<b>2038</b>	<b>96</b>	<b>96</b>	<b>na</b>	<b>92</b>	<b>91</b>	<b>92</b>	<b>na</b>	<b>92</b>	<b>88</b>	<b>90</b>	<b>92</b>	<b>93</b>
<b>Ireland</b>		<b>15567</b>	<b>94</b>	<b>94</b>	<b>86</b>	<b>91</b>	<b>91</b>	<b>92</b>	<b>86</b>	<b>90</b>	<b>87</b>	<b>89</b>	<b>90</b>	<b>92</b>

As the denominator/number in cohort varied slightly according to vaccine the DT<sub>3</sub> cohort is shown here

Since P<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub> uptake very similar to DT<sub>3</sub> uptake only DT<sub>3</sub> uptake figures are presented

While North Lee and South Lee are two separate Local Health Offices their combined immunisation uptake data are reported here

Rates are rounded to zero decimal places

na=not available

Hib<sub>4</sub> 'national' uptake rate is based on data from 18 LHOs only

Hib<sub>5</sub> 'national' uptake rate is based on data from 28 LHOs only

MenB<sub>complete</sub> 'national' rate is based on data from 20 LHOs.

MenC<sub>2</sub> 'national' uptake is based on data from 18 LHOs only. Lack of complete MenC<sub>2</sub> data is a reporting issue associated with the second dose of MenC now given at 13 months as part of the combined Hib/MenC vaccine and CHO reports not including this vaccine in MenC uptake rates

Please also see Caveats to Data section of this report

Due to COVID-19 being a priority in early 2020 HSE-NW data were extracted 14 weeks after quarter end