

Vaccine uptake in junior infants and children aged between 4 and 5 years in Ireland, 2023/2024

4 in 1 vaccine (DTaP-IPV) uptake and Measles, Mumps, Rubella (MMR) vaccine uptake as reported by Local Health Offices (LHOs) to HPSC for the academic year 2023 - 2024

A report from the Vaccine Preventable Disease Team, HPSC¹

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¹The Vaccine Preventable Disease Team is part of the Health Protection Surveillance Centre, National Health Protection Office, Health Service Executive

What are the key messages in this report?

In 2023/2024, uptake remained sub-optimal among junior infants (<95%), nationally, in all six Community Health Organisations (CHOs) and in all but five Local Health Offices (LHOs) (Limerick (4 in 1 / DTaP-IPV only), Tipperary North/East Limerick (MMR only) North Cork, Dublin South* and Dublin South East*).

Uptake less than 95% for these vaccines indicates vulnerability amongst children who have not availed of the vaccines aimed at preventing serious diseases (diphtheria, tetanus, pertussis, polio, measles, mumps, and rubella).



4 in 1 vaccine (DTaP-IPV)

- + For the 2023/2024 school year, overall national uptake of the 4 in 1 (DTaP-IPV) vaccine was 89.9%.
- + Between 2022/2023 and 2023/2024, 4 in 1 vaccine uptake among junior infants in schools in Local Health Office (LHOs) areas where HSE teams administered the vaccine increased from 90.0% to 90.5%*.
- + In LHOs where GPs administer the vaccine (Donegal and Sligo/Leitrim), uptake among children aged between 5 and 6 years increased from 80.3% to 83.4% between 2022/2023 and 2023/2024. An increase in uptake was observed in Donegal only.

*CAVEAT:

- In some areas vaccine uptake was recorded as >100%.
- This is due to technical discrepancies in school denominators from those received from the Department of Education and operational data collected at the time of vaccine delivery by HSE school teams.
- This report is based on primary school denominators issued by the Department to Education (DoE) and received by the School Immunisation System (SIS) team on 13/09/2024. In instances where uptake exceeds 100% denominators have been adjusted to equate an uptake capped at 100%.
- Discrepancies in denominators provided by DoE compared to those collected on the day of vaccination may be due to changes in school enrolment, student migration between schools and/or areas throughout the academic year and number of students presenting for vaccination on the day.



MMR vaccine

- + For the 2023/2024 school year, overall national uptake of the MMR vaccine was 89.5%.
- + Between 2022/2023 and 2023/2024, MMR vaccine uptake among junior infants in schools in LHO areas where HSE teams administered the vaccine increased from 89.8% to 90.0%.
- + In LHOs where GPs administer the vaccine (Donegal and Sligo/Leitrim), uptake among children aged between 5 and 6 years increased from 80.4% to 83.5% between 2022/2023 and 2023/2024. This increase occurred in Donegal only.

Note:

The raw data used to develop the content of this report are available at the end of this power-point document in:

Appendix 1. Overall uptake of the DTaP-IPV and MMR vaccines in junior infants in Ireland by LHO during the 2023/2024 academic year

Appendix 2. Overall uptake of the DTaP-IPV and MMR vaccines in junior infants in Ireland by CHO during the 2023/2024 academic year

Appendix 3 Overall uptake of the DTaP-IPV and MMR vaccines in junior infants in Ireland by HSE Health Regions during the 2023/2024 academic year₂

What background information is relevant when reading this report?

The uptake statistics presented in this report are by the nine Community Healthcare Organisations (CHO) and 32 Local Health Offices (LHO).

Appendix 3 also presents a summary of data by HSE Health Regions.

DTaP-IPV* and MMR† vaccine booster doses are primarily administered by the HSE school immunisation teams to children in junior infant classes. However, in two LHOs in the North West (Donegal and Sligo/Leitrim) these vaccines are routinely administered by GP services to children aged 5-6 years. Since the 2011/2012 academic school year, data on uptake of DTaP-IPV and MMR vaccines have been collated nationally and were first published in January 2013. Since then, annual (academic year) reports based on data submissions from each LHO, are published on the HPSC website at

<http://www.hpsc.ie/a-z/vaccinepreventable/vaccination/immunisationuptakestatistics/immunisationuptakestatisticsforjuniorinfants/>.

Since 2015, all LHOs are asked to input data relating to the school based junior infant DTaP-IPV and MMR vaccine programme on to the National Immunisation Office's (NIO) web-based HSE School Immunisation System (SIS). Apart from the two North Western LHOs where the vaccination programme is GP-led, all other LHOs now use SIS for recording these data, though a few also continue to maintain their own local information systems. In this report, data for the 2023/2024 academic year DTaP-IPV and MMR vaccination programme are provided, and uptake compared with previously reported data.

*DTaP-IPV = Diphtheria, Tetanus, acellular Pertussis and Polio vaccine, also known as the 4 in 1 vaccine

†MMR = Measles, Mumps and Rubella vaccine



The national picture

In 2023/2024*, as was the case in all previous seasons since 2011/2012, the uptake of both the DTaP-IPV and MMR nationally failed to reach the 95% uptake target which is required for herd immunity§ to take effect within the population (Figures 1, 2).

§ 'Herd immunity', also known as 'population immunity', is defined as the indirect protection from an infectious disease, such as measles, that happens when a population is immune either through vaccination or immunity developed through previous infection.

* See Caveat on slide #2

Figure 1 Estimated percentage uptake of the 4 in 1 (DTaP-IPV) vaccine nationally in Ireland, between 2011/2012 and 2023/2024 with 95 % Uptake Threshold Target

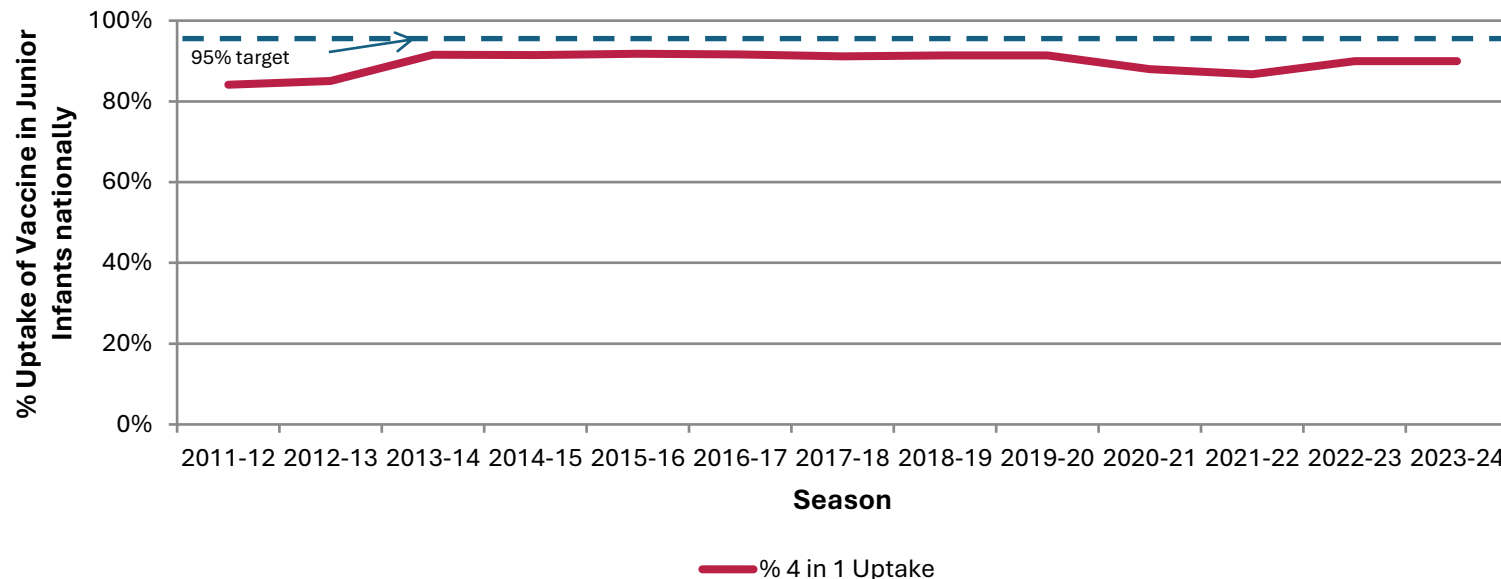
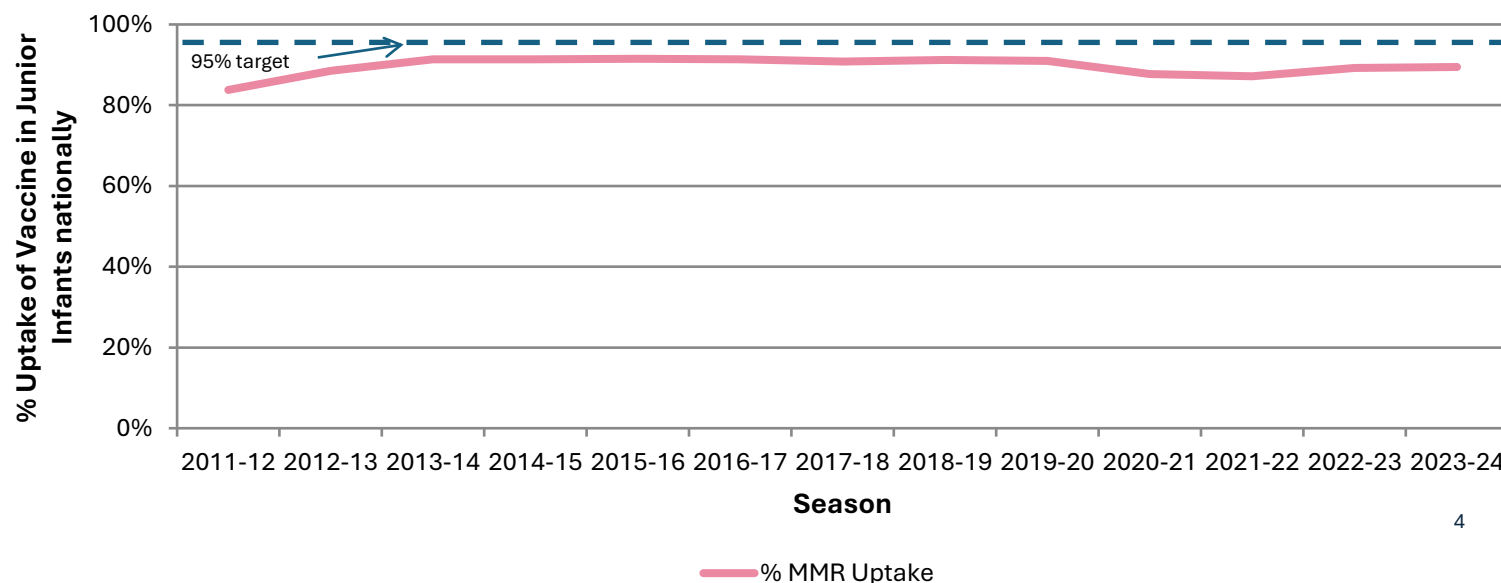


Figure 2 Estimated percentage uptake of the MMR vaccine nationally in Ireland, between 2011/2012 and 2023/2024 with 95 % Uptake Threshold Target





4 in 1 vaccine (DTaP-IPV)

Between 2022/2023 and 2023/2024*, the overall uptake of the DTaP-IPV vaccine in HSE-vaccine administered LHOs increased from 90.0% to 90.5%*. In 2023/2024, the average uptake among these 30* LHOs was 90.6% with a range from 79.2% in Dublin South West to 100% in Dublin South and Dublin South East*. Of the 30* HSE-vaccine administered LHOs, 13 reported an average uptake increase of 3.4%, and 17 reported an average decrease of 1.6% when compared to previous academic year. The largest reduction in uptake was reported by Dublin South City (4.8%) and the highest increase was reported by Dublin NorthWest (8.1%).

During the same timeframe, overall DTaP-IPV vaccine uptake in exclusively GP-vaccine administered LHOs (Donegal and Sligo/Leitrim) increased overall from 80.3% to 83.4%. Donegal reported an increase of 5.2%, whilst Sligo/Leitrim reported a fall of 0.2%.

* See Caveat on slide #2

Figure 3. Percentage uptake of the 4 in 1 (DTaP-IPV) vaccine in LHOs managed by HSE school teams in Ireland, between 2011/2012 and 2023/2024 with 95 % Uptake Threshold Target

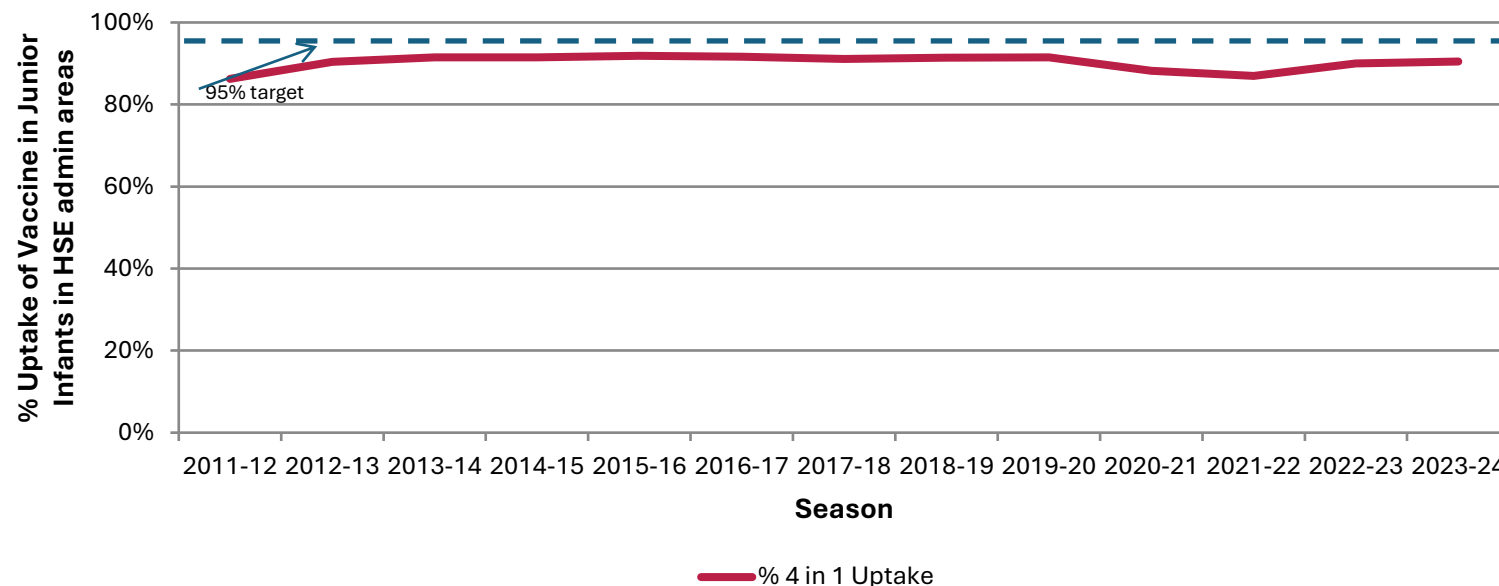
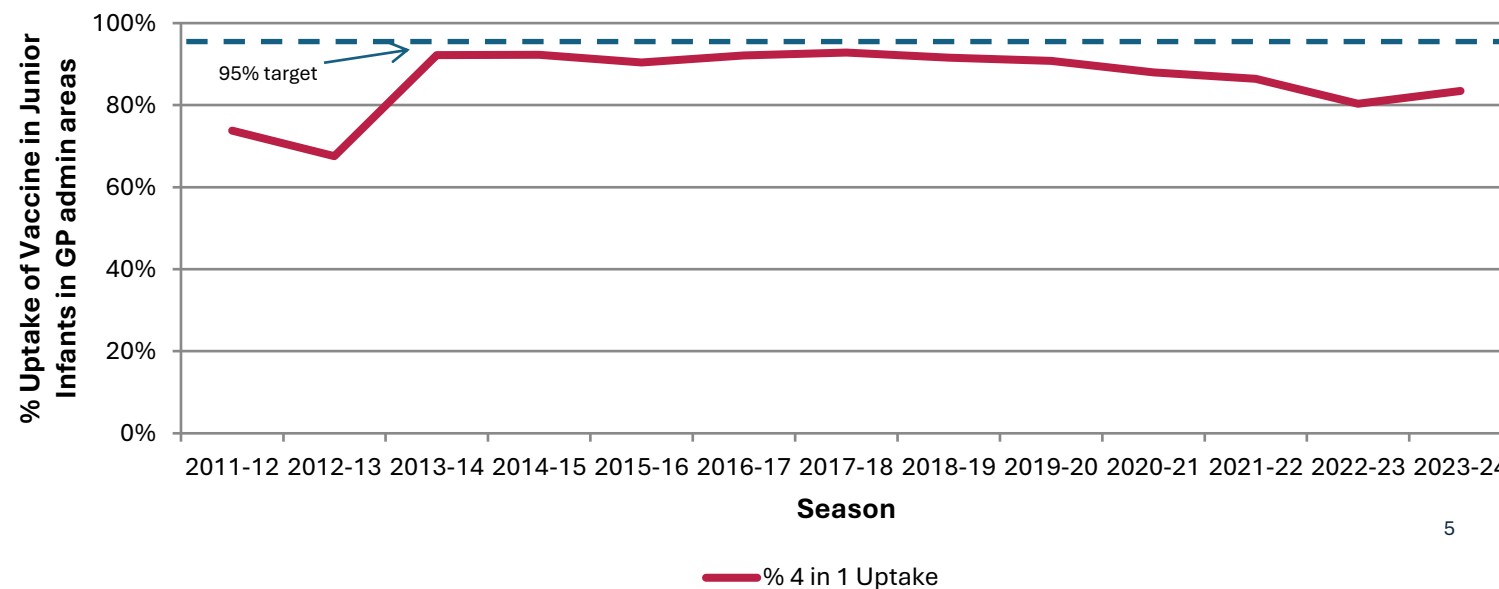


Figure 4. Percentage uptake of the 4 in 1 (DTaP-IPV) vaccine in LHOs in the North West managed by GPs in Ireland, between 2011/2012 and 2023/2024 with 95 % Uptake Threshold Target





MMR vaccine

The overall uptake of the MMR vaccine between 2022/2023 and 2023/2024* in HSE-vaccine administered LHOs increased from 89.8% to 90.0%. In 2023/2024, the average uptake among 30* LHOs was 90.0% with a range from 78.1% in Dublin North Central to 100% in Dublin South and Dublin South East*. Of the 30* HSE-vaccine administered LHOs, 12 reported an average uptake increase of 3.1% and 18 reported an average decrease of 1.7%. The largest reduction in uptake was reported by Dublin South City (4.6%) and the highest increase was reported by Dublin NorthWest (7.7%).

Overall MMR vaccine uptake in exclusively GP-vaccine administered LHOs increased from 80.4% to 83.5% during the same timeframe. Donegal uptake increased by 5.0%, whilst Sligo/Leitrim uptake reduced by 0.1%.

* See Caveat on slide #2

Figure 5. Percentage uptake of the MMR vaccine in LHOs managed by HSE school teams in Ireland, between 2011/2012 and 2023/2024 with 95 % Uptake Threshold Target

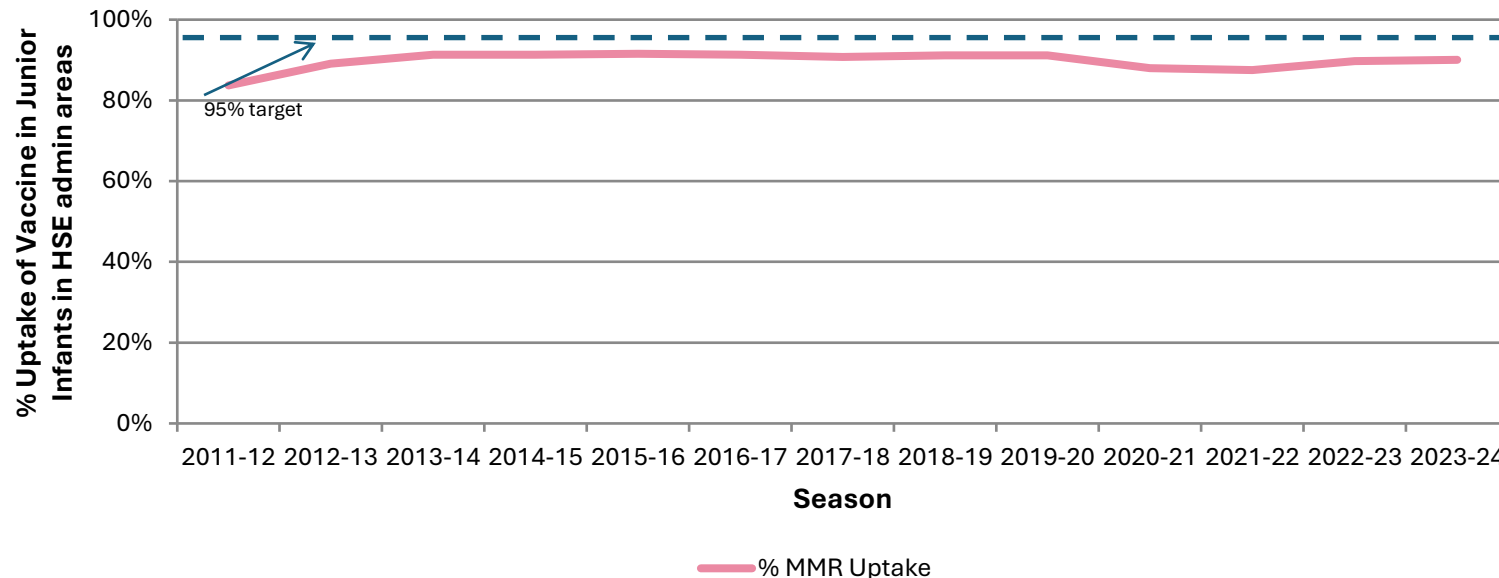
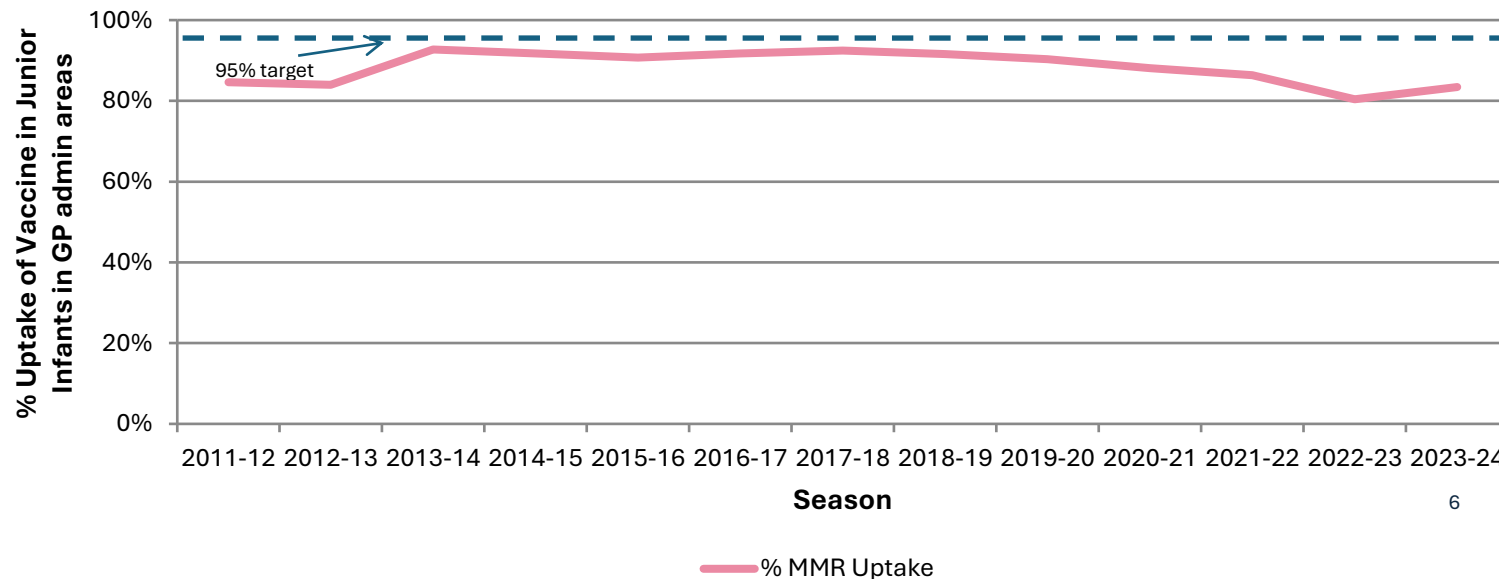


Figure 6. Percentage uptake of the MMR vaccine in LHOs in the North West managed by GPs in Ireland, between 2011/2012 and 2023/2024 with 95 % Uptake Threshold Target



What can we interpret from the data in this report in this report?

Uptake less than 95% for these vaccines indicates vulnerability amongst children who have not availed of the vaccines aimed at preventing serious diseases (diphtheria, tetanus, pertussis, polio, measles, mumps, and rubella).

In 2023/2024, uptake remained sub-optimal among junior infants (<95%), nationally, all six Community Health Organisations (CHOs) and in all but three Local Health Offices (LHOs) (Limerick (4 in 1 only), Tipperary North/East Limerick (MMR only), North Cork, Dublin South* and Dublin South East*).

* See Caveat on slide #2

4 in 1 vaccine

(DTaP-IPV)

- + Nationally uptake for both vaccines, 4 in 1 and MMR, increased slightly between 2022/2023 and 2023/2024
 - + In LHO areas where the vaccine was administered by HSE teams in schools, uptake for both vaccines, 4 in 1 and MMR, increased marginally, but this was after rounding down the uptake figures for two HSE administrative LHOs in CHO 6/Area C/HSE Dublin and South East to 100% from >100%*.
 - + The improvement in the figures in GP-vaccine administered LHOs in 2023/2024 is due to an increase in uptake in Donegal.

MMR vaccine

- + Recent annual data would suggest that overall uptake remains relatively unchanged in both LHO areas where the vaccine was administered by HSE teams in schools and also in LHOs in the North West where the vaccine was administered by GPs.
 - + Overall uptake levels nationally however, remains well below the 95% target level for herd immunity recommended by the WHO.
 - + Uptake less than 95% for these vaccines indicates vulnerability amongst the children who have not availed of the vaccines aimed at preventing serious diseases (diphtheria, tetanus, pertussis, polio, measles, mumps, and rubella).
 - + 95% coverage is needed to prevent outbreaks, avert unnecessary disease and deaths, and achieve WHO measles elimination goals**.

** <https://www.who.int/news/item/15-07-2024-global-childhood-immunization-levels-stalled-in-2023-leaving-many-without-life-saving-protection>

What do I need to know about how the data for this report was collected?

In 2023/2024, vaccines were delivered in 30 LHOs by HSE school teams only and in two LHOs based in the North West by GPs only. In regions where vaccines are administered routinely by HSE Schools teams, there may be a small number of children who receive vaccination from their GPs, these are not captured on the Schools Immunisation System (SIS) and so are not included in this report.

Process overview:

- + Uptake was monitored across all LHOs during the 2023/2024 academic year. Data from all HSE-vaccine administered LHOs are based on what was recorded on SIS by 9th October 2025.
- + All uptake data, provided by immunisation coordinators and other administrative staff were entered onto a MS-Excel database and compared to those reported for the previous 2022/2023 season.

There are limitations in these data.

1. A small number of children may have received booster vaccines prior to school age.

The data presented here represent vaccines administered for these age cohorts. It is possible that some children may have received their booster doses prior to school age if they came from another jurisdiction or were vaccinated earlier than the normal schedule for other reasons (including travel, exposure to cases of these diseases). However, if this did occur, the proportion would be very small.

2. The different ways that target populations have been defined in the HSE- and GP- vaccine administered LHOs has meant that a national uptake for either vaccine cannot be accurately calculated.

For the 2023 /2024 academic year, the target population in HSE-vaccine administered LHOs was all children in junior infants, on the school register on the 30th September 2023. For GP-vaccine administered LHOs, the target population was all children born between the 1st September 2017 and 31st August 2018.

3. The uptake in CHO area 1 cannot be compared to the other eight CHO areas (areas 2 to 9).

The two GP-vaccine administered LHOs (Donegal and Sligo/Leitrim) are part of Community Health Organisation (CHO) area 1, which also includes the HSE-vaccine administered LHO Cavan/Monaghan. However, to estimate uptake at a national level, the cohorts for Cavan/Monaghan, Donegal and Sligo/Leitrim have been combined.

4. The adjusted reported uptake figures from Dublin South and Dublin South East LHO will have impacted on the overall result for the HSE-vaccine administered areas (specifically CHO6 and Area C) as well as nationally.

Overall uptake of the DTaP-IPV and MMR vaccines in junior infants in Ireland by LHO during the 2023/2024 academic year

Notes:

GP=Vaccine administered by GPs in these areas;

HSE=Vaccine administered by HSE public health personnel in these areas;

Target Population in 30 LHOs: All children in Junior Infants on the school register in LHO on 30th September 2023 for the 2023/2024 academic year;

Target Population in 2 LHOs: All children born between 01/09/2017 and 31/08/2018;

The proportion of uptake attributable to home schooled children in HSE administered LHOs can now be captured on SIS and in 2023/2024 it accounted for just over 0.3% of the birth cohort for each vaccine.

* See Caveat on slide #2

2023-2024	Data as of 09/10/2025			4 in 1			MMR		
HSE Area	CHO	CCA Code	LHO	Birth Cohort	Total No. vaccinated	% Uptake	Birth Cohort	Total No. vaccinated	% Uptake
NE	CHO1	CN/MN	Cavan/Monaghan	2101	1831	87.1	2101	1818	86.5
NW	CHO1	DL	Donegal	2158	1812	84.0	2158	1802	83.5
NW	CHO1	SO/LM	Sligo/Leitrim	1440	1190	82.6	1440	1201	83.4
W	CHO2	G	Galway	3507	3206	91.4	3507	3223	91.9
W	CHO2	MO	Mayo	1751	1557	88.9	1751	1538	87.8
W	CHO2	RN	Roscommon	922	807	87.5	922	797	86.4
MW	CHO3	CE	Clare	1588	1412	88.9	1588	1411	88.9
MW	CHO3	L	Limerick	1839	1767	96.1	1839	1760	95.7
MW	CHO3	TN	Tipperary North/East Limerick	1747	1655	94.7	1747	1660	95.0
S	CHO4	KY	Kerry	1867	1603	85.9	1867	1603	85.9
S	CHO4	NC	North Cork	1261	1220	96.7	1261	1211	96.0
S	CHO4	NSL	North Lee - Cork	2180	2031	93.2	2180	2019	92.6
S	CHO4	NSL	South Lee - Cork	2841	2677	94.2	2841	2659	93.6
S	CHO4	WC	West Cork	745	675	90.6	745	668	89.7
SE	CHO5	CW/KK	Carlow/Kilkenny	1828	1723	94.3	1828	1709	93.5
SE	CHO5	TS	Tipperary South	1289	1181	91.6	1289	1168	90.6
SE	CHO5	WD	Waterford	1755	1635	93.2	1755	1585	90.3
SE	CHO5	WX	Wexford	1974	1780	90.2	1974	1783	90.3
E	CHO6	CCA1	Dublin South	1481	1481	100.0	1481	1481	100.0
E	CHO6	CCA2	Dublin South East	1408	1408	100.0	1408	1408	100.0
E	CHO6	CCA10	Wicklow	1641	1556	94.8	1641	1546	94.2
E	CHO7	CCA3	Dublin South City	1686	1480	87.8	1686	1469	87.1
E	CHO7	CCA4	Dublin South West	1714	1358	79.2	1714	1346	78.5
E	CHO7	CCA5	Dublin West	1984	1642	82.8	1984	1621	81.7
E	CHO7	CCA9	Kildare/West Wicklow	3653	3402	93.1	3653	3410	93.3
M	CHO8	LS/OY	Laois/Offaly	2356	2151	91.3	2356	2109	89.5
M	CHO8	LD/WH	Longford/Westmeath	1866	1691	90.6	1866	1695	90.8
NE	CHO8	LH	Louth	1836	1614	87.9	1836	1608	87.6
NE	CHO8	MH	Meath	2950	2662	90.2	2950	2661	90.2
E	CHO9	CCA8	Dublin North	3618	3218	88.9	3618	3191	88.2
E	CHO9	CCA7	Dublin North Central	1446	1147	79.3	1446	1130	78.1
E	CHO9	CCA6	Dublin North West	2829	2432	86.0	2829	2417	85.4
			Homeschooled	166	36	21.7	166	30	18.1
			NSL	5021	4708	93.8	5021	4678	93.2
			HSE area Only	59663	54002	90.5	59663	53704	90.0
			GP area Only	3598	3002	83.4	3598	3003	83.5
			Total including homeschooled	63427	57040	89.9	63427	56737	89.5

Overall uptake of the DTaP-IPV and MMR vaccines in junior infants in Ireland by Community Health Organisation (CHO) during the 2023/2024 academic year

Notes:

Target Population in 30 LHOs: All children in Junior Infants on the school register in LHO on 30th September 2023 for the 2023/2024 academic year;

Target Population in 2 LHOs: All children born between 01/09/2017 and 31/08/2018; HSE Health Regions are: HSE Dublin and North East, HSE Dublin and Midlands, HSE Dublin and South East, HSE Mid West, HSE South West, HSE West and North West

* See Caveat on slide #2

2023/2024 Data as of 09/10/2025	4 in 1			MMR		
Community Health Organisation	Birth Cohort	Total No. vaccinated	% Uptake	Birth Cohort	Total No. vaccinated	% Uptake
CHO1	5699	4833	84.8	5699	4821	84.6
CHO2	6180	5570	90.1	6180	5558	89.9
CHO3	5174	4834	93.4	5174	4831	93.4
CHO4	8894	8206	92.3	8894	8160	91.7
CHO5	6846	6319	92.3	6846	6245	91.2
CHO6	4530	4445	98.1	4530	4435	97.9
CHO7	9037	7882	87.2	9037	7846	86.8
CHO8	9008	8118	90.1	9008	8073	89.6
CHO9	7893	6797	86.1	7893	6738	85.4

Overall uptake of the DTaP-IPV and MMR vaccines in junior infants in Ireland by HSE Health Regions during the 2023/2024 academic year

Notes:

Target Population in 30 LHOs: All children in Junior Infants on the school register in LHO on 30th September 2023 for the 2023/2024 academic year;

Target Population in 2 LHOs: All children born between 01/09/2017 and 31/08/2018; HSE Health Regions are: HSE Dublin and North East, HSE Dublin and Midlands, HSE Dublin and South East, HSE Mid West, HSE South West, HSE West and North West

* See Caveat on slide #2

2023/2024 Data as of 09/10/2025	4 in 1			MMR		
HSE Region	Birth Cohort	Total No. vaccinated	% Uptake	Birth Cohort	Total No. vaccinated	% Uptake
Area A-Dublin and North East	14780	12904	87.3	14780	12825	86.8
Area B-HSE Dublin and Midlands	13259	11724	88.4	13259	11650	87.9
Area C-HSE Dublin and South East	11376	10764	94.6	11376	10680	93.9
Area D-HSE South West	8894	8206	92.3	8894	8160	91.7
Area E-HSE Midwest	5174	4834	93.4	5174	4831	93.4
Area F-HSE West and North West	9778	8572	87.7	9778	8561	87.6

Acknowledgements

Many thanks to all HSE staff, Department of Education and Skills staff, staff in all educational settings, GPs and practice nurses, parents, and children/students, who implemented, participated in and supported all these vaccination programmes.

Further information available on HPSC website:

<http://www.hpsc.ie/a-z/vaccinepreventable/vaccination/immunisationuptakestatistics/immunisationuptakestatisticsforjuniorinfants/>

