

Annual Epidemiological Report

June 2022 (Updated October 2022)

DTaP-IPV & MMR vaccine uptake in Junior Infants & children aged 4-5 years, in Ireland 2019/2020

Key Facts

In the academic year of 2019/2020 DTaP-IPV* and MMR[†] vaccines in junior infant schoolchildren/children aged 4-5 years were delivered in 30 Local Health Offices (LHOs) by HSE school teams and in two LHOs based in the North West by GPs only.

DTaP-IPV uptake:

- Between 2018/2019 and 2019/2020, overall uptake in HSE-vaccine administered LHOs increased minimally from 91.4% to 91.5%
- Between 2018/2019 and 2019/2020 uptake increased from 91.6% to 90.8% in GP-vaccine administered LHOs (Donegal; Sligo/Leitrim): Donegal reported an uptake decrease of 1.5%, and Sligo/Leitrim reported an increase of 0.5%

MMR uptake:

- Overall uptake between 2018/2019 and 2019/2020 in HSE-vaccine administered LHOs decreased fractionally from 91.2% to 91.1%
- In GP-vaccine administered LHOs uptake decreased from 91.6% to 90.3% between 2018/2019 and 2019/2020: Donegal reported an uptake decrease of -2.0%, whilst Sligo/Leitrim also reported a slight reduction of -0.1%

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).

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Background

The uptake statistics presented in this report are by nine Community Healthcare Organisations (CHO) and Local Health Offices (LHO), of which there are 32 in total.

DTaP-IPV* and MMR[†] vaccine booster doses are now primarily administered by the HSE school immunisation teams to children in junior infant classes. However there are also two LHOs in the North West (Donegal and Sligo/Leitrim) providing these vaccines via GP local services only to children aged 4 to 5 years. Since the 2011/2012 academic school year, data on the 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 the 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 are now using SIS for recording these data, even though a few continue to also maintain their own local information systems. In this report data for the 2019/2020 academic year DTaP-IPV and MMR vaccination programme are provided and uptake compared with previously reported data.

Results

Uptake of the DTaP-IPV and MMR vaccines in junior infant schoolchildren/4-5-year olds was monitored across all LHOs during the 2019/2020 academic year. Data from all HSE-vaccine administered LHOs is based on what was recorded on SIS by 24th November 2021.

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 2018/2019 season.

HSE-school team versus GP-vaccine administered LHOs

In 2019/2020, vaccines were delivered in 30 LHOs by HSE school teams only and in two LHOs based in the North West by GPs only. Among the former group of LHOs, GPs may also vaccinate a small number of children, but it was not possible to identify from SIS which LHOs and what percentage of children was vaccinated by GPs.

Target populations

For the 2019/2020 academic year, the target population in HSE-vaccine administered LHOs was all children in junior infants on the school register on the 30th September 2019. For GP-vaccine administered LHOs, the target population was all children born between the 1st September 2013 and 31st August 2014.

The different ways in which the 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. Donegal and Sligo/Leitrim, two GP-vaccine administered LHOs, are part of Community Health Organisation (CHO) area 1, which also includes the HSE-vaccine administered LHO Cavan/Monaghan. This means that the uptake in CHO area 1 cannot be compared to the other eight CHO areas 2 to 9. However, in order to estimate uptake at a national level, the cohorts for Cavan/Monaghan, Donegal and Sligo/Leitrim have been combined.

The proportion of uptake attributable to home schooled children in HSE administered LHOs can now be captured on SIS and in 2019/2020 it accounted for just over 0.14% of the birth cohort for each vaccine.

Uptake of DTaP-IPV vaccine

Between 2018/2019 and 2019/2020, the overall uptake of the DTaP-IPV vaccine in HSE-vaccine administered LHOs increased very slightly from 91.4% to 91.5%. In 2019/2020, the average uptake among these LHOs was 91.8% with a range from 84.5% in Limerick to 97.0% in Wicklow. Of the 30 HSE-vaccine administered LHOs, 17 reported an average uptake increase of +2.0% and 13 reported an average decrease of -2.6%. The largest reduction in uptake was reported by both Tipperary North/East Limerick and Louth (-5.2%) and the highest increase was reported by West Cork (+5.9%).

During the same period of time, overall DTaP-IPV vaccine uptake in exclusively GP-vaccine administered LHOs (Donegal; Sligo/Leitrim) decreased from 91.6% to 90.8%: Donegal reported an uptake decrease of 1.5%, whilst Sligo/Leitrim reported an increase of 0.5%.

Uptake of MMR vaccine

The overall uptake of the MMR vaccine between 2018/2019 and 2019/2020 in HSE-vaccine administered LHOs decreased marginally from 91.2% to 91.1%. In 2019/2020, the average uptake among these LHOs was 91.4% with a range from 84.0% in Dublin North West to 96.6% in Wicklow. Of the 30 HSE-vaccine administered LHOs, 13 reported an average uptake reduction of -2.4% and 17 reported an average increase of +1.7%. The largest reduction in uptake was reported by Limerick (-7.9%) and the highest increase was reported by West Cork (+5.4%).

Overall MMR vaccine uptake in exclusively GP-vaccine administered LHOs decreased from 91.6% to 90.3% during the same time period: Donegal reported an uptake decrease of 2.0%, whilst Sligo/Leitrim reported a very marginal decrease of -0.1%.

Figure 1 to 3 present trends in the percentage uptake of the DTaP-IPV and MMR vaccines between 2011/2012 and 2019/2020 in HSE administered areas, GP administered areas and as a national estimate, respectively.

Details of the overall uptake of the two vaccines in the HSE- and GP-vaccinated LHOs during 2019/2020 are presented in Table 1 and in the maps in Figure 4.

Discussion

Overall uptake for both vaccines, 4 in 1 and MMR, did not change very much between 2018/2019 and 2019/2020. 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). In 2013-2014 a plateau of between 90% and 94% uptake of the DTaP-IPV and MMR vaccines at national level was reached, but since then little progress has been made in exceeding the 95% threshold. This is a concern as the uptake of these vaccines remains sub-optimal among junior infants, not just nationally, but in a majority of CHOs and LHOs. Provision of catch-up opportunities for all children who are not fully vaccinated, in all areas, should be considered as a priority as services return to normal. *Limitations*

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 preschool 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.

Notes

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

†MMR = Measles, Mumps and Rubella vaccine

Further information available on HPSC website:

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

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Figure 1. Percentage uptake of the DTaP-IPV and MMR vaccines in HSE administered areas in Ireland, between 2011/2012 and 2019/2020

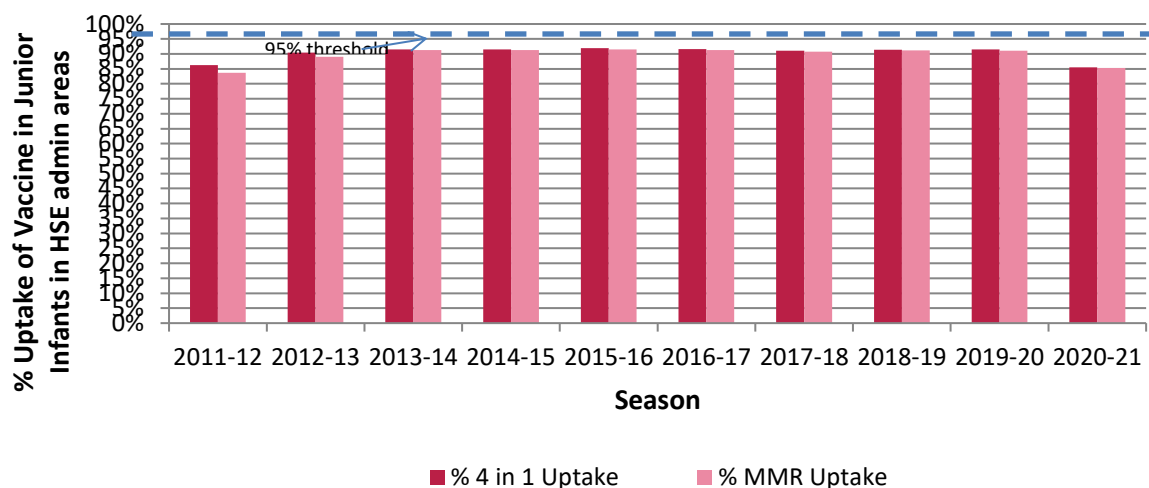


Figure 2. Percentage uptake of the DTaP-IPV and MMR vaccines in GP administered areas in Ireland, between 2011/2012 and 2019/2020

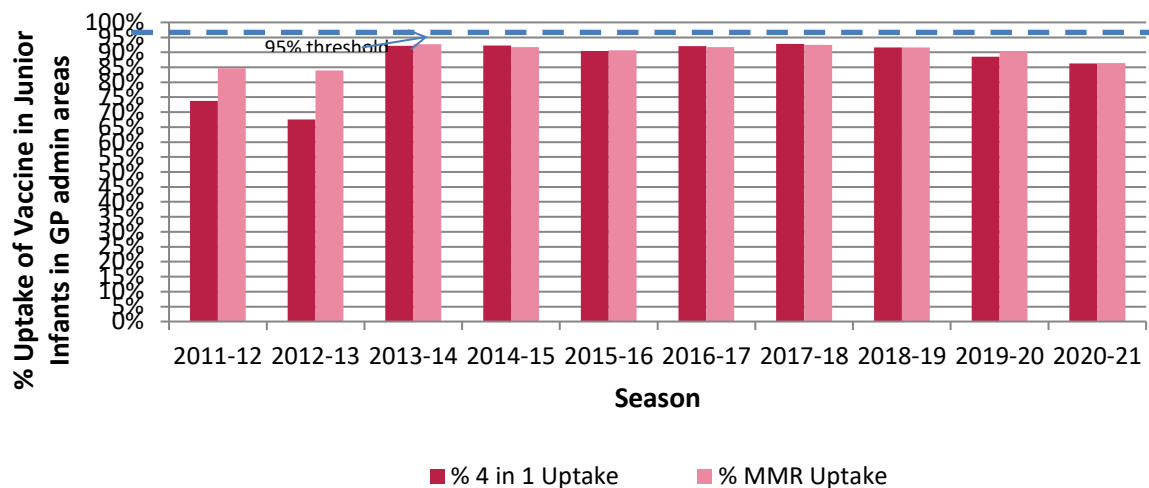


Figure 3. Estimated percentage uptake of the DTaP-IPV and MMR vaccines nationally in Ireland, between 2011/2012 and 2019/2020

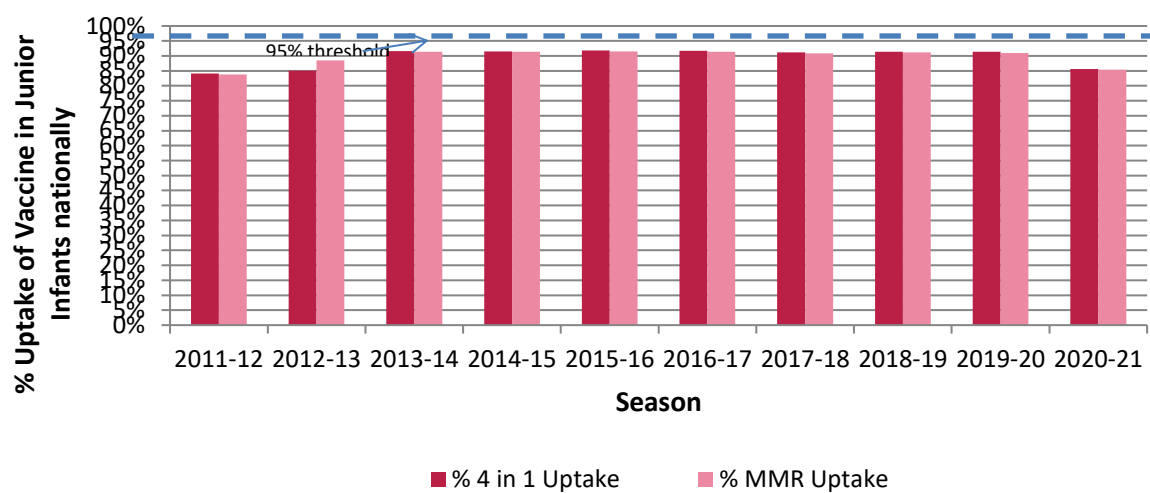


Table 1. Overall uptake of the DTaP-IPV and MMR vaccines in junior infants in Ireland during the 2019/2020 academic year

2019-2020	Data as of 24/11/2021			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	2059	1877	91.2	2059	1873	91.0
NW	CHO1	DL	Donegal	2182	1913	87.7	2182	1903	87.2
NW	CHO1	SO/LM	Sligo/Leitrim	1378	1320	95.8	1378	1312	95.2
W	CHO2	G	Galway	3534	3281	92.8	3534	3279	92.8
W	CHO2	MO	Mayo	1744	1646	94.4	1744	1629	93.4
W	CHO2	RN	Roscommon	968	912	94.2	968	915	94.5
MW	CHO3	CE	Clare	1523	1402	92.1	1523	1395	91.6
MW	CHO3	L	Limerick	1951	1648	84.5	1951	1642	84.2
MW	CHO3	TN	Tipperary North/East Limerick	1850	1694	91.6	1850	1693	91.5
S	CHO4	KY	Kerry	1788	1613	90.2	1788	1606	89.8
S	CHO4	NC	North Cork	1408	1363	96.8	1408	1356	96.3
S	CHO4	NSL	North Lee - Cork	2672	2488	93.1	2672	2509	93.9
S	CHO4	NSL	South Lee - Cork	2751	2586	94.0	2751	2587	94.0
S	CHO4	WC	West Cork	669	624	93.3	669	625	93.4
SE	CHO5	CW/KK	Carlow/Kilkenny	1987	1890	95.1	1987	1882	94.7
SE	CHO5	TS	Tipperary South	1234	1167	94.6	1234	1156	93.7
SE	CHO5	WD	Waterford	1816	1695	93.3	1816	1691	93.1
SE	CHO5	WX	Wexford	2195	2093	95.4	2195	2089	95.2
E	CHO6	CCA1	Dublin South	1729	1586	91.7	1729	1538	89.0
E	CHO6	CCA2	Dublin South East	1810	1659	91.7	1810	1654	91.4
E	CHO6	CCA10	Wicklow	1746	1693	97.0	1746	1686	96.6
E	CHO7	CCA3	Dublin South City	1472	1354	92.0	1472	1339	91.0
E	CHO7	CCA4	Dublin South West	1963	1758	89.6	1963	1753	89.3
E	CHO7	CCA5	Dublin West	2523	2291	90.8	2523	2278	90.3
E	CHO7	CCA9	Kildare/West Wicklow	3873	3672	94.8	3873	3651	94.3
M	CHO8	LS/OY	Laois/Offaly	2530	2232	88.2	2530	2232	88.2
M	CHO8	LD/WH	Longford/Westmeath	1950	1838	94.3	1950	1839	94.3
NE	CHO8	LH	Louth	1941	1648	84.9	1941	1639	84.4
NE	CHO8	MH	Meath	3261	2994	91.8	3261	2984	91.5
E	CHO9	CCA8	Dublin North	4027	3522	87.5	4027	3474	86.3
E	CHO9	CCA7	Dublin North Central	1369	1215	88.8	1369	1215	88.8
E	CHO9	CCA6	Dublin North West	3154	2672	84.7	3154	2649	84.0
			Homeschooled	95	21	22.1	95	21	22.1
			NSL	5423	5074	93.6	5423	5096	94.0
			HSE area Only	63497	58113	91.5	63497	57858	91.1
			GP area Only	3560	3233	90.8	3560	3215	90.3
			Total including homeschooled	67152	61367	91.4	67152	61094	91.0
			CHO1	5619	5110	90.9	5619	5088	90.5
			CHO2	6246	5839	93.5	6246	5823	93.2
			CHO3	5324	4744	89.1	5324	4730	88.8
			CHO4	9288	8674	93.4	9288	8683	93.5
			CHO5	7232	6845	94.6	7232	6818	94.3
			CHO6	5285	4938	93.4	5285	4878	92.3
			CHO7	9831	9075	92.3	9831	9021	91.8
			CHO8	9682	8712	90.0	9682	8694	89.8
			CHO9	8550	7409	86.7	8550	7338	85.8

Notes:

GP=Vaccine administered by GPs in these areas;

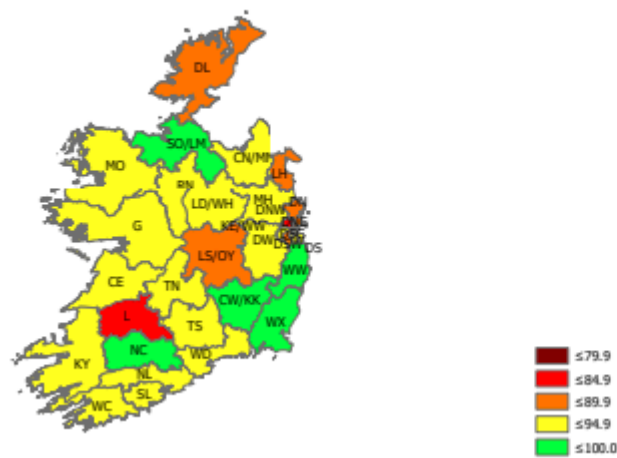
HSE=Vaccine administered by HSE public health personnel in these areas;

Target Population in LHO: All children in Junior Infants on the school register in LHO on 30th September 2019 for the 2019/2020 academic year;

Target Population in LHO: All children born between 01/09/2013 and 31/08/2014

Figure 4. LHO Maps of DTaP-IPV & MMR percentage vaccine uptake at in 4 to 5-year olds in GP administered LHOs (Donegal /Sligo/ Leitrim) and among junior infants in schools in HSE administered LHOs in Ireland during the 2019/2020 academic year

HSE and GP-DTaP-IPV Vaccine Uptake



HSE & GP-MMR Vaccine Uptake

