



Key Points

Uptake of the DTaP/IPV (also known as the 4 in 1) vaccine among junior infant schoolchildren during 2015/2016 in HSE-administered LHOs (Local Health Offices) was 91.9% and in GP-administered LHOs it was 90.4%

Uptake of the MMR vaccine among junior infant schoolchildren during 2015/2016 in HSE-administered LHOs was 91.5% and in GP-administered LHOs it was 90.7%

Overall, uptake of the DTaP/IPV and MMR vaccines at national level during 2015/2016 was estimated to be 91.8% and 91.5%, respectively.

Background

DTaP/IPV* and MMR vaccines are now primarily administered by the HSE school immunisation teams, with only two LHOs providing these vaccines via GP local services only. Data on the uptake of DTaP/IPV and MMR vaccines among junior infant schoolchildren has been collated nationally since the 2011/2012 academic school year and was first published January 2013¹. Since then, annual (academic year) reports, based on data submissions from each area, are published on the HPSC website.

Since 2015 all LHOs immunisation offices are asked to input the data relating to school based junior infant DTaP/IPV and MMR vaccine programme onto the HSE School Immunisation System (SIS). Although most areas are now using SIS for recording these data, some areas continue to use alternate information systems. There is agreement that all school based vaccines will be inputted onto SIS for the 2016/2017 academic year. In this report we provide data for the 2015/2016 academic year DTaP/IPV and MMR vaccination programme and compare uptake with previously reported data.

DTaP/IPV* and MMR[†] vaccine uptake 2015/2016

Uptake of the DTaP-IPV* and MMR[†] vaccines in 4-5 year olds/junior infant schoolchildren was monitored across all LHOs during the 2015/2016 academic year. Data from HSE-vaccine administered LHOs is based on what was recorded on SIS on 24th April 2017, although some LHOs had not entered all of their data at the time of data extraction. For the latter LHOs, the returns

¹ <http://ndsc.newsweaver.ie/epiinsight/1s4r7v3qv7n?a=1&p=30773765&t=17517774>

reported here are based on data provided directly to HPSC by mid-October 2016, except for Wexford, whose updated figures were reported on the 17th May 2017.

All uptake data, provided by immunisation coordinators and other administrative staff² were entered on to a MS-Excel database and compared to those reported for the previous 2014/2015 season, where possible.

HSE-school team versus GP-vaccine administered LHOs

In 2015/2016, vaccines were delivered in 21 LHOs by HSE school teams only, in eight other HSE-administered LHOs where GPs deliver a small percentage of vaccines and in two LHOs based in the North West by GPs only (Table 1).

Target populations

For the 2015/2016 academic year, the target population in HSE-vaccine administered LHOs was all children in junior infants on the school register on the 30th September 2015. For GP-vaccine administered LHOs, the target population was all children born between the 1st September 2009 and 31st August 2010.

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.

Uptake of DTaP-IPV vaccine

Between 2014/2015 and 2015/2016, the overall uptake of the DTaP-IPV vaccine in HSE-vaccine administered LHOs increased from 91.5% to 91.9%. In 2015/2016, the average uptake among these LHOs was 92.3% with a range from 81.4% in Dublin North to 97.2% in Waterford. Of the 29 HSE-vaccine administered LHOs, 13 reported an average uptake decline of -2.6% whilst 16 others reported an average increase of +3.7%. The largest reduction in uptake was reported by Dublin North (-7.7%) and the highest increase was each reported by Mayo and Limerick (+8.7%).

² Data for the North West area were provided to the HPSC by the local Department of Public Health

Table 1. Proportion of DTaP-IPV vaccine and MMR uptake in HSE-administered LHOs attributable to GPs in 2015/2016

| LHO | % Vaccine Uptake Administered by GPs | |
|--------------|--------------------------------------|-------|
| | DTaP-IPV | MMR |
| North Cork | 26% | 26% |
| Kerry | 12.5% | 12.5% |
| South Lee | 6.6% | 6.6% |
| North Lee | 6% | 6% |
| Dublin South | 5.5% | 6.1% |
| West Cork | 4.9% | 4.9% |
| Wexford | 2.1% | 2.1% |
| Offaly | 0.08% | 0.16% |

During the same period of time, overall DTaP-IPV vaccine uptake in exclusively GP-vaccine administered LHOs (Donegal; Sligo/Leitrim) fell slightly from 92.3% to 90.4%: Donegal reported an uptake reduction of -2.9%, whilst Sligo/Leitrim reported a slight decrease of -0.3%.

Uptake of MMR vaccine

The overall uptake of the MMR vaccine between 2014/2015 and 2015/2016 in HSE-vaccine administered LHOs increased from 91.3% to 91.5%. In 2015/2016, the average uptake among these LHOs was 91.9% with a range from 81.7% in Dublin North to 96.8% in North Cork. Of the 29 HSE-vaccine administered LHOs, 13 reported an average uptake reduction of -2.9% whilst 16 others reported an average increase of +3.4%. The largest reduction in uptake was reported by Dublin North (-7.0%) and the highest increase was reported by Limerick (+9.1%).

Overall MMR vaccine uptake in exclusively GP-vaccine administered LHOs decreased from 91.8% to 90.7% during the same time period: Donegal reported an uptake decrease of -2.1%, whilst Sligo/Leitrim reported a decrease of -0.3%.

MMR catch-up vaccination

Seven[†] HSE-vaccine administered LHOs reported on the number of children needing a catch-up MMR dose one month later after been given their first dose. The total number of children identified was 89 (range one to 30). Of these 89 children, 59 (66.3%) received a catch-up vaccine dose (range zero to 23) (data not shown).

Figures 1 to 3 present trends in the percentage uptake of the DTaP/IPV and MMR vaccines between 2011/2012 and 2015/2016 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 2015/2016 are presented in Table 2 and in the maps in Figure 4.

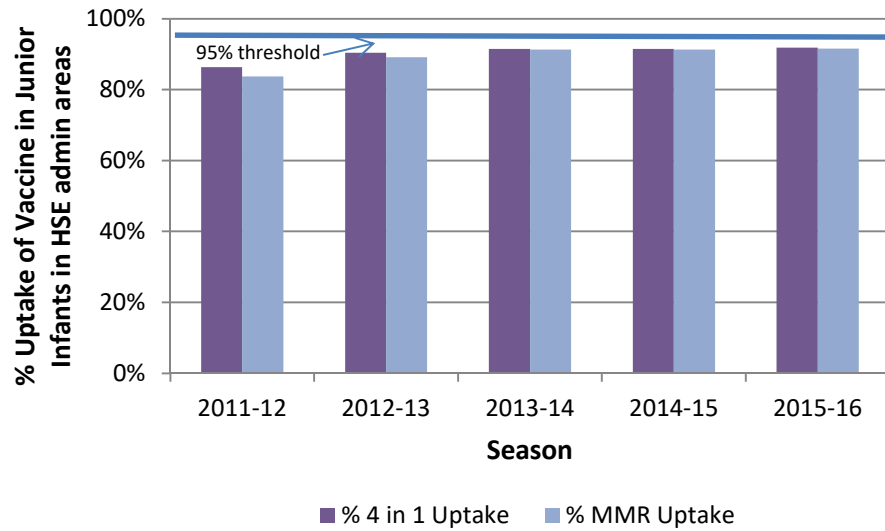


Figure 1. Percentage uptake of the DTaP/IPV and MMR vaccines in HSE administered areas between 2011/2012 and 2015/2016

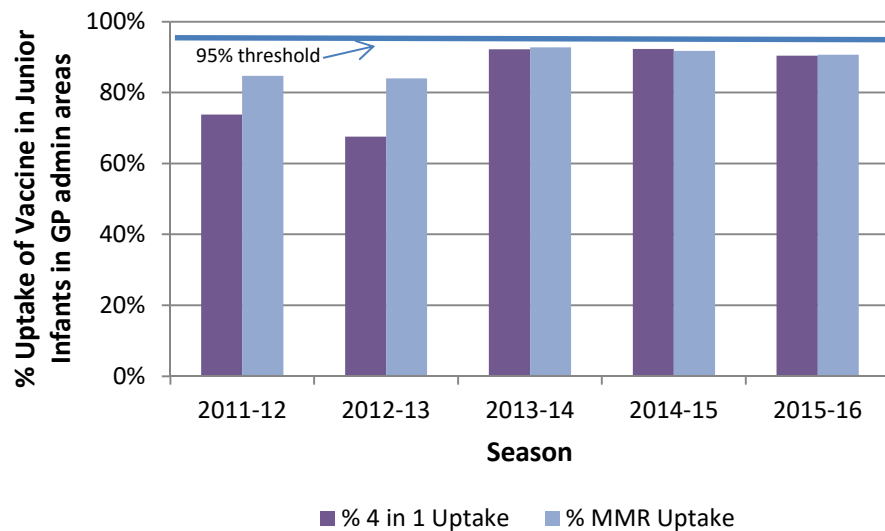


Figure 2. Percentage uptake of the DTaP/IPV and MMR vaccines in GP administered areas between 2011/2012 and 2015/2016

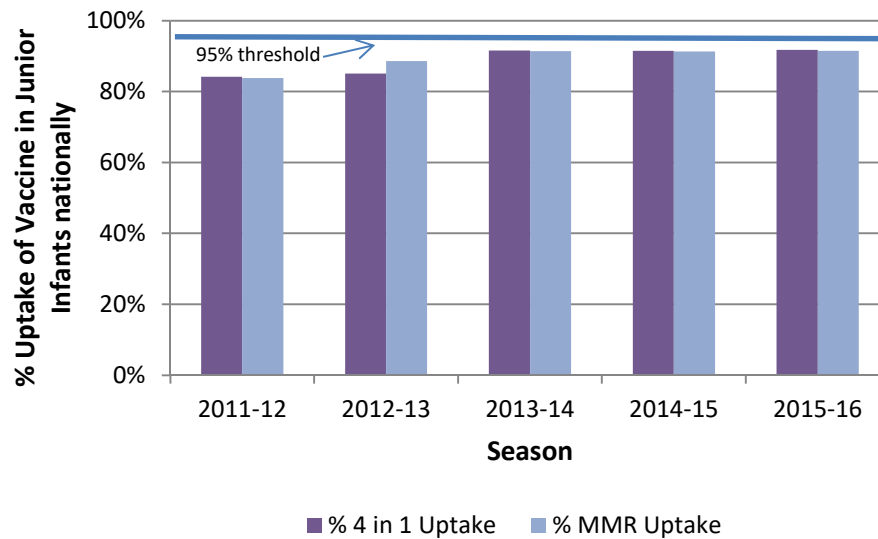


Figure 3. Estimated percentage uptake of the DTaP/IPV and MMR vaccines nationally between 2011/2012 and 2015/2016

Discussion

Although at national level uptake of DTaP/IPV and MMR has improved in recent years, little progress has been made at national level since 2013-2014 when a plateau was reached. It is of concern that uptake of these vaccines is sub-optimal among junior infants, both nationally and in a majority of CHOs and LHOs. 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). Even if all children in these cohorts had received their vaccines in early childhood, booster doses are needed to provide protection in the forthcoming years.

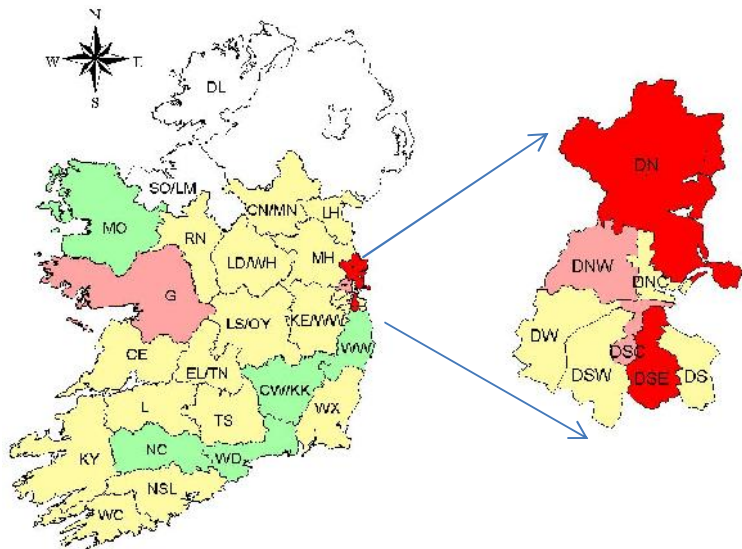
Limitations

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 (travel, exposure to cases of these diseases). However, if this did occur the proportion would be very small.

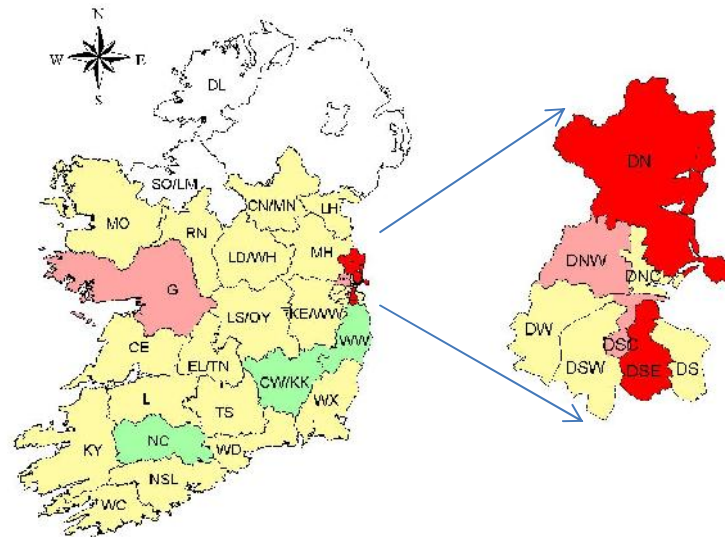
Table 2. Overall uptake of the DTaP-IPV and MMR vaccines in junior infants during the 2015/2016 academic year**

| CHO | LHO Name | HSE administered LHOs | | | | | | GP administered LHOs | | | | | |
|-----|-----------------------|-----------------------|---|--------------|---------------|--|--------------|----------------------|---|--------------|--------------|--|--------------|
| | | DTaP-IPV vaccine | | | MMR vaccine | | | DTaP-IPV vaccine | | | MMR vaccine | | |
| | | Cohort | Number children who have received 1 dose DTaP-IPV vaccine | % | Cohort | Number children who have received 1 dose MMR vaccine | % | Cohort | Number children who have received 1 dose DTaP-IPV vaccine | % | Cohort | Number children who have received 1 dose MMR vaccine | % |
| 1 | Cavan/Monaghan | 2,063 | 1,943 | 94.2% | 2,063 | 1,940 | 94.0% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Donegal | GP | GP | GP | GP | GP | GP | 2,450 | 2,160 | 88.2% | 2,450 | 2,160 | 88.2% |
| | Sligo/Leitrim | GP | GP | GP | GP | GP | GP | 1,515 | 1,425 | 94.1% | 1,515 | 1,437 | 94.9% |
| | CHO 1 Total | 2,063 | 1,943 | 94.2% | 2,063 | 1,940 | 94.0% | 3,965 | 3,585 | 90.4% | 3,965 | 3,597 | 90.7% |
| 2 | Galway | 3,868 | 3,440 | 88.9% | 3,868 | 3,431 | 88.7% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Mayo | 1,768 | 1,684 | 95.2% | 1,801 | 1,676 | 93.1% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Roscommon | 965 | 884 | 91.6% | 965 | 887 | 91.9% | HSE | HSE | HSE | HSE | HSE | HSE |
| | CHO 2 Total | 6,601 | 6,008 | 91.0% | 6,634 | 5,994 | 90.4% | | | | | | |
| 3 | Clare | 1,592 | 1,476 | 92.7% | 1,592 | 1,476 | 92.7% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Limerick | 2,131 | 1,934 | 90.8% | 2,131 | 1,940 | 91.0% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Tipperary North | 2,065 | 1,887 | 91.4% | 2,065 | 1,886 | 91.3% | HSE | HSE | HSE | HSE | HSE | HSE |
| | CHO 3 Total* | 5,788 | 5,297 | 91.5% | 5,788 | 5,302 | 91.6% | | | | | | |
| 4 | Kerry | 1,966 | 1,849 | 94.0% | 1,966 | 1,847 | 93.9% | HSE | HSE | HSE | HSE | HSE | HSE |
| | North Cork | 1,567 | 1,517 | 96.8% | 1,567 | 1,517 | 96.8% | HSE | HSE | HSE | HSE | HSE | HSE |
| | North Lee/South Lee | 5,924 | 5,623 | 94.9% | 5,924 | 5,619 | 94.9% | HSE | HSE | HSE | HSE | HSE | HSE |
| | West Cork | 772 | 709 | 91.8% | 772 | 710 | 92.0% | HSE | HSE | HSE | HSE | HSE | HSE |
| | CHO 4 Total | 10,229 | 9,698 | 94.8% | 10,229 | 9,693 | 94.8% | | | | | | |
| 5 | Carlow/Kilkenny | 2,148 | 2,054 | 95.6% | 2,148 | 2,049 | 95.4% | HSE | HSE | HSE | HSE | HSE | HSE |
| | South Tipperary | 1,344 | 1,261 | 93.8% | 1,344 | 1,263 | 94.0% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Waterford | 2,003 | 1,947 | 97.2% | 2,003 | 1,860 | 92.9% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Wexford | 2,282 | 2,149 | 94.2% | 2,282 | 2,147 | 94.1% | HSE | HSE | HSE | HSE | HSE | HSE |
| | CHO 5 Total | 7,777 | 7,411 | 95.3% | 7,777 | 7,319 | 94.1% | | | | | | |
| 6 | Dublin South | 1,927 | 1,783 | 92.5% | 1,927 | 1,783 | 92.5% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Dublin South East | 1,847 | 1,542 | 83.5% | 1,849 | 1,526 | 82.5% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Wicklow | 2,031 | 1,961 | 96.6% | 2,031 | 1,949 | 96.0% | HSE | HSE | HSE | HSE | HSE | HSE |
| | CHO 6 Total | 5,805 | 5,286 | 91.1% | 5,807 | 5,258 | 90.5% | | | | | | |
| 7 | Dublin South City | 1,590 | 1,426 | 89.7% | 1,590 | 1,420 | 89.3% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Dublin South West | 2,126 | 1,948 | 91.6% | 2,126 | 1,947 | 91.6% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Dublin West | 2,786 | 2,547 | 91.4% | 2,786 | 2,535 | 91.0% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Kildare/West Wicklow | 4,297 | 3,995 | 93.0% | 4,297 | 3,991 | 92.9% | HSE | HSE | HSE | HSE | HSE | HSE |
| | CHO 7 Total | 10,799 | 9,916 | 91.8% | 10,799 | 9,893 | 91.6% | | | | | | |
| 8 | Laos/Offaly | 2,714 | 2,491 | 91.8% | 2,725 | 2,480 | 91.0% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Longford/Westmeath | 2,142 | 2,019 | 94.3% | 2,142 | 2,024 | 94.5% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Louth | 2,154 | 2,012 | 93.4% | 2,154 | 2,011 | 93.4% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Meath | 3,598 | 3,354 | 93.2% | 3,598 | 3,348 | 93.1% | HSE | HSE | HSE | HSE | HSE | HSE |
| | CHO 8 Total | 10,608 | 9,876 | 93.1% | 10,619 | 9,863 | 92.9% | | | | | | |
| 9 | Dublin North | 4,404 | 3,583 | 81.4% | 4,396 | 3,591 | 81.7% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Dublin North Central | 1,396 | 1,305 | 93.5% | 1,399 | 1,298 | 92.8% | HSE | HSE | HSE | HSE | HSE | HSE |
| | Dublin North West | 3,553 | 3,090 | 87.0% | 3,553 | 3,076 | 86.6% | HSE | HSE | HSE | HSE | HSE | HSE |
| | CHO 9 Total | 9,353 | 7,978 | 85.3% | 9,348 | 7,965 | 85.2% | | | | | | |
| | National Total | 69,023 | 63,413 | 91.9% | 69,064 | 63,227 | 91.5% | 3,965 | 3,585 | 90.4% | 3,965 | 3,597 | 90.7% |

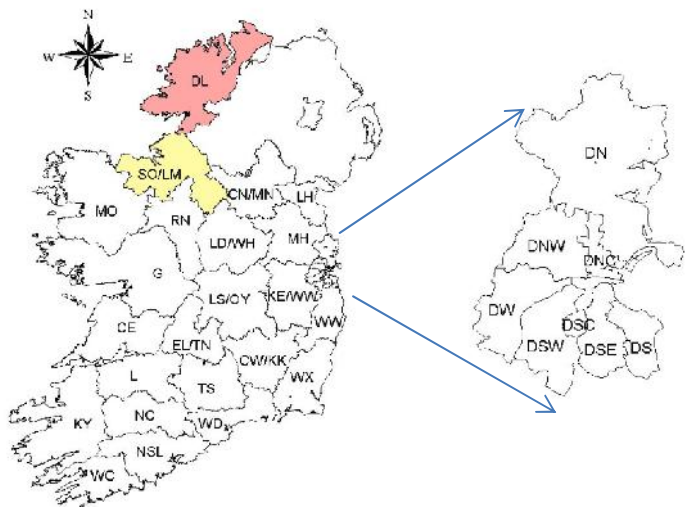
GP=Vaccine administered by GPs in these areas; HSE=Vaccine administered by HSE public health personnel in these areas; Target population HSE-vaccine administered areas: All children in Junior Infants on the school register on 30/09/2015 for the 2015/2016 academic year; Target population in GP-vaccine administered areas: All children born between 01/09/2009 and 31/08/2010



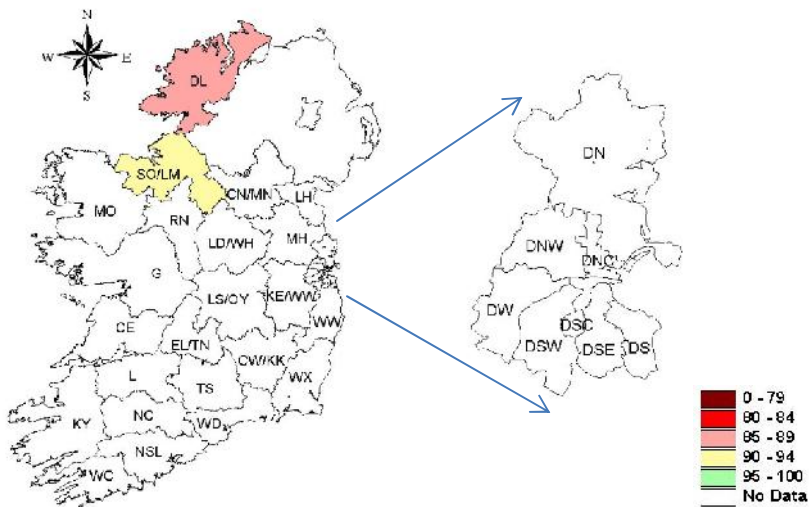
HSE-DTaP-IPV Vaccine Administered LHOs



HSE-MMR Vaccine Administered LHO



GP-DTaP-IPV Vaccine Administered LHOs



GP-MMR Vaccine Administered LHOs

Figure 4. LHO Maps of DTaP-IPV & MMR percentage vaccine uptake at Junior Infants level during the 2015/2016 academic year

Acknowledgements

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

Notes

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

†MMR = Measles, Mumps and Rubella vaccine

‡Excludes Laois

**In table 2, data in HSE vaccine administered LHOs based on what was recorded on SIS only on 24th April 2017 although some LHOs had not entered all their data at the time of data extraction. For the latter LHOs the returns reported here are based on data provided by them directly to HPSC by mid October 2016, except for Wexford, whose updated figures were reported on the 17th May 2017.