

HPV vaccine uptake in Ireland: 2015/2016

Background

Following a recommendation from the National Immunisation Advisory Committee, that human papillomavirus (HPV) vaccine should be given to 12 year old girls, a routine Health Service Executive (HSE) school HPV vaccination programme began in May 2010 for girls in the first year of second level school and age equivalent in non second level schools (see below for cohort details). The aim of the programme is to protect girls from their future risk of developing cervical cancer.

A catch-up campaign for girls in sixth year of second level schools and their age equivalents in non-second level schools (i.e. special schools, home schooled, Community Training Centres and Youthreach) was added in the academic year 2011/2012 and continued during the academic years 2012/2013 and 2013/2014.

Quadrivalent HPV vaccine, which protects against HPV types 6, 11, 16 and 18 associated with 70% of cervical cancer, is used in the school vaccination programme. A schedule of two vaccine doses given at least six months apart was recommended since the academic year 2014/2015 for girls aged <15 years. Prior to this a schedule of three vaccine doses given over a six month period was recommended. This change is based on recent data which showed that the immune response to two doses of the vaccine in 9-13 year old girls is comparable to a three dose course. The HPV vaccine does not protect against all cervical cancers, so regular cervical screening is still needed.

The vaccinations are provided by vaccination teams from the Local Health Offices (LHOs) who go into schools in their areas to vaccinate or provide vaccination clinics free of charge for girls in the target cohorts. Please see the HSE-National Immunisation Office (NIO) website at <http://www.immunisation.ie> for detailed and current information on the HPV school vaccination programme.

The target for uptake of two doses of vaccine for the routine HPV vaccination programme is $\geq 80\%$.

HPV vaccinations provided through the schools immunisation programme are entered into the School Immunisation System (SIS). Here we report on the uptake of HPV vaccine, provided through the school immunisation programme and recorded on SIS on the 24th January 2017, in the academic year 2015/2016 in Ireland.

The data presented here are the result of collaboration between NIO, School Immunisation Teams, Immunisation Coordinators, Immunisation System Administrators, Immunisation administrative staff and HPSC.

Cohort for vaccination in the academic year 2015/2016

The cohort for the 2015/2016 HPV vaccination programme as agreed with the Department of Education and Skills was as follows:

- All girls in **first year of second level schools**
- **and their age equivalents** i.e. those who were born between 01/09/2003 and 31/08/2004
 - attending special schools or
 - registered with the National Educational Welfare Board to be home schooled.

Terminology used in this report

At least stage 1- means a girl had a stage 1 HPV vaccine recorded on the database, this girl may or may not have had a stage 2 HPV vaccine recorded on the database.

At least stage 2- means a girl had a stage 2 HPV vaccine recorded on the database, she may or may not have had stage 1 HPV vaccine recorded on the database.

Girls with at least stage 2 are considered to have completed a course of vaccination. Prior to the 2014/2015 academic year girls with at least stage 3 were considered to have completed a course of vaccination.

Home schooled- refers to girls registered with the National Educational Welfare Board to be educated at home. These girls were recorded on the database and reported here as home schooled.

Out of school- refers to vaccinated girls who were neither enrolled in a second level school, special school nor registered with National Educational Welfare Board as home schooled.

Local Health Office (LHO) refers to the LHO the school is located in (it does not refer to the LHO the girl is resident in).

Outside cohort- refers to those who were vaccinated but who were not in first year of second level schools or their age equivalents in non-second level schools i.e. they were outside the cohorts recommended for vaccination.

The denominator for girls in second level schools was defined as the number of girls on the school roll on 30th September 2015 for first year. The denominator for age equivalent to first years in second level schools was defined as girls born between 01/09/2003 and 31/08/2004 on the school roll of special schools or registered with the National Educational Welfare Board on 30th September 2015. All the denominator data was entered on the immunisation database by the relevant System Administrator.

Summary

For the 2015-2016 academic year

- National uptake of at least HPV stage 2 was 72.3%
- There was some regional variation with uptake among the Community Healthcare Organisations ranging from 66.3% to 77.6%

Results

Ireland

Academic Year 2015/2016

The figures presented in this summary are based on data recorded on SIS on the 24th January 2017. These figures are subject to change due to ongoing updating of data on the database.

First year girls in second level schools and their age equivalents in special schools and home schooled

In Ireland, 72.3% of girls in second level schools and their age equivalents in special schools and home schooled were recorded as having received at least HPV stage 2 (considered to have completed a two dose course) (Table 1). In the 2014/2015 academic year, 86.9% of girls in second level schools and their age equivalents in special schools and home schooled were recorded as having received at least HPV stage 2 (considered to have completed a two dose course)¹. Data are not directly comparable with academic years prior to 2014/2015. Prior to the academic year 2014/2015 a three dose schedule was recommended. In the academic year 2013/2014 88.2% of girls in first year in second level schools were recorded as having received at least HPV stage 2 while 84.9% of girls in first year in second level schools were recorded as having received at least HPV stage 3.²

Among the nine Community Healthcare Organisations (CHOs), in the academic year 2015/2016, uptake of at least HPV stage 2 among girls ranged from 66.3% to 77.6%; with none reaching the target of $\geq 80\%$ uptake. While among the 32 LHOs uptake of at least HPV stage 2 ranged from 60.2% to 83.5%. Five LHOs reached the target of $\geq 80\%$ uptake in 2015/2016 compared to 30 LHOs who reached the target of $\geq 80\%$ in 2014/2015.

An additional 26 girls were recorded as being outside the cohorts recommended for vaccination and having received at least HPV stage 2 (Table 1).

Total doses administered

A total 48,682 administered vaccine doses were recorded in the academic year 2015/2016.

International comparison

At the time of writing of this report uptake of HPV vaccine in Ireland is not directly comparable to some other countries that have introduced and monitored HPV vaccination due to differences in the recommended HPV schedule and differences in the delivery of the two-dose schedule between countries.

United Kingdom

In Northern Ireland, in the 2015/2016 school year, 90.7% of Year 10 (born 01/09/2001 to 31/08/2002) females completed the two-dose HPV vaccination course.³ HPV vaccine coverage for the priming dose was 88.7% in Year 9 females in 2015/2016 (born 01/09/2002 to 31/08/2003).³

In 2015/2016, 11 of the 14 NHS Boards in Scotland offered girls in S1 (first year of secondary school) one dose of HPV vaccine and uptake by the end of the school year was 86.7%.⁴ Girls in Scotland had been offered both doses of vaccine by the end of S2 (second year of secondary school), in 2015/2016, in all NHS Boards except one.⁴ Uptake of the first dose of HPV vaccine among S2 pupils by the end of the school year was 93.0%.⁴ Uptake of the second dose by the end of the school year was 82.7%.⁴

In England, in the 2015/2016 school year, 85.1% of Year 9 (born 01/09/2001 to 31/08/2002) females completed the two-dose HPV vaccination course, compared to 86.7% completing a three-dose course in 2013/2014.³ HPV vaccine coverage for the priming dose was 87.0% in Year 8 females in 2015/2016 (born 01/09/2002 to 31/08/2003), 2.4% lower than priming dose coverage in 2014/2015.³

In Wales, uptake of the first dose of the HPV vaccine schedule in girls in the 2015/2016 School Year 8 (12-13 year olds) was 85%.⁵ Uptake of the two doses in girls in the 2015/2016 School Year 9 (13-14 year olds) was also 85%.⁵

Australia

In Australia coverage of HPV dose three, for females turning 15 years of age, in 2015 was 77.4%.⁶

United States

In the United States, for girls aged 13-17 years in 2015, coverage with \geq one dose of HPV vaccine was 62.8% and with ≥ 2 doses was 52.2%.⁷

Conclusions

The decline in uptake of HPV vaccine in Ireland in the academic year 2015/2016 is a concern. Every year in Ireland about 300 women get cervical cancer and 90 women die from it.⁸ Cervical cancer is the second most common cause of death due to cancer in women aged 25 to 39 years.⁸ HPV vaccine has a very good safety record.⁹ Parents are urged to protect their daughters against cervical cancer by ensuring they receive the vaccine currently being administered to school students.

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Table 1. HPV uptake data among girls in the routine cohort in the academic year 2015/2016 (data extracted from the School Immunisation System 24/01/2017)

| Community Healthcare Organisation (CHO) | Local Health Office/ CHO Total | First Year girls in second level and age equivalent* in special schools, home schooled and out of school | | | | Outside Cohort | | | |
|---|--------------------------------|--|--------------------------|------------------|--------------------|------------------|-------------|--------------------------|------------------|
| | | Denominator | Numbers Vaccinated with: | | % Vaccinated with: | | Denominator | Numbers Vaccinated with: | |
| | | | At least Stage 1 | At least Stage 2 | At least Stage 1 | At least Stage 2 | | At least Stage 1 | At least Stage 2 |
| | | | | | | | | | |
| CHO1 | Cavan/Monaghan | 876 | 683 | 620 | 78.0% | 70.8% | N/A | 1 | 1 |
| | Donegal | 1081 | 871 | 777 | 80.6% | 71.9% | N/A | 0 | 0 |
| | Sligo/Leitrim | 678 | 547 | 481 | 80.7% | 70.9% | N/A | 0 | 0 |
| | CHO1 Total | 2635 | 2101 | 1878 | 79.7% | 71.3% | N/A | 1 | 1 |
| CHO2 | Galway | 1745 | 1395 | 1271 | 79.9% | 72.8% | N/A | 4 | 4 |
| | Mayo | 918 | 695 | 623 | 75.7% | 67.9% | N/A | 2 | 1 |
| | Roscommon | 283 | 226 | 190 | 79.9% | 67.1% | N/A | 1 | 0 |
| | CHO2 Total | 2946 | 2316 | 2084 | 78.6% | 70.7% | N/A | 7 | 5 |
| CHO3 | Clare | 800 | 677 | 607 | 84.6% | 75.9% | N/A | 2 | 1 |
| | Limerick | 1026 | 857 | 759 | 83.5% | 74.0% | N/A | 0 | 0 |
| | Tipperary North/East Limerick | 967 | 810 | 717 | 83.8% | 74.1% | N/A | 1 | 1 |
| | CHO3 Total | 2793 | 2344 | 2083 | 83.9% | 74.6% | N/A | 3 | 2 |
| CHO4 | North Cork | 610 | 460 | 380 | 75.4% | 62.3% | N/A | 0 | 0 |
| | North Lee - Cork | 1267 | 1056 | 914 | 83.3% | 72.1% | N/A | 0 | 0 |
| | South Lee - Cork | 1238 | 1007 | 852 | 81.3% | 68.8% | N/A | 1 | 1 |
| | West Cork | 359 | 257 | 216 | 71.6% | 60.2% | N/A | 0 | 0 |
| | Kerry | 963 | 742 | 581 | 77.1% | 60.3% | N/A | 0 | 0 |
| | CHO4 Total | 4437 | 3522 | 2943 | 79.4% | 66.3% | N/A | 1 | 1 |
| CHO5 | Carlow/Kilkenny | 1073 | 945 | 865 | 88.1% | 80.6% | N/A | 0 | 0 |
| | Tipperary South | 550 | 452 | 395 | 82.2% | 71.8% | N/A | 2 | 0 |
| | Waterford | 829 | 704 | 646 | 84.9% | 77.9% | N/A | 0 | 0 |
| | Wexford | 1094 | 884 | 724 | 80.8% | 66.2% | N/A | 0 | 0 |
| | CHO5 Total | 3546 | 2985 | 2630 | 84.2% | 74.2% | N/A | 2 | 0 |
| CHO6 | Dublin South | 886 | 736 | 664 | 83.1% | 74.9% | N/A | 8 | 1 |
| | Dublin South East | 638 | 546 | 518 | 85.6% | 81.2% | N/A | 1 | 1 |
| | Wicklow | 756 | 625 | 557 | 82.7% | 73.7% | N/A | 0 | 0 |
| | CHO6 Total | 2280 | 1907 | 1739 | 83.6% | 76.3% | N/A | 9 | 2 |
| CHO7 | Dublin South City | 753 | 695 | 621 | 92.3% | 82.5% | N/A | 0 | 0 |
| | Dublin South West | 798 | 666 | 590 | 83.5% | 73.9% | N/A | 1 | 1 |
| | Dublin West | 1093 | 917 | 777 | 83.9% | 71.1% | N/A | 1 | 1 |
| | Kildare/West Wicklow | 1747 | 1584 | 1418 | 90.7% | 81.2% | N/A | 0 | 0 |
| | CHO7 Total | 4391 | 3862 | 3406 | 88.0% | 77.6% | N/A | 2 | 2 |
| CHO8 | Laois/Offaly | 1126 | 996 | 862 | 88.5% | 76.6% | N/A | 2 | 2 |
| | Longford/Westmeath | 1098 | 899 | 762 | 81.9% | 69.4% | N/A | 0 | 0 |
| | Louth | 992 | 913 | 828 | 92.0% | 83.5% | N/A | 2 | 0 |
| | Meath | 1397 | 1090 | 968 | 78.0% | 69.3% | N/A | 4 | 4 |
| | CHO8 Total | 4613 | 3898 | 3420 | 84.5% | 74.1% | N/A | 8 | 6 |
| CHO9 | Dublin North West | 1421 | 1147 | 987 | 80.7% | 69.5% | N/A | 4 | 3 |
| | Dublin North Central | 677 | 539 | 474 | 79.6% | 70.0% | N/A | 0 | 0 |
| | Dublin North | 1615 | 1262 | 1076 | 78.1% | 66.6% | N/A | 4 | 2 |
| | CHO9 Total | 3713 | 2948 | 2537 | 79.4% | 68.3% | N/A | 8 | 5 |
| Home Schooled | 51 | 1 | 1 | 2.0% | 2.0% | N/A | 1 | 0 | |
| Total of LHOs and Home Schooled | 31405 | 25884 | 22721 | 82.4% | 72.3% | N/A | 42 | 24 | |
| Out of School | N/A | 0 | 0 | N/A | N/A | N/A | 2 | 2 | |
| Total of LHOs and Home Schooled and Out of School | N/A | 25884 | 22721 | N/A | N/A | N/A | 44 | 26 | |

*Age equivalents are those born between 01/09/2003 and 31/08/2004.

Outside cohort refers to those who were vaccinated but who were outside the routine cohort for vaccination.

Local health office (LHO) refers to the LHO of the school. Therefore, in reports the LHOs of homeschooled and out of school children do not appear.

The denominator for second level schools was defined as the number of children on the school roll on 30th September 2015 for first year. The denominator for age equivalent to first years in second level schools was defined as children born between 01/09/2003 and 31/08/2004 on the school roll of special schools or registered with the National Educational Welfare Board on 30th September 2015. All the denominator data was entered onto the School Immunisation System by the relevant System Administrator.

'At least stage 1' means a girl had a stage 1 recorded on the database, this girl may or may not have had a stage 2 recorded. Similarly, 'at least stage 2' means a girl had a stage 2 recorded on the database, they may or may not have had stage 1 recorded.

N/A-Not applicable

Home schooled refers to children registered with the National Educational Welfare Board to be educated at home. These children were recorded on the School Immunisation System and reported here as home schooled.

Out of school refers to vaccinated children who were neither enrolled in a second level school, special school nor registered with the National Educational Welfare Board as home schooled.

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