

## HPV vaccine uptake in Ireland: 2014/2015

### 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 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 in 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 9<sup>th</sup> August 2016, in the academic year 2014/2015 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 2014/2015

The cohort for the 2014/2015 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 equivalents** i.e. those who were born between 01/09/2002 and 31/08/2003
  - attending special schools or
  - registered with the National Educational Welfare Board to be home schooled.

## Definitions 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 equivalents in non-second level schools.

The **denominator** for girls in second level schools was defined as the number of girls on the school roll on 30<sup>th</sup> September 2014 for first year.

The **denominator** for age equivalent to first years in second level schools was defined as girls born between 01/09/2002 and 31/08/2003 on the school roll of special schools or registered with the National Educational Welfare Board on 30<sup>th</sup> September 2014.

All the denominator data was entered on the immunisation database by the relevant System Administrator.

## Summary

For the 2014-2015 academic year

- National uptake of at least HPV stage 2 was 86.9%
- There was some regional variation with uptake among the Community Healthcare Organisations ranging from 77.4% to 90.8%

## Results

### Ireland

#### Academic Year 2014/2015

The figures presented in this summary are based on data recorded on the immunisation system on the 9<sup>th</sup> August 2016. These figures are subject to change due to ongoing updating of data on the database.

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

In Ireland, 86.9% of girls in second level schools and their 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). Data are not directly comparable with previous academic years. In previous years 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.<sup>1</sup> Among the nine Community Healthcare Organisations (CHOs), in the academic year 2014/2015, uptake of at least HPV stage 2 among girls in second level schools and their equivalents in special schools and home schooled ranged from 77.4% to 90.8%; with eight reaching the target of  $\geq 80\%$  uptake. While among the 32 Local Health Offices (LHOs) uptake of at least HPV stage 2 ranged from 75.1% to 96.9%; with 30 reaching the target of  $\geq 80\%$  uptake.

An additional 271 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 55,121 administered vaccine doses were recorded in the academic year 2014/2015.

## **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***

#### ***Girls aged 12-13 years of age***

Across the UK there was variation in the delivery of the two-dose schedule in 2014/2015.<sup>2</sup> In Northern Ireland, in the 2014/2015 school year, coverage of one dose among girls by end of year 9 (12-13 year olds) was 91.9% and two doses was 86.8%.<sup>3</sup>

In 2014/2015, 11 of the 14 NHS Boards in Scotland offered girls, in first year of secondary school (S1) i.e. aged around 11-12 years, one dose of HPV vaccine and uptake by the end of the school year was 89.0%.<sup>4</sup> In 2014/2015, all NHS Boards in Scotland offered girls, in second year of secondary school (S2) i.e. aged around 12 to 13 years, the first dose of HPV vaccine and uptake by the end of the school year was 91.4%.<sup>4</sup> In seven Boards and part of Fife (West Fife) girls in S2 were also offered the second dose of vaccine during the school year.<sup>4</sup> Uptake of the second dose by the end of the school year was 82.7%.<sup>4</sup>

In England, HPV immunisation coverage in the routine cohort of school year 8 girls (12- to 13-year-olds) for the first dose was 89.4% in 2014/2015.<sup>2</sup> Of 152 local authorities in England, all offered the first dose to the eligible cohort in the school year, and 86 offered both doses in the school year.<sup>2</sup> Other local authorities will offer the second dose in the 2015/2016 school year.<sup>2</sup> Therefore coverage of the completed course for the 2014/2015 school year 8 cohort at national level will not be available until autumn 2016.<sup>2</sup>

In Wales, coverage of the first dose of the new two dose HPV vaccination course, in girls at the end of the 2014-2015 school year 8 (reaching their 13<sup>th</sup> birthday between 01/09/2014 and 31/08/2015) was 87%.<sup>5</sup> Uptake of the second and final HPV dose in this group of girls will be reported over the next year.<sup>5</sup>

### ***Australia***

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

### ***United States***

In the United States, for girls aged 13-17 years, coverage with at least one dose of HPV vaccine was 60.0% in 2014.<sup>7</sup>

## **Conclusions**

The uptake of HPV vaccine in Ireland is very good, meets the national target and reflects the high acceptance among girls and parents and huge effort and support put in by all staff and schools involved in the school vaccination programme. It is particularly encouraging to see the very high retention of girls within the programme once they commence vaccination.

## **Acknowledgements**

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Table 1. HPV uptake data among girls in the routine cohort in the academic year 2014/2015 (data extracted from the School Immunisation System 09/08/2016)

Community Healthcare Organisation (CHO)	Local Health Office/ CHO Total	2014 - 2015							
		First Year girls in second level and 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	884	752	739	85.1%	83.6%	N/A	1	1
	Donegal	1148	1055	1042	91.9%	90.8%	N/A	3	3
	Sligo/Leitrim	639	573	557	89.7%	87.2%	N/A	0	0
	CHO1 Total	2671	2380	2338	89.1%	87.5%	N/A	4	4
CHO2	Galway	1454	1468	1409	101.0%	96.9%	N/A	3	3
	Mayo	890	749	732	84.2%	82.2%	N/A	47	45
	Roscommon	316	280	274	88.6%	86.7%	N/A	2	2
	CHO2 Total	2660	2497	2415	93.9%	90.8%	N/A	52	50
CHO3	Clare	784	701	690	89.4%	88.0%	N/A	3	3
	Limerick	917	834	795	90.9%	86.7%	N/A	1	1
	Tipperary North/East Limerick	1007	924	893	91.8%	88.7%	N/A	2	2
	CHO3 Total	2708	2459	2378	90.8%	87.8%	N/A	6	6
CHO4	North Cork	607	545	530	89.8%	87.3%	N/A	4	4
	North Lee - Cork	1193	1091	1060	91.5%	88.9%	N/A	3	2
	South Lee - Cork	1304	1139	1119	87.3%	85.8%	N/A	1	1
	West Cork	363	303	297	83.5%	81.8%	N/A	1	1
	Kerry	944	815	765	86.3%	81.0%	N/A	1	1
	CHO4 Total	4411	3893	3771	88.3%	85.5%	N/A	10	9
CHO5	Carlow/Kilkenny	1049	968	948	92.3%	90.4%	N/A	7	7
	Tipperary South	566	525	515	92.8%	91.0%	N/A	13	9
	Waterford	853	803	793	94.1%	93.0%	N/A	0	0
	Wexford	1076	972	948	90.3%	88.1%	N/A	1	1
	CHO5 Total	3544	3268	3204	92.2%	90.4%	N/A	21	17
CHO6	Dublin South	928	844	834	90.9%	89.9%	N/A	12	7
	Dublin South East	701	594	584	84.7%	83.3%	N/A	4	4
	Wicklow	743	667	640	89.8%	86.1%	N/A	2	1
	CHO6 Total	2372	2105	2058	88.7%	86.8%	N/A	18	12
CHO7	Dublin South City	821	754	707	91.8%	86.1%	N/A	0	0
	Dublin South West	824	711	694	86.3%	84.2%	N/A	0	0
	Dublin West	1075	960	885	89.3%	82.3%	N/A	2	1
	Kildare/West Wicklow	1645	1604	1577	97.5%	95.9%	N/A	4	3
	CHO7 Total	4365	4029	3863	92.3%	88.5%	N/A	6	4
CHO8	Laois/Offaly	1051	978	952	93.1%	90.6%	N/A	0	0
	Longford/Westmeath	1128	1011	985	89.6%	87.3%	N/A	5	5
	Louth	1002	882	860	88.0%	85.8%	N/A	2	2
	Meath	1266	1197	1161	94.5%	91.7%	N/A	5	4
	CHO8 Total	4447	4068	3958	91.5%	89.0%	N/A	12	11
CHO9	Dublin North West	1350	1096	1014	81.2%	75.1%	N/A	3	3
	Dublin North Central	749	631	626	84.2%	83.6%	N/A	1	1
	Dublin North	1526	1233	1167	80.8%	76.5%	N/A	155	154
	CHO9 Total	3625	2960	2807	81.7%	77.4%	N/A	159	158
Home Schooled		35	9	7	25.7%	20.0%	N/A	0	0
Total of LHOs and Home Schooled		30838	27668	26799	89.7%	86.9%	N/A	288	271
Out of School		N/A	1	1	N/A	N/A	N/A	0	0
Total of LHOs and Home Schooled and Out of School		N/A	27669	26800	N/A	N/A	N/A	288	271

Local health office (LHO) refers to the LHO of the school.

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

\*\*Please see Background section of document for details of cohorts recommended HPV vaccine during the academic year 2014/2015.

## References

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