

HPV vaccine uptake in Ireland: 2012/2013

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 (see below for cohort details) was added in the academic year 2011/2012, this catch-up campaign continued during the academic year 2012/2013.

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 three vaccine doses given over a six month period was recommended in the academic year 2012/2013. 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 www.immunisation.ie for detailed and current information on the HPV school vaccination programme.

The target for uptake of three doses of vaccine for the routine HPV vaccination programme is >80% and the target for the catch-up programme is >60% uptake.

HPV vaccinations provided through the schools immunisation programme are entered onto a database. Here we report on the uptake of HPV vaccine, provided through the school immunisation programme and recorded on the database, in the academic year 2012/2013 in Ireland.

Cohort for vaccination in the academic year 2012/2013

The routine and catch-up cohorts for the 2012/2013 HPV vaccination programme as agreed with the Department of Education and Skills was as follows:

Routine HPV Vaccination programme

- All girls in **first year of second level schools**
- **and their equivalents** i.e. those who were born between 01/09/2000 and 31/08/2001
 - attending special schools or
 - registered with the National Educational Welfare Board to be home schooled.

Catch up HPV Vaccination Programme

- All girls in **sixth year of second level schools**
- **and their equivalents** i.e. those who were born between 01/09/1994 and 31/08/1995 and
 - attending special schools or
 - registered with the National Educational Welfare Board to be home schooled or
 - attending Youthreach and Community Training Centres funded by the Department of Education and Skills.

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 or a stage 3 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 or a stage 3 HPV vaccine recorded on the database.

"**at least stage 3**" means a girl had a stage 3 HPV vaccine recorded on the database, she may or may not have had a stage 1 or a stage 2 HPV vaccine recorded on the database.

Girls with at least stage 3 are 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, Youthreach or Community Training Centre 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 or sixth year of second level schools or their equivalents.

The **denominator** for girls in second level schools was defined as the number of girls on the school roll on 30th September 2012 for first year in the routine programme and for sixth year in the catch-up programme.

The **denominator** for age equivalent to first years in second level schools in the routine programme was defined as girls born between 01/09/2000 and 31/08/2001 on the school roll of special schools or registered with the National Educational Welfare Board on 30th September 2012.

The **denominator** for age equivalent to sixth years in second level schools in the catch-up programme was defined as girls born between 01/09/1994 and 31/08/1995 on the school roll of special schools or registered with the National Educational Welfare Board or attending Community Training Centres or Youthreach on 30th September 2012.

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

Results

Ireland

Academic Year 2012/2013

The figures presented in this summary are based on data recorded on the immunisation system on the 25th June 2014. These figures are provisional and subject to change due to ongoing updating of data on the database.

First year girls in second level schools

In Ireland, 84.2% of girls in first year in second level schools were recorded as having received at least HPV stage 3 (considered to have completed a three dose course) (Table 1). This is a decline of 1.3% compared to the academic year 2011/2012 when 85.5% of girls in first year in second level schools were recorded as having received at least HPV stage 3.¹ Among the 32 Local Health Offices (LHOs), in the academic year 2012/2013, uptake of at least HPV stage 3 ranged from 58.4% to 96.0%; with four recording $\geq 90.0\%$ uptake and four recording $< 80.0\%$ uptake.

Sixth year girls in second level schools

In Ireland, 67.4% of girls in sixth year in second level schools were recorded as having at least HPV stage 3 (Table 2). This is a decline of 4.1% compared to the academic year 2011/2012 when 71.5% of girls in sixth year in second level schools were recorded as having received at least HPV stage 3.¹ Among the 32 LHOs, in the academic year 2012/2013, uptake of HPV stage 3 ranged from 48.7% to 81.0%; with one recording $\geq 80.0\%$ uptake and seven recording $< 60.0\%$ uptake.

Some girls in the catch-up cohort were vaccinated privately by General Practitioners or other medical agencies following the licensing of HPV vaccines in 2006/2007 and prior to the announcement in early 2011 that there would be a HPV catch-up programme. These vaccinated girls would be included in the denominator data but not in the numbers vaccinated as they were not vaccinated as part of the school programme. Some LHOs have highlighted this issue: Donegal, Dublin North Central, Limerick, Louth, North Tipperary/East Limerick, Tipperary South and Wexford.

First and Sixth year second level equivalent cohorts in non-second level schools/Outside cohort/Out of school

An additional 444 girls were recorded as having received at least HPV stage 3 (Table 3); of these 286 were recorded in the first year routine and sixth year catch up age equivalent cohorts in special schools, Youthreach, Community Training Centres, home schooled or out of school and 158 were recorded as being outside the cohorts recommended for vaccination.

The target cohort of girls in special schools, Community Training Centres, Youthreach, and Home Schooled were identified by birth cohort either equivalent to first years (born between 01/09/2000 and 31/08/2001) or equivalent to sixth years (born between 01/09/1994 and 31/08/1995). For operational reasons HSE vaccinating staff did not adhere strictly to these birth cohorts. Many of the vaccinations in these school settings were actually "outside cohort". The identification of denominator data for the target birth cohorts in these settings was difficult and staff focused on vaccinations rather than defining cohort numbers accurately. Therefore, this report gives the number of girls vaccinated in these settings reflecting activity in these settings rather than HPV vaccine uptake.

Total doses administered

A total of 132,925 administered vaccine doses were recorded in the academic year 2012/2013. This compares to 139,646 administered vaccine doses recorded in 2011/2012.

Academic Years 2009/2010 and 2010/2011

Uptake for 2009/2010 and 2010/2011 cohorts of first year girls vaccinated from May 2010 was measured by manual reports and national uptake for the combined cohort was estimated at 81.9%.²

International comparison

Uptake of HPV vaccine in Ireland compares very favourably with estimates in other countries that have introduced and monitored HPV vaccination.^{3,4,5,6,7,8,9,10}

United Kingdom

Girls aged 12-13 years of age

In England, 2012/2013 HPV coverage data of the third dose for the routine cohort of school year 8 girls (12- to 13-year-olds) at 31 August 2013 was 86.1%.³

In Scotland, 82.0% of girls in second year of secondary school (S2) i.e. aged around 12 to 13 years in school year 2012/13 had completed the three dose course of HPV immunisations by the end of the school year. Data for the first four years of the HPV immunisation programme show that a number of girls in S2 complete their immunisation course after the end of the school year in which they were first offered the vaccine. Therefore, the reported uptake rates for girls in S2 during school year 2012/13 are expected to increase, for the third dose in particular. Updated uptake rates for these girls 'one year later' will be published in September 2014.⁴

In Wales, coverage of HPV vaccination in 2012/2013 School Year 8 group (reaching their 13th birthday between 01/09/2012 and 31/08/2013) was 86.1% for three doses.⁵

In Northern Ireland, for the 2011/2012 routine cohort HPV immunisation uptake rates for all three doses reached 88.1%.⁴

Older girls

In England, HPV third dose coverage was 80.9% for those aged 13 to 14 years in the academic year 2010/2011, 84.4% for those aged 14 to 15 years in 2010/2011, 75.7% for those aged 15 to 16 years in 2010/2011, 70.8% for those aged 16 to 17 years in 2010/2011, and 48.1% for those aged 17 to 18 years in 2010/2011.⁶

In Scotland, a catch-up programme for girls aged 13-17 years ran over three years (September 2008 – August 2011). Vaccine uptake for those girls in the catch-up cohort and still attending school was comparable to uptake of the routine year, at overall 87% uptake of three doses for all school years. Vaccine uptake for three doses of vaccine for those girls who had left school was significantly lower at 32%. Overall, the uptake of three doses of vaccine for all girls eligible (both in and out of school) was 65% uptake of three doses of vaccine.⁷

Australia

In Australia, HPV three dose vaccination coverage for females turning 15 years of age in 2012 was 70.9%.⁸

Conclusions

The uptake of HPV vaccine in Ireland is very encouraging and reflects the 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. Uptake of HPV vaccine compares very favourably with estimates in other countries that have introduced HPV vaccination and monitored uptake.

Acknowledgements

Thank you to all HSE staff, Department of Education and Skills staff, staff in all educational settings, parents and girls, who implemented, participated in and supported the school HPV vaccination programme.

Table 1

Vaccine Type:		HPV						
Academic Year:		2012 - 2013						
Cohort:		First Year (routine HPV programme)**						
School Category:		Second Level School						
Date Report Run:		25/06/2014						
Uptake Statistics								
		2012 - 2013						
		First Year (routine HPV vaccination programme)**						
HSE Region	LHO/HSE Region	Denominator	Numbers Vaccinated with:			% Vaccinated with:		
			At least Stage 1	At least Stage 2	At least Stage 3	At least Stage 1	At least Stage 2	At least Stage 3
Dublin Mid Leinster	Dublin South	932	834	831	822	89.5%	89.2%	88.2%
	Dublin South East	597	519	518	517	86.9%	86.8%	86.6%
	Dublin South City	800	696	686	668	87.0%	85.8%	83.5%
	Dublin South West	758	687	678	660	90.6%	89.4%	87.1%
	Dublin West	947	812	806	761	85.7%	85.1%	80.4%
	Kildare/West Wicklow	1575	1387	1383	1361	88.1%	87.8%	86.4%
	Wicklow	724	646	640	635	89.2%	88.4%	87.7%
	Laois/Offaly	942	849	844	839	90.1%	89.6%	89.1%
	Longford/Westmeath	1049	925	919	896	88.2%	87.6%	85.4%
	Total Dublin Mid Leinster	8324	7355	7305	7159	88.4%	87.8%	86.0%
Dublin North East	Dublin North	1479	1355	1342	1292	91.6%	90.7%	87.4%
	Dublin North Central	651	558	552	532	85.7%	84.8%	81.7%
	Dublin North West	1331	969	956	912	72.8%	71.8%	68.5%
	Cavan/Monaghan	892	542	535	521	60.8%	60.0%	58.4%
	Louth	1019	871	861	842	85.5%	84.5%	82.6%
	Meath	1252	1091	1082	1058	87.1%	86.4%	84.5%
	Total Dublin North East	6624	5386	5328	5157	81.3%	80.4%	77.9%
South	North Cork	610	536	530	525	87.9%	86.9%	86.1%
	North Lee - Cork	1157	1028	1023	941	88.9%	88.4%	81.3%
	South Lee - Cork	1122	975	962	940	86.9%	85.7%	83.8%
	West Cork	357	282	282	278	79.0%	79.0%	77.9%
	Kerry	930	833	826	804	89.6%	88.8%	86.5%
	Carlow/Kilkenny	973	910	896	862	93.5%	92.1%	88.6%
	Tipperary South	582	553	550	529	95.0%	94.5%	90.9%
	Waterford	756	732	729	723	96.8%	96.4%	95.6%
	Wexford	1122	951	946	922	84.8%	84.3%	82.2%
	Total South	7609	6800	6744	6524	89.4%	88.6%	85.7%
West	Donegal	1152	1018	1012	1004	88.4%	87.8%	87.2%
	Sligo/Leitrim	628	559	557	551	89.0%	88.7%	87.7%
	Galway	1659	1341	1328	1297	80.8%	80.0%	78.2%
	Mayo	848	764	759	754	90.1%	89.5%	88.9%
	Roscommon	300	292	290	288	97.3%	96.7%	96.0%
	Clare	765	697	691	680	91.1%	90.3%	88.9%
	Limerick	912	818	809	789	89.7%	88.7%	86.5%
	Tipperary North/East	990	910	904	893	91.9%	91.3%	90.2%
	Total West	7254	6399	6350	6256	88.2%	87.5%	86.2%
Total		29811	25940	25727	25096	87.0%	86.3%	84.2%

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 or a stage 3 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 or a stage 3 recorded. Similarly, "at least stage 3" means a person had a stage 3 recorded on the database, they may or may not have had stage 1 or a stage 2 recorded.

**Please see Background section of document for details of cohorts recommended HPV vaccine during the academic year 2012/2013.

Table 2

Vaccine Type:		HPV						
Academic Year:		2012 - 2013						
Cohort		Sixth Year (catch up campaign)**						
School Category:		Second Level School						
Date Report Run:		25/06/2014						
Uptake Statistics								
		2012 - 2013						
		Sixth Year (catch up campaign)**						
HSE Region	LHO/HSE Region	Denominator	Numbers Vaccinated with:			% Vaccinated with:		
			At least Stage 1	At least Stage 2	At least Stage 3	At least Stage 1	At least Stage 2	At least Stage 3
Dublin Mid Leinster	Dublin South	837	526	519	505	62.8%	62.0%	60.3%
	Dublin South East	550	353	344	335	64.2%	62.5%	60.9%
	Dublin South City	843	604	593	557	71.6%	70.3%	66.1%
	Dublin South West	677	563	529	477	83.2%	78.1%	70.5%
	Dublin West	742	513	478	415	69.1%	64.4%	55.9%
	Kildare/West Wicklow	1271	1029	1016	975	81.0%	79.9%	76.7%
	Wicklow	572	474	472	450	82.9%	82.5%	78.7%
	Laois/Offaly	894	638	625	603	71.4%	69.9%	67.4%
	Longford/Westmeath	823	627	619	605	76.2%	75.2%	73.5%
	Total Dublin Mid Leinster	7209	5327	5195	4922	73.9%	72.1%	68.3%
Dublin North East	Dublin North	1180	684	660	605	58.0%	55.9%	51.3%
	Dublin North Central	668	438	427	389	65.6%	63.9%	58.2%
	Dublin North West	1071	755	718	642	70.5%	67.0%	59.9%
	Cavan/Monaghan	797	478	469	454	60.0%	58.8%	57.0%
	Louth	869	457	442	423	52.6%	50.9%	48.7%
	Meath	970	667	660	650	68.8%	68.0%	67.0%
Total Dublin North East	5555	3479	3376	3163	62.6%	60.8%	56.9%	
South	North Cork	464	371	363	348	80.0%	78.2%	75.0%
	North Lee - Cork	1075	817	803	774	76.0%	74.7%	72.0%
	South Lee - Cork	1031	762	752	710	73.9%	72.9%	68.9%
	West Cork	340	215	213	211	63.2%	62.6%	62.1%
	Kerry	923	733	715	689	79.4%	77.5%	74.6%
	Carlow/Kilkenny	815	649	637	599	79.6%	78.2%	73.5%
	Tipperary South	519	354	342	322	68.2%	65.9%	62.0%
	Waterford	703	551	546	539	78.4%	77.7%	76.7%
	Wexford	972	689	681	643	70.9%	70.1%	66.2%
	Total South	6842	5141	5052	4835	75.1%	73.8%	70.7%
West	Donegal	947	763	758	739	80.6%	80.0%	78.0%
	Sligo/Leitrim	526	438	433	426	83.3%	82.3%	81.0%
	Galway	1344	1113	1100	1046	82.8%	81.8%	77.8%
	Mayo	775	591	582	568	76.3%	75.1%	73.3%
	Roscommon	348	236	233	229	67.8%	67.0%	65.8%
	Clare	647	476	467	461	73.6%	72.2%	71.3%
	Limerick	921	659	637	606	71.6%	69.2%	65.8%
	Tipperary North/East	876	529	524	511	60.4%	59.8%	58.3%
	Total West	6384	4805	4734	4586	75.3%	74.2%	71.8%
Total	25990	18752	18357	17506	72.2%	70.6%	67.4%	

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 or a stage 3 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 or a stage 3 recorded. Similarly, "at least stage 3" means a person had a stage 3 recorded on the database, they may or may not have had stage 1 or a stage 2 recorded.

**Please see Background section of document for details of cohorts recommended HPV vaccine during the academic year 2012/2013.

Table 3

Vaccine Type:		HPV		
Academic Year:		2012 - 2013		
Cohort and School Category:		Recommended cohorts** for vaccination and those outside cohort in special schools, youthreach, community training centres, home schooled and out of school and those outside cohort in second level schools.		
Date Report Run:		25/06/2014		
Uptake Statistics				
HSE Region	LHO/HSE Region	Recommended cohorts** for vaccination and those outside cohort in special schools, youthreach, community training centres, home schooled and out of school and those outside cohort in second level schools with:		
		At least Stage 1	At least Stage 2	At least Stage 3
Dublin Mid Leinster	Dublin South	19	17	13
	Dublin South East	2	2	2
	Dublin South City	9	4	4
	Dublin South West	18	15	11
	Dublin West	18	16	16
	Kildare/West Wicklow	32	31	29
	Wicklow	10	9	8
	Laois/Offaly	10	9	8
	Longford/Westmeath	18	11	10
	Total Dublin Mid Leinster	136	114	101
Dublin North East	Dublin North	5	2	1
	Dublin North Central	23	15	6
	Dublin North West	31	30	29
	Cavan/Monaghan	1	1	1
	Louth	11	10	10
	Meath	20	19	14
Total Dublin North East	91	77	61	
South	North Cork	9	9	9
	North Lee - Cork	37	35	32
	South Lee - Cork	22	19	15
	West Cork	0	0	0
	Kerry	12	11	10
	Carlow/Kilkenny	39	36	31
	Tipperary South	12	12	12
	Waterford	34	29	26
	Wexford	35	30	24
	Total South	200	181	159
West	Donegal	15	14	13
	Sligo/Leitrim	7	6	6
	Galway	21	20	15
	Mayo	13	13	13
	Roscommon	6	6	4
	Clare	17	14	10
	Limerick	54	50	45
	Tipperary North/East Limerick	19	17	14
Total West	152	140	120	
Home Schooled		3	2	2
Total of LHOs and Home Schooled		582	514	443
Out of School		1	1	1
Total of LHOs and Home Schooled and Out of School		583	515	444

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.

"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 or a stage 3 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 or a stage 3 recorded.

Similarly, "at least stage 3" means a person had a stage 3 recorded on the database, they may or may not have had stage 1 or a stage 2 recorded.

"Outside cohort" refers to those who were vaccinated but who were not in first year or sixth year of second level schools or their equivalents.

** Please see Background section of document for details of cohorts recommended HPV vaccine during the academic year 2011/2012.

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