

The National Immunisation Schedule

Update and Current issues

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National Immunisation Office



www.immunisation.ie

Objectives

- To outline key issues in immunisation
 - Primary childhood immunisation programme
 - School immunisation programme



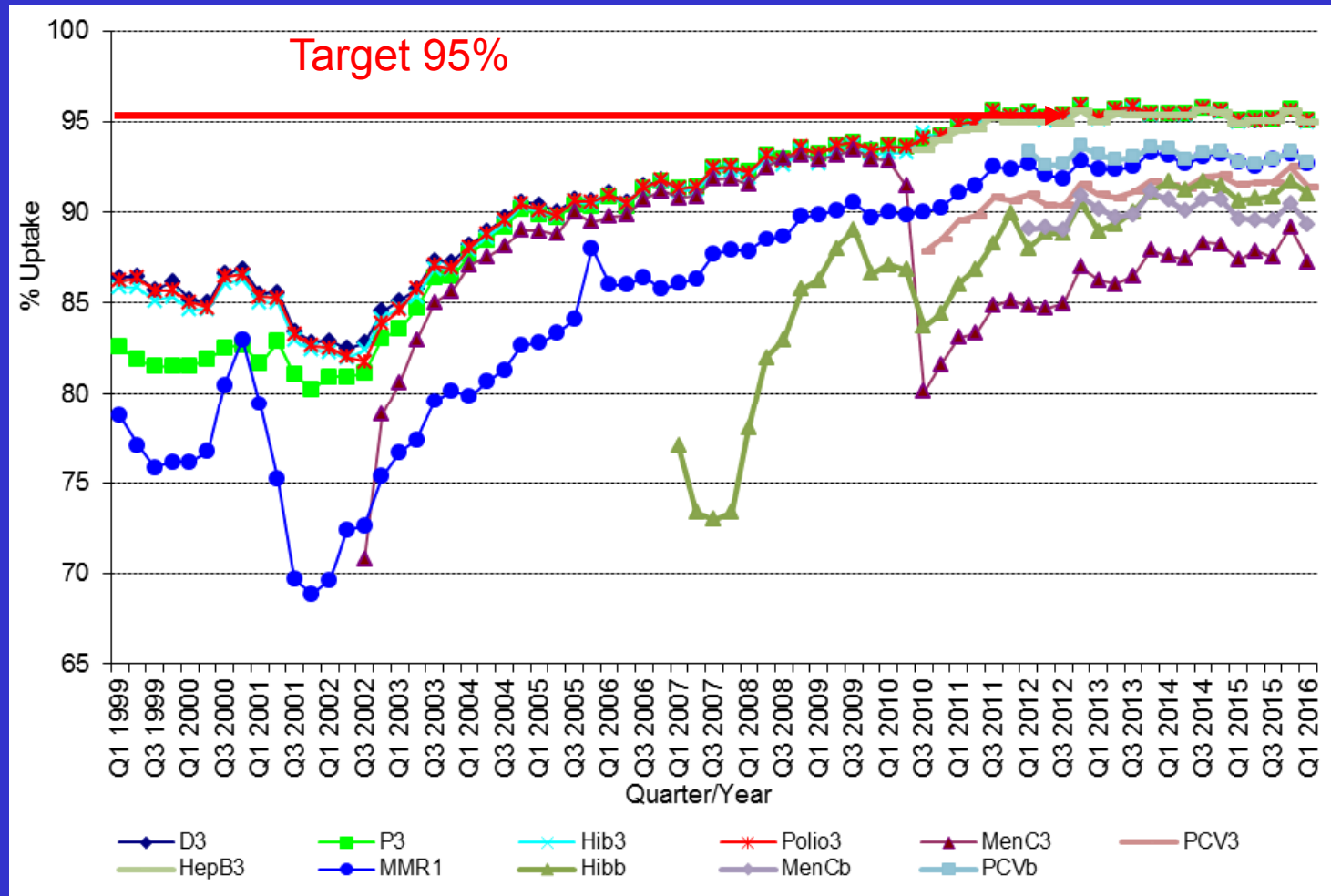
Dates vaccines introduced into the Irish immunisation schedule

1937 - 1999	
Vaccine	Date introduced
1. BCG	1937
2. DT	1930s
3. DTP	1952
4. Oral Polio Vaccine (OPV)	1957
5. Rubella	1971
6. Measles	1985
7. MMR	1988
8. MMR2	1992
9. Hib	1992

2000 - 2016	
Vaccine	Date introduced
1. Men C	2000
2. DTaP-Hib-IPV (5 in1)	2001
3. Inactivated Polio (IPV)	2001
4. Hib Booster	2006
5. Hepatitis B (as part of 6 in 1)	2008
6. PCV7	2008
7. HPV	2010
8. PCV13	2010
9. Tdap	2012
10. Men C (adolescent booster)	2014
11. Rotavirus	2016
12. Men B	2016



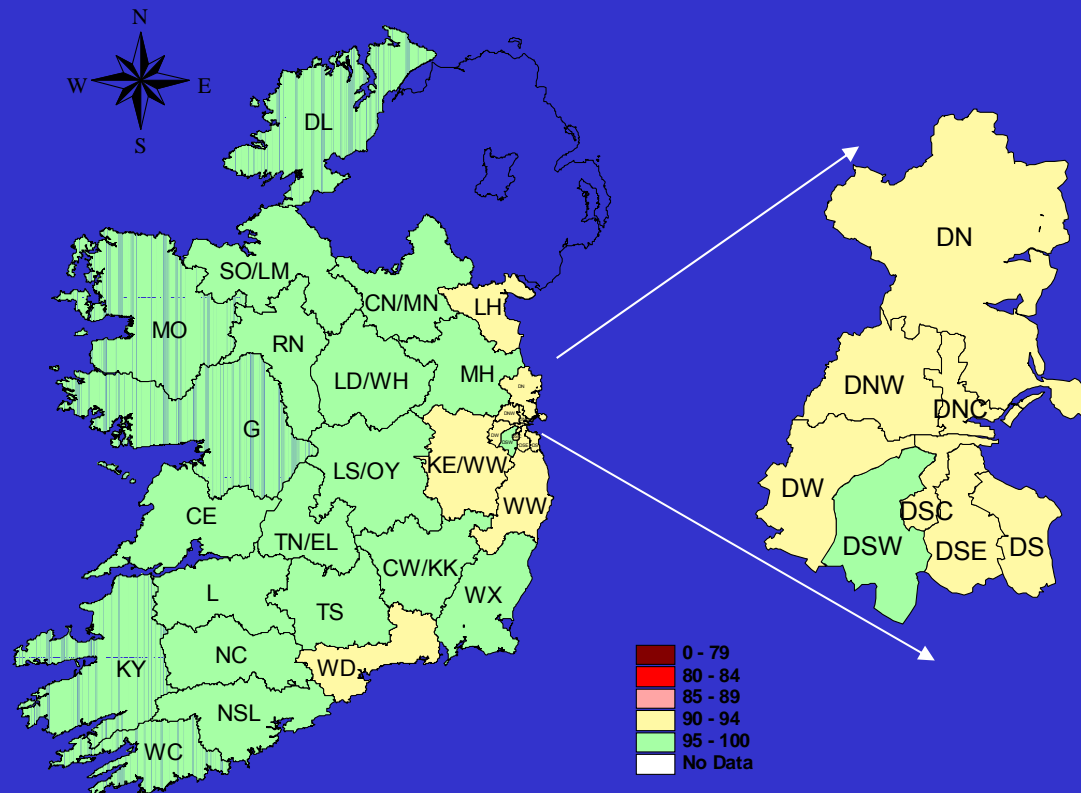
Vaccine uptake rate at 24 months 1999-2016



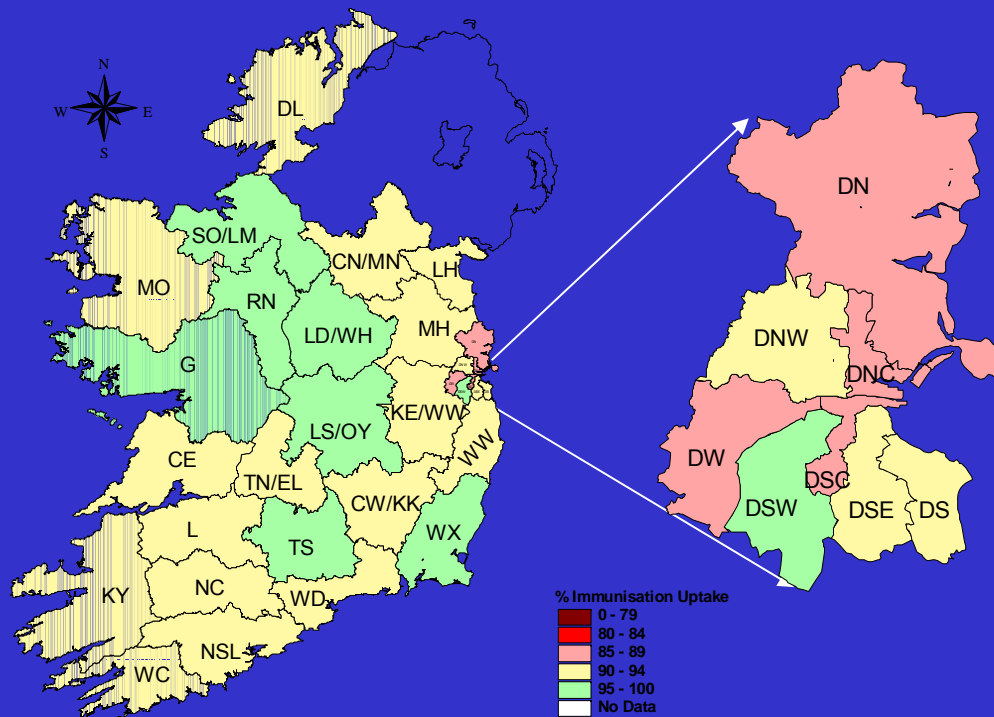
Source: HPSC



Quarter 1 2016 D3 immunisation uptake rates (%) by LHO, in those 24 months of age in Ireland and Dublin (source HPSC)



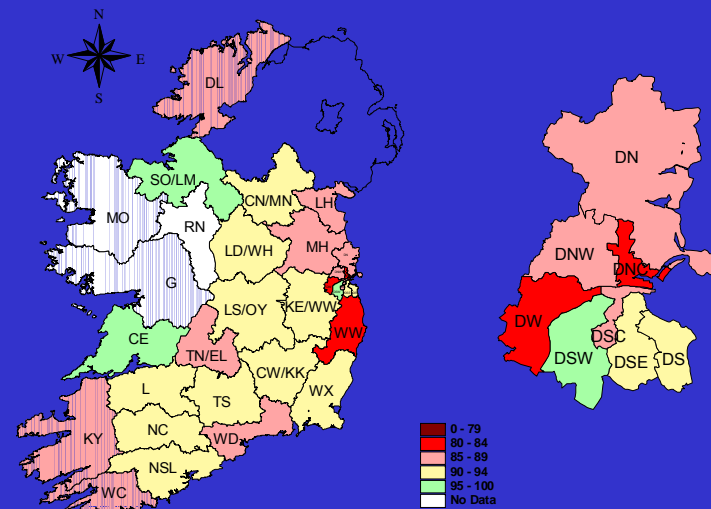
Quarter 1 2016 MMR immunisation uptake rates (%) by LHO, in those 24 months of age in Ireland and Dublin (source HPSC)



Decline in vaccine uptakes

MenC_b booster dose by LHO in those reaching 24 months Q1 2016

	Q1 2010	Q3 2010	Q1 2016
Men C ₃	93%	80%	89%
PCV ₃	-	88%	91%
Hib _b (booster dose)	89%	84%	91%



Source: HPSC



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Decline in vaccine uptakes

Actions

- Highlight 5 visits at every opportunity
- Give an appointment for next visit
- Send a text reminder before appointment
- Follow up defaulters as soon as possible
- Send vaccine returns on time
- Defaulters need appropriate vaccines even if they are over the recommended age

Immunisation Schedule
for children born on or after 1st July 2015

AGE	WHERE	VACCINATION
At birth	HSE clinic or maternity hospital	BCG 1 INJECTION
2 months	GP surgery Visit 1	6 in 1 + PCV 2 INJECTIONS
4 months	GP surgery Visit 2	6 in 1 + MenC 2 INJECTIONS
6 months	GP surgery Visit 3	6 in 1 + PCV 2 INJECTIONS
12 months	GP surgery Visit 4	MMR + PCV 2 INJECTIONS
13 months	GP surgery Visit 5	MenC + Hib 2 INJECTIONS

REMEMBER
Your child needs 5 GP visits. Bring your child's immunisation passport to each visit.
www.immunisation.ie

What common reactions can my child get after being vaccinated and what should I do?

Common reactions	What to do
Soreness, swelling and redness in the area where the injection was given	Give paracetamol or ibuprofen to relieve aches and pains. Make sure clothes are not too tight or rubbing against the area where the injection was given.
Fever (over 39.5°C)	Do not overdress your baby. Make sure their room isn't too hot. Give extra fluids to drink. Give paracetamol or ibuprofen to lower the fever.
Headache or irritability	Give paracetamol or ibuprofen to relieve aches and pains.

REMEMBER
Remember, if your child is very unwell after getting a vaccine, they may be sick for some other reason. If you are worried about your child, please contact your GP, practice nurse or public health nurse for further advice.
REMEMBER to bring your child's vaccine passport to each GP visit so that your child's vaccines are recorded and you have this information when they are older.

Remember, it takes 5 GP visits to fully vaccinate your baby.

2 months 4 months 6 months 12 months 13 months

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Primary school immunisation schedule 2016/2017

Age (years)	Vaccine
4 -5	Tdap/IPV MMR

Tdap/IPV low dose diphtheria
Tetanus
low dose pertussis
Polio
(IPV Boostrix)



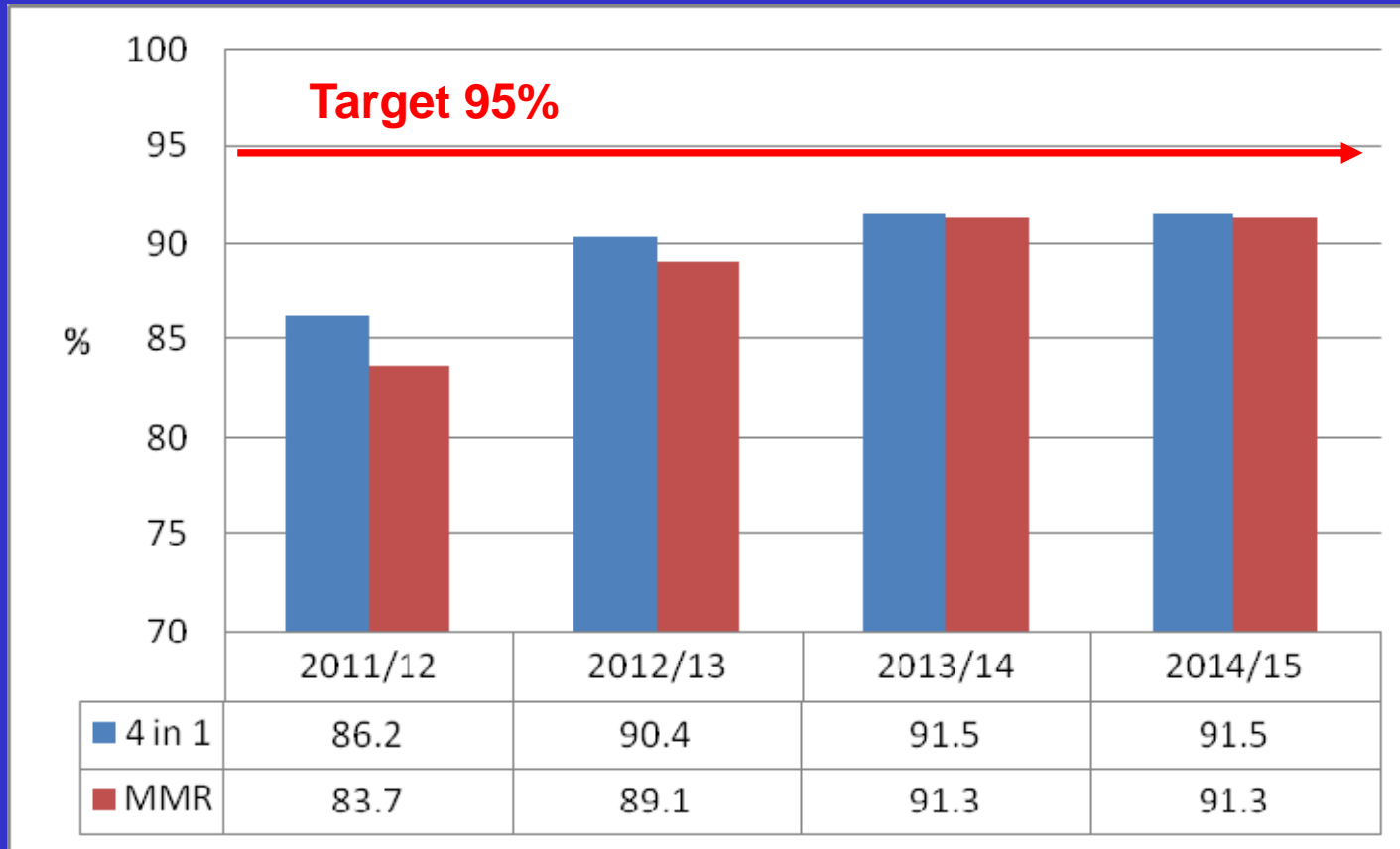
MMR Measles, mumps and rubella



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Primary school immunisation uptake 2011/12 - 2014/15



CHO 6 4in1 90.9% MMR 91.1%
 CHO 7 4in1 94.8% MMR 94.6%
 CHO 9 4in1 88.8% MMR 88.4%



Second level school immunisation schedule 2016/2017

Age (years)	Vaccine
12-13	Tdap MenC
12 – 13 (girls only)	HPV (2 dose schedule)

Tdap Tetanus, low dose diphtheria & pertussis
 MenC Meningococcal C vaccine
 HPV Human papillomavirus



Second level school vaccination programme

Name: _____
 Date: _____
 Time of vaccination: _____

Your child was given the following vaccines today

HPV Tdap MenC

Common reactions expected after these vaccines may include

- soreness, swelling and redness where the injection was given (this usually passes after a day or two)
- dizziness
- headache

Occasionally your child may feel sick or have a mild fever. On rare occasions some children may have an itchy rash or hives.

You can give your child paracetamol or ibuprofen to relieve aches and pains or to lower the fever. If you are concerned about your child please seek medical advice.

The school vaccination team can be contacted during office hours from Monday to Friday at _____

If you require medical advice after these hours please contact your family doctor.

Before the next vaccine, you should write to the vaccination team if there has been

- a serious reaction to these vaccines
- any change to your child's medical history or your consent

You will get a record of your child's vaccinations when they have all been completed. **Please keep this safe.**

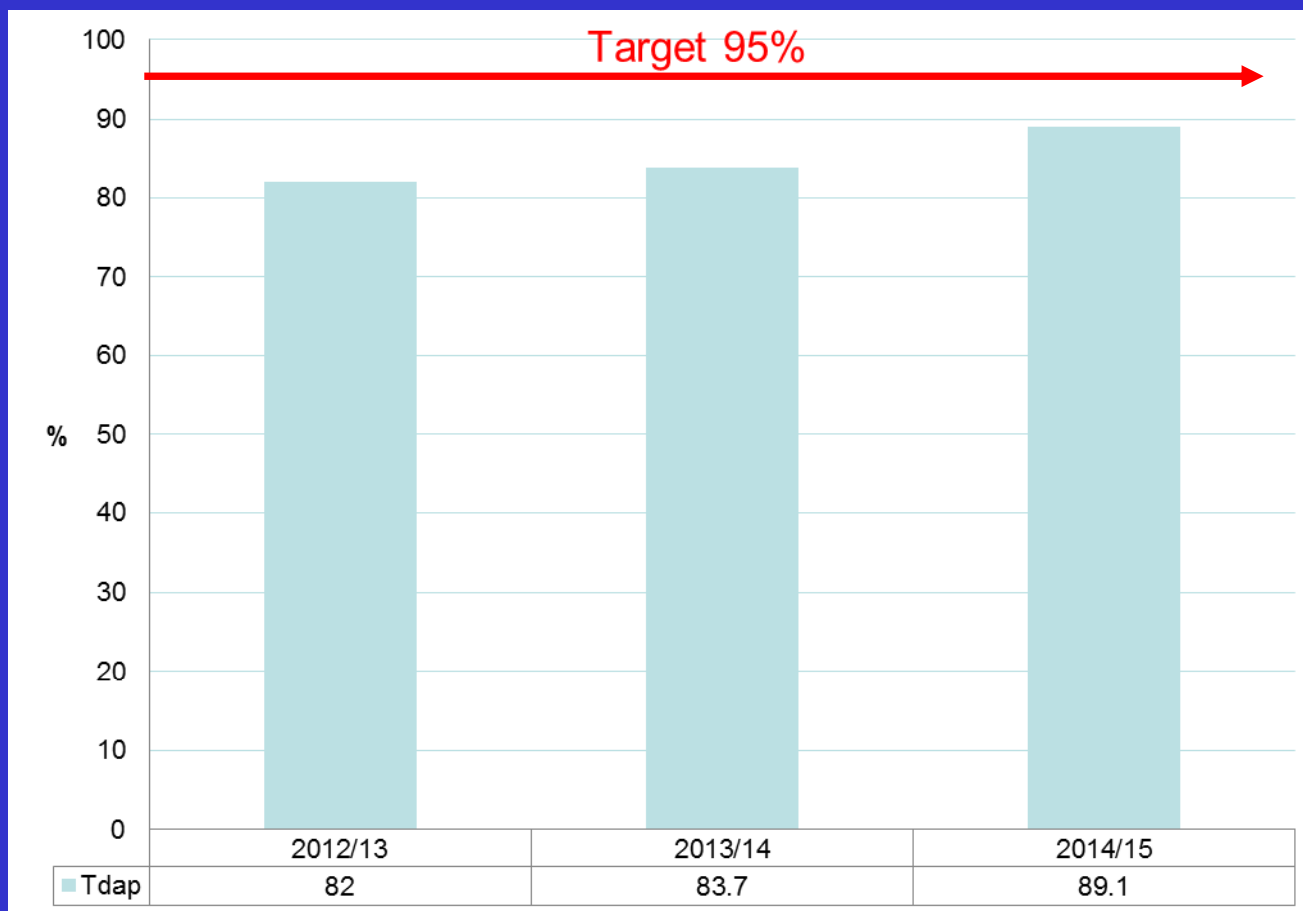
For more information see www.immunisation.ie



www.immunisation.ie



Second level school immunisation uptake Tdap



CHO6 89.0%
CHO7 91.6%
CHO9 79.2%

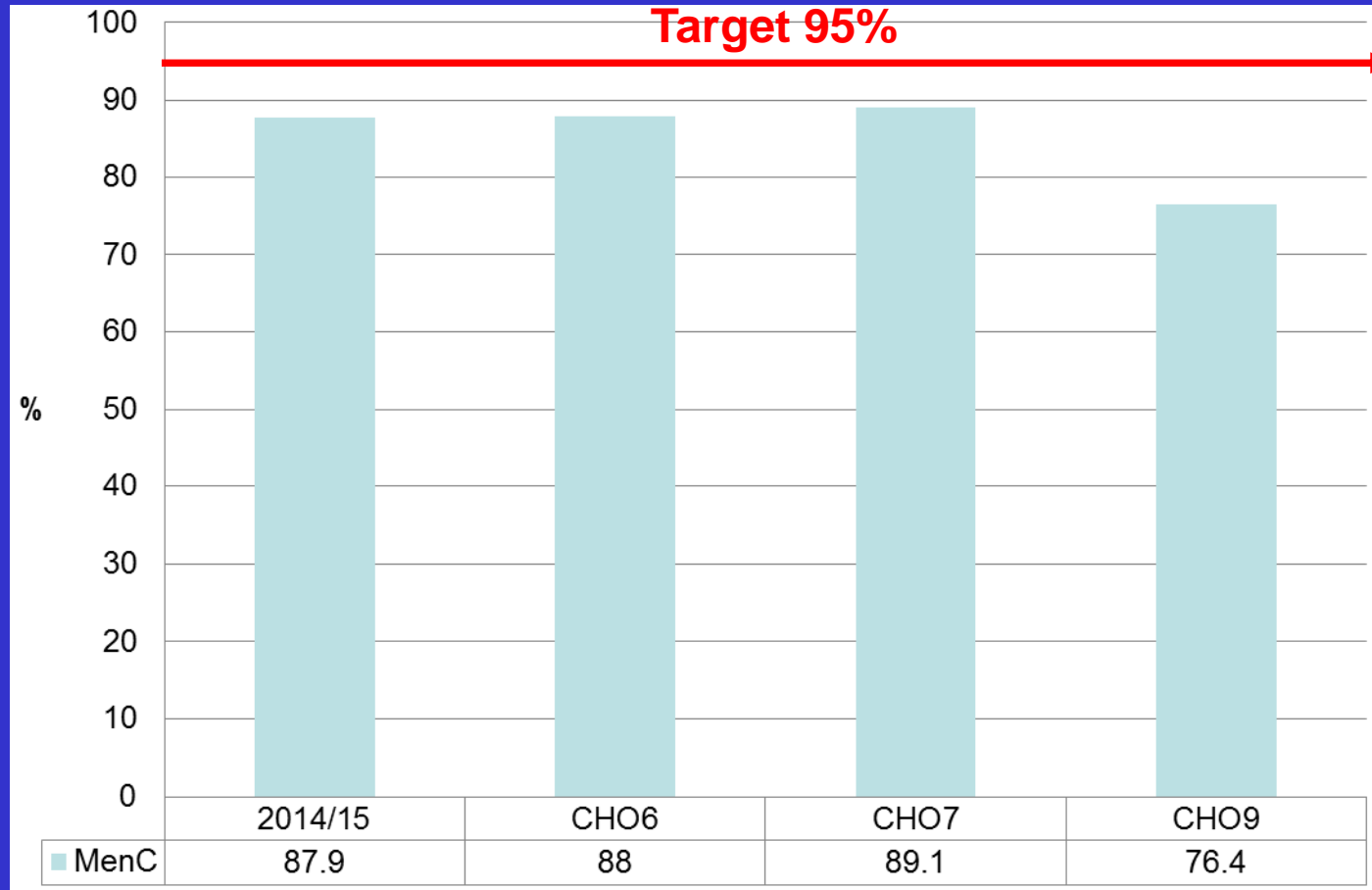


Adolescent MenC booster vaccine

- Peak rates in under 5 years and 15-19 years
- Concerns about waning immunity in adolescents
- Recent study
 - those vaccinated at <1 year, vaccine effectiveness decreased by 50% after 10 years
 - those vaccinated with one dose at 12–19 years showed no changes
 - vaccination at ≥ 12 years related to a low number of vaccine failures and a higher and longer protection over time
- MenACWY in UK since 2015/2016



Second level school immunisation uptake MenC



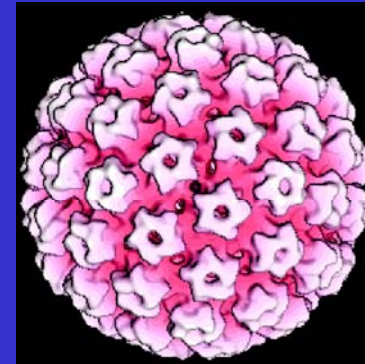
CHO6 89.0%
CHO7 91.6%
CHO9 79.2%



HPV vaccination programme

Gardasil (Sanofi Pasteur)

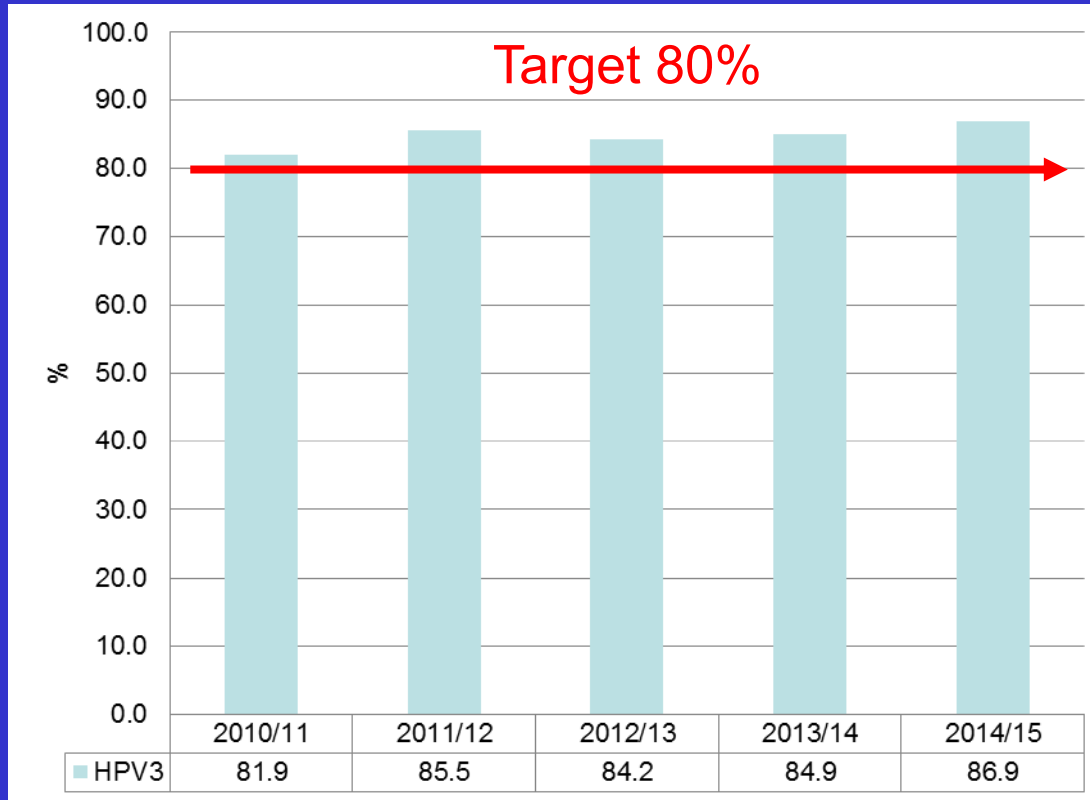
- protects against
 - HPV 16 and 18
(causes 70% cervical cancers)
- and
 - HPV 6 and 11
(causes 90% anogenital warts)



Computerised image of
the human papillomavirus
Courtesy of Dept of
Pathology, University of
Cambridge

HPV vaccine uptake 2010/2011 - 2014/2015

Routine programme First years



CHO6 86.8%

CHO7 88.5%

CHO9 77.4%

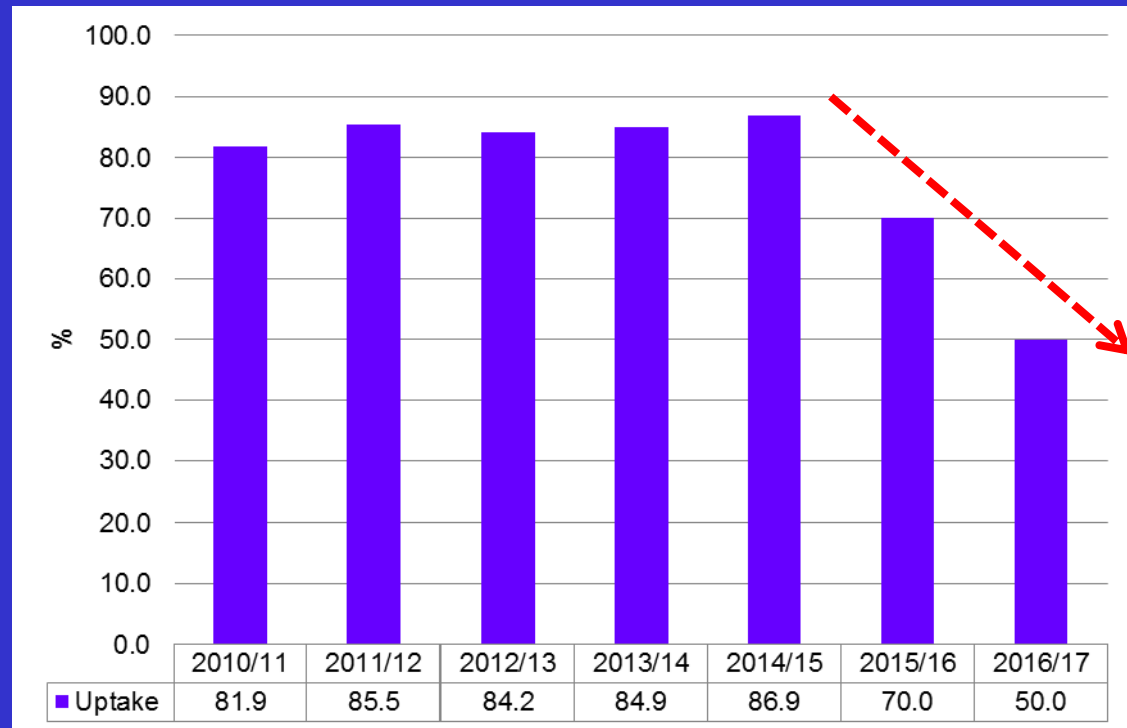
Highest uptake achieved in 2014/15

Excellent cohort retention

97% girls who started dose 1 completed dose 2



HPV vaccine uptake 2010/2011 - 2016/2017



5000 more girls
not vaccinated
in 2015/16

Concerns



**ARE HPV
VACCINES
SAFE?**

- Vaccine safety
- Vaccine safety
- Vaccine safety
- Vaccine causes serious side effects

- Lack of information
- Consent process too rushed
- Distrust in HSE – link to Pharma
- Anti-establishment agenda



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Reactions and Effects of Gardasil Resulting in Extreme Trauma

Home Background Victims Research Videos



R.E.G.R.E.T.

What needs to be done?

R.E.G.R.E.T.
Support Group
INAUGURAL MEETING,
SWORDS, 23/05/2015, 12 am.
PROPOSED STRUCTURE AND AGENDA.

12.00. INTRODUCTION.

AIMS OF THE GROUP:

- TO GET THE GIRLS HEALTH BACK
- TO CREATE AWARENESS AMONG OTHER PARENTS OF THE POTENTIAL FOR SERIOUS REACTIONS
- TO SUPPORT THE GIRLS IN THEIR EFFORTS TO CONTINUE THEIR EDUCATION

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KERRY PARENTS CONTINUE CAMPAIGN ON HPV VACCINE



'We won't back off!'

A GROUP OF Kerry parents have vowed to continue a campaign to raise awareness on what they believe are the adverse effects of the HPV vaccine - given to young girls to protect them from developing cervical cancer.

BY SINEAD KELLEHER

Aengus O'Leary from Castlemaine, have been raising concerns in a campaign since their

Aengus O'Leary (left) and Don Myers with the HPV Vaccine leaflet they have produced.

"We are not anti-vaccine parents. We merely are trying to circulate information on the HPV Vaccine which parents are entitled to. "We will not tell any parent to vaccinate their child

late any information that was not HSE related. Last Friday, they met with Dr Kevin Kelleher, the assistant national director for public health with the HSE. "We met him as concerned

Join us on Facebook: [For Information here](#)

A Public Service Message from REGRET

HPV vaccination - Do you know the full facts? [31/08/2016]

HPV vaccination for 12 year old girls - Make u...

Regret is an organisation of parents, just like you, who trusted what we were told

REGRET GoFundMe campaign

[29/06/2016] [REGRET GoFundMe campaign](#) begins to help Irish families trying to cope with post-HPVvaccine illness. Tel +353894582901 for info

REGRET and the Aftermath of the HPV Vaccin...

THE MEANING OF REGRET

Cervical Cancer Vaccine - Is it safe? (Irish TV3 Documentary)

Four Irish families tell their stories about what getting the HPV Vaccine Gardasil has meant for them. TV3 documentary aired on 14/12/2015.

Cervical Cancer Vaccine - Is it safe? (Part1)

REGRET @REGRET_ie

Swedish based WHO agency says more HPVvax study needed 'given the medical seriousness of this safety concern' @ghook link.springer.com/article/10.100...

REGRET Retweeted

George Hook @ghook

I refuse to be labelled a scaremonger because I dare ask questions about the safety of HPV vaccine

REGRET Retweeted

92.5 Phoenix FM @925PhoenixFM

Last up on D15 Today, we have Anna Cannon @REGRET_ie is on to talk about the HPV vaccination. #D15Today

REGRET Retweeted

George Hook @ghook

Embed View on Twitter

Events

STRIKE WARRIORS

REGRET

REGRET

HOSTED BY ANAEL CUMMINGS

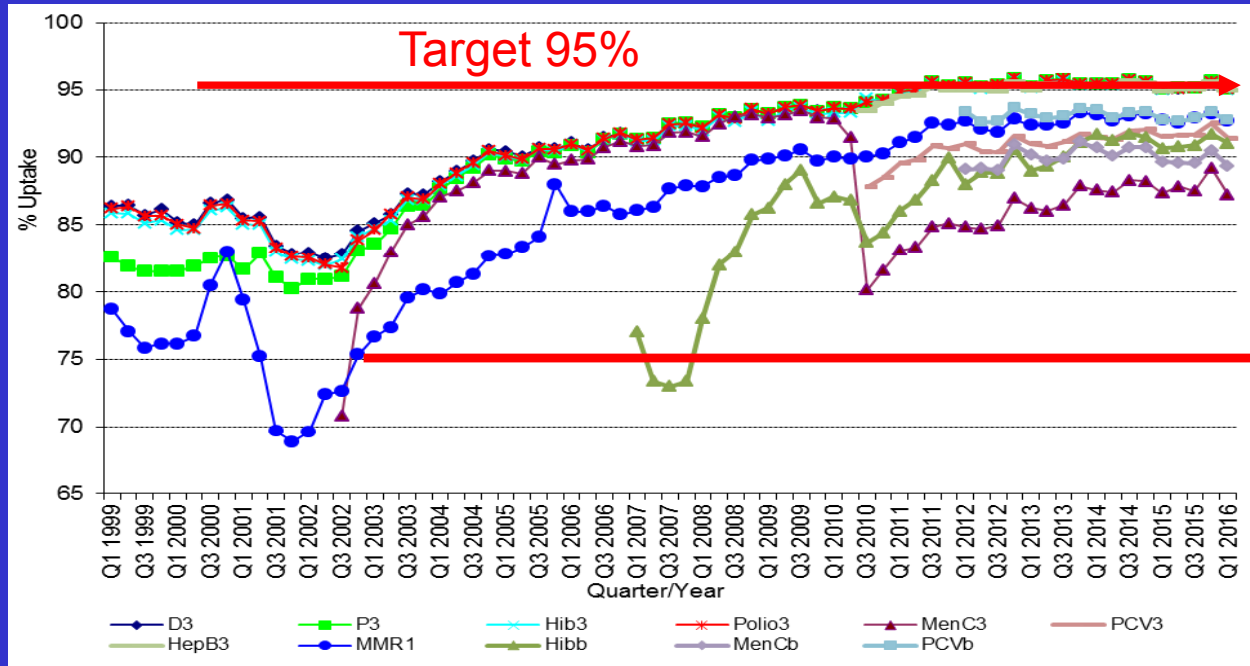
IN AID OF REGRET SUPPORT GROUP



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Vaccine uptake rate at 24 months 1999-2016



- 16 years
- Measles outbreaks
- Death and disability



Source: HPSC

Gardasil vaccine safety

- Over 200 million doses distributed worldwide
 - Used in over 25 European countries, the US, Canada, Australia and New Zealand
 - All international regulatory and expert bodies repeatedly review safety data
 - no serious adverse events
- e.g.
- World Health Organization
 - European Medicines Agency
 - Centers for Disease Control and Prevention



Gardasil vaccine safety

- The safety profile studied for over 13 years in more than 1 million people during clinical trials and since the vaccine was licensed in 2006
- No increase in the rates of any serious long term condition including autoimmune diseases and chronic fatigue syndrome in vaccinated girls

Gardasil HPV vaccine is a safe vaccine with zero known long term side effects

An Overview of Quadrivalent Human Papillomavirus Vaccine Safety: 2006 to 2015: <http://www.ncbi.nlm.nih.gov/pubmed/26107345>



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HPV vaccine safety

September 2016

- 1072 reports to HPRA
 - consistent with the expected pattern of adverse effects for the vaccines
 - syncope (faints), gastrointestinal symptoms, malaise, headache
 - 14 reports of chronic fatigue syndrome
 - 10 reports of post viral fatigue
 - 3 reports of an auto immune condition
- 660,000 doses administered
- over 220,000 girls fully vaccinated



Chronic fatigue syndrome (CFS)

- known for over 200 years
- is 3-4 times more common in females and younger adolescents
- 10,000 cases in Ireland
- estimated prevalence rate in Ireland 0.2-0.4%
- 220,000 girls vaccinated

=> at least 440-880 cases expected

Reported numbers much lower than expected



HPV Vaccine Facts

There is no document that states there are more than 20 known side effects of Gardasil HPV vaccine

4. Possible side effects

Like all vaccines and medicines, Gardasil can cause side effects, although not everybody gets them.

The following side effects can be seen after the use of Gardasil:

Very commonly (more than 1 in 10 patients), side effects found at the injection site include: pain, swelling and redness. Headache was also seen.

Commonly (more than 1 in 100 patients), side effects found at the injection site include: bruising, itching, pain in extremity. Fever and nausea have also been reported.

Rarely (less than 1 in 1000 patients): hives (urticaria).

Very rarely (less than 1 in 10,000 patients), difficulty breathing (bronchospasm) has been reported.

When Gardasil was given with a combined diphtheria, tetanus, pertussis [acellular, component] and poliomyelitis [inactivated] booster vaccine during the same visit, there was more headache and injection-site swelling.

Side effects that have been reported during marketed use include:

Fainting, sometimes accompanied by shaking or stiffening, has been reported. Although fainting episodes are uncommon, patients should be observed for 15 minutes after they receive HPV vaccine.

Allergic reactions that may include difficulty breathing, wheezing (bronchospasm), hives and rash have been reported. Some of these reactions have been severe.

As with other vaccines, side effects that have been reported during general use include: swollen glands (neck, armpit, or groin); muscle weakness, abnormal sensations, tingling in the arms, legs and upper body, or confusion (Guillain-Barré Syndrome, Acute disseminated encephalomyelitis); dizziness, vomiting, joint pain, aching muscles, unusual tiredness or weakness, chills, generally feeling unwell, bleeding or bruising more easily than normal, and skin infection at the injection site.

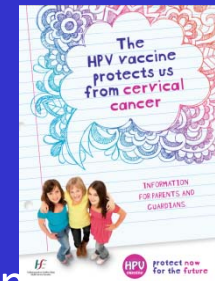
Side effects seen after use

=> Scientific evidence of causation

- pain, redness or swelling in the arm
- headache
- nausea
- a mild fever
- Itchy rash/ hives
- fainting
- serious allergic reactions very rare

Side effects reported during general use

=> No scientific evidence of causation



CDC

CDC has carefully studied the risks of HPV vaccination. HPV vaccination is recommended because the benefits, such as prevention of cancer, far outweigh the risks of possible side effects.

Benefits

Cancer Prevention
Cervical, vaginal, and vulvar cancer in women
Anal cancer in men and women
Likely penile cancer in men
Likely oropharyngeal cancer in women and men

Potential Risks

Chance of fainting
Pain, redness, or swelling in the arm where the shot was given

<http://www.cdc.gov/vaccinesafety/pdf/data-summary-hpv-gardasil-vaccine-is-safe.pdf>



HPV vaccine impact in Australia

High Grade Cervical Lesions <18 years

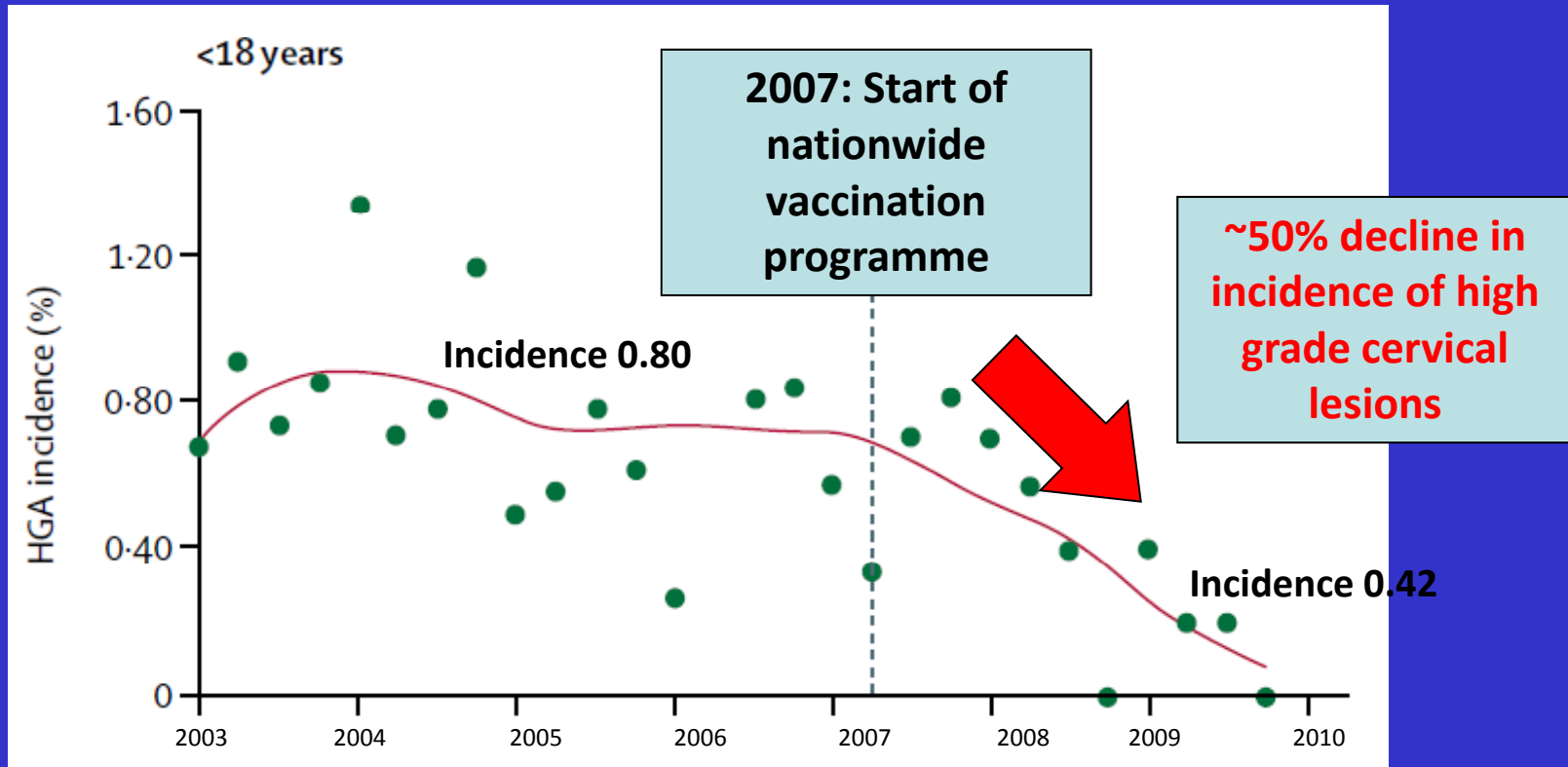


Figure 2: Incidence of high-grade cervical abnormalities, by age group

Incidence of high-grade cervical abnormalities (HGA; green dots) is the number of new diagnoses within a 3-month period per 100 women tested. Lowess smoothing trends are shown with red lines. The vertical lines, at the start of the second quarter in 2007, signify the introduction of human papillomavirus vaccination.

By 2013 reductions also seen in 20-24 year age group

Brotherton et al Lancet 2011; 377: 2085-92

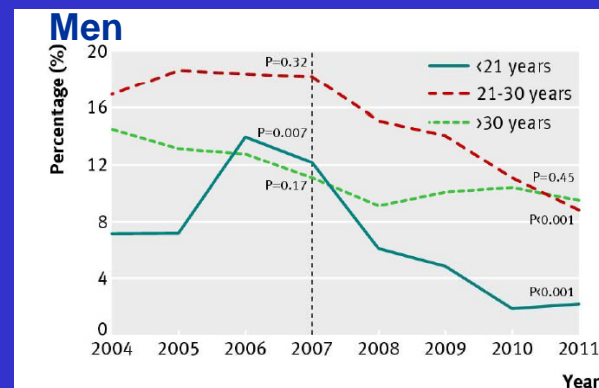
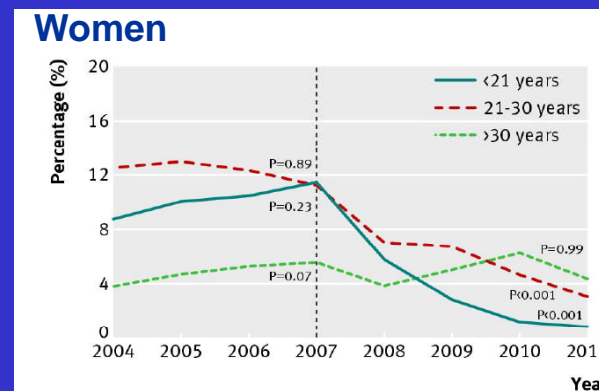


HPV vaccine effectiveness - Australia

Genital warts

- Women <21 years
 - HPV vaccine 83% 1st dose uptake
 - 2011
 - 93% decline in genital warts
 - no genital warts in vaccinated women
- Men
 - 82% decline in genital warts in heterosexual men
 - attributable to herd immunity

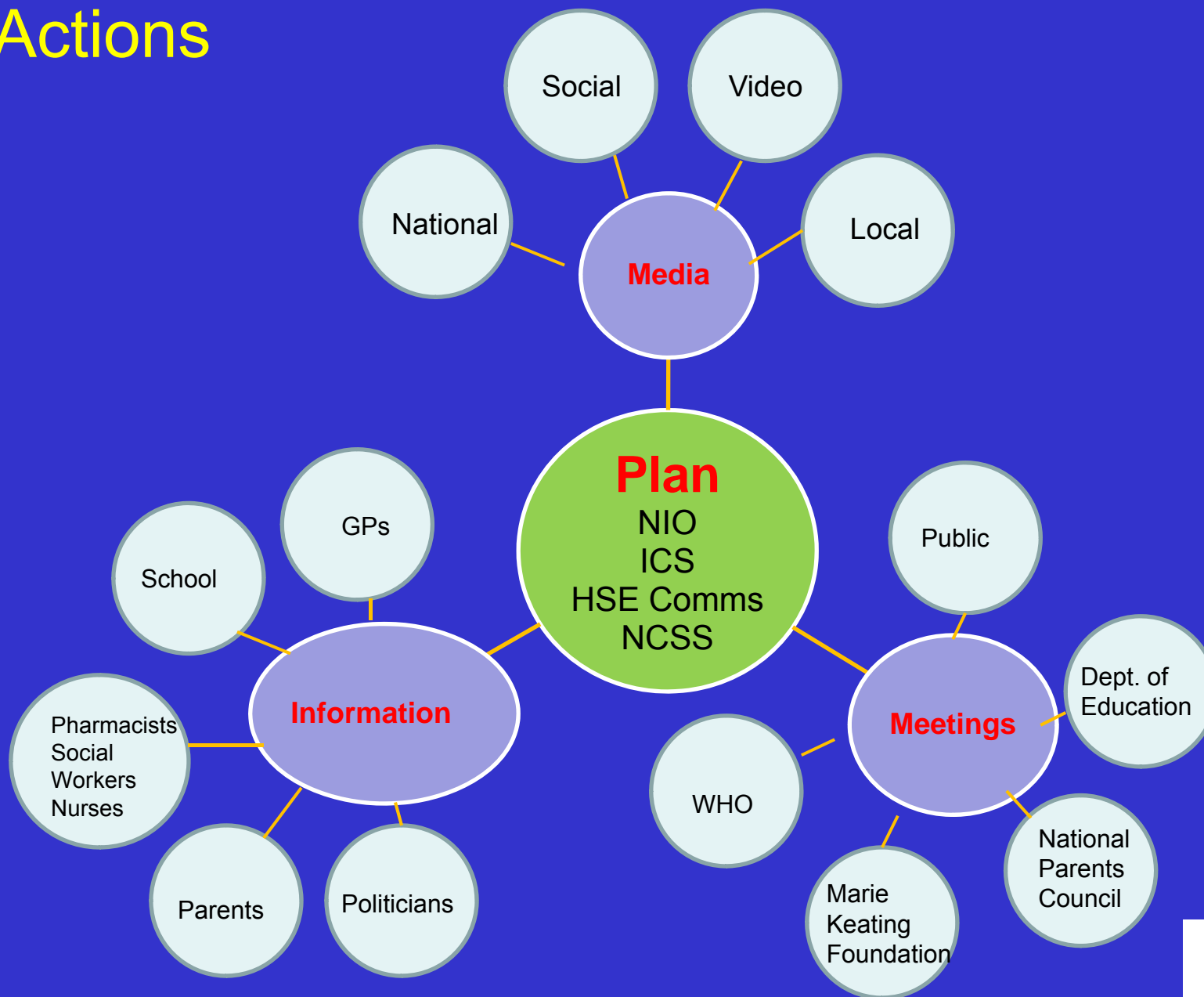
% Australian born diagnosed with genital warts by age group 2004 - 2011



Ali H et al *BMJ* 2013;346:f2032 doi: 10.1136/bmj.f2032 (Published 19 April 2013)



Actions



HPV vaccine information

Website accredited by



HPV Vaccines and Cervical Cancer

Published by National Immunisation Office August 2016

Human papillomavirus (HPV)

- Human Papillomavirus (HPV) infection is spread by direct (usually sexual) contact with an infected person.
- About 80% of all women will have a HPV infection in their lifetime usually in their late teens and early 20s.
- Most HPV infections clear naturally but some caused by high risk HPV types can progress to cervical cancer.
- Two high risk HPV types (16 and 18) cause over 70% of cervical cancers.

Cervical cancer

- Ireland has one of the highest rates of cervical cancer in Western Europe.
- Each year in Ireland
 - over 90 women die from cervical cancer
 - over 280 (many young) women need treatment (surgery, chemotherapy and radiotherapy) for invasive cervical cancer
 - over 6,500 women need treatment for a precancerous form of cervical cancer.

HPV vaccine

- There are three licensed HPV vaccines, HPV2, HPV4 and HPV9.
- HPV vaccine is recommended by the World Health Organization, the International Federation of Obstetricians and Gynaecologists and the expert immunisation in Ireland.
- The HPV vaccine used in the school HPV vaccination programme is HPV9 (Gardasil).
- Gardasil provides protection against
 - two high risk HPV types (16 and 18) that cause 70% of cervical cancers and precancers
 - two HPV types that cause genital warts.

There is no scientific evidence of any long term side effects of HPV vaccines.

Do HPV vaccines work?

- HPV vaccines are more than 99% protective against infection with cancer causing HPV virus types.
- HPV vaccines are most effective when given at the age of 12 to 13 years and will provide protection throughout adulthood.
- Precancerous growths of the cervix have been reduced by more than 90%.

HPV Vaccine Key Facts

Published by National Immunisation Office August 2016

There is evidence that the recommendation of a known health professional leads to increased vaccine uptake. GPs and practice nurses provide a significant role in the promotion of all vaccines so please help to inform parents about the safety and effectiveness of HPV vaccine.

Human papillomavirus (HPV)

- HPV is responsible for
 - more than 90% anal cancers
 - almost 70% vaginal and vulvar cancers
 - more than 60% of penile cancers
 - over 70% oropharyngeal cancers.
- Spread by direct (usually sexual) contact with an infected person.
- About 80% of all women will have a HPV infection in their lifetime usually in their late teens and early 20s.
- HPV infection rates are rising rapidly among women and men in high income countries.
- Most HPV infections clear naturally but some caused by high risk HPV types can progress to cervical cancer.
- Two high risk HPV types (16 and 18) cause over 70% of cervical cancers.

Cervical cancer

- Ireland has one of the highest rates of cervical cancer in Western Europe.
- Each year in Ireland
 - over 90 women die from cervical cancer
 - over 280 (many young) women need treatment (surgery, chemotherapy and/or radiotherapy) for invasive cervical cancer
 - over 6,500 women are diagnosed with high grade cervical intraepithelial neoplasia (CIN) and require hospital treatment.

Other cancers

- HPV vaccine is recommended by the World Health Organization (WHO), the International Federation of Obstetricians and Gynaecologists (FIGO) and the American Society for Clinical Oncology to reduce the burden of cervical cancer in women.
- HPV vaccine is recommended before exposure to HPV at sexual contact.
- Recommended for all girls age 12-13 years.
- HPV vaccine is known to be most effective when given at this age.
- Two HPV vaccines (HPV2 and HPV 4) were licensed in 2006.
- HPV2 vaccine (Cervarix)
 - is licensed to prevent premalignant genital lesions and cervical cancer causally related to HPV types 16 and 18
 - is licensed for use in females from 9 years of age

HPV vaccine

- Should be administered before exposure to HPV at sexual contact.
- Recommended for all girls age 12-13 years.
- HPV vaccine is known to be most effective when given at this age.
- Two HPV vaccines (HPV2 and HPV 4) were licensed in 2006.
- HPV2 vaccine (Cervarix)
 - is licensed to prevent premalignant genital lesions and cervical cancer causally related to HPV types 16 and 18
 - is licensed for use in females from 9 years of age

HPV types 16 and 18 cause 70% cervical cancers.

HPV9 vaccine (Gardasil 9)

- was licensed in 2014
- provides protection against 9 HPV types (5, 11, 16, 18, 31, 33, 45, 52, and 58 (7 of which cause almost 90% of cervical cancers).

HPV Vaccine Facts

Share: [social media icons]

Gardasil HPV vaccine is safe and effective and will prevent girls from developing cervical cancer in the future. Many parents are reading and hearing lots of scare stories about HPV vaccine.

Please read the facts below or download facts about HPV vaccine (596KB)

FACT 1

Gardasil HPV vaccine prevents cancer developing.

Some HPV infections caused by high risk HPV types can progress to pre cancerous growths and some of these can progress to cervical cancer.

Gardasil HPV vaccine has been scientifically proven to prevent the HPV infection that causes 70% of cervical cancers.

In countries with high HPV vaccine uptake such as Australia and Scotland precancerous growths of the cervix have been reduced by more than 50%.

On August 29th 2016, Australian Professor Ian Frazer stated that after ten years of Gardasil HPV vaccine use "the number of new cases of cervical cancer in women has halved" in Australia

<http://www.sciencelister.com/the-ppv-vaccine-has-halved-cervical-cancer-rates-in-the-past-10-years>

Impact and Effectiveness of the Quadrivalent Human Papillomavirus Vaccine: A Systematic Review of 10 Years of Real - world Experience - on the benefits of the HPV vaccine is available at

fection with the HPV virus types 6, 11, 16 and 18 for at least 9 years

is expected to provide life time protection from these viruses if vaccinated.

side effects of Gardasil HPV vaccine.

Injection site, headache, fever, nausea, dizziness, bronchospasm?

1 in every million cases. This is treated by an injection.

ordered after vaccination. These conditions have not been

Human Papillomavirus (HPV) Vaccine Information

September 2016

The Human papillomavirus (HPV) vaccine protects girls from developing cervical cancer when they are adults.

The HSE has offered the HPV vaccine to all girls in first year in second level schools since 2010 to protect them from cervical cancer in adulthood. HPV vaccine is offered to this age group because the response to the vaccine is best at this age.

The vaccine is recommended by

- the World Health Organization
- the International Federation of Obstetricians and Gynaecologists
- the National Immunisation Advisory Committee

The HPV vaccine is available free of charge from the HSE for all girls in 1st year of second level school.

The vaccine is given through a school based programme, to ensure high vaccine uptake. However, in specific instances some girls will be invited to special HSE clinics for their vaccine.

The HSE will let you know the date the school immunisation team will attend your daughter's school to give the HPV vaccine. If a student misses the vaccine in school, the HSE will arrange for the student to be vaccinated at a HSE clinic.

To read more about HPV please visit the following pages

- HPV and cervical cancer
- HPV vaccine
- HPV vaccination programme
- HPV vaccine safety
- HPV vaccine facts
- HPV information materials

The HPV vaccine protects against cervical cancer

Why is HPV Vaccine Important?

Each year in Ireland, over 6,500 women need hospital treatment for pre cancer of the cervix, 200 women get cervical cancer, and 90 women die from it. Cervical Cancer is caused by HPV.

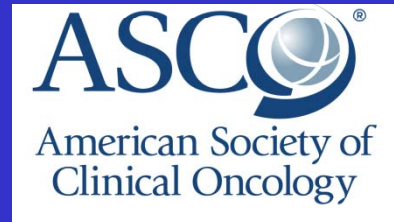
HPV vaccine prevents against 7 out of 10 cervical cancers.

We are offering the vaccine to girls in first year because the vaccine works best when given at this age. The vaccine will protect girls before adulthood and the



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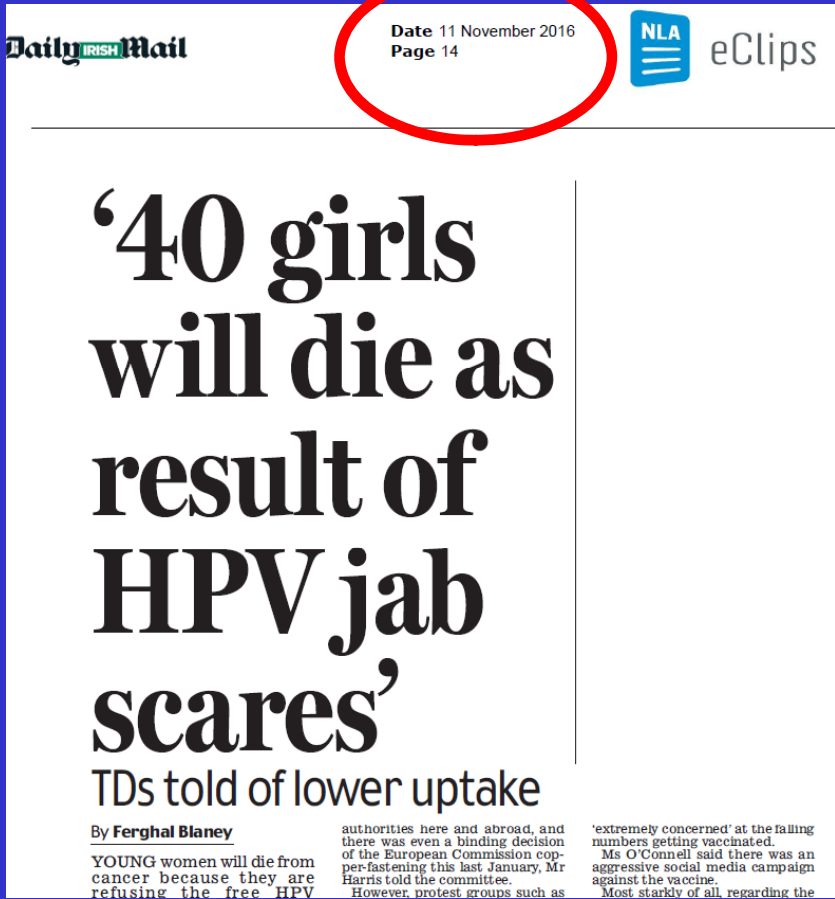


versus



www.hpv.ie





www.immunisation.ie

