

# The National Immunisation Schedule

## Update and Current issues

### August 2012

Dr Brenda Corcoran  
National Immunisation Office



[www.immunisation.ie](http://www.immunisation.ie)



# Objectives

- To outline immunisation schedules in Ireland
  - Primary childhood schedule
  - Vaccine uptake rates
  - School immunisation programme
  - Seasonal influenza vaccination programme
- To highlight development of new vaccines



# 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 - 2011	
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. PCV 13	2010



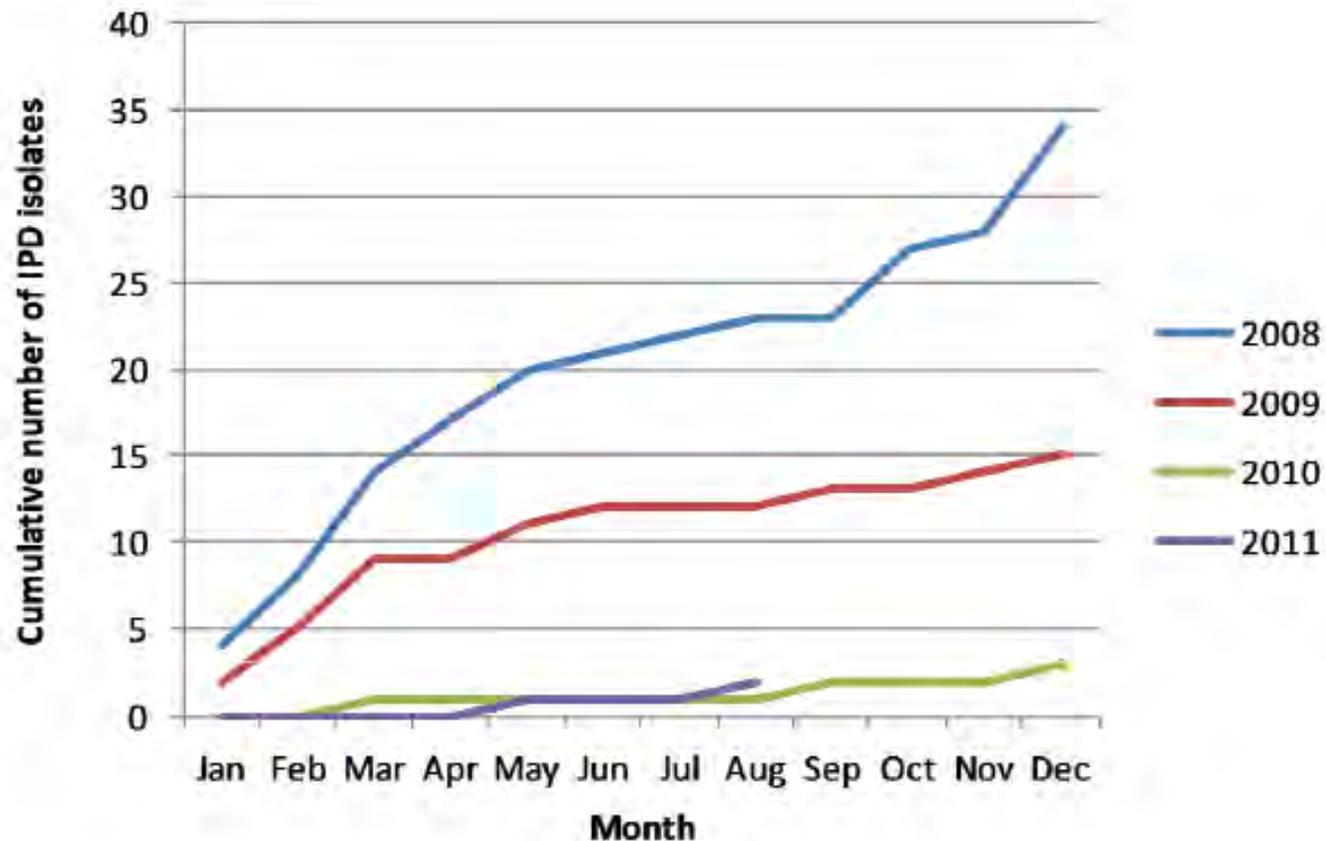
# Primary Childhood Immunisation (PCI) Schedule

- Birth            BCG
- 2 months      6 in 1 + PCV\*
- 4 months      6 in 1 + Men C
- 6 months      6 in 1 + PCV + Men C
  
- 12 months    MMR + PCV
- 13 months    Men C + Hib

- \* PCV 7 introduced in September 2008  
PCV13 introduced in December 2010



# Impact of PCV on the burden of IPD caused by PCV7 vaccine serotypes in <2 year olds



91% reduction in IPD when cumulative number of cases between Jan -Aug 2008 and 2011 are compared  
Data source: IPD Typing Project

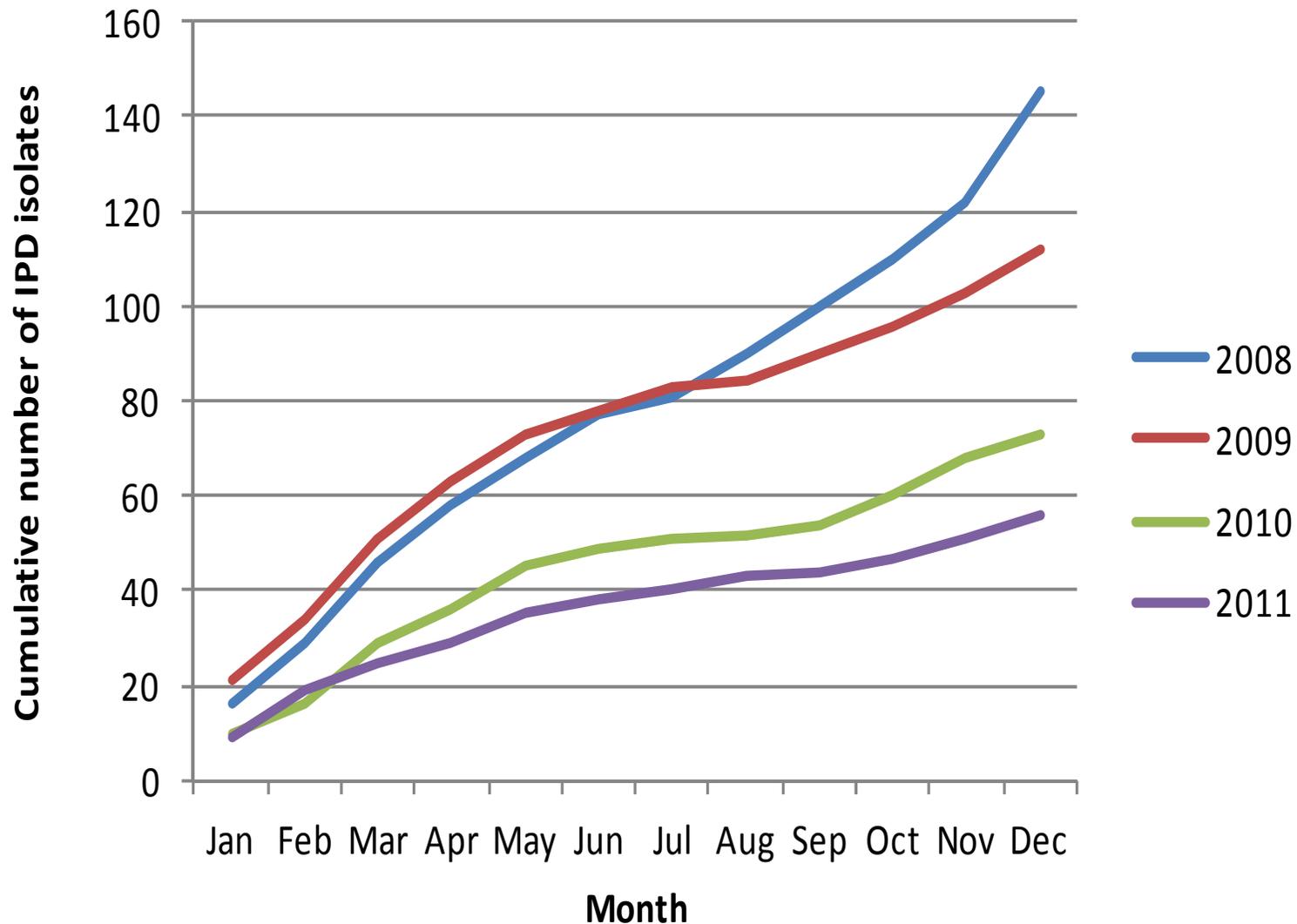


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# Impact of PCV on the burden of IPD caused by PCV7 vaccine serotypes in $\geq 2$ year olds

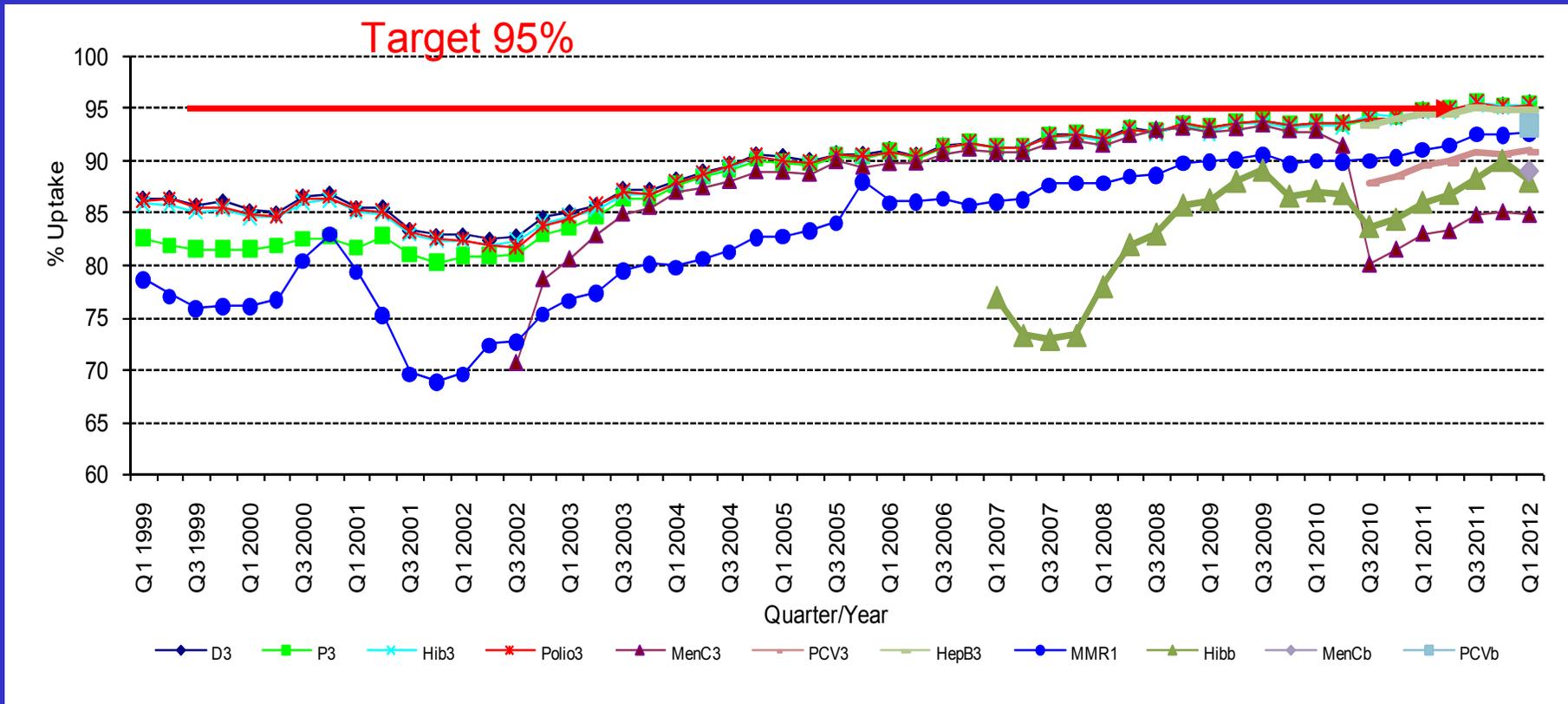


61% reduction in IPD when cumulative number of cases between Jan – Dec 2008 and 2011 are compared  
Data source: IPD Typing Project



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# Vaccine uptake rate at 24 months 1999-2012



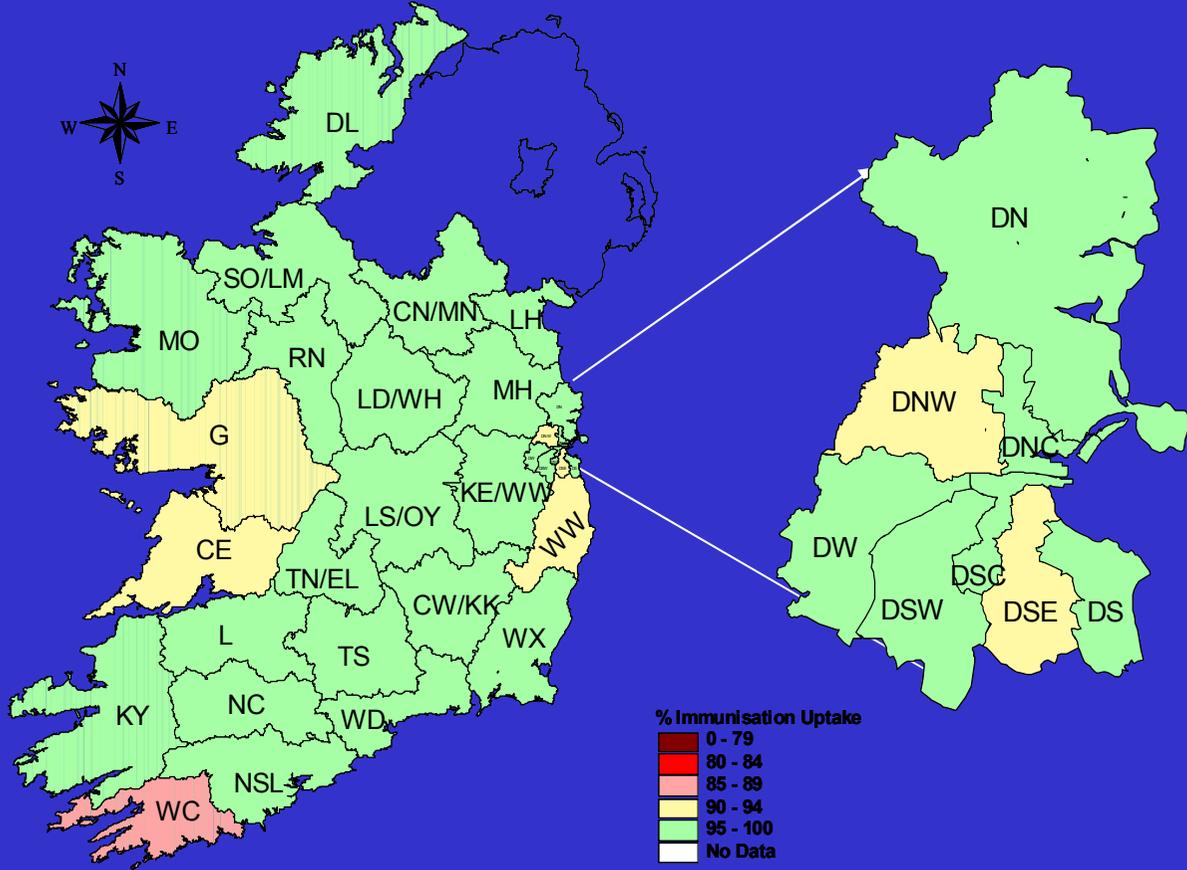
Source: HPSC



[www.immunisation.ie](http://www.immunisation.ie)



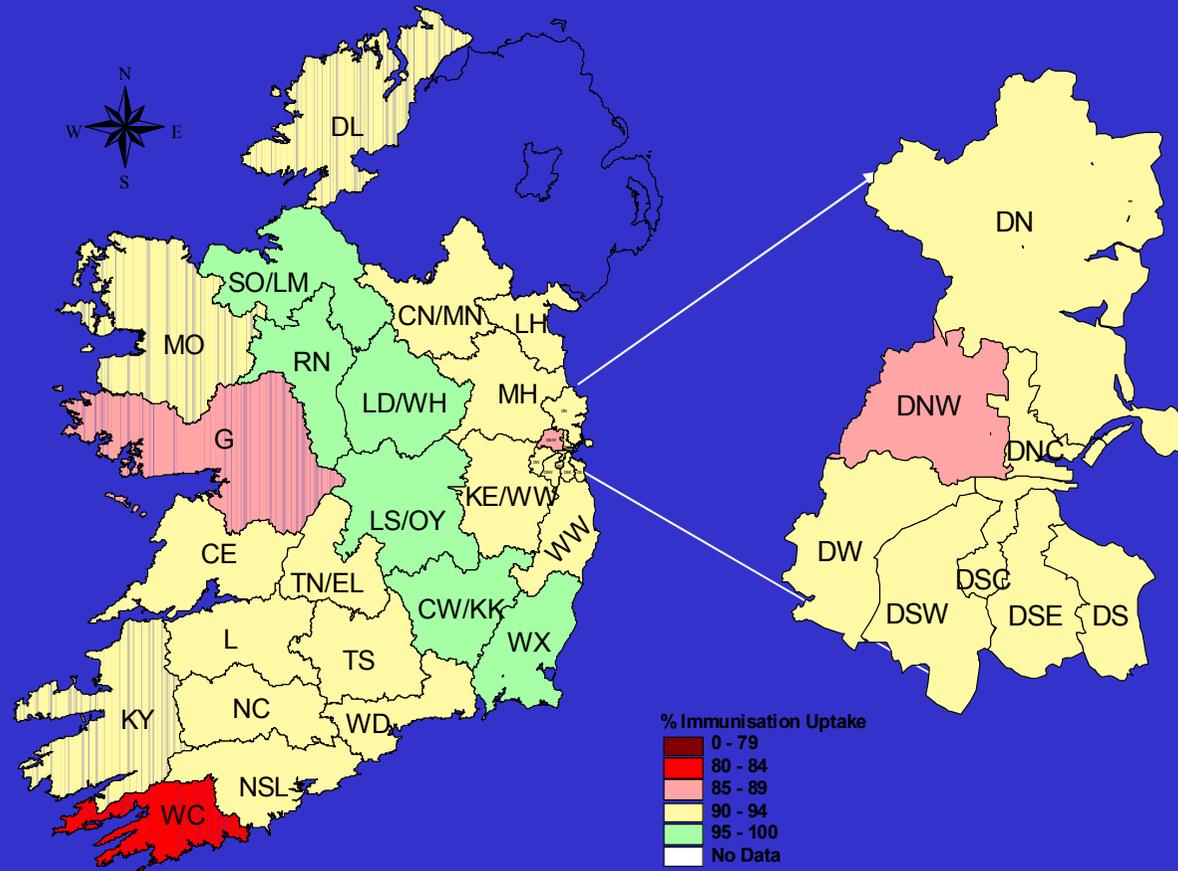
# Quarter 1 2012 D3 immunisation uptake rates (%) by LHO, in those 24 months of age in Ireland and Dublin (source HPSC)



[www.immunisation.ie](http://www.immunisation.ie)



# Quarter 1 2012 MMR immunisation uptake rates (%) by LHO, in those 24 months of age in Ireland and Dublin (source HPSC)



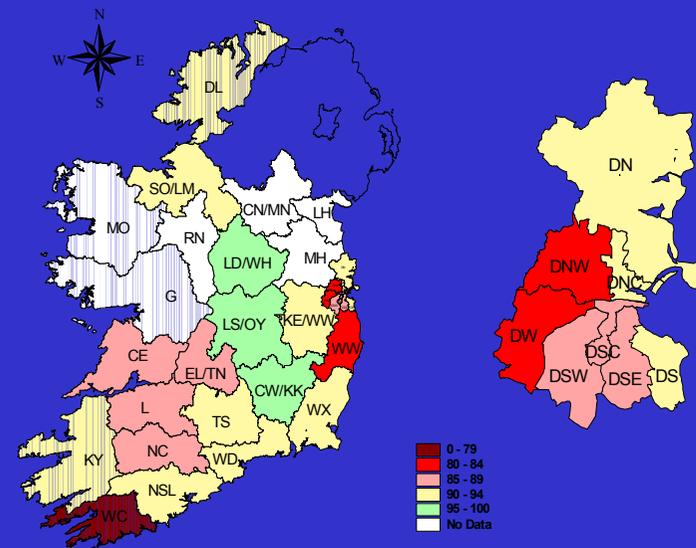
[www.immunisation.ie](http://www.immunisation.ie)



# Decline in vaccine uptakes

Quarter 1 2012 Men C<sub>3</sub> immunisation uptake rates (%) by LHO, in those 24 months of age in Ireland and Dublin (source HPSC)

	Q1 2010	Q3 2010	Q1 2012
Men C <sub>3</sub>	93%	80%	85%
PCV <sub>3</sub>	-	88%	91%
Hib <sub>b</sub> (booster dose)	89%	84%	88%



# Decline in vaccine uptakes 2010

- ? Change in schedule -> confusion
- ? 5<sup>th</sup> visit -> parents choosing some vaccines
- ? IT systems -> incorrect or delayed recording



# Decline in vaccine uptakes 2010

The National Immunisation Advisory Committee (NIAC) has recommended

- certain vaccines be given at specific ages to make sure babies are protected from serious diseases **at the age when they are most vulnerable**
- 5 visits to ensure babies are fully protected from these diseases
- adherence to vaccine schedule
  - three vaccines to be given at the 6 month visit
    - give 6 in1 and Men C in the same limb  
(different sites and 2.5cms apart)
    - give PCV in the other limb



# Decline in vaccine uptakes 2010

## 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\*

\*[http://www.immunisation.ie/en/HealthcareProfessionals/Guidelinesforlateentrants/PDFFile\\_9494\\_en.pdf](http://www.immunisation.ie/en/HealthcareProfessionals/Guidelinesforlateentrants/PDFFile_9494_en.pdf)

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

Common reaction

Soreness, swelling in the area where the vaccine was given

Fever (over 39.5°C)

Headache or irritability

Primary Childhood Immunisation Schedule

AGE	WHERE	VACCINATION
At Birth	Hospital or HSE Clinic	BCG
2 Months	GP	6 in 1 + PCV
4 Months	GP	6 in 1 + Men C
	GP	6 in 1 + PCV + Men C
	GP	MMR + PCV
	GP	Men C + Hib

Appointment for your child's next visit?

Next appointment

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

5

PROTECT. PREVENT. IMMUNISE. [www.immunisation.ie](http://www.immunisation.ie)



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# School Immunisation Schedule

Age (years)	Vaccine
4 -5	4 in 1 MMR
11-14	Tdap
12 (girls only)	HPV (3 dose schedule)

- 4 in1      Diphtheria  
            Tetanus  
            Pertussis  
            Polio
- Tdap      Tetanus, low dose diphtheria/low dose pertussis
- HPV      Human Papilloma Virus



[www.immunisation.ie](http://www.immunisation.ie)



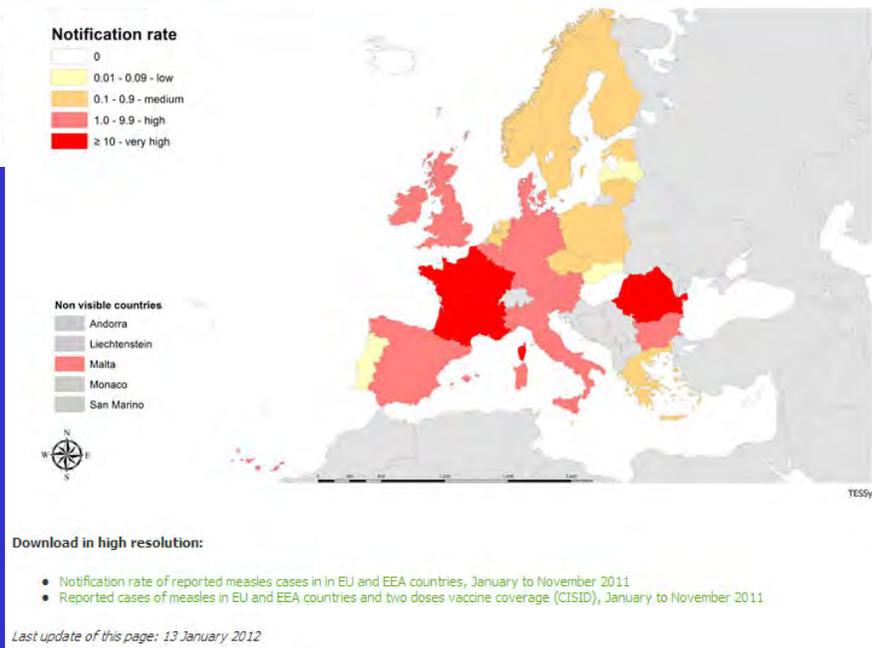
# Measles June 2011 – May 2012

- 12 594 cases reported
- France, Romania, Italy and Spain
- 79% of the total number of cases
- Majority of cases not vaccinated (71%)
- 10 cases of encephalitis
- No deaths

**2012/2013**

**?? MMR catch up campaign**

## PARENTS WARNED OF MEASLES DANGER



Rate of measles cases by country. Source ECDC

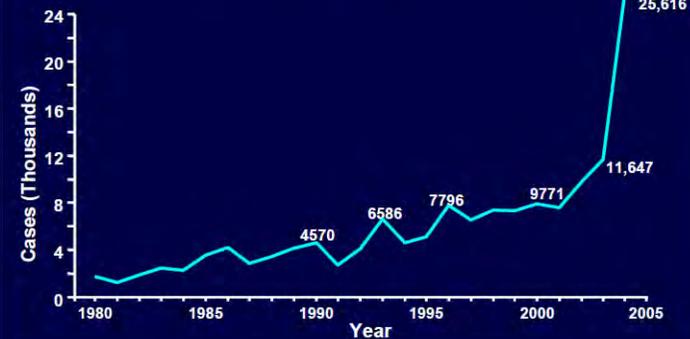


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# Pertussis

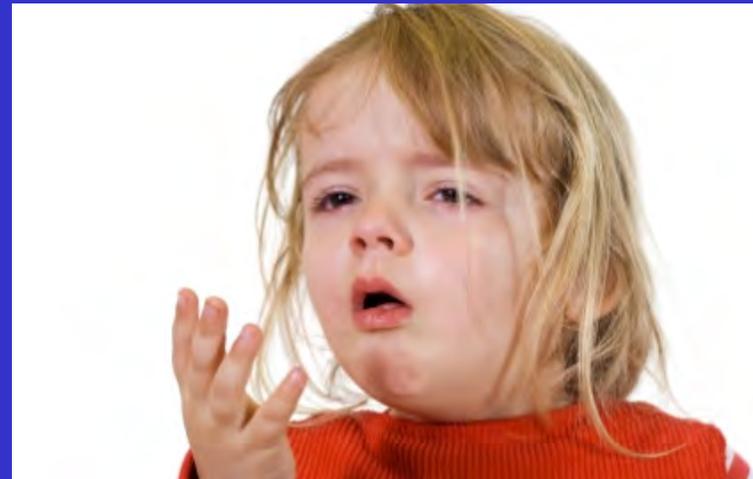
- Cough lasting at least 2 weeks
- No other cause
- +
- Paroxysms of coughing  
or
- Inspiratory 'whoop'  
or
- Vomiting post cough

Reports of Pertussis  
United States, 1980 – 2005



CDC. Summary of notifiable diseases—United States, 2003. Published April 22, 2005, for MMWR 2003;52(No. 54):72-78.  
CDC. Summary of notifiable diseases—United States, 2004. Published June 10, 2006, for MMWR 2004;53(No. 53):19.  
CDC. Reported cases of notifiable diseases, by geographic division and area — United States, 2005. MMWR 2006;55:890.

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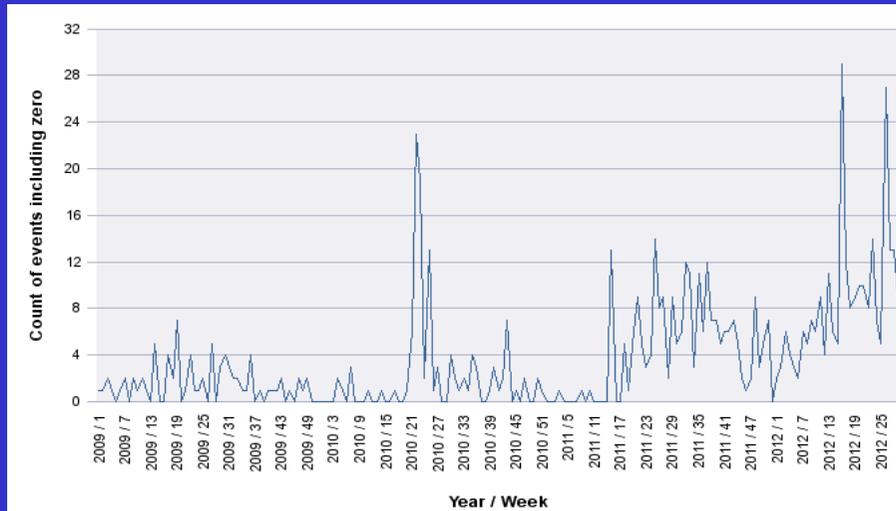


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Health Service Executive

Number of pertussis cases notified by week 2009-2012 (up to week 29), Ireland

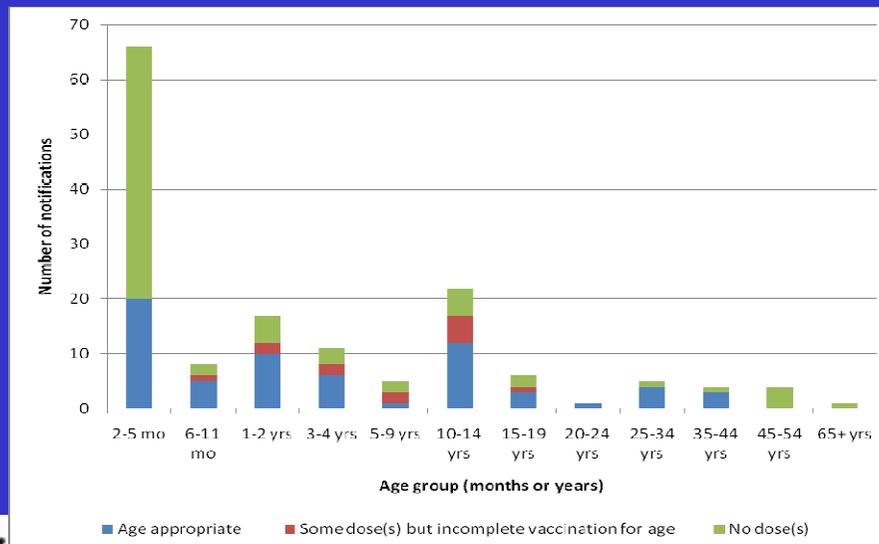


# Pertussis Ireland

Between Jan – July 2012

- 12,252 cases reported (x 3 for same time in 2011)
- Most < 5 years of age

Vaccination status (where known) by age group



- 48% unvaccinated

## Recommendations

- Age appropriate vaccination
  - Health care workers
  - Pregnant women
  - Cocooning
- Those with prolonged avoid cough should avoid babies



Source: HPSC

[www.immunisation.ie](http://www.immunisation.ie)



# 2011/2012 School Immunisation Schedule

- Introduction of Tdap in 1<sup>st</sup> year in 19 LHOs
- Given with 3<sup>rd</sup> dose of HPV (for girls)
- ? Extension to all LHOs in 2012/2013
- No interval required between previous tetanus containing vaccine

**THE IRISH Sun** Date 12 January 2011 Page 34,35 e clips newspaper licensing agency

## Why killer infection whooping cough is back

**Tdap vaccine**  
Information for parents of children in First Year of second level school.

**WHOOPING** cough was virtually wiped out in the Fifties when a nationwide vaccination programme was introduced - but now it's back. The number of cases more than DOUBLED last year - to 1,040 in England and Wales, compared to just 42 in 2010, say experts of the Health Protection Agency. Official Irish figures are still to be released.

But it's not the only Victorian disease to make a comeback. Mumps, measles, typhoid and scarlet fever are also on the rise. The increase is being blamed on a fall in the number of parents getting their kids immunised. But these diseases don't only affect children but teens and adults too. Whooping cough spreads easily and in the worst cases, can be fatal.

**Booster**  
Health chiefs are urging parents to ensure their children are vaccinated and the HPA has written to GPs to remind them of the signs and symptoms of whooping cough and to report cases quickly. Dr. Moy Ramsey, head of immunisation of the HPA, said: "Parents should ensure their children are up-to-date with their vaccinations."

"The pre-school booster is also important, not only to boost protection in that child but also to help prevent them passing the infection on to vulnerable babies, as those under four months cannot be fully protected by the vaccine."

Here, **LYNSEY HAWTHOOD** speaks to a mum and daughter, who picked up whooping cough and a lecturer who is still coughing two-and-a-half months after falling ill.

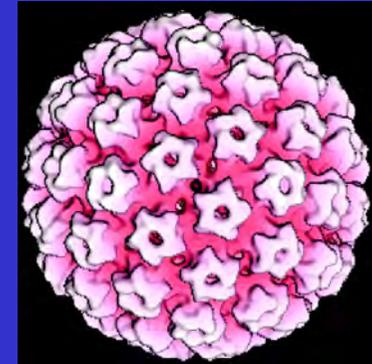


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# HPV vaccination programme

Gardasil (Sanofi Pasteur)

- protects against
  - HPV 16 and 18 (causes 70% cervical cancers)
  - and
  - HPV 6 and 11 (causes 90% anogenital warts)
- 3 dose schedule at 0, 2 and 6 months



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

# Letters to the editor

The Irish Examiner, City Quarter, Lapps Quay, Cork. 021 4272722, fax 021 4275477, letters@examiner.ie

## Manufacturers are more interested in profits than ill effects of their drugs

□ I WISH to congratulate you on your issue of August 30 — the warning about the cervical cancer **vaccine** Gardasil is very important. The people who are pushing this have been ignoring the consequences for years now in search of obscene profits.

They are the same companies that have been earning billions of decent, hard-working taxpayers' money all over the world from other **vaccine** scams such as bird flu, SARS, swine flu, etc, that few people even remember now and that virtually nobody died from.

## IS IT WORTH THE RISK?

There are fears a national roll out of the HPV **vaccine** could lull young women into a false sense of security, writes **Jennifer Hough**

**T**HE HSE insists the HPV cervical cancer **vaccine** for teenage girls set to be rolled out next month is safe and "very worthwhile".  
Dr Brenda Corcoran, consultant in public health medicine with HSE's National Immunisation Office, maintains the **vaccine** will "substantially" reduce the risk of cervical cancer developing in those immunised.

Yet in 2008, when HIQA carried out its "health technology assessment" on the **vaccine** it stated: "The longest duration of follow-up in relation to **vaccine** efficacy is currently five years and thus the protective effect against invasive cervical cancer has not yet been demonstrated."

It went on to say "future evidence is required to establish long-term safety and efficacy of HPV **vaccination**".

Harper advises on the benefits of Gardasil — including prevention of about 10% of abnormal smear tests and prevention of a portion of the necessary cervical treatments for pre-cancerous disease. She says if duration is at least 15 years, then vaccinating 11-year-old girls will protect them until they are 26 and will prevent some pre-cancers, but only postpone most cancers.

If duration of effect is less than 15 years, no cancers are prevented, only postponed.

But she also warns about the "serious adverse events" associated with its use.  
Of course any serious adverse event associated with the **vaccine** will be rare, but consequently when they do not occur with enough frequency or proof so as to be scientifically linked to the **vaccine**, they are dismissed as coincidental by official authorities.

side-effects in only about 1,200 girls 16 years old and younger and followed up for less than two years before.

■ Thousands of adverse events reported to the federal **Vaccine** Adverse Events Reporting System (VAERS) since Gardasil has been licensed, including deaths, serious health problems, emergency room visits, hospitalisations, and permanent injuries, have been written off by federal health agencies as a coincidence.

■ Comparison of serious adverse events, such as death, stroke, blood clots, cardiac arrest, seizures, fainting, lupus, and re-challenge cases, reported to VAERS after Gardasil vaccination and meningococcal (Menactra) vaccination reveal that these events are reported three to 30 times more frequently after Gardasil vaccination.

## Is the cervical cancer **vaccine** good to go?

**X NO**

Gardasil has never been proven to prevent cervical cancer, hasn't been sufficiently tested on the target age group, and not enough is known about adverse reactions

**PAULA BYRNE**

prevents cervical cancer when the reality is quite different.

group was "in development was measure This is a mod

## Priest urges chastity instead of cervical cancer jab

Cork curate said **vaccine** will only reduce risk of infection, it will not guarantee against cancer

by **Stephen Sanders**

these (called CIN). Current guideline advise not treating these lesions, as they tend to go away by themselves.

The **vaccine** was significantly less successful at preventing those lesions (known as CIN3 and AIS) that are likely to become cancerous. It would take decades to find out if these small changes in pre-cancerous states will translate into improvements in the death rates from cervical cancer.

There are at least 15 different types of these viruses that are considered cancer-causing. The **vaccine** targets the two infections most commonly found in cervical cancer. Screening must continue for cancers caused by the other types of HPV. It seems logical, therefore, that investment in

## Letters to the editor

The Irish Examiner, City Quarter, Lapps Quay, Cork. 021 4272722, fax 021 4275477, letters@examiner.ie

## Cervical **vaccine**: let's have an honest debate first

□ WHEN I was serving as an MEP on the committee responsible for public health, I received a great deal of glossy, well-produced literature, invitations to free lunches and dinners and even an offer of an all-expenses-paid trip to America to convince me to support the so-called cervical cancer **vaccine**.

Though I did not accept the invitations, the lavish nature and sheer persistence of the drug company-funded lobbying caused me to do my own research on the **vaccine** they were promoting.

What I discovered made me very concerned.

The **vaccine** was too new to make the claims those who stood to profit by it

ago the European Commission began a review of the **vaccine** because of a suspected link to neurodegenerative diseases, or narcolepsy.

Will we see the commission investigating the HPV jab next year? I think it is better to have an honest debate about this new **vaccine** before we start jabbing our girls and not wait until some have been harmed.

**Kathy Sinnott**  
'St Joseph'  
Ballinabearna  
Ballinassig  
Co Cork

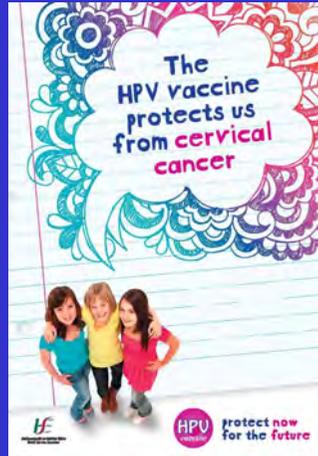


[www.immunisation.ie](http://www.immunisation.ie)



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Health Service Executive

# HPV information materials and website



- Parents (over 90% happy with content of materials)
- Department of Education
- School management bodies
- National parents council
- Other stakeholders
- Media



[www.hpv.ie](http://www.hpv.ie)

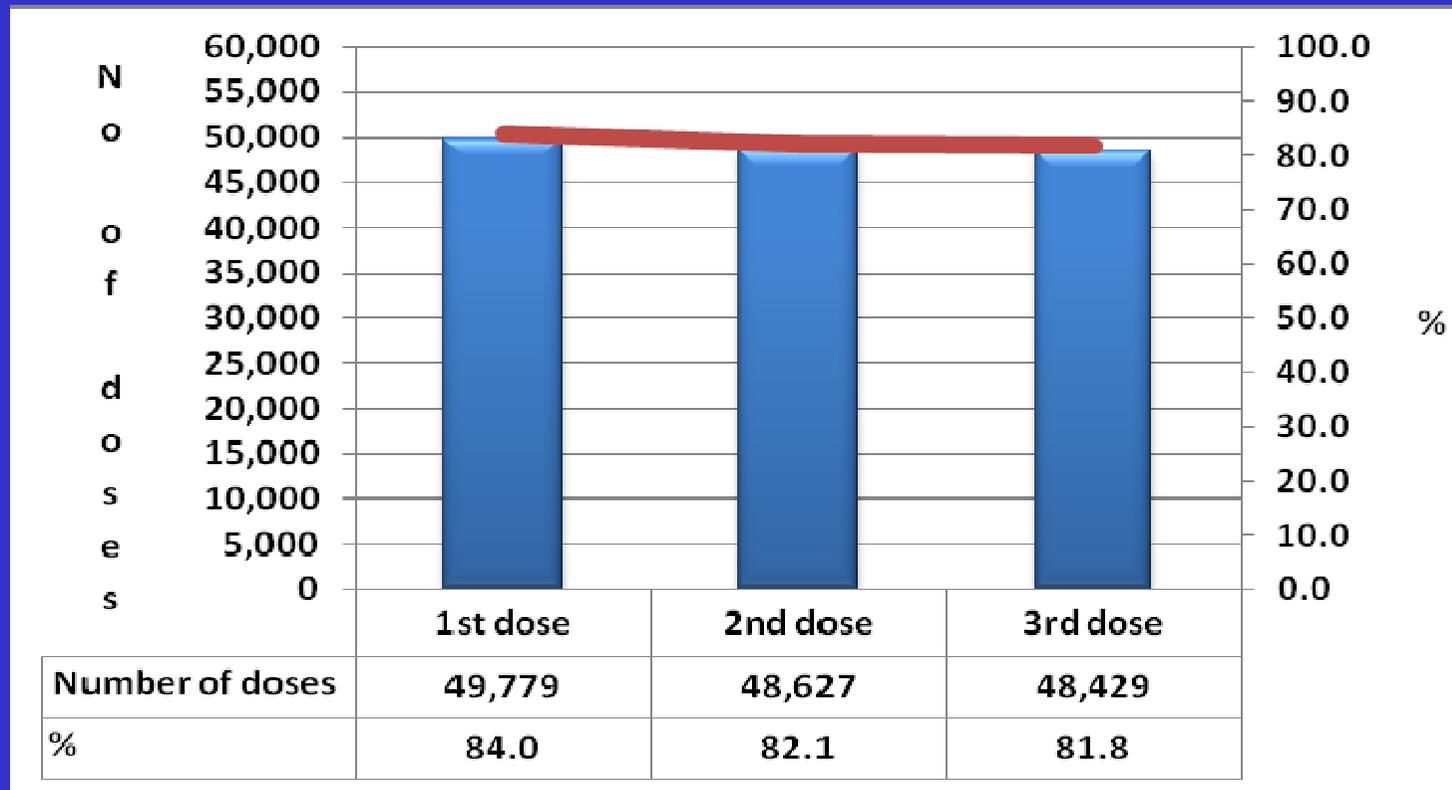
- includes
  - Ask a question
  - Translated materials

Highlights the importance of cervical screening in the future

[www.immunisation.ie](http://www.immunisation.ie)



# HPV vaccine uptake 2010/2011



- Over 80% (81.8%) uptake achieved for 3 dose schedule
- Excellent cohort retention
- >95% girls who started dose 1 completed dose 3



[www.immunisation.ie](http://www.immunisation.ie)



# HPV Vaccination Programme

- HPV catch programme for all 6th year girls until 2013/2014

HPV vaccine fears put to rest with safety report

Schoolgirl vaccine uptake of 82% beats target figures

CARL O'BRIEN

A VACCINE that protects girls against cervical cancer in later life had an uptake of 82 per cent during the first year of the vaccination programme.

high uptake.

The 82 per cent uptake was "excellent" and was equal to or greater than those achieved in the first year of programmes in other countries such as the United

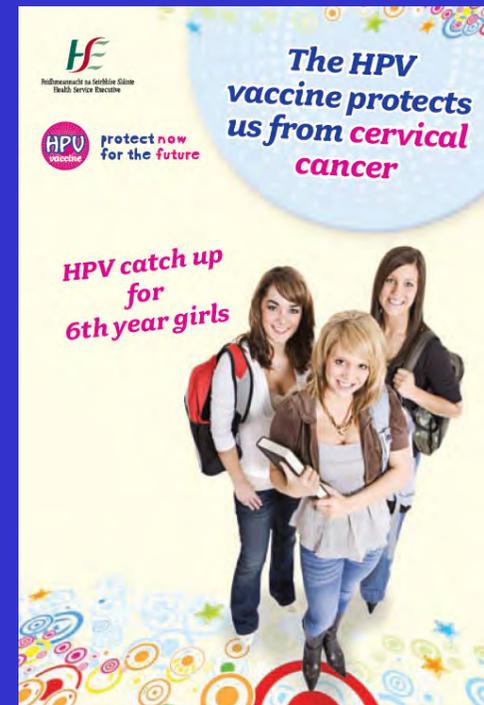
benefits and risks for Gardasil remains positive," the board said.

The most commonly reported effects were dizziness or headache. Other commonly reported symptoms included malaise.

HPV vaccine – what about the boys?

It's not cost effective to include teen boys in the HPV immunisation programme even though they would benefit from it

\*Routine vaccination is not recommended.



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# Gardasil - duration of protective efficacy



- The exact duration of protective efficacy will only be determined after decades of follow up of vaccinees
- at least 5 years
- evidence of immune memory
- ? Need for booster
- prevents 98-100% pre-cancerous lesions which are precursor to cervical cancer

# Incidence of genital warts in young women before and after introduction of Gardasil, Australia 2011

## The Near Disappearance of Genital Warts in Young Women 4 Years After Commencing a National Human Papillomavirus (HPV) Vaccination Programme

Tim R H Read, Jane S Hocking, Marcus Y Chen, Basil Donovan, Catriona S Bradshaw, Christopher K Fairley

Posted: 12/09/2011; Sex Transm Infect. 2011;87(7):544-547. © 2011 BMJ Publishing Group

### Abstract and Introduction

#### Abstract

**Background** Australia provided free quadrivalent human papillomavirus had access to free vaccines.

**Methods** Before and after the study, of the proportion of new patients

**Results** From July 2004 to June 2011, 52 454 new patients were seen. Proportions with GW either increased or did not change in all group heterosexual men under 21 years from 22.9% to 2.9%. The ORs for 0.44 (95% CI 0.32 to 0.58) and 0.42 (95% CI 0.31 to 0.60), respectively 0.89 to 1.06) or in homosexual men (OR 0.95, 95% CI 0.85 to 1.07).

**Conclusion** The dramatic decline and near disappearance of GW in

#### Introduction

In April 2007, Australia began vaccinating women aged 12–27 years (Victoria, Australia). We previously reported that by the end of 2008, lesser degree in heterosexual men but not changed in homosexual men confirmed our initial observations and also showed that the change, however, the decline in younger women had slowed substantially and data do not currently include the number of sexual partners so they

In this analysis, we update the trends in GWs at MSHC to the end proportion may have become sexually active.<sup>[1]</sup>

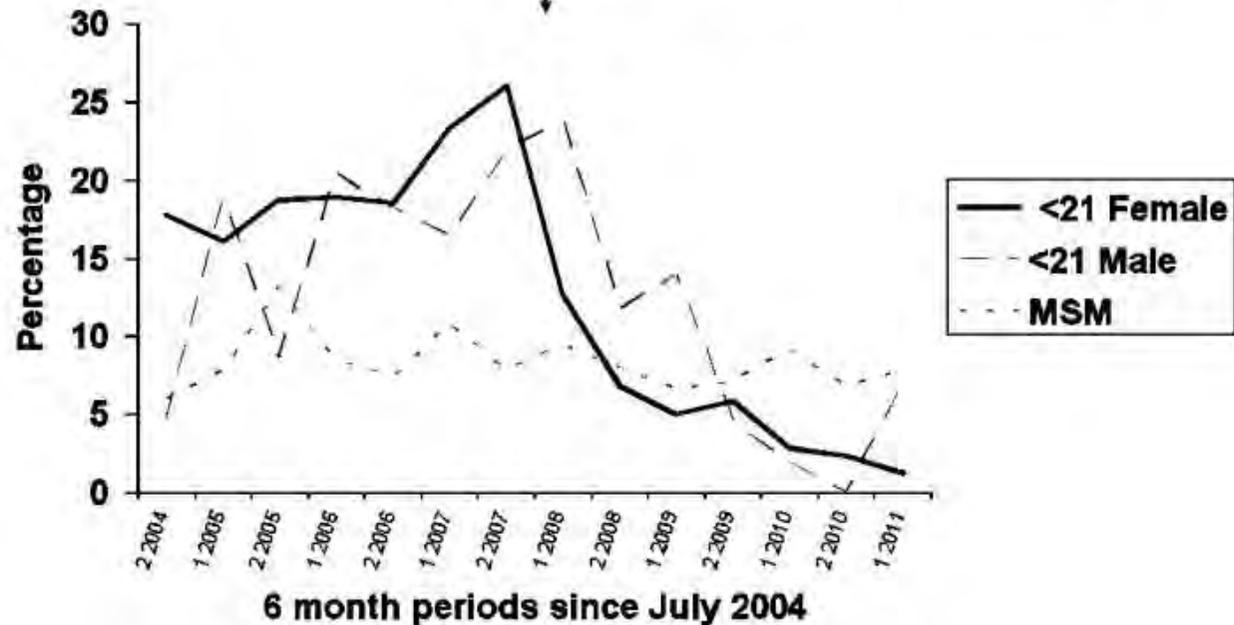
#### Methods

SEXUALLY TRANSMITTED INFECTIONS

Medscape

### Presentations with warts in men and women <21 years, and MSM all ages, July 2004 to end June

2011  
Vaccination program commences



Source: Sex Transm Infect © 2011 BMJ Publishing Group Ltd

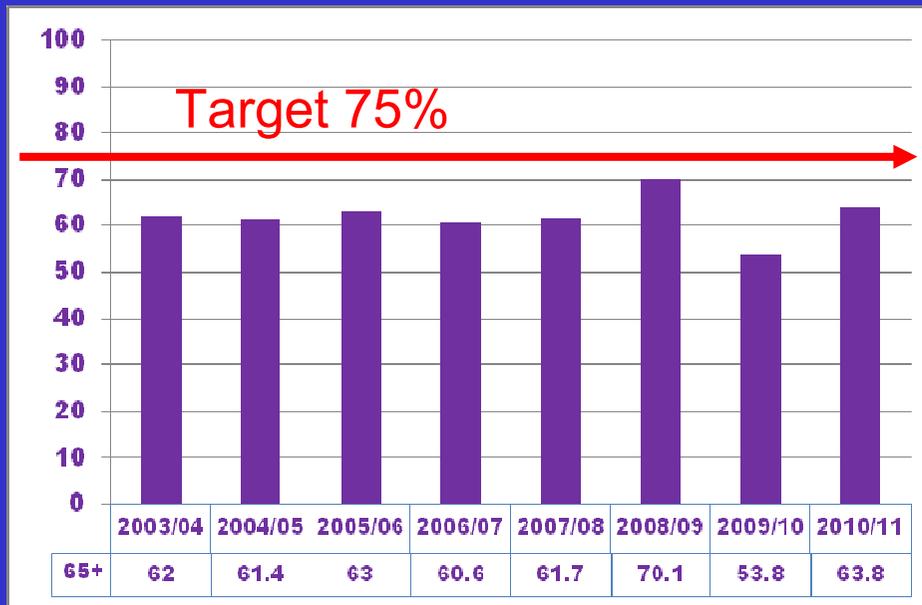


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# Seasonal influenza vaccination programme 2012/2013

Vaccine uptake for 65+ years with GMS card  
Source:HPSC

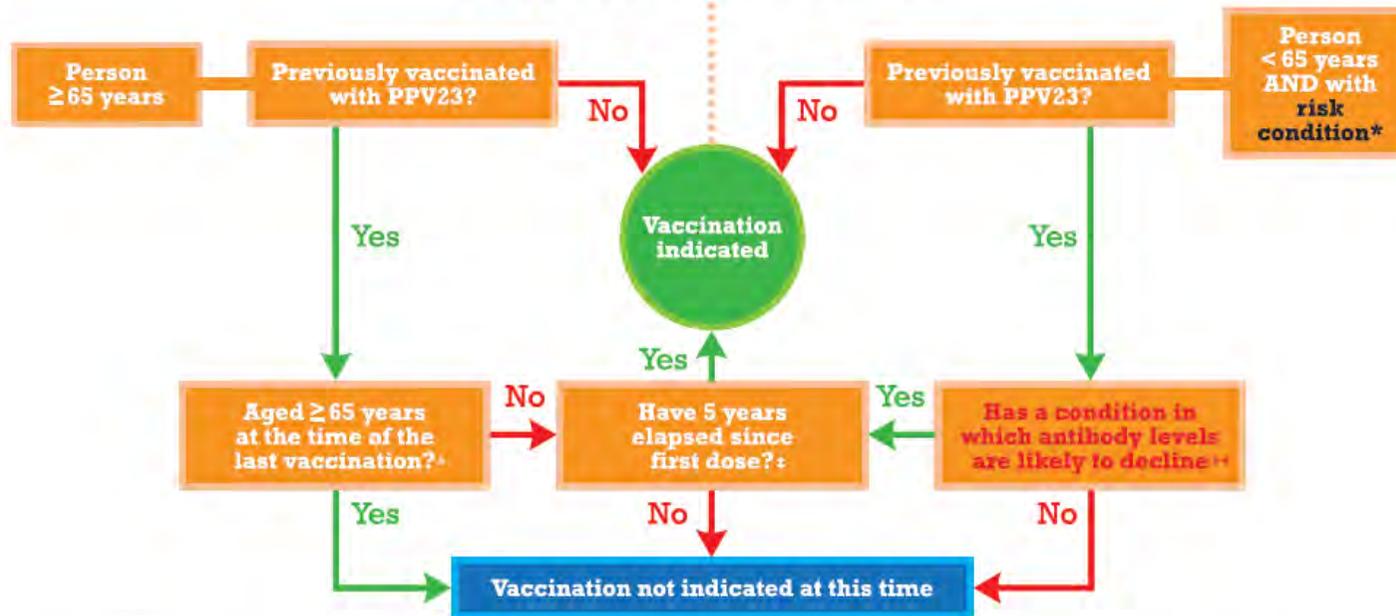


- Annual campaign
- No change in at risk groups
- Pregnant women
- Season continues until end of April
- Information materials being sent next week
- Vaccine deliveries (and record cards) start from 16<sup>th</sup> Sept



[www.immunisation.ie](http://www.immunisation.ie)

## Pneumococcal Polysaccharide Vaccine (PPV23) Algorithm for Vaccination



\* Asplenia or splenic dysfunction (splenectomy, sickle cell disease, coeliac syndrome); chronic renal, heart, lung, liver disease, diabetes mellitus, complement deficiency, immunosuppressive conditions; CSF leak, cochlear implant recipients or candidates for implants; children < 5 years with history of invasive disease.

^ Revaccination not indicated for any person who has received a dose of PPV23 at age ≥65 years.

‡ If vaccination has been given during chemotherapy or radiotherapy revaccination 3 months after treatment is indicated.

\*\* Those with no spleen, with splenic dysfunction, immunosuppression including HIV infection, nephrotic syndrome, renal transplant or chronic renal disease.

# New vaccines

- Meningococcal Group B
- ~ 30 new or improved vaccines anticipated by 2015

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### New vaccine against deadly meningitis B 'will be available in the spring'

- Meningitis B causes 120 deaths in Britain each year
- Vaccine effective against about 80 per cent of strains found in Europe

By JENNY HOPE  
Last updated at 5:47 AM on 18th January 2012

#### Articles

### Immunogenicity and tolerability of a multicomponent meningococcal serogroup B (4CMenB) vaccine in healthy adolescents in Chile: a phase 2b/3 randomised, observer-blind, placebo-controlled study

Mania Elime-Sunilidyan, Maguire L O'Ryan, Maria Teresa Valenzuela, Valeria Pineda, Rodrigo Virgani, Alma Muñoz, Daniela Tonotari, Gabriela Guina, Huijue Wang, Ralph Cremens, Peter McDill, for the V2P10 Meningococcal B Adolescent Vaccine Study group\*

**Summary**  
Background Effective glycoconjugate vaccines against *Neisseria meningitidis* serogroups A, C, W-135, and Y have been developed, but serogroup B remains a major cause of severe invasive disease in infants and adolescents worldwide. We assessed immunogenicity and tolerability of a four-component vaccine (4CMenB) in adolescents.

**Methods** We did a randomised, observer-blind, placebo-controlled, study at 12 sites in Santiago and Valparaiso, Chile. Adolescents aged 11–17 years received one, two, or three doses of 4CMenB at 1 month, 2 month, or 6 month intervals. Immunogenicity was assessed as serum IgG antibody against human complement (hSBA) against three

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See Article Online  
DOI:10.1016/S0140-6736(12)11712-3



# More information

The screenshot shows the Health Service Executive Immunisation Website and a newsletter titled 'National Immunisation News' for October 2011. The website header includes 'Protect - Prevent - Immunise' and navigation links. The main content area features a 'Welcome to the Health Service Executive Immunisation Website' message and a 'This site provides information on immunisation for the General Public and Healthcare Professionals' statement. There are three main sections: 'Childhood Immunisation', 'Adult Immunisation', and 'Healthcare Professionals'. A 'New chapters August 2012' banner highlights updates for Diphtheria, Influenza, Pertussis, and Tetanus. The newsletter on the right contains 'Seasonal Flu Campaign 2011 - 2012' information, including a '10 DAYS OF HEADACHES, FEVER AND MUSCLE PAIN' warning and a list of recommendations from the National Immunisation Advisory Committee (NIAC).



New chapters August 2012  
 Diphtheria/ Influenza/ Pertussis/ Tetanus

<http://www.immunisation.ie/en/HealthcareProfessionals/ImmunisationGuidelines2008/>



[www.immunisation.ie](http://www.immunisation.ie)



# Why Immunise?

- Immunisation has saved more lives than any other public health intervention apart from the provision of clean water
- Immunisation is one of the most cost effective and safest of all health interventions



[www.immunisation.ie](http://www.immunisation.ie)