

The National Immunisation Schedule

Update and Current issues

November 2013

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National Immunisation Office



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

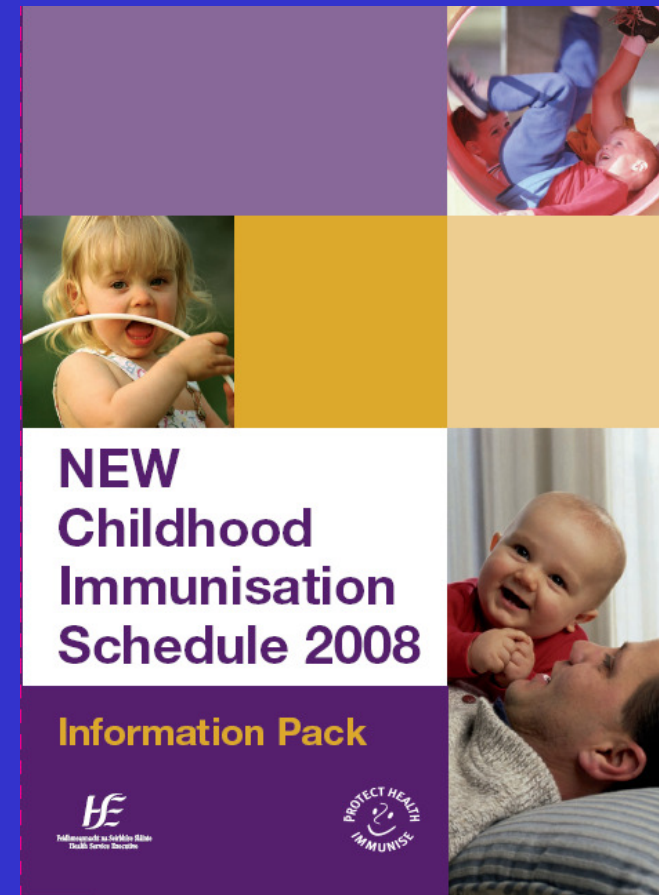
1937 - 1999	
Vaccine	Date introduced
1. BCG	1937
2. DT	1930s
3. DTP	1952
4. Oral Polio Vaccine (OPV)	1957
5. Rubella	1971
6. Measles	1985
7. MMR	1988
8. MMR2	1992
9. Hib	1992

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	2010
8. Tdap	2012

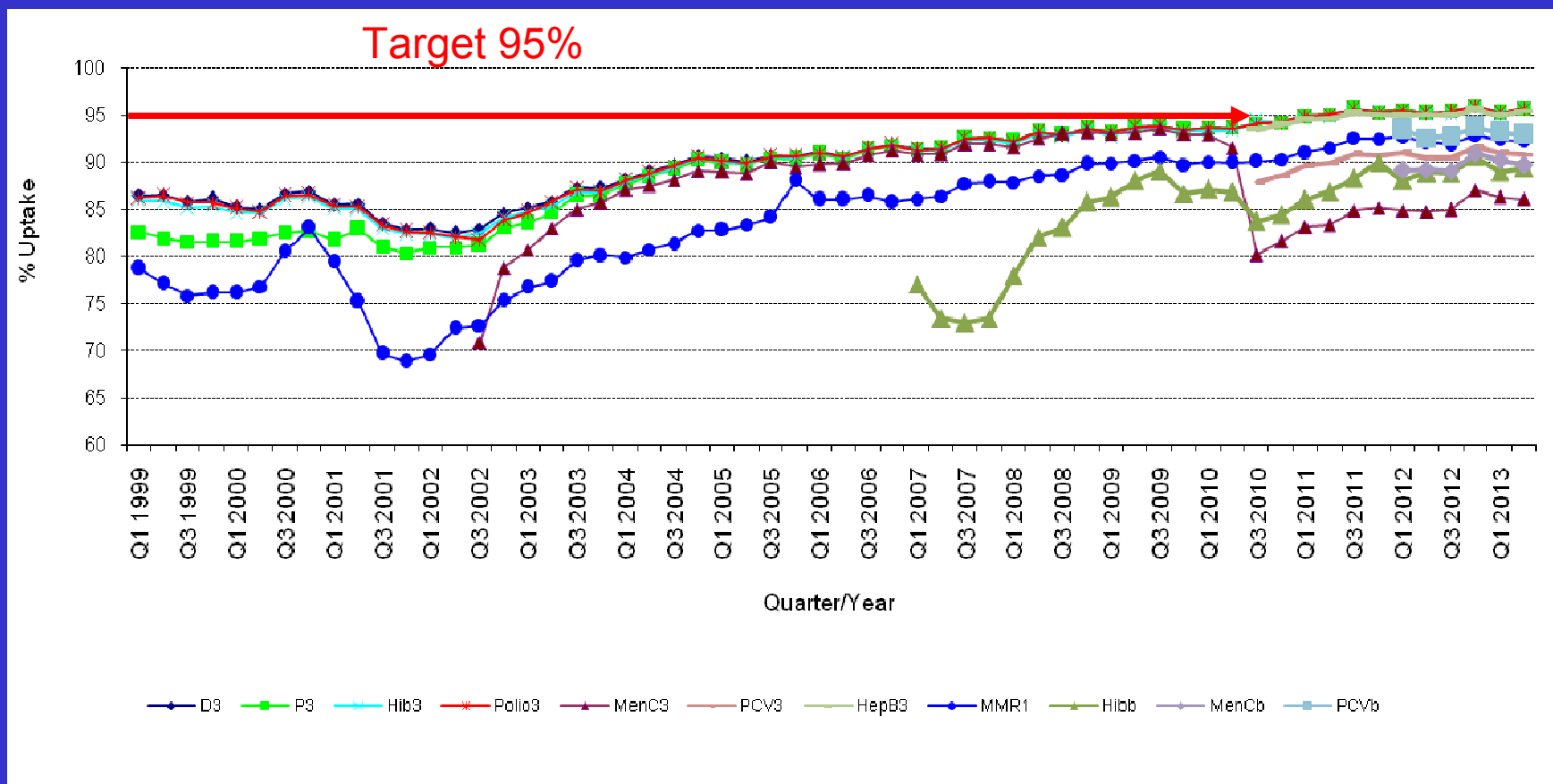


Primary Childhood Immunisation (PCI) Schedule

- 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



Vaccine uptake rate at 24 months 1999-2013

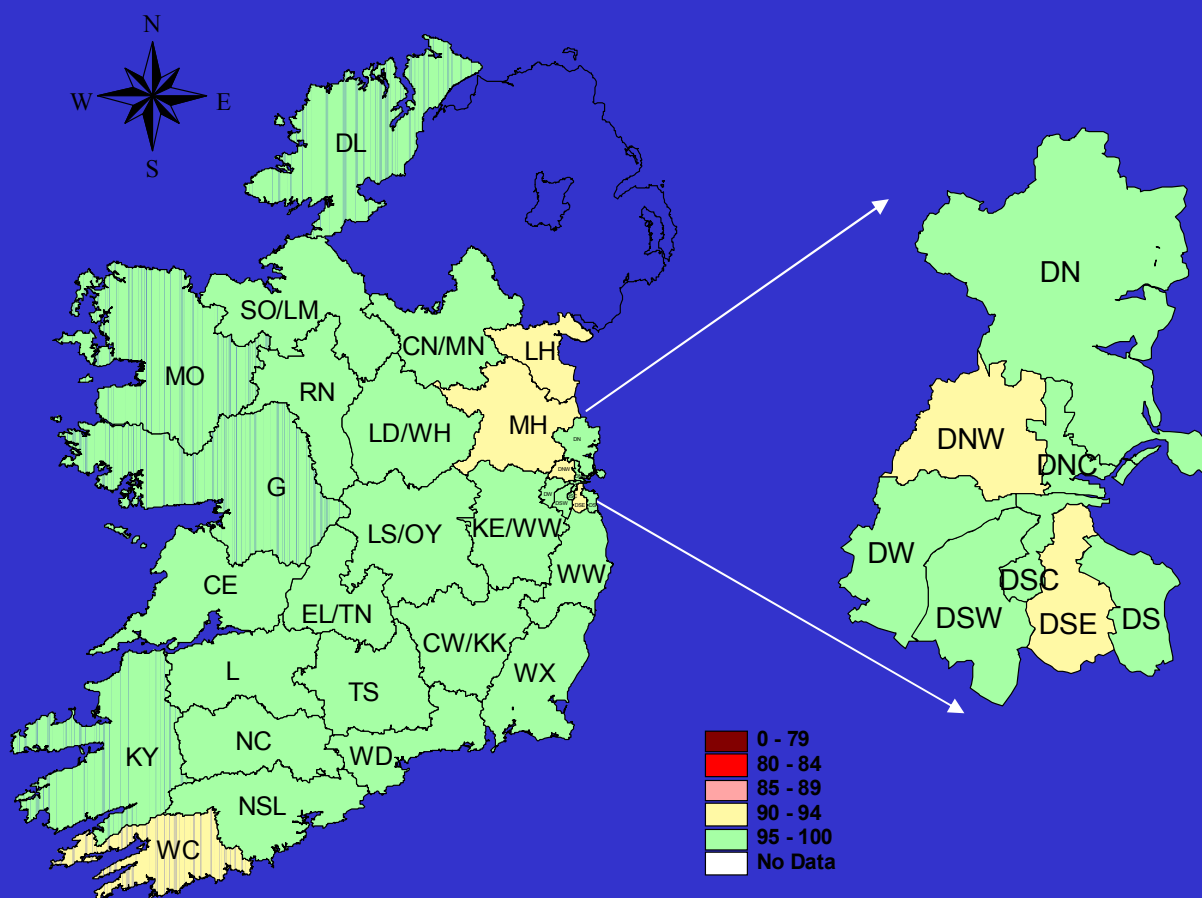


Source: HPSC



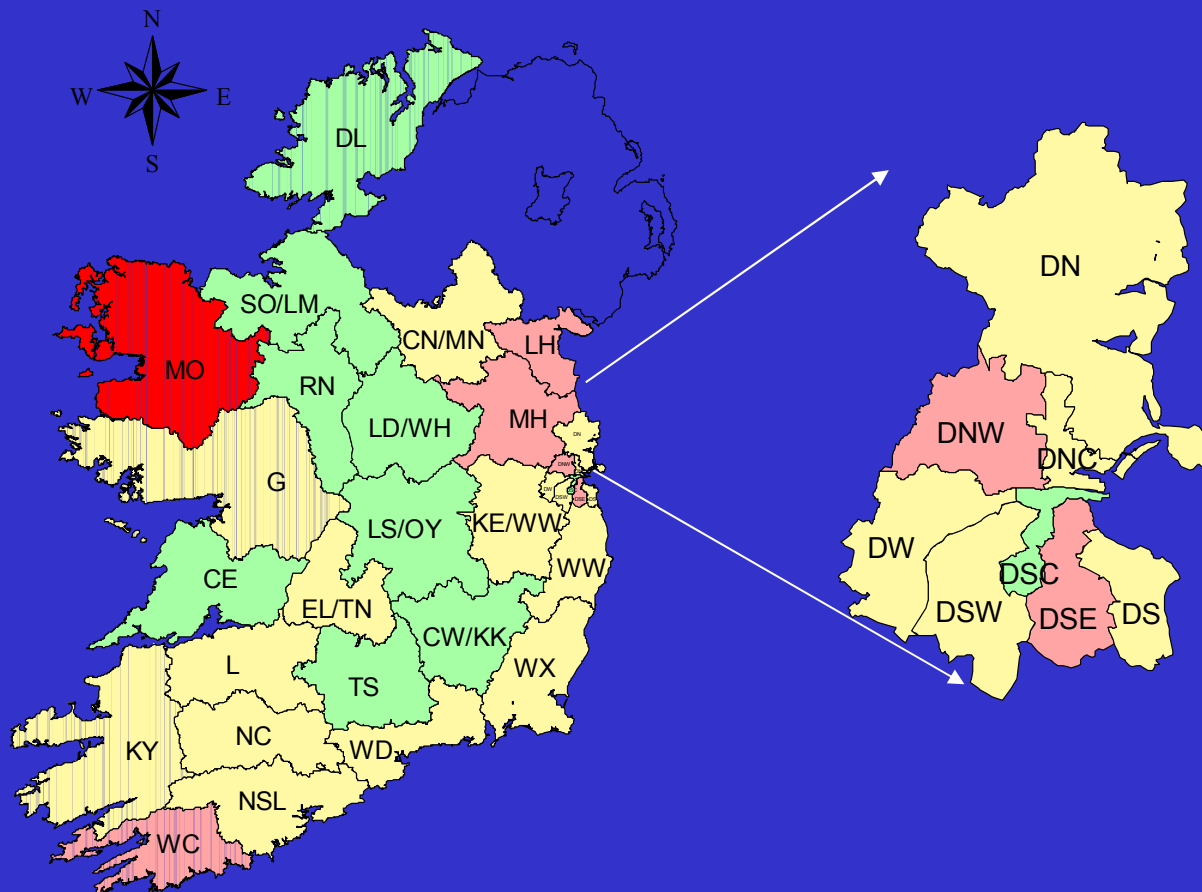
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Quarter 2 2013 D3 immunisation uptake rates (%) by LHO, in those 24 months of age in Ireland and Dublin (source HPSC)



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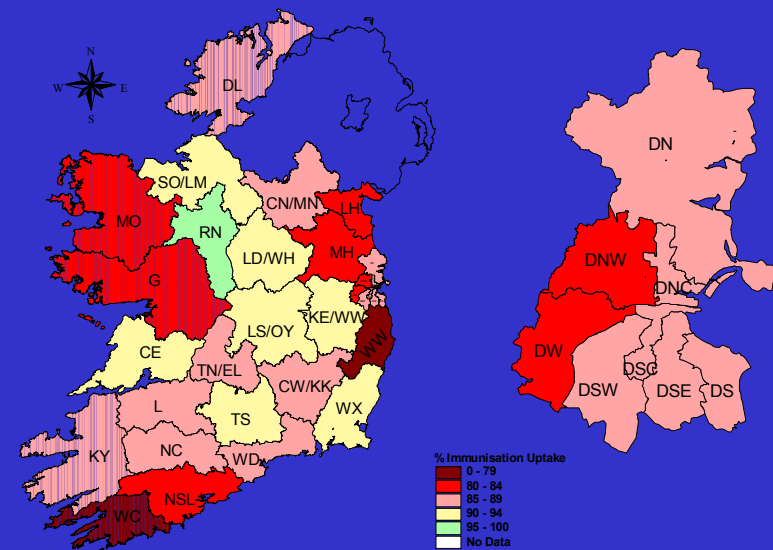
Quarter 2 2013 MMR immunisation uptake rates (%) by LHO, in those 24 months of age in Ireland and Dublin (source HPSC)



Decline in vaccine uptakes

Quarter 2 2013 Men C₃ immunisation uptake rates (%) by LHO, in those 24 months of age in Ireland and Dublin (source HPSC)

	Q1 2010	Q3 2010	Q2 2013
Men C ₃	93%	80%	86%
PCV ₃	-	88%	91%
Hib _b (booster dose)	89%	84%	89%



Decline in vaccine uptakes

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



Decline in vaccine uptakes

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

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

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

Primary Childhood Immunisation Schedule

Common reaction	AGE	WHERE	VACCINATION
Soreness, swelling in the area where the vaccine was given	At Birth	Hospital or HSE Clinic	BCG
Fever (over 39.5°C)	2 Months	GP	6 in 1 + PCV
Headache or irritability	4 Months	GP	6 in 1 + Men C
		GP	6 in 1 + PCV + Men C
		GP	MMR + PCV
		GP	Men C + Hib

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

Next appointment

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

5

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Optimal and minimum recommended ages and intervals between doses

	Dose 1		Dose 1 to Dose 2		Dose 2 to Dose 3	
	Optimal	Minimum	Optimal	Minimum	Optimal	Minimum
Diphtheria (D) Tetanus (T) Pertussis(aP) IPV Hib Hepatitis B (6 in 1 vaccine)	2 months	6 weeks	2 months	4 weeks	2 months (and 4 months after Dose 1)	8 weeks (and 16 weeks after Dose 1)
Men C	2 months	6 weeks	2 months	4 weeks	2 months (and over 12 months of age)	8 weeks (and over 12 months of age)
MMR	12 months	6months	1 month	4 weeks		
PCV	2 months	6 weeks	2 months	4 weeks	2 months	8 weeks (and over 12 months of age)



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Immunisation Guidelines

- Once a child is back on schedule, the optimal recommended ages and intervals should be followed for the remainder of the routine scheduled vaccines
- Children resident in Ireland should be given vaccines according to the recommended Irish schedule with the number of doses and type of vaccine dependent on the child's age



Routine physical examination & procedures

(e.g. measuring temperatures)

- not prerequisites for vaccinating persons who appear to be healthy
- ask if the proposed recipient is ill
- postpone vaccination if there is an acute severe illness.



Pain reduction

- **Distraction techniques**
playing music, books, pretending to blow away the pain, deep breathing techniques
- **Sweet-tasting liquids**
1/2 teaspoon 24-30% sugar solution prior to injection reduces crying in children < 12 months
- **Breastfeeding**
effective soothing measure for infants receiving injections
can decrease the incidence of fever
- **Order of injections**
most painful last (e.g., MMR, PCV or HPV)
- **Tactile stimulation**
rubbing or stroking skin near injection site with moderate intensity
older children (4 years and older) and adults
- **Administration technique**
rapid needle insertion,
depressing the plunger over 1-2 seconds,
withdrawal without aspiration
- **Simultaneously administering vaccines at separate sites??**



School Immunisation Schedule

Age (years)	Vaccine
4 -5	4 in 1 MMR
11-14	Tdap
12 (girls only) 18 (catch up)	HPV (3 dose schedule)

4 in1

Diphtheria
Tetanus
Pertussis
Polio

Tdap

Tetanus, low dose diphtheria/low dose pertussis

HPV

Human Papilloma Virus

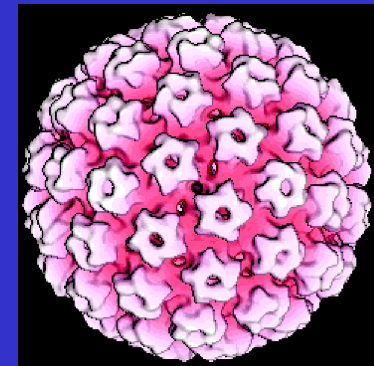


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HPV vaccination programme

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

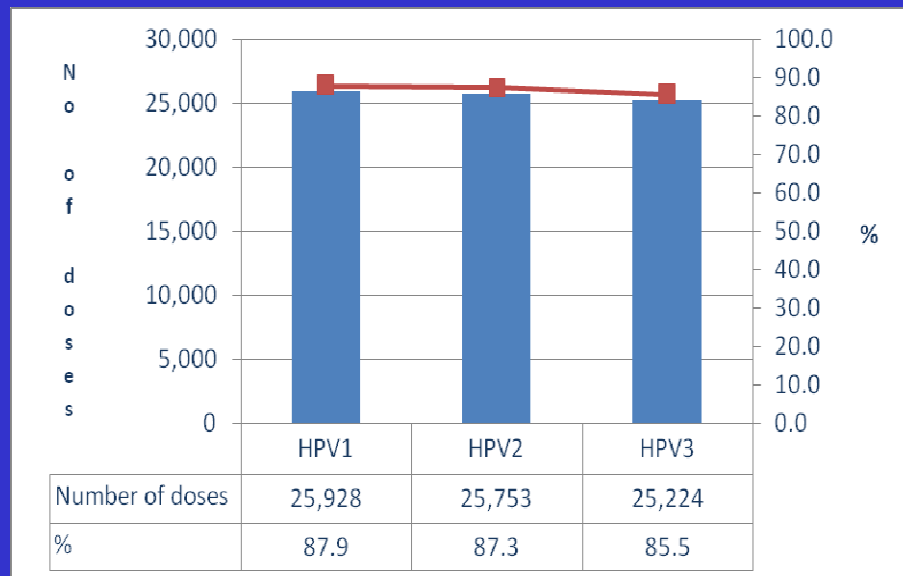


Computerised image of
the human papillomavirus
Courtesy of Dept of
Pathology, University of
Cambridge

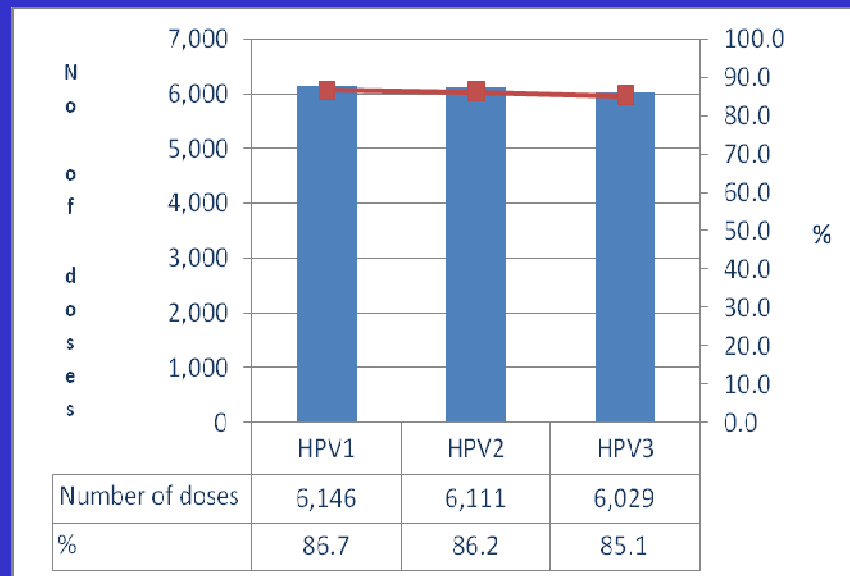
HPV vaccine uptake 2011/2012

Routine programme First years

National



West



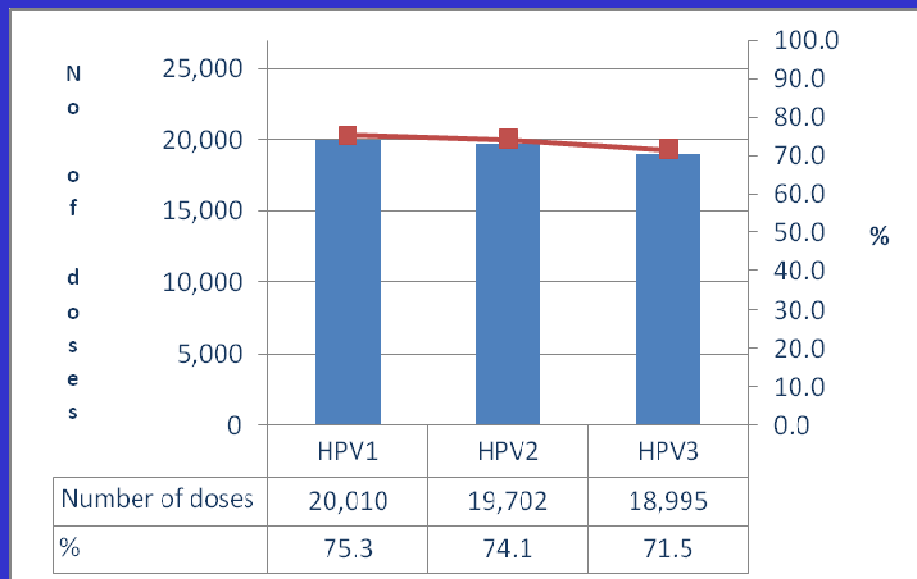
- Over 80% (85.5%) uptake achieved for 3 dose schedule
- Excellent cohort retention
- >97% girls who started dose 1 completed dose 3



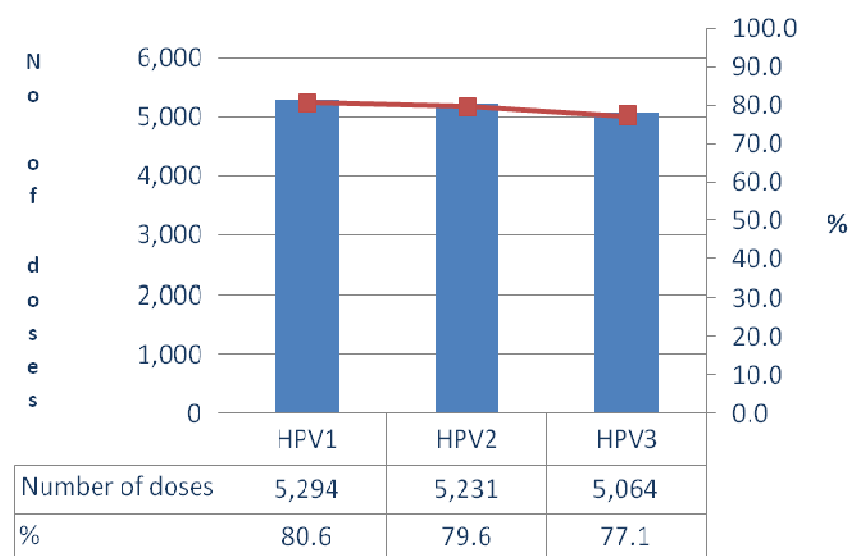
HPV vaccine uptake 2011/2012

Catch up programme Sixth years

National



West



- Over 70% (71.5%) uptake achieved for 3 dose schedule
- Excellent cohort retention
- ~95% girls who started dose 1 completed dose 3



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Vaccine Impact in Australia

High Grade Cervical Lesions <18 years

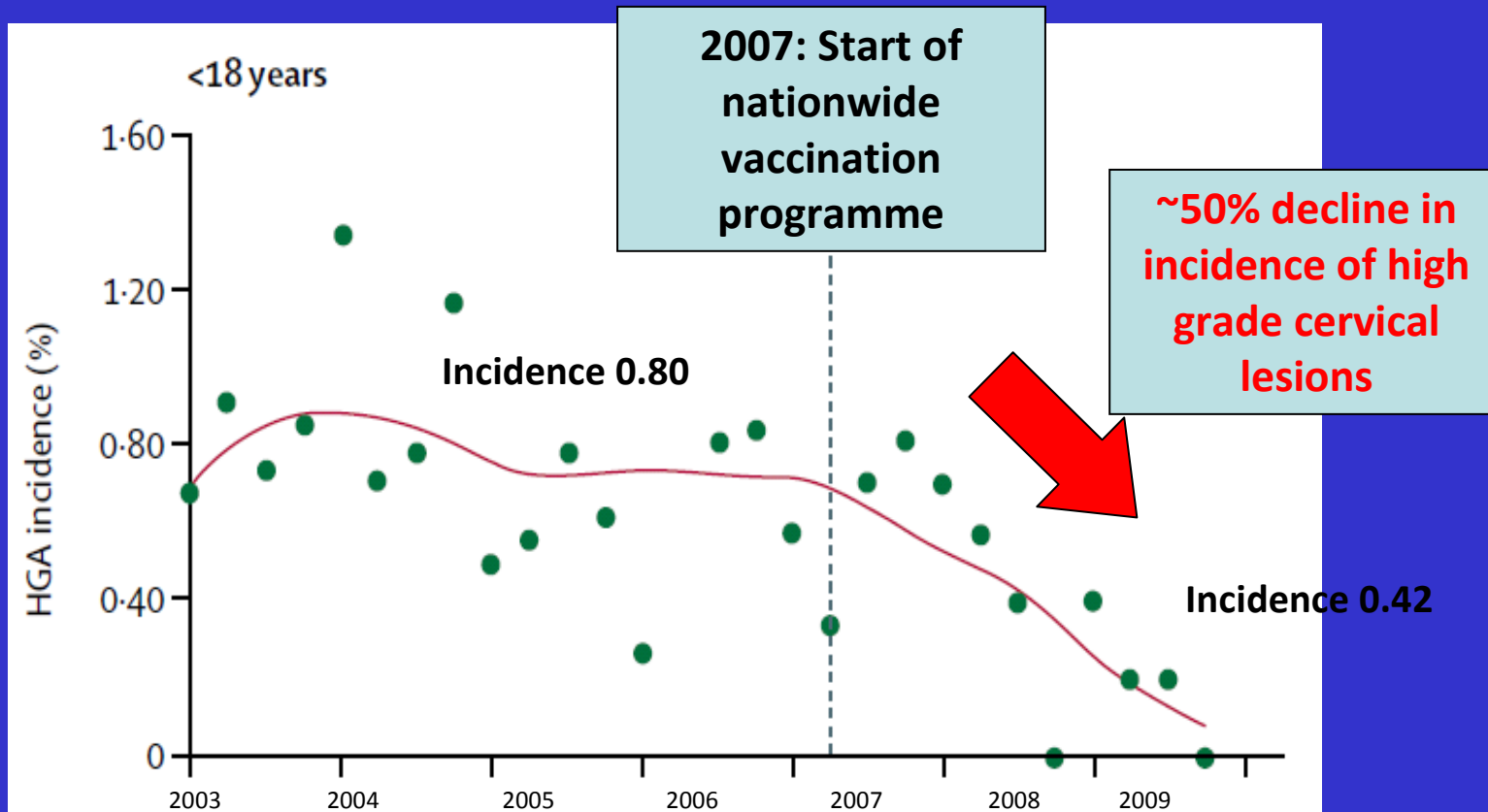


Figure 2: Incidence of high-grade cervical abnormalities, by age group

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.



Brotherton et al Lancet 2011; 377: 2085–92

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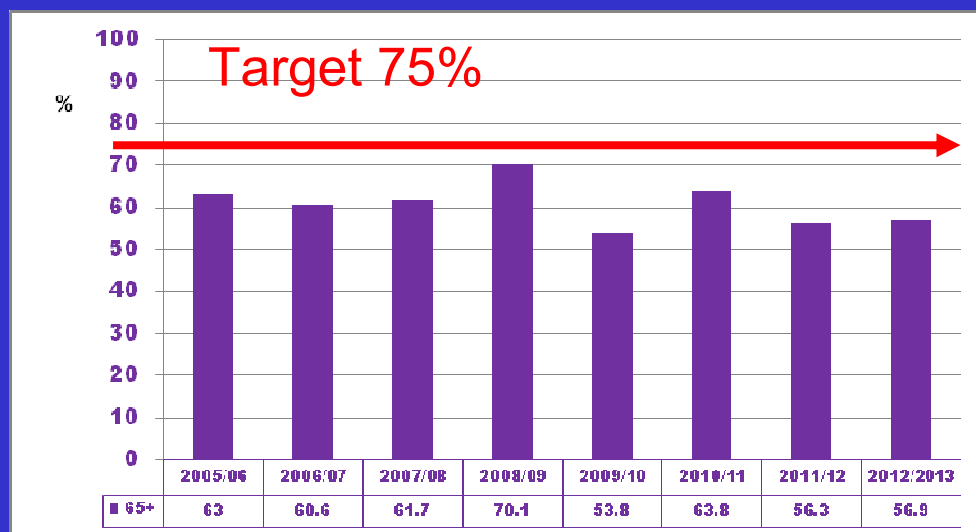


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Seasonal influenza vaccination programme

Vaccine uptake for 65+ years with GMS card

Source:HPSC



2013/2014 Annual campaign

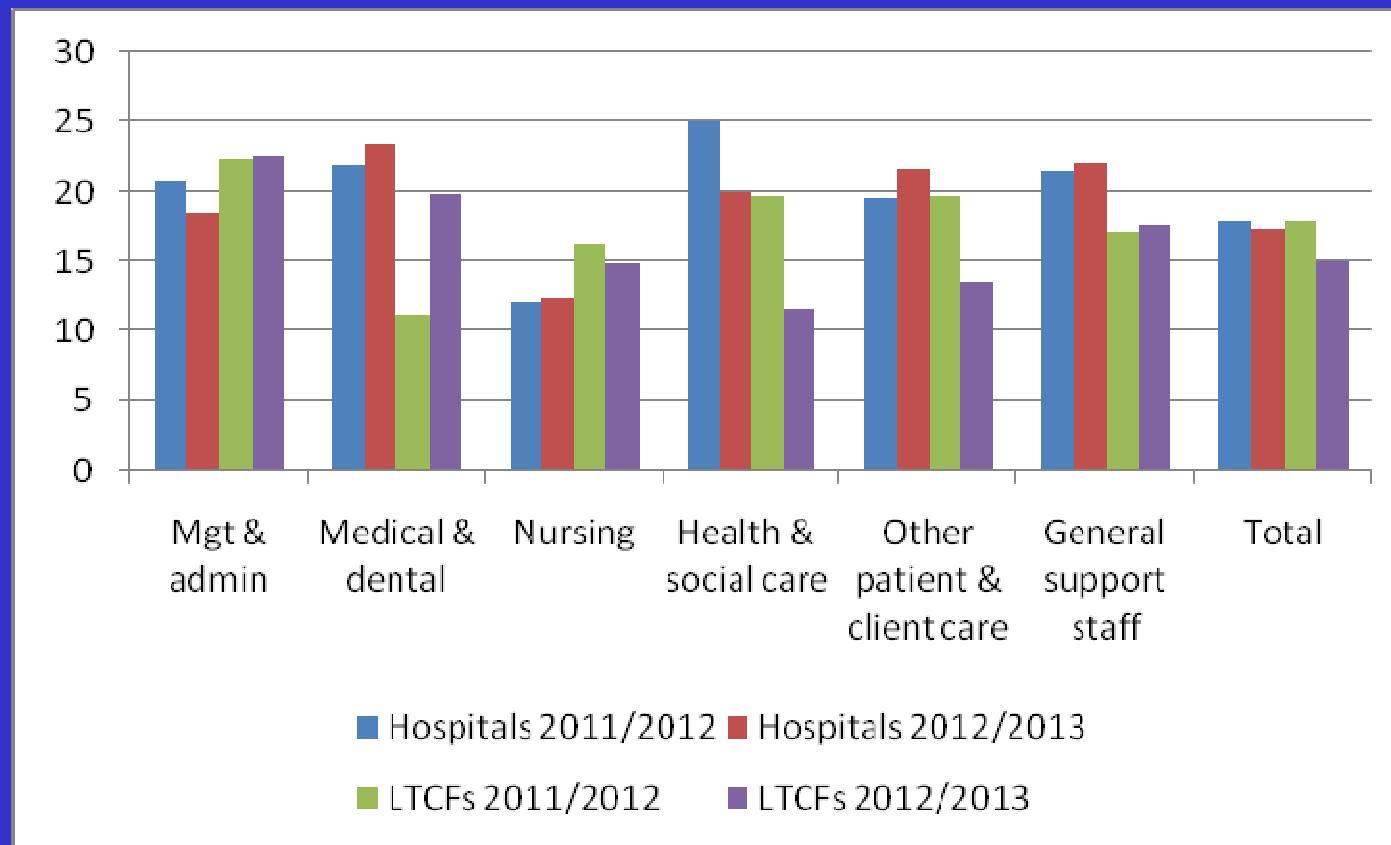
- No change in at risk groups
- Pregnant women
- Health care workers
- Season continues until end of April



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Seasonal influenza vaccination programme

% vaccine uptake in health care workers



<http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaandHealthcareWorkers/>



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Why should health care workers be vaccinated?

“I’m very healthy so my immune system will protect me from flu.”

“I know the symptoms and would stay at home if I got sick so I wouldn’t infect my colleagues or patients.”

“I got the vaccine and it gave me the flu.”

- >20% HCWs get flu every year
- may only have mild symptoms and continue to work
- highly transmissible 1 day before & 5-7 days after symptoms
- healthy people can get seriously ill from flu
- vaccine contains killed viruses so cannot cause flu

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



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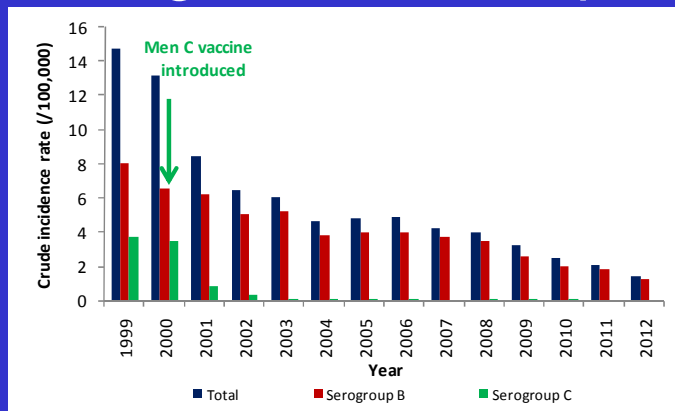
Changes to UK schedule 2013

June	2 nd dose of Men C in infancy stopped
July	Rotavirus (oral) vaccine introduced 2 doses at 2 and 3 months
Sept	Men C adolescent dose introduced
	Shingles vaccine Routine at 70 years Catch up at 79 years
	Flu vaccine (LAIV – nasal spray) Some pre school children All 2-16 years (over a number of years)
???	Men B



New vaccines

- Meningococcal Group B



- ~ 30 new or improved vaccines anticipated in next 10 years

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HIV vaccine possible after scientific breakthrough, study claims

Scientists hope to be able develop a vaccine to prevent HIV after capturing the most detailed picture yet of a key Aids protein

Telegraph Politics

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By Hayley Dixon, and ages
10:19PM GMT 31 Oct 2013

Novel Approach for Influenza Vaccination Shows Promise in Early Animal Testing

May 22, 2013 — A new approach for immunizing against influenza elicited a more potent immune response and broader protection than the currently licensed seasonal influenza vaccines when tested in mice and ferrets. The vaccine concept, which was developed by scientists at the National Institute of Allergy and Infectious Diseases (NIAID), represents an important step forward in the quest to develop a universal influenza vaccine -- one that would protect against most or all influenza strains without the need for an annual vaccination.

The scientists designed an experimental vaccine featuring the protein ferritin, which can self-assemble into microscopic pieces called nanoparticles, as a key component. Ferritin was fused genetically with hemagglutinin (HA), the protein found on the surface of the influenza virus, resulting in a nanoparticle with eight protruding viral spikes. Using this as the basis for the vaccine antigen, the researchers created

When ferritin (gray) is fused with the influenza protein hemagglutinin (blue), it self-assembles into a sphere with 8 protruding spikes from its surface. (Credit: NIAID)

Related Topics



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More information

The screenshot shows the homepage of the HSE Immunisation Website. At the top, there is a navigation bar with links: skip nav | Home | Contact Us | Sitemap | Accessibility Help. The main header features the 'Protect - Prevent - Immunise' slogan in both English and Gaelic. Below this is a banner with five images of diverse people. The main content area is titled 'Welcome to the Health Service Executive Immunisation Website' and states: 'This site provides information on immunisation for and Healthcare Professionals'. It features three columns: 'Childhood Immunisation' (with an image of a smiling child), 'Adult Immunisation' (with an image of an elderly couple), and 'Healthcare Professionals' (with an image of a doctor and a nurse). A 'Hot Topic' section lists: 'All at risk urged to get the flu vaccine', 'High uptake of HPV vaccine', and 'Increase in cases of Whooping Cough (pertussis)'. The footer includes logos for hpsc, the National Immunisation Advisory Committee (NICG), and the HSE.

2013 edition online only

The screenshot shows the August 2013 issue of the 'National Immunisation News' newsletter. The header includes the date 'August 2013' and a photo of laboratory glassware. The main title is 'National Immunisation News' with the subtitle 'The newsletter of the HSE National Immunisation Office'. The 'CONTENTS' section lists: 'Flu Season is coming', 'Immunisation Guidelines for Ireland', 'Immunisation Website', 'IP Guidelines', 'Uptake rates are still low', 'Schools Immunisation Programme', 'Monitoring Fridge Temperatures', 'Vaccine Deliveries', 'Supplies of Hepatitis Vaccine', 'Vaccine Listing', and 'Common Queries'. The 'FLU SEASON IS COMING' section provides instructions for returning vaccines and includes a link to the returns form. It also mentions that expired vaccines do not require refrigeration. The 'IMMUNISATION GUIDELINES FOR IRELAND' section states that new 2013 guidelines are being drafted and will be available online later. The footer includes the HSE logo and the website 'www.immunisation.ie'.

NATIONAL IMMUNISATION ADVISORY COMMITTEE
Immunisation Guidelines
for Ireland
2013 Edition

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



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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



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