The successes of new vaccine introductions in the UK.

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The UK Immunisation programme.

- All routine vaccines are purchased by the Department of Health (DH).
- They are distributed by DH to providers and are free to providers and recipients.
- Immunisations are all recorded and submitted to DH either by automated or semi-automated systems.
- Coverage measurements are available down to individual General Practice level every three months or more often (weekly for seasonal influenza vaccination).
- Coverage can be monitored by practice, Primary Care Trust, Strategic Health Authority and nationally.
- Most immunisations are provided through Primary Care apart from those provided in school (HPV, Td/IPV).

The DH coordinating role in the process of introducing new vaccines.

- Epidemiology before and after implementation.
- Cost-effectiveness analysis with modelling of expected impact.
- Training for Health Professionals with nationally developed materials.
- Surveys of public attitudes, knowledge and acceptability.
- Communications research and pre-testing of advertising materials.
- Development of communications packages (Television, radio, leaflets, newspapers, social networking, internet).
- Tracking of vaccinations through national systems.
- Evaluation of communication materials.
- Impact assessment.

Joint Committee on Vaccination & Immunisation (JCVI)

JCVI focuses on vaccination and immunisation against infectious diseases and provides independent, expert, evidence-based advice

- JCVI's aim is to ensure greatest benefit to public health is obtained from most appropriate vaccination and immunisation strategies.
- JCVI appraises available evidence from a comprehensive range of sources, including evidence on the burden of disease and the impact of vaccines, vaccine safety*, efficacy and quality, and impact and cost effectiveness of strategies for their use.

* Safety of vaccines (and other medicines) is responsibility of regulators (EMA, MHRA)

Evidence considered by JCVI

- Published peer-reviewed scientific and medical literature
- Epidemiological and clinical trials analyses by HPA
- Epidemiological and cost effectiveness mathematical modelling mostly by HPA
- Submissions from vaccine manufacturers
- Attitudinal (social) research
- Other opinion (e.g. WHO)
- Calls for evidence from interested parties
- Papers synthesised by secretariat



Haemophilus influenzae type b (Hib) E&W; 1991 - 2009



Cases of meningococcal C disease and introduction of Meningococcal C conjugate vaccine.





Seasonal distribution of rotavirus infections - laboratory reports of all identifications by month, England and Wales, 2000-2012.



Confirmed rotavirus infections in children under 5 years of age, 2000-2011



England and Wales, July 2000 to June 2012 (*n* = 178,880) *Source: Rotavirus LabBase, Health Protection Agency*.



Protecting your baby against rotavirus

Answers to your questions on the vaccine that protects babies against rotavirus infection





Public Health England data

HPV Vaccine Uptake - Routine Cohort (12-13 Year Olds) 2008/09, 2009/10, 2010 /11, 2011/12 & 2012/13 Comparison - Monthly Data



Vaccine uptake – 'mop up' vaccinations in England (% vaccinated in target cohort)

	At end of academic year	Including 'mop up' vaccinations
2008/9 routine cohort	80.1	84.4 (+4.3)
		Up to Sept 2011
2009/10 routine cohort	76.4	81.8* (+5.4)
		Up to Sept 2012
2010/11 routine cohort	83.8	86.3* (+2.5)
		Up to Sept 2012
2011/12 routine cohort	86.8	Ongoing vaccination programme

HPV vaccine uptake 3rd dose England (2008/9 to 2011/12)



Reduction in HPV 16/18 prevalence in sexually active young women following the introduction of HPV immunisation in England

D. Mesher , K. Soldan , R. Howell-Jones , K. Panwar , P. Manyenga , M. Jit , S. Beddows , O.N. Gill

http://dx.doi.org/10.1016/j.vaccine.2013.10.085

Vaccine, Volume 32, Issue 1, 2013, 26 - 32

Prevalence of vaccine HPV types (16/18) by age-group and survey period. * Vaccine coverage estimated using published data on national HPV coverage for each birth-cohort by year. In the 19–21 year old age-group this is calculated separately for thos...



Incidence of laboratory-confirmed pertussis, by total case-patients and age group in England & Wales, 1998–2013 PHE data.



Total laboratory confirmed pertussis cases by month, England & Wales: January 2012- April2013 PHE data



Introduction of emergency vaccination programme for pregnant women (Late September 2012 onwards).

- Vaccination with TdaP/IPV since stocks already available.
- All women between 28 and 38 weeks of pregnancy.
- Vaccination in each pregnancy.



Information Service for Parents

advice you can trust



Department of Health

Hello

26 weeks

It's a baby bone-builder!

Make sure you get enough calcium. It's good for you and your baby's growing bones. Foodie calcium sources include dairy foods like milk, cheese and yogurt, fortified breakfast cereals and green leafy veg such as broccoli. Read more about getting enough calcium and other great foods for pregnancy.

Vitamins and minerals in pregnancy



Information Service for Parents advice you can trust



34 weeks

Hello

Am I in labour?

Are you anxious about how you'll know when the big event is starting? Try not to worry. Labour usually builds up very slowly. This one-minute video shows you how to spot the clues that your baby is finally on the way.



Watch the video

Whooping cough vaccination

Due to a sharp rise in the number of whooping cough cases in the UK, it is now recommended that all pregnant women should be vaccinated against whooping cough when they are 28-38 weeks pregnant. Whooping cough is a serious illness and getting vaccinated while you're pregnant may help protect your baby from whooping cough in the first weeks of their life. If you haven't heard from your midwife or GP about the vaccination, contact them to discuss having it.

Whooping cough vaccination



Whooping cough vaccination

You can expect to be offered a vaccination against whooping cough at one of your next antenatal appointments. Due to a sharp rise in the number of whooping cough cases in the UK, it is now recommended that all pregnant women should get vaccinated against whooping cough when they are 28-38 weeks pregnant. Whooping cough is a serious illness and getting vaccinated while you're pregnant may help protect your baby from whooping cough in the first weeks of their life. Find out more about the whooping cough vaccination and why it's recommended.

Repevax (TdaP/IPV) vaccine issued and monthly vaccine uptake





Figure1: CPRD Maternal pertussis vaccine coverage by week of child's birth

Using CPRD: a total of 16146 women with live births from October 1st 2012 until the last data extract from their practice were available (6% of births in England).

Monthly distribution of laboratory confirmed cases in 2012 and 2013, England & Wales, by age group based on provisional data. PHE data



Provisional data: not to be quoted.

2012: Pre-campaign 14 deaths in infants less than3 months

2013: Post-campaign **1** death in infant of unvaccinated mother

VE estimates from the various analyses. Public Health England data

Analysis	Cases vaccinated / total	VE (95% CI)	VE reducing cover by relative 10% (95% Cl)
All 43 cases	8/43	89% (76% to 94%)	83% (66% to 92%)
Dropping the	7/42	90%	85%
Welsh case		(79% to 95%)	(69% to 93%)
Dropping cases	6/38	91%	87%
aged 2m		(78% to 96%)	(68% to 94%)

Maternal Pertussis vaccine Effectiveness Estimates by timing of vaccination. PHE data

Analysis	Cases vaccinated / total	VE* (95% CI)	
VE for vaccination 28 days before birth	5/29	90% (77% to 96%)	
VE for vaccination 7 to 27 days before birth	3/38	76% (42% to 90%)	
VE for vaccination 0-6 days before of 1-13 days after birth	2/41	29% (-188% to 83%)	

Pertussis vaccination of pregnant women: safety studies

- A prospective study using the Clinical Practice Research Database (CPRD) examined a range of pre-defined pregnancy-related adverse events.
- Data on the known rates of events were used to examine the short term risk following vaccination using observed vs. expected analyses.
 - Intrauterine death / stillbirth, Pre-eclampsia / Eclampsia, Ante- / post-partum haemorrhage, Uterine rupture, Placenta praevia, Vasa praevia, Foetal distress, Pre-term birth.

There was no increase in the rates of specific events in vaccinated women (17,000), including stillbirths.

For stillbirths, a further matched cohort study was undertaken using the CPRD with three historic controls matched to each vaccinated woman (6,000 vaccinated women matched to 18,000 controls).

There was no increase in the rate of stillbirths following pertussis vaccination in pregnant women.

Pertussis vaccination programme for pregnant women in the UK.

- The pertussis vaccination programme for pregnant women was put in place extremely quickly.
- High coverage has been achieved from the outset.
- Vaccine efficacy up to two months of age has been shown to be high.
- Studies on 18,000 women give assurance on safety in pregnancy.
- Infants will be followed to examine the impact of antenatal immunisation on infant responses to primary immunisations.

Summary of changes to the immunisation schedule in 2013/14

Programme	June 2013	July 2013	August 2013	Sept 2013
MenC vaccine: remove one primary dose	V			
Rotavirus vaccine introduced		V		
MenC vaccine: adolescent dose introduced through schools				v *
Shingles vaccine: programme begins (including catch-up)				V
Flu vaccine for some pre- school aged children introduced				V

Introducing new vaccines / new policies.

- Vaccine studies
 Product selection
 Disease Surveillance
 Adverse Event monitoring
- Supply arrangementsCall / recall programming

- Coverage Measurement
- Resources.
- Communication Strategy
- Professional training materials
- Vaccine failures
- Impact assessment