UK Health Security Agency

This Webinar will be recorded. Recording will begin at the start of the webinar and end before the question and answer section. No delegate information will be visible on the recording.

Primary care immunisation update webinar series

June 2023: Child and Adolescent immunisation update

Presenter: Pauline MacDonald

Welcome to the webinar. This webinar will commence at the scheduled time.

Before then please take a moment to read through the tips below

- All delegate's lines are muted throughout the presentation
- If at other times you are in a noisy environment please mute your line by pressing the mute button on your screen
- If you would like to ask a question please use the chat function
- There will be an opportunity for questions at the end – you can unmute to ask your question
- This webinar will be recorded and made available on the national immunisation webpages.(https://www.gov.uk/government/publications/immunisation-update-webinars-for-primary-care-immunisers)
- Recording will begin at the start of the webinar and end before the question and answer section. No delegate information will be visible on the recording.
- If you are having any technical problems please send a message to the host via the message function or email ImmsTraining@ukhsa.gov.uk

Webinar Essentials

Today's webinar

- Trainer is Pauline MacDonald
- 30 minutes Pauline talking with slides
- 15 minutes for questions and answers from delegates

Access to slides

- Copy of slides will be emailed to delegates (following submission of evaluation)
- Underlined text on the slides are hyperlinks – click to go straight to the link

Following the webinar

- You will be emailed a link to an electronic evaluation (Select Survey)
- Your feedback is essential to support the development of the webinar series
- A certificate will be emailed once the evaluation is completed

UK Health Security Agency

Primary care immunisation update webinar series

June 2022: Child and Adolescent immunisation update

Presenter: Pauline MacDonald

Learning outcomes

Explain the impact of these programmes on vaccine preventable diseases – changes in epidemiology since vaccine introduction

Highlight current issues in immunisation related to these programmes

Identify ways to improve vaccine uptake among children and adolescents

Session content

- Routine child and adolescent immunisations
- Epidemiology of Vaccine Preventable diseases
- Current issues around the programmes
- Addressing potential barriers

Impact of COVID-19

Disrupted programme delivery

Falling uptake of vaccines – None of the 0-5 imms programmes achieved 95% in 2021-22

Reduction in some vaccine preventable disease (VPD)

Increase in pool of individuals who are susceptible to VPD

Possibility of resurgence in VPD

Important to reverse any declines in uptake

Resources: COVER data reports

https://digital.nhs.uk/data-and-information/publications/statistical/nhs-immunisation-statistics/2021-22

Children and adolescents

- Aims of the national immunisation programme:
  - Provide a programme of lifelong immunisations to the UK population
  - Vaccination programmes that start in infancy
  - Administer vaccines at ages appropriate to epidemiology and risk of acquiring and/or have poor outcomes of vaccine preventable diseases
  - Administer additional vaccines to boost immunity through the life course
  - Provide vaccination for individuals who are not fully immunised and remain susceptible to infection
  - When required, provide vaccines as part of catch ups or outbreak response

The routine immunisation schedule from February 2022

Age due	Diseases protected against	Vaccine given and trade name		Usual site[1]
Eight weeks old	Diphtheria, tetanus, pertussis (whooping cough), polio, *Haemophilus influenzae* type b (Hib) and hepatitis B	DTaP/IPV/Hib/HepB	Infanrix hexa or Vaxelis	Thigh
	Meningococcal group B (MenB)	MenB	Bexsero	Left thigh
	Rotavirus gastroenteritis	Rotavirus[2]	Rotarix[2]	By mouth
Twelve weeks old	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B	DTaP/IPV/Hib/HepB	Infanrix hexa or Vaxelis	Thigh
	Pneumococcal (13 serotypes)	Pneumococcal conjugate vaccine (PCV)	Prevenar 13	Thigh
	Rotavirus	Rotavirus[2]	Rotarix[2]	By mouth
Sixteen weeks old	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B	DTaP/IPV/Hib/HepB	Infanrix hexa or Vaxelis	Thigh
	MenB	MenB	Bexsero	Left thigh
One year old (on or after the child's first birthday)	Hib and MenC	Hib/MenC	Menitorix	Upper arm/thigh
	Pneumococcal	PCV booster	Prevenar 13	Upper arm/thigh
	Measles, mumps and rubella (German measles)	MMR	MMRvaxPro[3] or Priorix	Upper arm/thigh
	MenB	MenB booster	Bexsero	Left thigh
Eligible paediatric age groups[4]	Influenza (each year from September)	Live attenuated influenza vaccine LAIV[3,5]	Fluenz Tetra[3,5]	Both nostrils
Three years four months old or soon after	Diphtheria, tetanus, pertussis and polio	dTaP/IPV	Boostrix-IPV	Upper arm
	Measles, mumps and rubella	MMR (check first dose given)	MMRvaxPro[3] or Priorix	Upper arm
Boys and girls aged twelve to thirteen years	Cancers and genital warts caused by specific human papillomavirus (HPV) types	HPV (two doses 6-24 months apart)	Gardasil	Upper arm
Fourteen years old (school Year 9)	Tetanus, diphtheria and polio	Td/IPV (check MMR status)	Revaxis	Upper arm
	Meningococcal groups A, C, W and Y	MenACWY	Nimenrix	Upper arm
65 years old	Pneumococcal (23 serotypes)	Pneumococcal Polysaccharide Vaccine (PPV)	Pneumovax 23	Upper arm
65 years of age and older	Influenza (each year from September)	Inactivated influenza vaccine	Multiple	Upper arm
70 to 79 years of age	Shingles	Shingles	Zostavax[3] (or Shingrix if Zostavax contraindicated)	Upper arm

1. Intramuscular injection into deltoid muscle in upper arm or anterolateral aspect of the thigh.
2. Rotavirus vaccine should only be given after checking for SCID screening result.
3. Contains porcine gelatine.
4. See annual flu letter at: www.gov.uk/government/collections/annual-flu-programme
5. If LAIV (live attenuated influenza vaccine) is contraindicated or otherwise unsuitable use inactivated flu vaccine (check Green Book Chapter 19 for details).

For vaccine supply information for the routine immunisation schedule please visit portal.immform.phe.gov.uk and check Vaccine Update for all other vaccine supply information: www.gov.uk/government/collections/vaccine-update

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https://www.gov.uk/government/publications/the-complete-routine-immunisation-schedule

February 2022

Routine childhood immunisations from February 2022

When	Diseases protected against	Vaccine given and trade name		Usual site[1]
Eight weeks old	Diphtheria, tetanus, pertussis (whooping cough), polio, *Haemophilus influenzae* type b (Hib) and hepatitis B	DTaP/IPV/Hib/HepB	Infanrix hexa or Vaxelis	Thigh
	Meningococcal group B (MenB)	MenB	Bexsero	Left thigh
	Rotavirus gastroenteritis	Rotavirus	Rotarix[2]	By mouth
Twelve weeks old	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B	DTaP/IPV/Hib/HepB	Infanrix hexa or Vaxelis	Thigh
	Pneumococcal (13 serotypes)	PCV	Prevenar 13	Thigh
	Rotavirus	Rotavirus	Rotarix	By mouth
Sixteen weeks old	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B	DTaP/IPV/Hib/HepB	Infanrix hexa or Vaxelis	Thigh
	MenB	MenB	Bexsero	Left thigh
One year old (on or after the child's first birthday)	Hib and MenC	Hib/MenC	Menitorix	Upper arm/thigh
	Pneumococcal	PCV booster	Prevenar 13	Upper arm/thigh
	Measles, mumps and rubella (German measles)	MMR	MMRvaxPro[3] or Priorix	Upper arm/thigh
	MenB	MenB booster	Bexsero	Left thigh
Eligible paediatric age group[4]	Influenza (each year from September)	Live attenuated influenza vaccine LAIV	Fluenz Tetra[3,5]	Both nostrils
Three years four months old or soon after	Diphtheria, tetanus, pertussis and polio	dTaP/IPV	Boostrix-IPV	Upper arm
	Measles, mumps and rubella	MMR (check first dose given)	MMRvaxPro[3] or Priorix	Upper arm
Boys and girls aged twelve to thirteen years	Cancers and genital warts caused by specific human papillomavirus (HPV) types	HPV (two doses 6-24 months apart)	Gardasil	Upper arm
Fourteen years old (school Year 9)	Tetanus, diphtheria and polio	Td/IPV (check MMR status)	Revaxis	Upper arm
	Meningococcal groups A, C, W and Y	MenACWY	Nimenrix	Upper arm

1. Intramuscular injection into deltoid muscle in upper arm or anterolateral aspect of the thigh.
2. Rotavirus vaccine should only be given after checking for SCID screening result.
3. Contains porcine gelatine.
4. See annual flu letter at: www.gov.uk/government/collections/annual-flu-programme
5. If LAIV (live attenuated influenza vaccine) is contraindicated or otherwise unsuitable use inactivated flu vaccine (check Green Book Chapter 19 for details).

Selective childhood immunisation programmes

Target group	Age and schedule	Disease	Vaccines required
Babies born to hepatitis B infected mothers	At birth, four weeks and 12 months old[1,2]	Hepatitis B	Hepatitis B (Engerix B/HBvaxPRO)
Infants in areas of the country with TB incidence >= 40/100,000	Around 28 days old[4]	Tuberculosis	BCG
Infants with a parent or grandparent born in a high incidence country[3]	Around 28 days old[4]	Tuberculosis	BCG
Children in a clinical risk group	From 6 months to 17 years of age	Influenza	LAIV or inactivated flu vaccine if contraindicated to LAIV or under 2 years of age
Pregnant women	At any stage of pregnancy during flu season	Influenza	Inactivated flu vaccine
	From 16 weeks gestation	Pertussis	dTaP/IPV (Boostrix-IPV)

1. Take blood for HBsAg at 12 months to exclude infection.
2. In addition hexavalent vaccine (Infanrix hexa or Vaxelis) is given at 8, 12 and 16 weeks.
3. Where the annual incidence of TB is >= 40/100,000 – see www.gov.uk/government/publications/tuberculosis-tb-by-country-rates-per-100000-people
4. Check SCID screening outcome before giving BCG.

For vaccine supply information for the childhood programme please visit www.immform.dh.gov.uk and check vaccine update for all other vaccine supply information.

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https://www.gov.uk/government/publications/routine-childhood-immunisation-schedule

https://www.gov.uk/government/publications/vaccination-of-individuals-with-uncertain-or-incomplete-immunisation-status
from 2nd May 2023

UK Health Security Agency

Vaccination of individuals with uncertain or incomplete immunisation status

For online Green Book, see www.gov.uk/government/collections/immunisation-against-infectious-disease-the-green-book • For other countries' schedules, see immunizationdata.who.int/listing.html?topic=vaccine-schedule&location=

Infants from two months of age up to first birthday

DTaP/IPV/Hib/HepB[a#] + MenB[b] + rotavirus[c]
Four week gap
DTaP/IPV/Hib/HepB + PCV13[d] + rotavirus[c]
Four week gap
DTaP/IPV/Hib/HepB + MenB[b]

[a] A child who has already received 1 or more doses of primary diphtheria, tetanus, polio and pertussis should complete the 3 dose course with DTaP/IPV/Hib/HepB. Any missing doses of Hib and/or HepB can be given as Hib/MenC and/or, monovalent hepatitis B, at 4 week intervals

[b] Doses of MenB should ideally be given 8 weeks apart. They can be given 4 weeks apart in order for the primary MenB immunisation schedule to be completed before the first birthday if possible (i.e. if schedule started after 10m of age)

[c] First dose of rotavirus vaccine to be given **only** if infant is more than 6 weeks and under 15 weeks and second dose to be given **only** if infant is less than 24 weeks old

[d] Infants who are aged 12 weeks or over when starting their primary schedule can be given their single infant priming dose of PCV13 with their first set of primary immunisations. If a child has received PCV10 vaccine abroad, they should be offered 1 dose of PCV13 (at least 4 weeks after PCV10 was given)

Boosters + subsequent vaccination

As per UK schedule ensuring at least a 4 week interval between primary DTaP/IPV/Hib/HepB and the booster Hib/MenC dose, and a minimum 4 week interval between MenB and PCV13 priming and booster doses.

General principles

- unless there is a documented or reliable verbal vaccine history, individuals should be assumed to be unimmunised and a full course of immunisations planned
- individuals coming to UK part way through their immunisation schedule should be transferred onto the UK schedule and immunised as appropriate for age
- if the primary course has been started but not completed, resume the course – no need to repeat doses or restart course
- plan catch-up immunisation schedule with minimum number of visits and within a minimum possible timescale – aim to protect individual in shortest time possible

Children from first up to second birthday

DTaP/IPV/Hib/HepB[†#] + PCV13[††] + Hib/Men C[††] + MenB[†††] + MMR
Four week gap
DTaP/IPV/Hib/HepB[†]
Four week gap
DTaP/IPV/Hib/HepB[†] + MenB[†††]

[†] DTaP/IPV/Hib/HepB is now the only suitable vaccine containing high dose tetanus, diphtheria and pertussis antigen for priming children of this age. Children born from 01/08/17 who received primary vaccines without HepB should be opportunistically offered a 3 dose course of monovalent HepB vaccine. If they are in a high-risk group or are exposed to hepatitis B, they should be proactively offered a hepatitis B vaccine course

[††] All un- or incompletely immunised children only require 1 dose of Hib, Men C (until teenage booster) and PCV13 over the age of 1 year. It does not matter if 2 Hib-containing vaccines are given at the first appointment or if the child receives additional Hib at subsequent appointments if DTaP/IPV/Hib/HepB vaccine is given. If a child has received PCV10 vaccine abroad, they should be offered 1 dose of PCV13 (at least 4 weeks after PCV10 was given)

[†††] Children who received less than 2 doses of MenB in the first year of life should receive 2 doses of MenB in their second year of life at least 8 weeks apart. Doses of MenB can be given 4 weeks apart if necessary to ensure the 2 dose schedule is completed (i.e. if schedule started at 22m of age)

Boosters + subsequent vaccination

As per UK schedule

Children from second up to tenth birthday

DTaP/IPV/Hib/HepB[^#] + Hib/MenC[^^] + MMR
Four week gap
DTaP/IPV/Hib/HepB[^] + MMR
Four week gap
DTaP/IPV/Hib/HepB[^]

[^] DTaP/IPV/Hib/HepB is now the only suitable vaccine containing high dose tetanus, diphtheria and pertussis antigen for priming children of this age. Children born from 01/08/17 who received primary vaccines without HepB should be opportunistically offered a 3 dose course of monovalent HepB vaccine. If they are in a high-risk group or are exposed to hepatitis B, they should be proactively offered a hepatitis B vaccine course.

[^^] All un- or incompletely immunised children only require 1 dose of Hib and Men C (until teenage booster) over the age of 1 year. It does not matter if 2 Hib-containing vaccines are given at the first appointment or if the child receives additional Hib at subsequent appointments if DTaP/IPV/Hib/HepB vaccine is given

Boosters + subsequent vaccination

First booster of dTaP/IPV can be given as early as 1 year following completion of primary course to re-establish on routine schedule. Additional doses of DTaP-containing vaccines given under 3 years of age in some other countries do not count as a booster to the primary course in the UK and should be discounted. Subsequent vaccination – as per UK schedule

From tenth birthday onwards

Td/IPV[#] + MenACWY[*] + MMR
Four week gap
Td/IPV + MMR
Four week gap
Td/IPV

[*] Those aged from 10 years up to 25 years who have never received a MenC-containing vaccine should be offered MenACWY
Those aged 10 years up to 25 years may be eligible or may shortly become eligible for MenACWY usually given around 14y of age. Those born on/after 1/9/1996 remain eligible for MenACWY until their 25th birthday

Boosters + subsequent vaccination

First booster of Td/IPV: Preferably 5 years following completion of primary course
Second booster of Td/IPV: Ideally 10 years (minimum 5 years) following first booster

HPV vaccine

- females (born on/after 1/9/91) and males (born on/after 1/9/06) remain eligible up to their 25th birthday
- eligible individuals age 11 to 25 years should be offered a 2 dose schedule at 0, 6-24 months
- eligible individuals who are HIV positive or immunocompromised should be offered a 3 dose schedule at 0, 1, 4-6 months
- if the course is interrupted, it should be resumed but not repeated, even if more than 24 months have elapsed since the first dose
- individuals who started a 3 dose HPV schedule prior to the schedule change on 1 April 2022 should continue with their planned 3 dose schedule unless:
  - they have had two doses already with a 6 month interval – in which case no further doses are needed
  - they have only had one dose 6 or more months ago – in which case they will only require 1 more HPV dose to complete their schedule
- for individuals who started the schedule with an HPV vaccine no longer/not used in the UK programme, the course can be completed with the vaccine currently being used
- courses started but not completed before 25th birthday should be completed at the minimum interval (6 months for those following 2 dose course)

MMR – from first birthday onwards

- doses of measles-containing vaccine given prior to 12 months of age should not be counted
- 2 doses of MMR should be given irrespective of history of measles, mumps or rubella infection and/or age
- a minimum of 4 weeks should be left between 1st and 2nd dose MMR
- if child <3y4m, give 2nd dose MMR with pre-school dTaP/IPV unless particular reason to give earlier
- second dose of MMR should not be given <18m of age except where protection against measles is urgently required

Flu vaccine (during flu season)

- those aged 65yrs and older although recommendations may change annually so always check Annual Flu Letter
- children eligible for the current season's childhood influenza programme (see Annual Flu Letter for date of birth range)
- those aged 6 months and older in the defined clinical risk groups (see Green Book Influenza chapter)

Pneumococcal polysaccharide vaccine (PPV)

- those aged 65yrs and older
- those aged 2yrs and older in the defined clinical risk groups (see Green Book Pneumococcal chapter)

Shingles vaccine

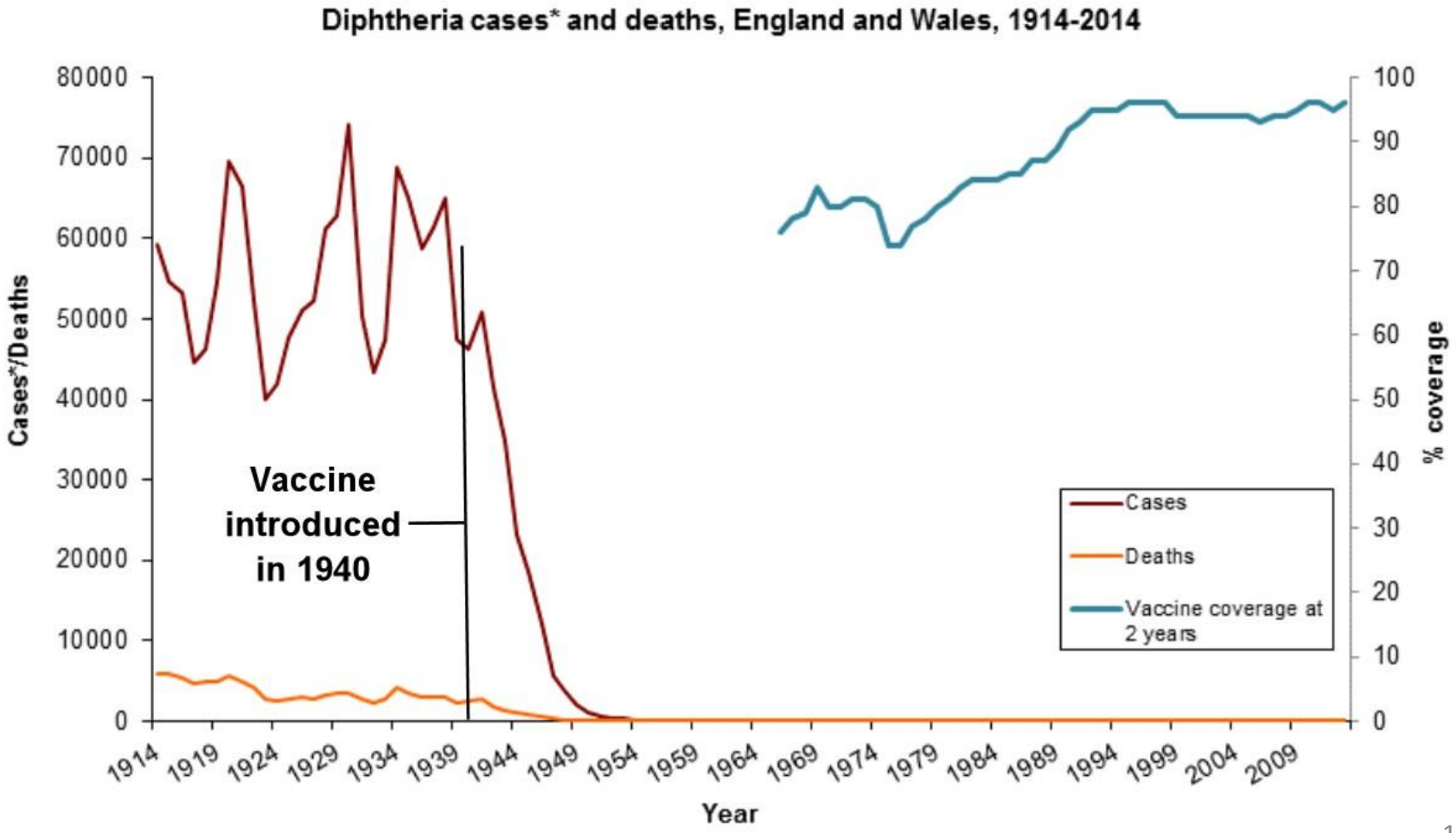
- those aged from 70 years up to their 80th birthday

[#] If an individual has received any OPV in another country since April 2016, these doses should be discounted as it is unlikely that they will protect against all 3 polio types. Most countries who still use OPV have a mixed OPV and IPV schedule so if sufficient IPV doses have been received for age, no additional IPV doses are needed.
BCG and Hepatitis B vaccines for those at high risk should be given as per Green Book recommendations. Individuals in clinical risk groups may require additional vaccinations. Please check Green Book chapters.

IMW186.11. Effective from 2 May 2023 – Authorised by: Laura Craig

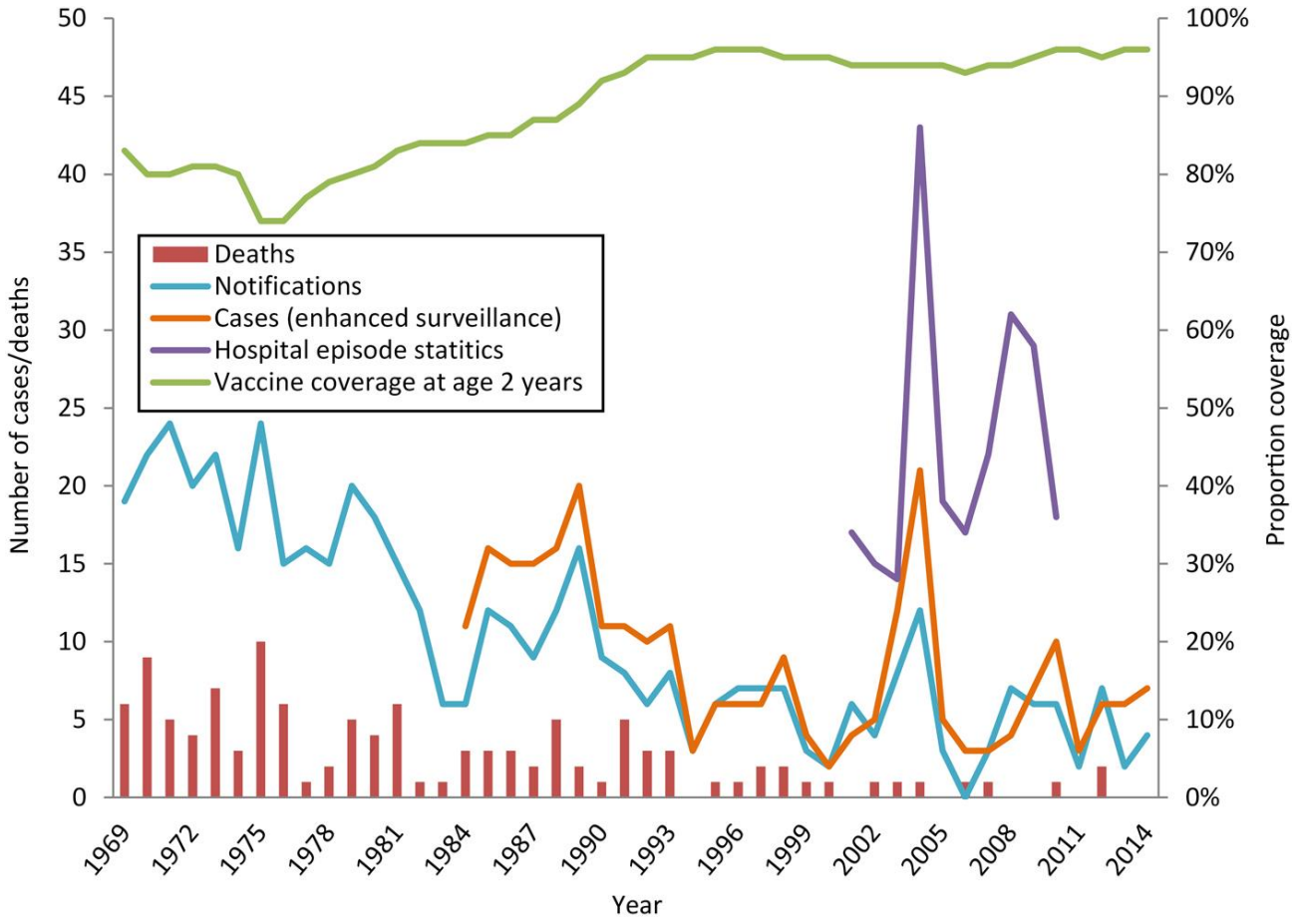
Epidemiology of some VPDs

Notifications of Diphtheria 1914 to 2014 England & Wales



Diphtheria cases Jan-Dec 2022:
87 cases of toxigenic corynebacterial – 3 deaths
74 of those among asylum seekers
https://www.gov.uk/government/publications/diphtheria-in-england-and-wales-annual-reports/diphtheria-in-england-2022

Tetanus – vaccine introduced in 1961



2019 – 4 cases (2 born before 1961) and no deaths

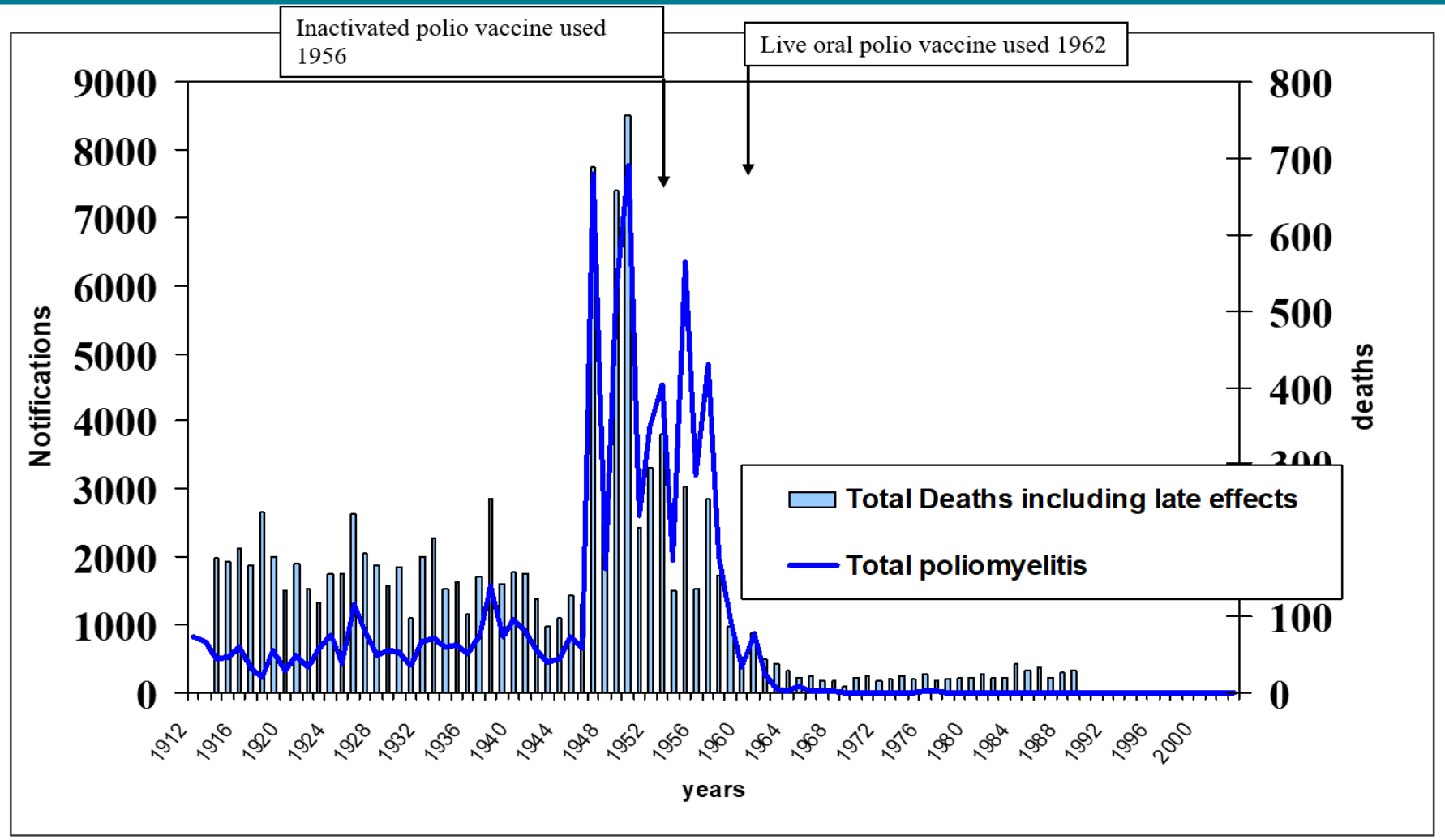
2020 – 7 cases – 2 died

2021 – 11 cases (6 born before 1961) – 1 died

2022 – 4 cases, no deaths

https://www.gov.uk/government/publications/tetanus-in-england-annual-reports

Polio epidemiology



VDPV2 found in sewage in London between Feb-Nov 2022

Prompted catch-up and extra dose of polio vaccine for children in London in 2022

2023 – catch-up of children who are not fully vaccinated against polio and MMR

https://www.gov.uk/government/news/polio-vaccine-catch-up-campaign-for-london-as-sewage-surveillance-findings-suggest-reduced-transmission

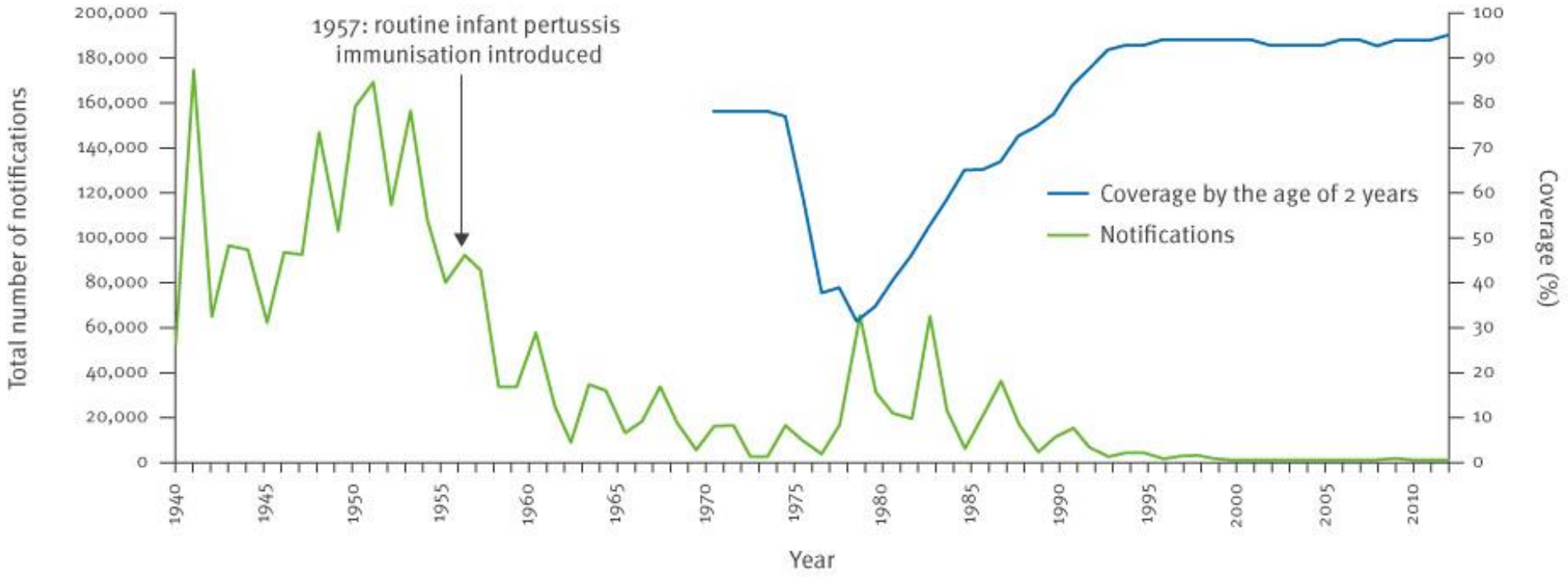
UK diphtheria, tetanus and polio vaccination recommendations

- Five doses of diphtheria, polio and tetanus containing vaccines in our child and adolescent programmes
  - 3 in infancy, one as pre-school booster and one school leaver booster

Pertussis

FIGURE 1

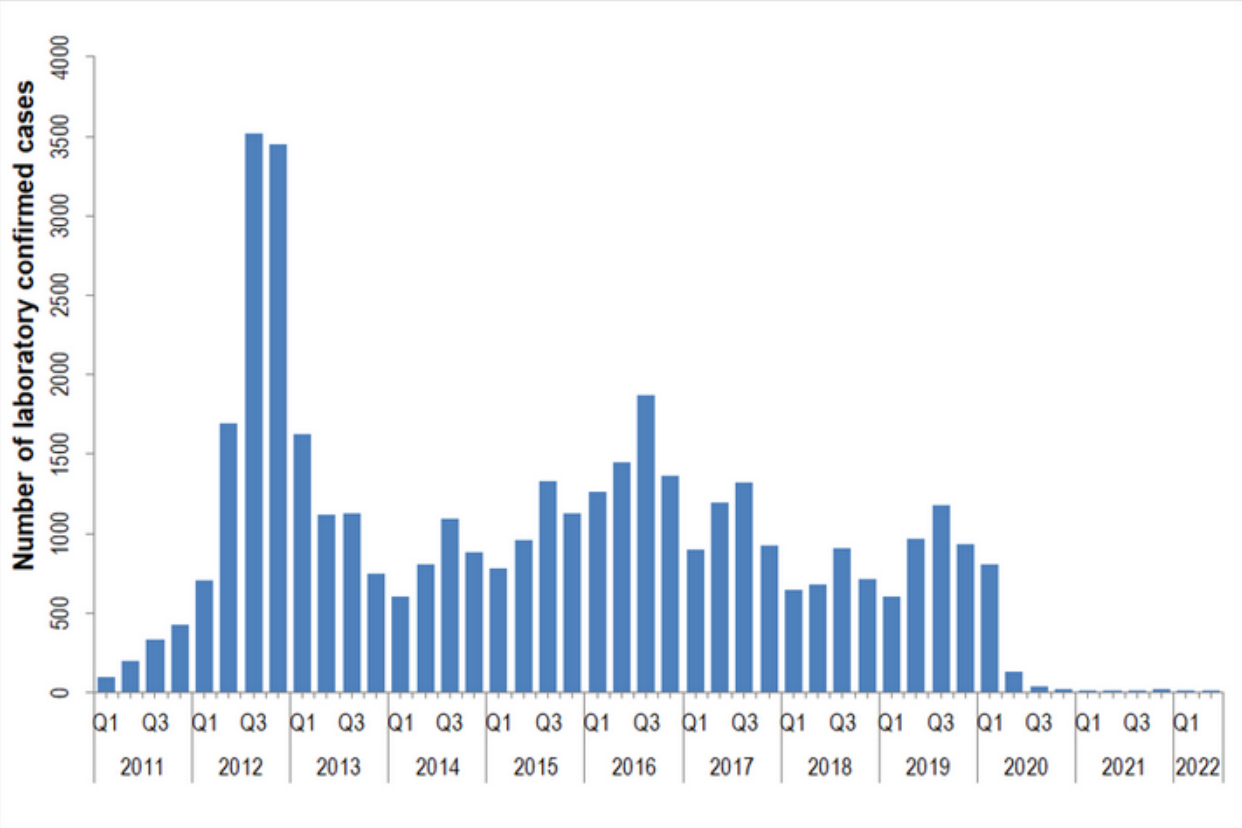
Annual notifications of pertussis (1940–2012, England and Wales) and vaccine coverage by the age of 2 years (1970–2012, England only)



Source: [3], updated with data up to 2012.

Pertussis Laboratory confirmed cases 2009 – 2021(Q3)

Figure 1. Total number of laboratory-confirmed pertussis cases per quarter in England, 2011 to 2022 (Q1 and Q2)



https://www.gov.uk/government/publications/pertussis-laboratory-confirmed-cases-reported-in-england-2022

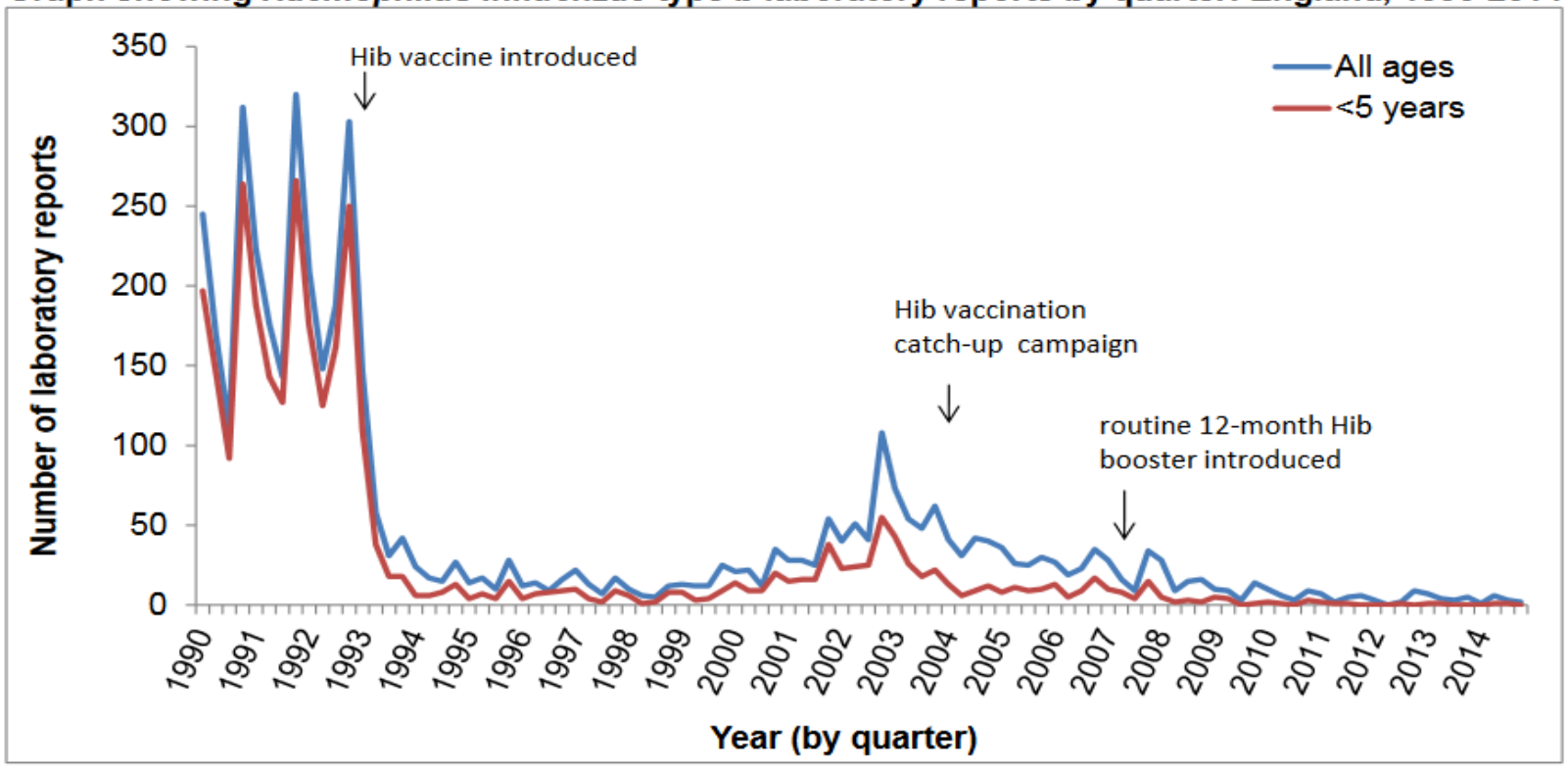
Pertussis containing vaccines for children

- Three doses of pertussis containing vaccines in infancy (in hexavalent)
- A booster dose at age 3 years and 4 months (in Boosterix-IPV)
- Reminder that neither pertussis containing vaccines nor pertussis infection confer life-long immunity

- Also protecting infants by offering a pertussis containing vaccine to pregnant women
  - Every pregnancy – use Boosterix-IPV – inform them also getting dip, Tet, and IPV
  - From 16 weeks' gestation – most commonly given after the 20-week fetal anomaly scan
  - Information for Healthcare practitioners document - 6th Sep 2021
    - https://www.gov.uk/government/publications/vaccination-against-pertussis-whooping-cough-for-pregnant-women

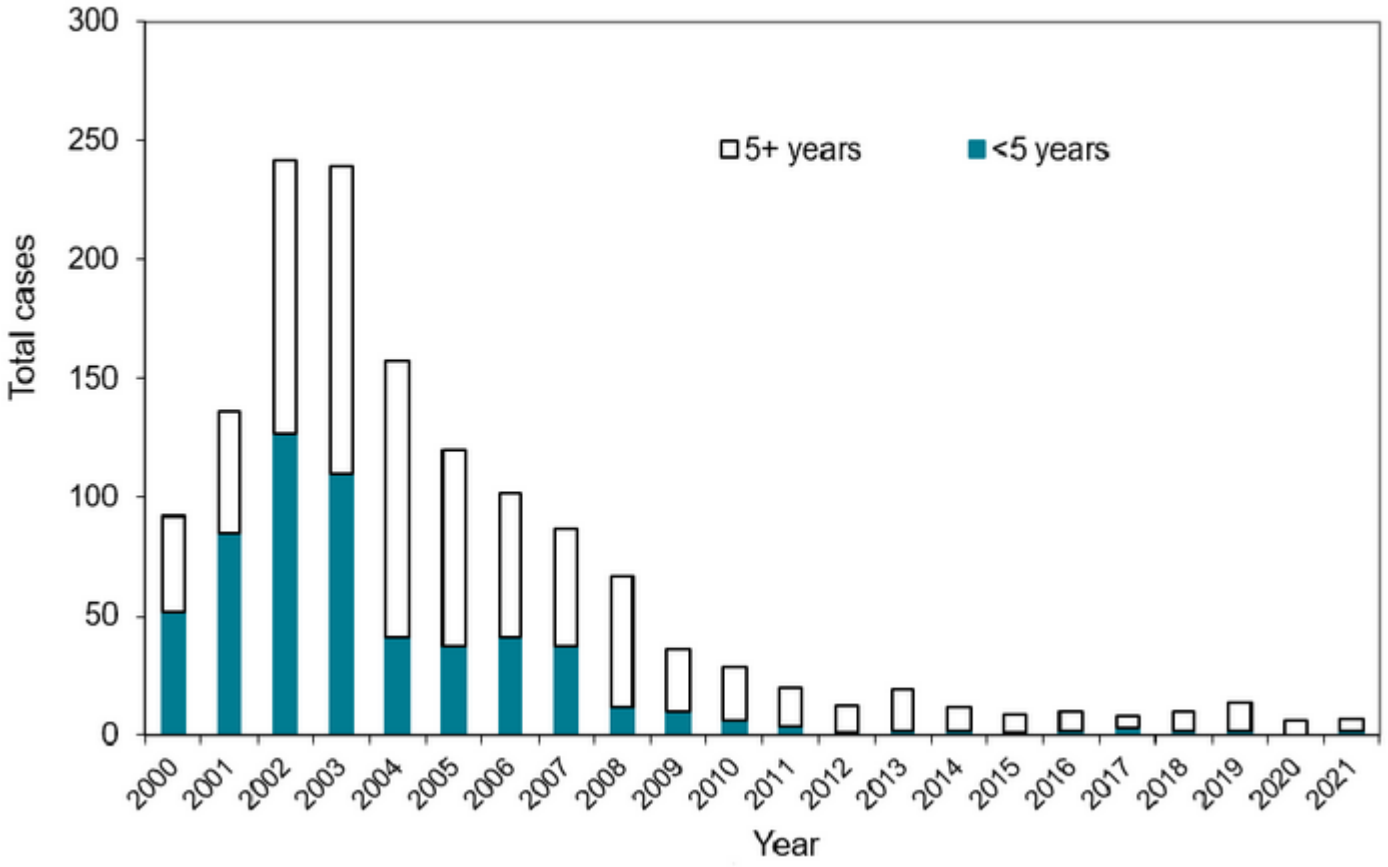
Haemophilus influenzae Type b (Hib)

Graph showing *Haemophilus influenzae* type b laboratory reports by quarter: England, 1990-2014*



*Provisional data
Source: Routine laboratory data combined with reference laboratory data

Figure 1. Total cases of Hib by year, 2000 to 2021



2021 – 7 cases of Hib

- 5 over 15 years of age
- 1 under 1 year
- 1 age 1-4 years

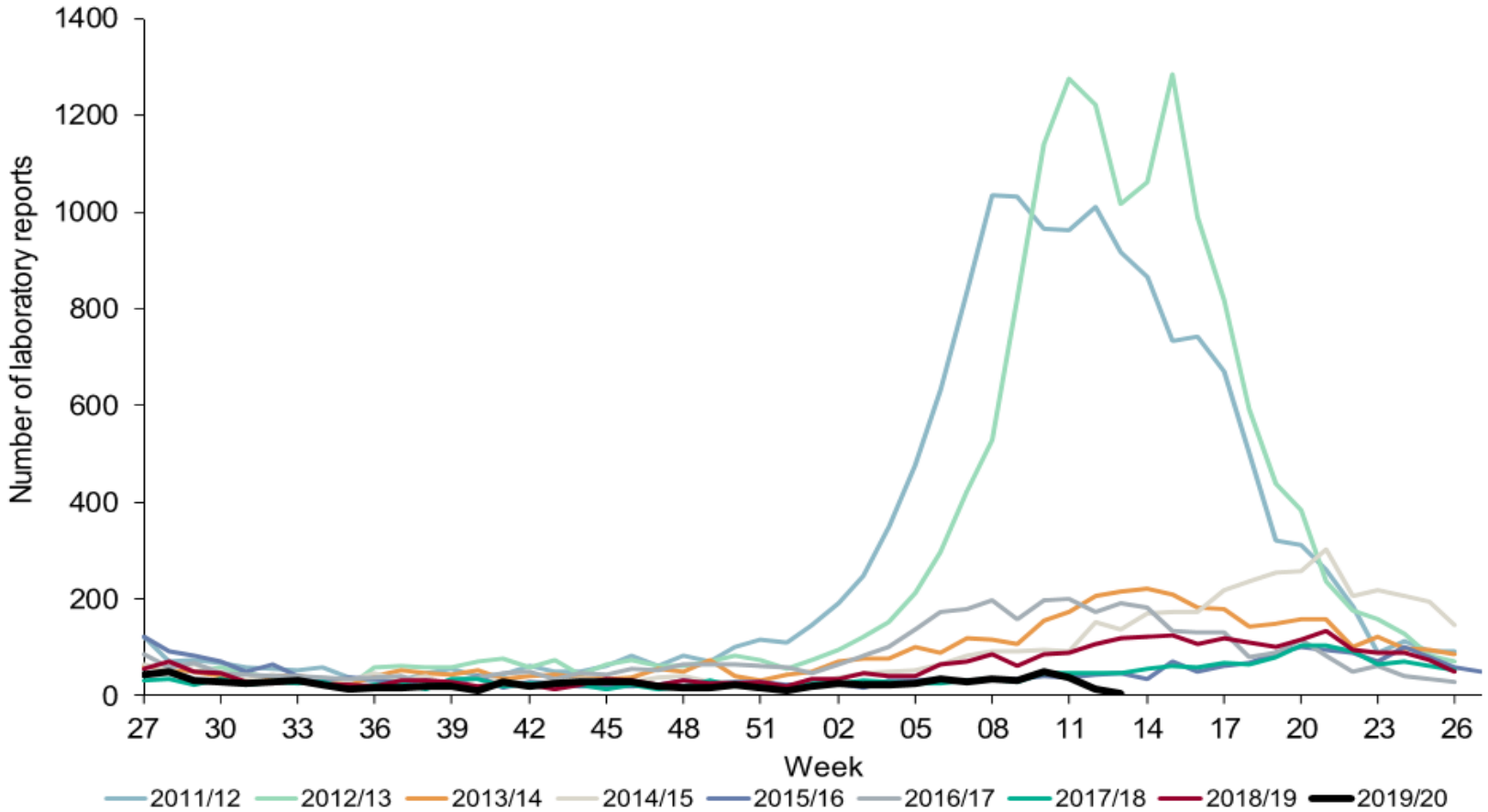
https://www.gov.uk/government/publications/haemophilus-influenzae-laboratory-reports-by-age-group-and-serotype/laboratory-reports-of-haemophilus-influenzae-by-age-group-and-serotype-england-annual-2021-and-2020

Hib containing vaccines in childhood

- Three doses in infancy (as hexavalent vaccine)
- Booster over 12 months of age (as Menitorix vaccine (Hib/MenC))
- Menitorix was made by GSK – no longer made
- UKHSA – has stock piles in their warehouses
- Menitorix should be reserved for use to provide Hib booster to children over the age of one to under 10 years of age
- The requirement for Hib/MenC vaccine in over 10s with underlying medical has been withdrawn (see PGD version history of March 2020)
  - Current Hib/MenC PGD dated 31st July 2022
  - https://www.england.nhs.uk/london/our-work/immunis-team/
- In the future there will be changes to the schedule due to loss of Menitorix
  - https://www.gov.uk/government/publications/changes-to-the-childhood-immunisation-schedule-jcvi-statement/joint-committee-on-vaccination-and-immunisation-jcvi-statement-on-changes-to-the-childhood-immunisation-schedule

Rotavirus vaccine – introduced May 2013 : positive impact

Figure 7: Seasonal comparison of laboratory reports of rotavirus by week 2011/12-2019/20 (England and Wales)

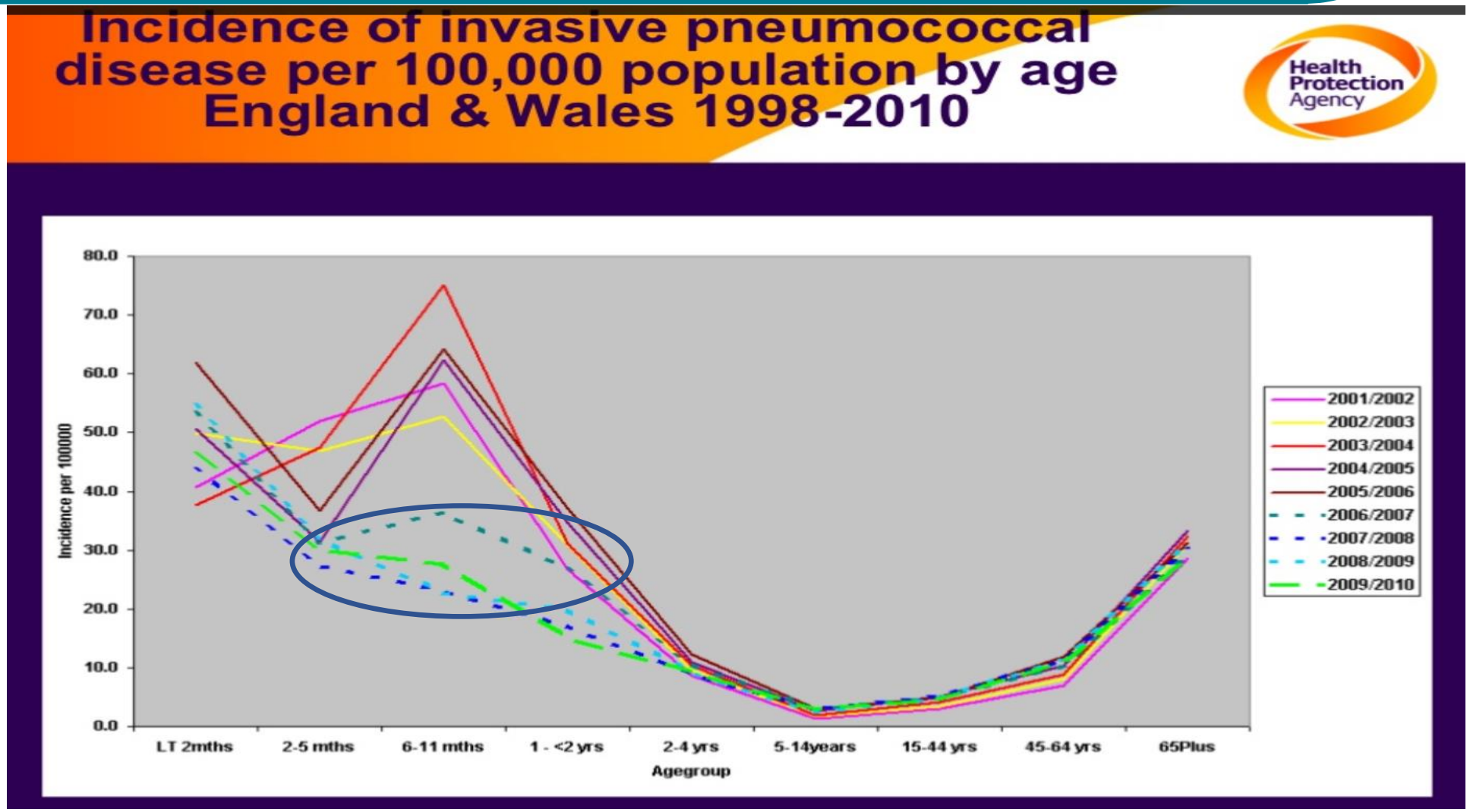


Rotavirus vaccine

- Live oral vaccine
  - Long list of contraindications
- Two doses in infancy
  - There are restrictions on age by which infants must receive first and second doses
- Rotavirus vaccination programme: Information for healthcare professionals Sep 21
  - https://www.gov.uk/government/publications/rotavirus-qas-for-healthcare-practitioners
- Severe Combined Immunodeficiency (SCID) screening now means live Rotavirus vaccine should not be administered until results of SCID screen are checked, and found to be “not confirmed”
  - More info in above document or at this link – leaflet for GPs and Practices Nurses
    - https://www.gov.uk/government/publications/rotavirus-vaccine-and-scid-newborn-screening-evaluation

Pneumococcal disease

Shows impact of Prevenar introduction for infants and toddlers in 2006

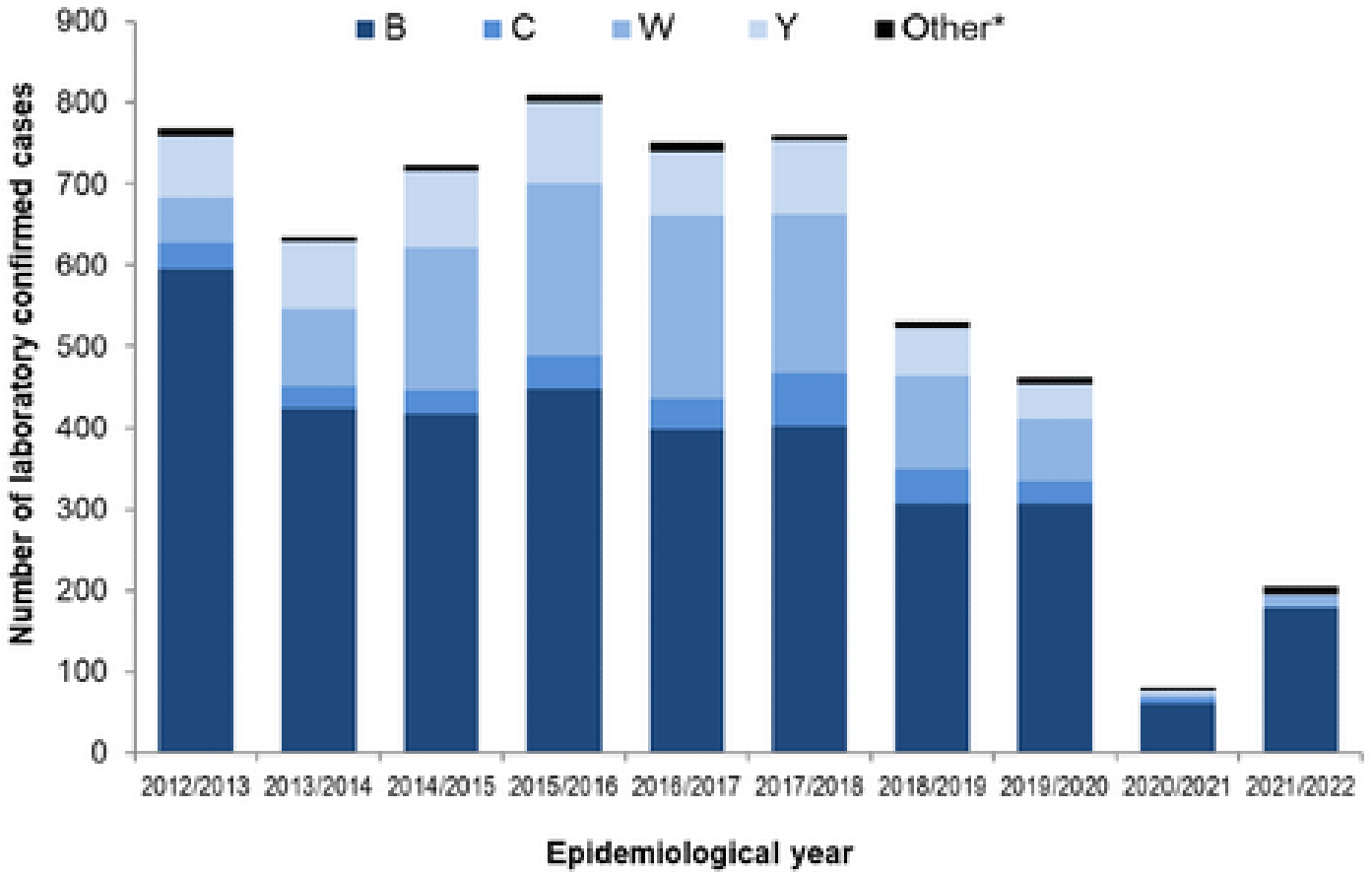


Pneumococcal vaccines

- One dose of PCV13 in infancy at 12 weeks (“Prevenar 13”)
- Booster dose Prevenar 13 at +12 months of age
- At risk children (with underlying medical conditions) may also require additional doses of PCV 13 and a dose of Pneumococcal Polysaccaride Vaccine (PPV) over the age of 2
- Complex recommendations – always check Green book chapter 25
  - https://www.gov.uk/government/publications/pneumococcal-the-green-book-chapter-25
- Control of invasive pneumococcal disease is challenging due to multiple strains
- New conjugate vaccines are in the pipeline
  - ? Changes to the pneumococcal vaccines we use in future

Meningococcal disease

Figure 1. Invasive meningococcal disease in England by capsular group: 2012 to 2013 through to 2021 to 2022



In 2021/22 - 205 cases
Men C = 1
Men W = 13
Men B = 179

https://www.gov.uk/government/publications/meningococcal-disease-laboratory-confirmed-cases-in-england-in-2021-to-2022/invasive-meningococcal-disease-in-england-annual-laboratory-confirmed-reports-for-epidemiological-year-2021-to-2022

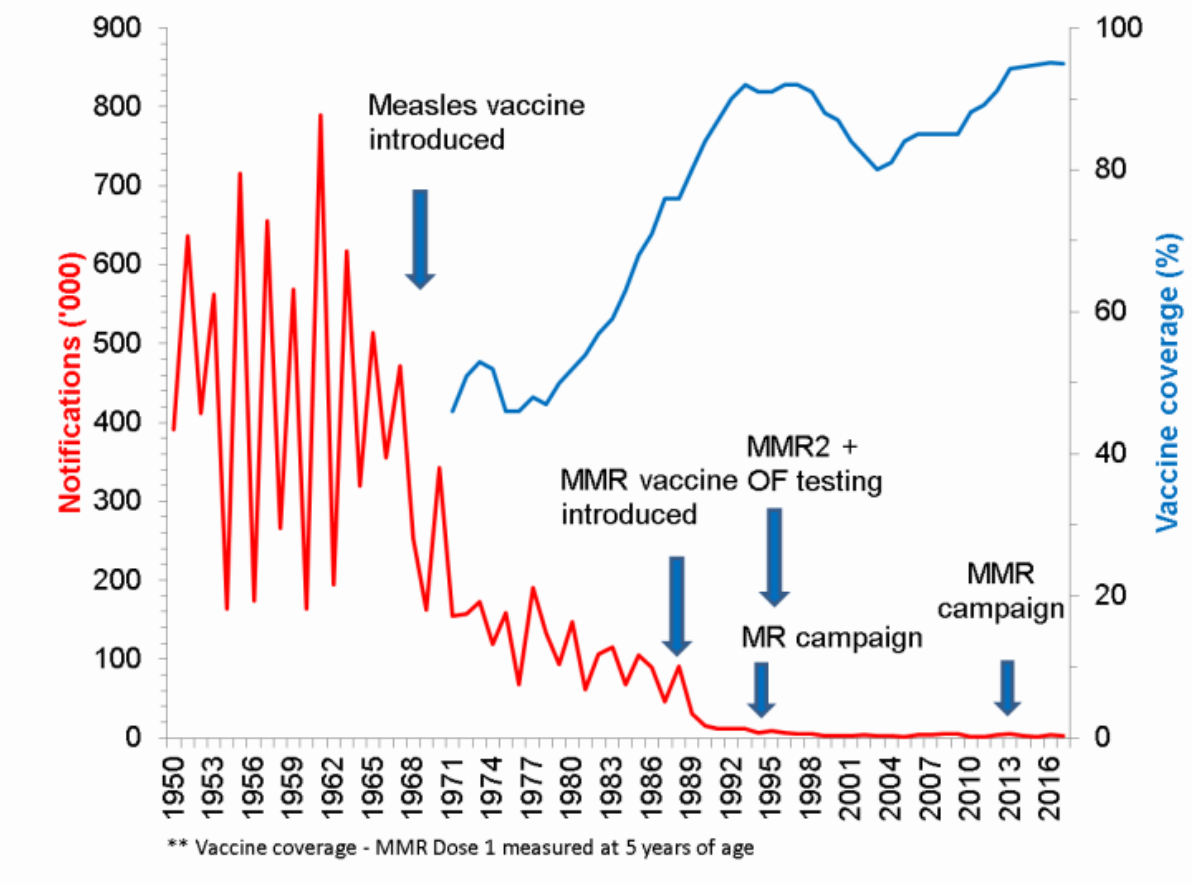
Meningococcal vaccines

- Two doses of Bexsero (“Men B”) in infancy
- One dose of Bexsero and one dose of Men C antigen (as Menitorix) for +12 month olds
- One dose of Men ACWY vaccine for teenagers (14 year olds)
  - Eligible young people remain eligible until 25th Birthday
  - Important for protection of these strains in all ages across our population
  - https://www.gov.uk/government/publications/menacwy-programme-information-for-healthcare-professionals

- Some at risk individuals may also require doses of MenACWY and Men B vaccine
  - See section on Immunisation of individuals with underlying medical conditions
    - https://www.gov.uk/government/publications/the-complete-routine-immunisation-schedule/the-complete-routine-immunisation-schedule-from-february-2022
    - https://www.gov.uk/government/publications/immunisation-of-individuals-with-underlying-medical-conditions-the-green-book-chapter-7

MMR - measles epidemiology

Figure 1. UK coverage of measles vaccination and measles notifications from 1950 to 2016

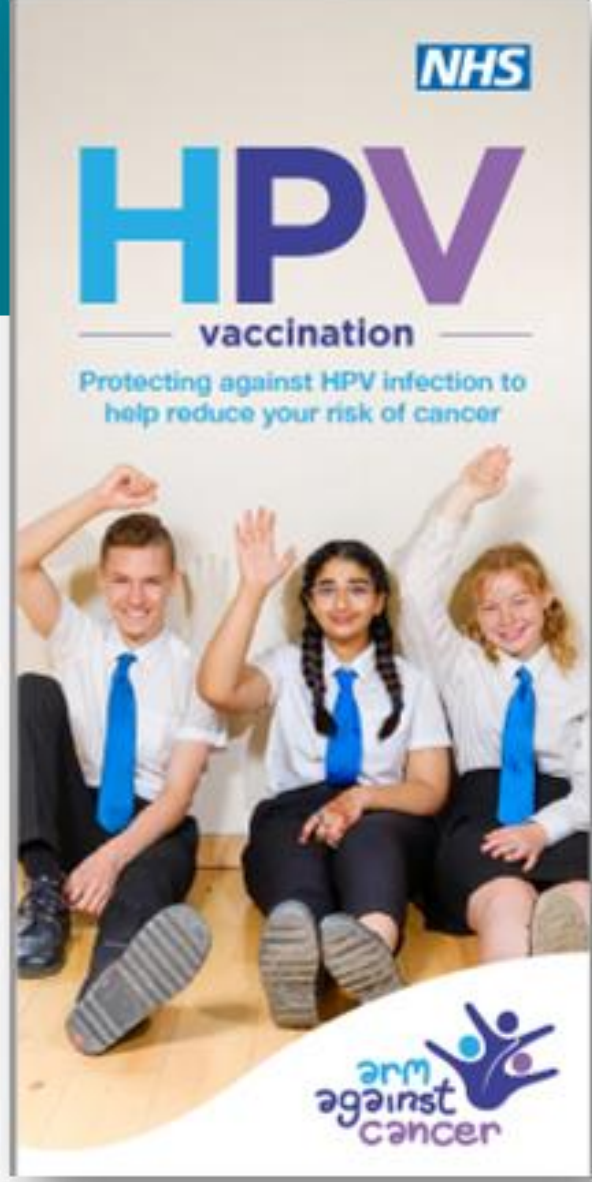


- Measles cases increasing again after low numbers over past 3 years
  - 2019 – 880
  - 2020 – 82
  - 2021 – 2
  - 2022 – 54
- Jan-Apr 2023 – 49
  - 45% in children under 5
  - 33 in London
    - https://www.gov.uk/government/publications/health-protection-report-volume-17-2023/hpr-volume-17-issue-5-news-4-may-2023
- MMR by age 5:
  - 85.7% England
  - 74.2% in London
    - https://digital.nhs.uk/data-and-information/publications/statistical/nhs-immunisation-statistics/2021-22

MMR doses

- 1st dose of MMR at plus 12 months of age
- 2nd dose of MMR at 3 years and 4 months (earlier in some areas)
  - Doses given before 12 months of age are discounted
- Children given 2 doses of MMR before the age of 15 months still require a dose of MMR at 3 years and 4 months
- Many children missed vaccines during the pandemic
- Make every contact count and check all children's MMR status when they attend the practice and opportunistically offer missing vaccines

HPV immunisation programme



- Gardasil 9 ® HPV types 6, 11, 16, 18, 31, 33, 45, 52, 58
- School year 8 for boys and girls
  - Only boys born after 01 Sep 2006 are eligible
- Girls, eligible boys and MSM
  - 2 dose course – ideally 0 and 6-12 months later
- Still 3 dose schedule for immunosuppressed/HIV positive
- Interrupted courses should be resumed but not repeated
- Further information in '[Guidance for health care practitioners]' and the HPV PGD
- Once eligible remain so up to (not including) 25th birthday
- MSM programme (and others at high-risk due sexual activities) offered vaccine in GUM/sexual health clinics

HPV from September 2023

- HPV programme will change from 1st Sep 2023
  - https://www.gov.uk/government/news/jcvi-advises-move-to-1-dose-of-hpv-vaccine-for-adolescents - 5th August 22
- Keep alert to new guidance
- GPs can catch-up missed dose of HPV
  - If still at senior school refer back to SAIS
  - GP will be paid for doses given if eligible and over 14yrs and under 25yrs
  - Can use national supply

Improving uptake – removing barriers

- Take opportunities to discuss vaccinations and offer missing vaccines whenever you see children and adolescents
- Utilise IT tools on practice systems to flag incomplete immunisations
- Consider inequalities or barriers to accessing immunisation services
  - Are your immunisation services accessible for all in your responsible population?
- Young people aged 16 and 17 are presumed, in law, to be able to consent to their own medical treatment
- Younger children who understand fully what is involved in the proposed procedure (referred to as ‘Gillick competent’) can also give consent, although ideally their parents will be involved
  - https://www.gov.uk/government/publications/consent-the-green-book-chapter-2
- NICE Vaccine uptake in the general population, Guidance https://www.nice.org.uk/guidance/ng218

Vaccine specific programme resources

Vaccine programmes

Joint letters from the Department of Health, UKHSA and NHS England announce changes to vaccine programmes. Training slide sets and other resources to accompany these programmes are also available:

- Annual flu vaccination programme
- Bacillus Calmette–Guérin (BCG) vaccination programme
- COVID-19 vaccination programme
- Diphtheria vaccination and treatment resources
- Hepatitis B routine and selective vaccination programmes
- Human papillomavirus (HPV) universal vaccination programme
- Human papillomavirus (HPV) vaccination for men who have sex with men (MSM) programme
- Measles catch-up
- Meningococcal ACWY (MenACWY) vaccination programme
- Meningococcal B (MenB) vaccination programme
- Meningococcal C (MenC) vaccination programme
- Mpox (monkeypox) vaccination programme
- Pneumococcal infant vaccination programme
- Polio vaccination campaign
- Rotavirus vaccination programme
- Shingles vaccination programme

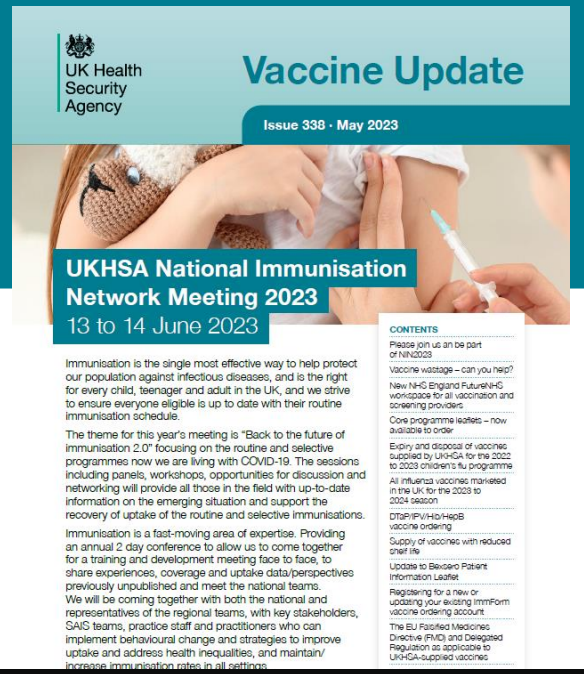
- Immunisation Collection webpage
  - https://www.gov.uk/government/collections/immunisation
  - Health professional resources
  - Communications
  - Posters
  - Leaflets

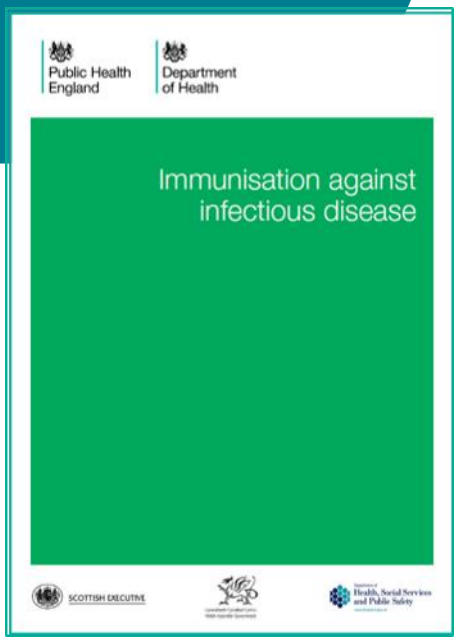
Summary

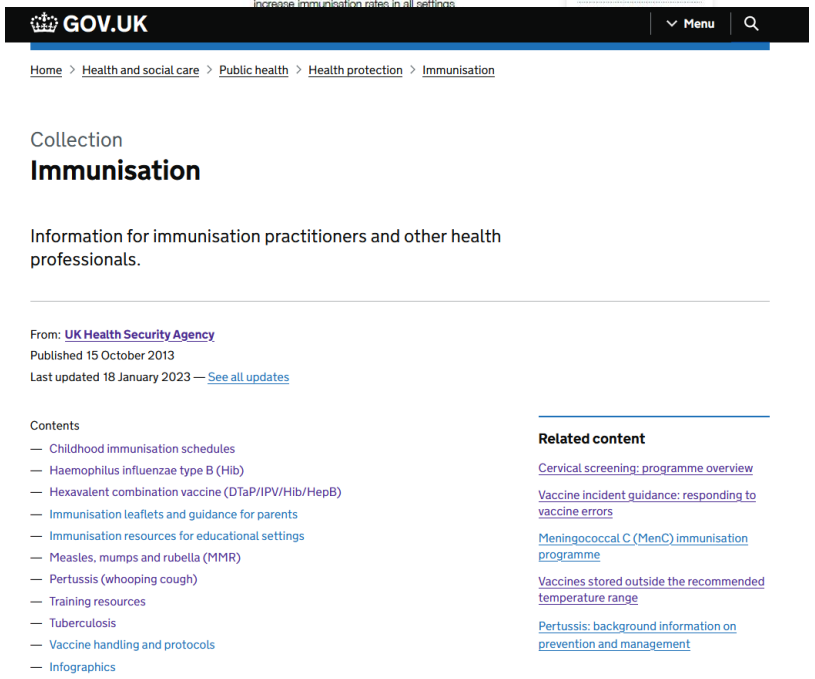
- Immunisation for children and adolescents are important in providing protection against vaccine preventable diseases (for them and the rest of the population – indirect protection)
- Children and adolescent vaccine uptake has been dropping since COVID emerged
- Herd immunity is important in the success of many of these programmes and gaps in immunity due to poor uptake must be addressed to allow vaccines to achieve their potential impact
- Risk of vaccine preventable disease remains
- The national schedule continues to evolve to offer best protection to individuals
  - Ensure you keep up to date

Keeping up to date

- Have access to and be familiar with:
- Online Green Book
- Vaccine update
- UKHSA immunisation webpages







Immunisation training and updates

- The National Immunisation Training Standards recommend all immunisers have core foundation education in immunisation and annual updates so they can keep up to date with the changes to the vaccine programmes.
- There is no specified criteria for updates, immunisers will need to determine what education they need in order to safely deliver vaccine programmes.
- The immunisation competency tool can be a useful way to identify learning needs.
- The e-learning from e-LfH provide useful updates; see Immunisation e-learning programme for the routine programme and specific e-learning resources for influenza and COVID-19 vaccines.
- This webinar series provides additional bite sized sessions to support specific areas in immunisation delivery.
- The RCN immunisation pages provide some useful resources to help people keep up to date.

- Immunisation training standards for healthcare practitioners (2018)
- Immunisation training of healthcare support workers: national minimum standards and core curriculum (2015)
- RCN Immunisation Knowledge and Skills Competence Assessment Tool (2022)

Immunisation and health protection advice (London)

NHS E London Immunisation Clinical Advice Response Service (ICARS) for Immunisation queries from primary care. Email: london.immunisationqueriescars@nhs.net

North East and North Central London HPT

UK Health Security Agency
Nobel House, Smith's Square
London SW1P 3JR

Email:
necl.team@ukhsa.gov.uk
phe.nenclhpt@nhs.net

Telephone
020 3326 1658

Out of hours advice:
01895 238 282

North West London HPT

UK Health Security Agency
61 Colindale Avenue
London NW9 5EQ

Email:
phe.nwl@nhs.net

Telephone
020 3326 1658

Out of hours advice:
01895 238 282

South London HPT

UK Health Security Agency
Nobel House Smith's Square
London SW1P 3JR

Email:
slhpt@ukhsa.gov.uk
phe.slhpt@nhs.net

Telephone
020 3326 1658

Out of hours advice:
01895 238 282

Questions

After the webinar, please remember to:

- Complete the evaluation (link being emailed to you today from Eventbrite)
- Print/save the certificate (emailed to you once the survey is complete)
- Use the prompts to capture your reflections on the certificate
- Book for future webinars

If you need to contact the webinar team, please email: ImmsTraining@ukhsa.gov.uk

Primary care immunisation update webinar series 2023

February to July

- Vaccine ordering, storage & handling
- Incomplete immunisation schedules
- Vaccination of individuals with underlying medical conditions
- Vaccine administration – best practice
- Child and adolescent immunisation update
- Addressing concerns around vaccines – supporting acceptance

September to December

- Influenza and Covid-19
- Shingles and pneumococcal (adult) vaccines
- Adverse events following immunisation
- Current Issues vaccine schedule changes. Session to be confirmed

Webinar Series - booking

	Date	Start time	Link to register
June 2023	**Child and adolescent immunisation update**		
1	13/06/2023	11:00	https://June23-Webinar1-ChildAndAdolescentImmunisationUpdate.eventbrite.co.uk
2	13/06/2023	14:00	https://June23-Webinar2-ChildAndAdolescentImmunisationUpdate.eventbrite.co.uk
3	29/06/2023	14:00	https://June23-Webinar3-ChildAndAdolescentImmunisationUpdate.eventbrite.co.uk
July 2023	**Addressing concerns around vaccines – supporting acceptance.**		
1	04/07/2023	09:30	https://July23-Webinar1-AddressingConcernsAroundVaccines.eventbrite.co.uk
2	04/07/2023	13:00	https://July23-Webinar2-AddressingConcernsAroundVaccines.eventbrite.co.uk
3	12/07/2023	09:30	https://July23-Webinar3-AddressingConcernsAroundVaccines.eventbrite.co.uk