

Vaccination of individuals with uncertain or incomplete immunisation status, 2018

• For online Green Book, see www.gov.uk/government/organisations/public-health-england/series/immunisation-against-infectious-disease-the-green-book • For other countries' schedules, see http://apps.who.int/immunization_monitoring/globalsummary/

2 - 12 months of age

DTaP/IPV/Hib/HepB + PCV* + MenB ** + rotavirus***

Four week gap

DTaP/IPV/Hib/HepB + Hib/MenC + rotavirus***

Four week gap

DTaP/IPV/Hib/HepB + PCV* + MenB**

Seasonal Flu vaccine[†]
(after 6m of age)

- Doses of PCV and MenB should ideally be given two months apart but can be given one month apart if necessary
- **Vaccination with rotavirus should not be started for infants aged 15 weeks or older**
- first dose to be given only if infant is more than 6 weeks and under 15 weeks
- second dose to be given only if infant is less than 24 weeks old

>12 months - 2 years of age

DTaP/IPV/Hib + PCV + MMR + Hib/Men C + MenB

Four week gap

DTaP/IPV/Hib

Four week gap

DTaP/IPV/Hib + PCV + MenB

Seasonal Flu vaccine[†]

VZV[†] x2 doses

Hep A&B^{††} for >1 year, if previously unimmunised

- All children require at least 1 dose of Hib and Men C > the age of 1 (until teenage booster)
- It doesn't matter if two Hib-containing vaccines are given
- 1st and 2nd PCV should be given 2 months apart
- Children who received <2 doses of MenB in the 1st year of life should receive 2 doses of MenB in their second year of life

>2 years - 10 years of age

DTaP/IPV/Hib + Hib/Men C + PCV + MMR

Four week gap

DTaP/IPV/Hib + MMR

Four week gap

DTaP/IPV/Hib + PCV

Seasonal Flu vaccine[†] (LAIV)

VZV[†] x2 doses

MenB optional (table 1)

Hep A&B^{††} for >1 year, if previously unimmunised

- All children require at least one dose of Hib and Men C over the age of 1
- It doesn't matter if two Hib-containing vaccines are given
- 1st and 2nd PCV should be given 2 months apart

10 years of age and over

Tdap/IPV + Men ACWY + MMR + PCV

Four week gap

Tdap/IPV + MMR

Four week gap

Tdap/IPV + PCV

Seasonal Flu vaccine[†] (LAIV)

VZV[†] x2 doses

MenB optional (table 1)

All adolescents
Hep A&B^{††}

HPV x3 doses
(12-13 years, for girls and boys)

Boosters + subsequent vaccination

As per UK schedule

At least one month interval between DTaP/IPV/Hib/HepB and Hib/MenC doses and two month interval between PCV and MenB primary and booster doses

Boosters + subsequent vaccination

As per UK schedule

Boosters + subsequent vaccination

1st booster of dTaP/IPV or DTaP/IPV can be given as early as one year following completion of primary course to re-establish on routine schedule
2nd booster – as per UK schedule

Boosters + subsequent vaccination

First Td/IPV - preferably five years following completion of primary course
Second Td/IPV - ideally ten years (minimum five years) following first booster

MMR – From 12 months

- Doses of **MMR/measles** given prior to 12 months of age should not be counted
- For individuals **<18 months** of age a minimum interval of 3 months should be left between 1st and 2nd dose
- For individuals **>18 months** of age a minimum of 1 month should be left between 1st and 2nd doses
- 2 doses of MMR should be given irrespective of history of measles, rubella or mumps infection and/or age
- *MMR should be postponed if there is severe immunosuppression (see Table 2, “Vaccination of HIV infected children, UK schedule 2018”).

General principles 1

- **All infants should follow the UK primary childhood immunisation schedule. The primary immunisation should NOT be delayed.**
- Children should not receive BCG.
- If HAART is indicated for the older children with absent or non-protective antibody levels – vaccination should be delayed until ~ 6 months of VL<50 and CD4 >15% on HAART
- UNLESS RELIABLE VACCINE HISTORY, INDIVIDUALS SHOULD BE ASSUMED TO BE UNIMMUNISED, AND A FULL COURSE OF IMMUNISATION PLANNED
- **First**, check baseline serology if possible (diphtheria, tetanus, Hib, MenC, PCV, MMR, hepatitis A&B, VZV) and if seronegative, plan the immunisation course accordingly
- Serology results may be taken into account but it should be noted that correlates of protection are not well established
- Individuals coming to UK part way through their immunisation schedule should be transferred onto the UK schedule and immunised as appropriate for age
- If primary course has been started but not completed, continue where left off – NO NEED TO REPEAT DOSES OR RESTART COURSE
- IPV should be used to complete a vaccination course started off with OPV
- aP should be used to complete a primary course which may have been started with whole cell.
- Live vaccines **should** be postponed if there is severe immunosuppression of the child or a household contact. However consider the vaccination **as soon as** the immune reconstitution is achieved on HAART.

PCV13*

- 2 doses of PCV is recommended for all ages if not previously immunised. The use of PPV is controversial in this context and not included/not recommended in this guideline.

MenB**

- Men B is included for babies as part of the routine NHS childhood vaccination programme from September 1 2015. The vaccine could also be considered for all ages if previously unimmunized (see table 1 for recommended dosing schedule).

Rotavirus***

- Vaccination with rotavirus should not be started for infants aged 15 weeks or older
- First dose to be given only if infant is more than 6 weeks and under 15 weeks
- Second dose to be given only if infant is less than 24 weeks old

General principles 2

Flu+ vaccine

- Give inactivated seasonal influenza vaccine after 6 months of age, 2 doses one month apart, and consult annual DoH guidance. Live attenuated intranasal vaccine LAIV should be administered to children 2 years and older. If there is an immunocompromised household member, administer an injected TIV vaccine instead.

VZV γ

- VZV vaccine should be offered for VZV seronegative children over 1 year of age.
- 2 doses should be given 2 months apart and in the absence of severe immunosuppression.
- VZV and MMR should be given either on the same day, or at a four week interval.

Hepatitis B (Hepatitis A/B⁺⁺)

- HBV is included for babies as part of the routine NHS childhood vaccination programme from September 2018. Combined HAV/HBV vaccine (Twinrix or Ambirix) should be considered in children over 1 year.
- All children should receive as adolescents a booster dose or full vaccination course if previously unimmunised, consider giving earlier if at particular risk.

HPV

- 3 doses of HPV (preferably 4-valent, Gardasil) should be administered to females and males (12-13 years).

Table 1. Meningitis B (Bexsero) dosing schedule (optional if not part of the routine NHS schedule)

Age	Primary series	Booster
2 – 4 months (as part of the routine NHS vaccination programme)	2 doses with the first given at 2 months of age (2month apart)	1 dose at 12 -13 months of age
Unvaccinated 5 – 11 months	2 doses (≥ 2 months apart)	1 dose at 12 to 23 months of age; ≥2 months from primary series
Unvaccinated 12 – 23 months	2 doses (≥ 2 months apart)	1 dose; 12 to 23 months from primary series
Unvaccinated 2 - 10 years	2 doses (≥ 2 months apart)	Need not established
Unvaccinated 11 years and older	2 doses (≥ 1 months apart)	Need not established