Immunisation for adults with HIV-PHIV

Immunisation Advisory Centre

Human immunodeficiency virus (HIV) infects CD4+T cells leading to a progressive decline in CD4 cell count, increasing immunodeficiency and vulnerability to infection, and suboptimal responses to vaccines. Use of antiretroviral therapy (ART) to reduce virus replication and improve CD4 counts to 200cells/mm^3 or higher, preferably above 400cells/mm^3, is recommended to improve the response to all vaccines.
For children aged under 18 years, please refer to the current Immunisation Handbook.

Vaccine	Notes	Additional notes	Recommended schedule	Eligibility
Hepatitis A (Havrix)	• Disease is not worse unless the individual also has hepatitis B or hepatitis C infection • Vaccinate those with risk	**Highest risk groups:** • MSM • Those travelling to hepatitis A risk countries • Illicit injection drug users • Coinfection with hepatitis B or hepatitis C	• Administer two doses 6 months apart • Administer a booster dose every 10 years	**Recommended NOT FUNDED**
Hepatitis B (Engerix-B)	• Increased risk of chronic disease • Reduced vaccine seroconversion rates, particularly in individuals who are aged over 45 years, smoke tobacco products or who are not on ART	**Recommended for:** • Hepatitis B non-immune individuals **Evidence of immunity:** • Check serology 4–6 weeks after dose 3 • If accelerated course (0, 1, 2) is used and serology returns positive, ensure a booster dose is administered at 12 months to provide longer-term immunity • If anti HBs <10 IU/L, seek advice from HIV specialist **Non-responders:** • For a PHIV who does not respond to an initial hepatitis B course, consider repeating course using double-dose vaccine of adult-strength Engerix-B or Twinrix (if not hepatitis A immune) • Multiple intradermal doses are another option (see IHB figure 9.4).	• Administer four doses at 0, 1, 2 and 12 months (test serology 4-6 weeks after dose 3) • Or, if patient has no risk behaviour, a 0, 1 and 6 months course can be considered (test serology 4-6 weeks after dose 3)	**FUNDED Engerix-B** **NOT FUNDED Twinrix**
Herpes zoster (Shingrix)	• Although ART has reduced the incidence of herpes zoster in PHIV, the risk remains approximately 3-fold higher than in the general population	**Recommended and funded for:** • those aged 65 years • those with poorly controlled HIV - discuss with specialist but examples may include those with advanced or untreated HIV infection with CD4 counts less than 350/mm^3 or those with a higher CD4 count not established on effective anti-retroviral therapy. Recommended but unfunded for all PHIV 18 years and over, particularly those aged over 66 years who have not had Shingrix.	• Administer two doses at least 2–6 months apart	**FUNDED Aged 65 years** **Aged 18+ years for those with poorly controlled HIV (discuss with specialist)** **Recommended NOT FUNDED Aged 18+ years for those who don't meet eligibility requirements**

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Vaccine	Notes	Additional notes	Recommended schedule	Eligibility
Human papillomavirus HPV (Gardasil 9)	• Increased risk of HPV related malignancy but less frequently serotypes 16 & 18	**Recommended for:** • Males and females 18–45 years of age inclusive	• Administer three doses at 0, 2 and 6 months	**FUNDED Up to 27 years of age** **Recommended NOT FUNDED 27 years or older**
Influenza	• Increased risk of complications	• Annually, during the Influenza Immunisation Programme	• Administer one dose annually	**FUNDED**
Meningococcal MenACYW-D (MenQuadfi)	• Increased risk of infection but not as high as for pneumococcal disease • Disease may be more severe	• Consider for those at risk, e.g. communal living, some MSM, travel to high-risk areas • Prescription required for second primary dose • A booster dose is recommended every five years if ongoing risk	• Administer two doses at least 8 weeks apart • Schedule a precall for a booster dose every 5 years	**FUNDED**
Meningococcal 4CMenB (Bexsero)	• Increased risk of infection but not as high as for pneumococcal disease • Disease may be more severe	• Consider for those at risk, e.g. communal living, some MSM • Can be co-administered with any other vaccine	• Administer two doses 8 weeks apart • Schedule a precall for a booster dose every 5 years †	**FUNDED**
Mpox (Jynneos)	• Increased risk of severe mpox infection	• All PHIV with no prior history of mpox infection should be offered mpox vaccination if they anticipate potential exposure to mpox *See IMAC factsheet for eligibility - immune.org.nz/factsheets/mpox-vaccine-jynneos-factsheet*	• Administer two doses at least 28 days apart • Consider a 4-week interval between Jynneos and COVID-19 vaccine	**FUNDED for those at risk**
Pneumococcal PCV13 (Prevenar 13)	• Protection lasts longer than that from Pneumovax 23 • Generates long term memory cells that can produce additional protection following disease exposure • PHIV have a higher incidence of invasive pneumococcal disease compared to general population	• Administer Prevenar 13 **before** Pneumovax 23 • If Pneumovax 23 has been administered before Prevenar 13, wait one year to give Prevenar 13	• Administer one dose of Prevenar 13	**FUNDED**

† Although the need for a booster dose after this vaccination schedule has not been established, it is recommended and funded for certain special groups (refer to Pharmac Schedule)

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Vaccine	Notes	Additional notes	Recommended schedule	Eligibility
Pneumococcal 23PPV (Pneumovax 23)	• Broadens protection against an additional 12 pneumococcal serotypes not covered by Prevenar 13 • Protection is shorter than that from Prevenar 13 • Does not generate memory cells • Blunts/reduces the immune response to subsequent pneumococcal vaccinations • PHIV have higher incidence of invasive pneumococcal disease compared to general population	• Administer Pneumovax 23 a minimum of 8 weeks **after** Prevenar 13	**If aged 18 years to under 60 years:** • Administer one dose • Schedule a precall for the second dose in 5 years • Schedule a precall for the third/final dose 5 years after second dose or at age 65 years, whichever is later **If aged 60 years or older**: • Administer one dose • Schedule a precall for the second/final dose in 5 years	**FUNDED**
Polio IPV (Ipol)		• Check immunisation history for a primary course of three polio containing vaccines	**If unsure of polio immunisation history:** • Administer three doses with a minimum of 4 weeks between each dose	**FUNDED**
SARS-CoV-2 (COVID-19)	• Increased risk of complications	• Recommended annually, or every 6 months for severely immunocompromised	• Administer vaccine doses following the recommended schedule for the available COVID-19 vaccine	**FUNDED**
Tetanus/diphtheria/ pertussis Tdap (Boostrix)	• Duration of protection against tetanus/diphtheria and/or pertussis may be shorter compared with healthy vaccinees	• Check immunisation history for a primary course of three tetanus/diphtheria containing vaccines	**If unsure of tetanus/diphtheria immunisation history:** • Administer three doses with a minimum of 4 weeks between each dose **If confident recollection of completed tetanus/diphtheria immunisation:** • Administer one Tdap at age 45 years if less than four documented tetanus containing vaccine doses • Administer one Tdap at age 65 years	**FUNDED**

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Vaccine	Notes	Additional notes	Recommended schedule	Eligibility
Measles/mumps/ rubella MMR (Priorix)	• Disease may be more severe	**Highest risk group:** • Individuals born in 1969 or later who do not have two documented doses of MMR vaccine	**If CD4+ lymphocyte count is ≥200cells/mm³ [a,b,c,d]** and • If less than two documented doses ○ Complete a documented course of two MMR doses ○ Administer up to two doses at least 4 weeks apart	**FUNDED for individuals who meet the eligibility criteria** **CONTRAINDICATED if CD4 count is <200cells/m3**
Varicella (chickenpox) VV (Varilrix)	• Disease maybe more severe	**Highest risk groups:** • Individuals who do not have a reliable history of chickenpox disease • Individuals raised overseas, especially in subtropical countries **Evidence of immunity:** • Individuals with a positive past history of chickenpox disease are considered immune to varicella zoster virus **If no reliable history of chickenpox disease:** • Check varicella zoster virus serology • If varicella zoster virus serology is negative (i.e. non-immune) administer funded varicella vaccine	**If CD4+ lymphocyte count is ≥200cells/mm³ [a,b,c,d,e]** and • The individual is varicella zoster virus seronegative (i.e. non-immune) ○ Administer two doses at least 4 weeks apart	

a. Individuals who have received immunoglobulin or other blood products may require time for passive antibodies to decrease prior to administration of live MMR and varicella vaccines. Refer to Table A6.1 in the current *Immunisation Handbook.*

b. Two or more live vaccines can be given at the same visit. However, when live vaccines are administered at different visits, a minimum interval of 4 weeks is required.

c. Live vaccines should not be given during the 4 weeks prior to elective immunosuppression.

d. Consider normal immunoglobulin or zoster immunoglobulin for post-exposure measles or varicella prophylaxis respectively in immunosuppressed, non-immune individuals.

e. Two doses of varicella vaccine are funded for a household contact of an individual who is severely immunocompromised or undergoing a procedure leading to immune compromise, where the household contact has no clinical history of varicella infection or immunisation.

Call 0800 IMMUNE (0800 466 863) for clinical advice