

Table 21: (see Tables 7–20 for source and reference information for individual vaccines)

SUMMARY OF RECOMMENDED VACCINES FOR ADULTS WITH HIV			
Vaccine Trade Name	Indications	Administration and Revaccination	Comments
COVID-19/SARS-CoV-2 • Pfizer-BioNTech COVID-19 Vaccine • Moderna COVID-19 Vaccine • Janssen COVID-19 Vaccine (Johnson & Johnson)	<ul style="list-style-type: none"> • Pfizer-BioNTech COVID-19 vaccine: ≥12 years old • Moderna and Janssen COVID-19 vaccines: ≥18 years old • As determined by CDC guidelines; approved for use under FDA Emergency Use Authorizations. 	<ul style="list-style-type: none"> • Administer as per manufacturer's instruction for each vaccine: <ul style="list-style-type: none"> – Pfizer-BioNTech: 2 doses, given 3 weeks apart – Moderna: 2 doses, given 4 weeks apart – Johnson & Johnson (Janssen): 1 dose • Revaccination: Not yet determined 	<ul style="list-style-type: none"> • Covered by the Countermeasures Injury Compensation Program
Haemophilus Influenzae Type B Conjugate (Hib) • Hiberix; ActHIB	Patients at risk of Hib infection; see CDC guidelines for all adults	<ul style="list-style-type: none"> • Administer according to CDC guidelines for all adults at risk • Revaccination: None 	Not routinely recommended for people with HIV in the absence of other risk factors
Hepatitis A (HAV) • HAV: Havrix; Vaqta • HAV inactivated + HBV: Twinrix	All patients aged ≥1 year with HIV.	<ul style="list-style-type: none"> • Administer according to CDC guidelines • Obtain HAV IgG at least 1 month after final dose of vaccination series to identify nonresponders • If immune reconstitution appears likely, then consider deferring until patient's CD4 count >200 cells/mm³ • Revaccination: Nonresponders to primary HAV vaccination series should be revaccinated and counseled to avoid exposure 	<ul style="list-style-type: none"> • Covered by the Vaccine Injury Compensation Program* • See NYSDOH AI guideline <i>Prevention and Management of Hepatitis A Virus in Adults With HIV</i>
Hepatitis B (HBV) • HBV 2-dose series: HEPLISAV-B • HBV 3-dose series: Engerix-B, Recombivax HB • HAV inactivated + HBV: Twinrix	<ul style="list-style-type: none"> • Patients who are negative for anti-HBs and do not have chronic HBV infection; see NYSDOH AI guideline <i>HBV-HIV Coinfection</i>, Figure 3 	<ul style="list-style-type: none"> • Administer according to CDC guidelines for all adults • Alternative administration strategies, such as a 3- or 4-injection double-dose vaccination series or an accelerated schedule of 0, 1, and 3 weeks, may be considered • Test for anti-HBs 1 to 2 months after administration of the last dose of the vaccination series • Revaccination: Nonresponders to the primary HBV vaccination series (anti-HBs <10 IU/L) should receive a double-dose revaccination series; a 4-dose schedule should be considered 	<ul style="list-style-type: none"> • In patients at risk for HBV infection, initial vaccination should not be deferred if CD4 cell count is <200 cells/mm³ • If an accelerated schedule is used, a 4th dose booster should be administered at least 6 months after initiation of the series; the accelerated schedule is not recommended for patients with CD4 counts <500 cells/mm³ • The HAV/HBV combined vaccine is not recommended for the double-dose or 4-injection HBV vaccination strategy • A 2-dose (1 month apart) recombinant HBV surface antigen vaccine with a novel adjuvant (HEPLISAV-B) is available. There are no data available on use among people with HIV. There were no autoimmune adverse events among people with HIV exposed to the adjuvant • See NYSDOH AI guideline <i>HBV-HIV Coinfection</i> • Covered by the Vaccine Injury Compensation Program*
Human Papillomavirus (HPV) • Gardasil 9	<ul style="list-style-type: none"> • All patients aged 9 to 26 years who were not previously vaccinated or did not receive a complete 3-dose series 	<ul style="list-style-type: none"> • Administer through age 26 years as a 3-dose series according to CDC guidelines for adults with immuno-compromising conditions • Revaccination: None 	<ul style="list-style-type: none"> • A 2-dose schedule is not recommended • Because of the broader coverage offered by the 9-valent HPV vaccine, it is the only HPV vaccine currently available in the United States (see CDC HPV Home > Information for Healthcare Professionals for more information) • Although the 9-valent vaccine has not been specifically studied in people with HIV, it is expected that the response will be the same in this population as with the 4-valent vaccine • Follow recommendations for cervical and anal cancer screening in women with HIV and men who have received the HPV vaccine • Covered by the Vaccine Injury Compensation Program*
Influenza • For brand names, see CDC flu vaccines table	<ul style="list-style-type: none"> • For all patients, as determined by CDC guidelines for all adults 	<ul style="list-style-type: none"> • Administer annually during flu season (October through May) according to CDC guidelines for all adults • Revaccination: None 	<ul style="list-style-type: none"> • Covered by the Vaccine Injury Compensation Program*

Table 21 Continued: (see Tables 7–20 for source and reference information for individual vaccines)

SUMMARY OF RECOMMENDED VACCINES FOR ADULTS WITH HIV <i>Continued</i>			
Vaccine Trade Name	Indications	Administration and Revaccination	Comments
Measles, Mumps, and Rubella (MMR) • M–M–R II • MMR + varicella: ProQuad	<ul style="list-style-type: none"> For patients with CD4 cell counts ≥ 200 cells/mm³ who do not have evidence of MMR immunity, as determined by CDC guidelines for all adults 	<ul style="list-style-type: none"> Two doses at least 28 days apart Revaccination: Recommended only in the setting of an outbreak 	<ul style="list-style-type: none"> Contraindicated for patients with CD4 counts < 200 cells/mm³ MMRV should not be substituted for MMR Those who previously received 2 doses of a mumps-containing vaccine and are at increased risk for mumps in the setting of an outbreak should receive a third dose to improve protection against mumps disease and related complications Covered by the Vaccine Injury Compensation Program*
Meningococcal Serotype Non-B (MenACWY) MenACWY: Menactra MCV4: Menveo	<ul style="list-style-type: none"> All patients with HIV See NYSDOH Health Advisories on Meningococcal Disease 	<ul style="list-style-type: none"> Administer 2 doses of MenACWY at least 8 weeks apart in those not previously vaccinated For those previously vaccinated with 1 dose of MenACWY, administer the 2nd dose at the earliest opportunity at least 8 weeks after the previous dose Revaccination: Administer 1 booster dose of MenACWY every 5 years 	<ul style="list-style-type: none"> MenACWY is preferred over MPSV4 in adults with HIV > 55 years of age Covered by the Vaccine Injury Compensation Program*
Meningococcal Serotype B (MenB) Bexsero; Trumenba	<ul style="list-style-type: none"> Patients at risk of MenB infection, as determined by CDC guidelines 	<ul style="list-style-type: none"> Administer according to CDC guidelines for patients at risk Revaccination: None 	<ul style="list-style-type: none"> Not routinely recommended for people with HIV in the absence of other risk factors Covered by the Vaccine Injury Compensation Program*
Pneumococcal • 13-valent: Prevnar 13 (PCV13) • 23-valent: Pneumovax 23 (PPSV23)	<ul style="list-style-type: none"> All patients with HIV 	<ul style="list-style-type: none"> The complete series of vaccinations is 1 dose of PCV13 and 2 doses of PPSV23 before age 65 years, followed by 1 additional dose of PPSV23 after age 65 years See Table 17 for detailed administration guidelines based on age and previous vaccination history 	<ul style="list-style-type: none"> The PCV13 vaccine should be not be deferred for patients with CD4 count < 200 cells/mm³ and/or detectable viral load; however, the follow-up secondary administration of PPSV23 vaccine may be deferred until the patient's CD4 count is > 200 cells/mm³ and/or viral load is undetectable
Tetanus, Diphtheria, and Pertussis (Tdap) and Tetanus-Diphtheria (Td) • Tdap: Adacel; Boostrix • Td: Tenivac; Decavac (generic 9Td)	<ul style="list-style-type: none"> For all patients, as determined by CDC guidelines for all adults 	<ul style="list-style-type: none"> Administer according to CDC guidelines for all adults Revaccination: None 	<ul style="list-style-type: none"> Covered by the Vaccine Injury Compensation Program*
Varicella • Varicella: Varivax • MMR + varicella: ProQuad	<ul style="list-style-type: none"> For patients with CD4 cell counts ≥ 200 cells/mm³ who do not have evidence of immunity to varicella, as determined by CDC guidelines for all adults 	<ul style="list-style-type: none"> Administer according to CDC guidelines for all adults Revaccination: None 	<ul style="list-style-type: none"> Contraindicated for patients with CD4 counts < 200 cells/mm³ Anti-varicella IgG screening should be performed in patients with no known history of chickenpox or shingles MMRV should not be used Antiherpetic agents should be avoided at least 24 hours before and 14 days after administration An interval of at least 5 months is recommended between administration of post-exposure varicella IgG (VariZIG) and varicella vaccination Clinical disease due to varicella after vaccination, a very rare event, should be treated with acyclovir Covered by the Vaccine Injury Compensation Program*
Zoster • RZV: Shingrix— PREFERRED • For information on ZVL (brand name Zostavax), see Table 20	<ul style="list-style-type: none"> MCCC recommendation: Patients aged ≥ 50 years with HIV (A2) 	<ul style="list-style-type: none"> Two IM doses, spaced 2 to 6 months apart, regardless of past receipt of ZVL See CDC information on administering Shingrix Perform anti-varicella IgG screening in patients with no known history of chickenpox or shingles Revaccination: None 	<ul style="list-style-type: none"> RZV is preferred over ZVL (A2) RZV provides strong protection against shingles and post-herpetic neuralgia. Currently, there are no data on efficacy specific to people with HIV; however, superior efficacy and longer duration of protection have been demonstrated among the elderly, and a recombinant vaccine is preferred people with HIV In addition, immunogenicity and safety following a 3-dose schedule has been demonstrated among people with HIV infection. <i>Note: RZV is administered IM in distinction to ZVL which is delivered by SQ injection.</i>

CDC: Centers for Disease Control and Prevention; MMR: measles, mumps, and rubella; NYSDOH AI: New York State Department of Health AIDS Institute; RZV: recombinant zoster vaccine; ZVL: zoster vaccine live.

*Vaccine injury compensation program: Tel: 1-800-338-2382; U.S. Court of Federal Claims, 717 Madison Place, NW, Washington DC 20005