### SUMMARY OF RECOMMENDED VACCINES FOR ADULTS WITH HIV

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<tr>
<th>Vaccine Trade Name</th>
<th>Indications</th>
<th>Administration and Revaccination</th>
<th>Comments</th>
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<td><strong>Haemophilus Influenzae Type B Conjugate (Hib)</strong>&lt;br&gt;• Hiberix; ActHIB</td>
<td>Patients at risk of Hib infection; see CDC guidelines for all adults</td>
<td>• Administer according to CDC guidelines for all adults at risk&lt;br&gt;• Revaccination: None</td>
<td>Not routinely recommended for people with HIV in the absence of other risk factors</td>
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<td><strong>Hepatitis A (HAV)</strong>&lt;br&gt;• HAV: Havrix, Vaqta&lt;br&gt;• HAV inactivated + HBV: Twinrix</td>
<td>Patients with HIV who:&lt;br&gt;• Are HAV IgG negative and at risk of HAV infection and related morbidity and mortality&lt;br&gt;• Seek protection against HAV&lt;br&gt;• Are MSM&lt;br&gt;• Have chronic liver disease or conditions that can lead to chronic liver disease&lt;br&gt;• Travel to countries with high or intermediate endemicity of infection&lt;br&gt;• Use and inject illicit drugs&lt;br&gt;• Live in a community experiencing an outbreak of HAV infection&lt;br&gt;• Have a clotting-factor disorder&lt;br&gt;• Are at occupational risk of HAV infection</td>
<td>• Administer according to CDC guidelines&lt;br&gt;• Obtain HAV IgG at least 1 month after final dose of vaccination series to identify nonresponders&lt;br&gt;• If immune reconstitution appears likely, then consider deferring until patient’s CD4 count &gt;200 cells/mm³&lt;br&gt;• Revaccination: Nonresponders to primary HAV vaccination series should be revaccinated and counseled to avoid exposure</td>
<td>• Not routinely recommended for people with HIV in the absence of other risk factors&lt;br&gt;• Covered by the Vaccine Injury Compensation Program*&lt;br&gt;• See NYSDOH AI guideline HAV–HIV Coinfection</td>
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<td><strong>Hepatitis B (HBV)</strong>&lt;br&gt;• HBV 2-dose series: HEPLISAV-B&lt;br&gt;• HBV 3-dose series: Engerix-B, Recombivax HB&lt;br&gt;• HAV inactivated + HBV: Twinrix</td>
<td>Patients who are negative for anti–HBs and do not have chronic HBV infection; see NYS DOH AI guideline HBV–HIV Coinfection, Figure 3</td>
<td>• Administer according to CDC guidelines for all adults&lt;br&gt;• 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&lt;br&gt;• Test for anti–HBs 1 to 2 months after administration of the last dose of the vaccination series&lt;br&gt;• Revaccination: Nonresponders to primary HBV vaccination series (anti–HBs &lt;10 IU/L) should receive a double-dose revaccination series; a 4-dose schedule should be considered</td>
<td>• In patients at risk for HBV infection, initial vaccination should not be deferred if CD4 cell count is &lt;200 cells/mm³&lt;br&gt;• 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 &lt;500 cells/mm³&lt;br&gt;• The HAV/HBV combined vaccine is not recommended for the double-dose or 4-injection HBV vaccination strategy&lt;br&gt;• A two-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&lt;br&gt;• Covered by the Vaccine Injury Compensation Program*</td>
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<td><strong>Human Papillomavirus (HPV)</strong>&lt;br&gt;• Gardasil 9</td>
<td>All patients aged 9 to 26 years who were not previously vaccinated or did not receive a complete three-dose series</td>
<td>• Administer through age 26 years as a three-dose series according to CDC guidelines for adults with immunocompromising conditions&lt;br&gt;• Revaccination: None</td>
<td>• A two-dose schedule is not recommended&lt;br&gt;• 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 Vaccine Information for Clinicians for more information)&lt;br&gt;• 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&lt;br&gt;• Follow recommendations for cervical and anal cancer screening in women with HIV and men who have received the HPV vaccine&lt;br&gt;• Covered by the Vaccine Injury Compensation Program*</td>
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<td><strong>Influenza</strong>&lt;br&gt;• For brand names, see CDC flu vaccines table</td>
<td>For all patients, as determined by CDC guidelines for all adults</td>
<td>• Administer annually during flu season (October through May) according to CDC guidelines for all adults</td>
<td>• Covered by the Vaccine Injury Compensation Program*</td>
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<td><strong>Measles, Mumps, and Rubella (MMR)</strong>&lt;br&gt;• M–M–R II&lt;br&gt;• MMR + varicella: ProQuad</td>
<td>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</td>
<td>• Two doses at least 28 days apart&lt;br&gt;• Revaccination: Recommended only in the setting of an outbreak</td>
<td>• Contraindicated for patients with CD4 counts &lt;200 cells/mm³&lt;br&gt;• MMRV should not be substituted for MMR&lt;br&gt;• Those who previously received two 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&lt;br&gt;• Covered by the Vaccine Injury Compensation Program*</td>
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New York State Department of Health AIDS Institute: [www.hivguidelines.org](http://www.hivguidelines.org)
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| **Meningococcal Serotype Non-B (MenACWY)** | • All patients with HIV  
• See NYSDOH Health Advisories on Meningococcal Disease | • Administer two doses of MenACWY at least 8 weeks apart in those not previously vaccinated  
• For those previously vaccinated with one dose of MenACWY, administer the 2nd dose at the earliest opportunity at least 8 weeks after the previous dose  
• Revaccination: Administer one booster dose of MenACWY every 5 years | • MenACWY is preferred over MPSV4 in adults with HIV >55 years of age  
• Covered by the Vaccine Injury Compensation Program*                                                                                     |
| Meningococcal Serotype B (MenB)          | • Patients at risk of MenB infection, as determined by CDC guidelines        | • Administer according to CDC guidelines for patients at risk  
• Revaccination: None                                                                                                                        | • Not routinely recommended for people with HIV in the absence of other risk factors  
• Covered by the Vaccine Injury Compensation Program*                                                                                         |
| Pneumococcal                            | • All patients with HIV                                                     | • The complete series of vaccinations is one dose of PCV13 and two doses of PPSV23 before age 65 years, followed by one additional dose of PPSV23 after age 65 years  
• See Table 10 for detailed administration guidelines based on age and previous vaccination history | • The PCV13 vaccine should 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) | • For all patients, as determined by CDC guidelines for all adults          | • Administer according to CDC guidelines for all adults  
• Revaccination: None                                                                                                                        | • Covered by the Vaccine Injury Compensation Program*                                                                                         |
| Varicella                                | • Varicella: Varivax  
• MMR + varicella: ProQuad                                                 | • Administer according to CDC guidelines for all adults  
• Revaccination: 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  
• Antitherpetic 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—PREFFERED  
• For information on ZVL (brand name Zostavax), see Table 13 | • MCCCD recommendation: Patients with HIV ≥50 years of age (A2)  
• 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                                                                                                                       | • 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.  
Note: RZV is administered IM in distinction to ZVL which is delivered by SQ injection.  
*Vaccine injury compensation program: Tel: 1-800-338-2382; U.S. Court of Federal Claims, 717 Madison Place, NW, Washington DC 20005 |