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Table 1: COVID-19 Vaccines	
Trade Names See FDA COVID-19 Vaccines	<ul style="list-style-type: none"> Moderna COVID-19 Vaccine (mRNA vaccine) Pfizer-BioNTech COVID-19 Vaccine (mRNA vaccine) Novavax COVID-19 Vaccine, Adjuvanted (protein subunit vaccine)
Indications	<ul style="list-style-type: none"> At least 1 monovalent 2024–2025 COVID-19 vaccine for all individuals aged 18 years and older with HIV Clinical Guidelines Program recommendation: Clinicians should vaccinate individuals with HIV and CD4 counts <350 cells/mm³ for COVID-19 according to the CDC schedule for individuals who are moderately or severely compromised. (A2)
Administration	Administer according to CDC Interim Clinical Considerations for Use of COVID-19 Vaccines in the United States : <ul style="list-style-type: none"> Table 1: Routine COVID-19 vaccination schedule, October 31, 2024 Table 2: COVID-19 vaccination schedule for people who are moderately or severely immunocompromised, October 31, 2024
Comments	See also CDC Interim Clinical Considerations for Use of COVID-19 Vaccines in the United States > Description of moderate and severe immunocompromising conditions and treatments .
Abbreviations: CDC, Centers for Disease Control and Prevention; FDA, U.S. Food and Drug Administration.	

Table 2: <i>Haemophilus influenzae</i> Type B Vaccine	
Trade Names	<ul style="list-style-type: none"> Hiberix ActHIB
Indications	Patients at risk of Hib infection
Administration	Administer according to CDC: Adult Immunization Schedule : <ul style="list-style-type: none"> Recommendations for Ages 19 Years and Older, 2023: HTML PDF (Table 1) Recommendations by Medical Condition and Other Indication: HTML PDF (Table 2)
Revaccination	None
Comments	Not routinely recommended for people with HIV in the absence of other risk factors
Abbreviations: CDC, Centers for Disease Control and Prevention; Hib, <i>Haemophilus influenzae</i> type B.	

Table 3: Hepatitis A Virus Vaccine	
Trade Names	<ul style="list-style-type: none"> HAV: Havrix; Vaqta HAV inactivated + HBV: Twinrix
Indications	All adults with HIV [CDC(a) 2022]
Administration	<ul style="list-style-type: none"> Administer according to CDC: Adult Immunization Schedule: <ul style="list-style-type: none"> Recommendations for Ages 19 Years and Older, 2023: HTML PDF (Table 1) Recommendations by Medical Condition and Other Indication: HTML PDF (Table 2) Notes: <ul style="list-style-type: none"> Obtain HAV IgG testing ≥ 1 month after final dose of vaccination series to confirm immune response. If immune reconstitution appears likely, consider deferring until patient's CD4 count ≥ 200 cells/mm³ [DHHS 2022].
Revaccination	Patients who do not respond to the primary HAV vaccination series should be revaccinated [Thompson, et al. 2021] and counseled to avoid exposure.
Comments	<ul style="list-style-type: none"> See NYSDOH AI guideline Prevention and Management of Hepatitis A Virus Infection in Adults With HIV. Covered by HRSA: Vaccine Injury Compensation Program
Abbreviations: CDC, Centers for Disease Control and Prevention; HAV, hepatitis A virus; HBV, hepatitis B virus; HRSA, Health Resources and Services Administration; IgG, immunoglobulin G.	

Table 4: Hepatitis B Virus Vaccine	
Trade Names	<ul style="list-style-type: none"> HBV 2-dose series: HEPLISAV-B (see comments) HBV 3-dose series: Engerix-B; Recombivax HB; PreHevbrio (see comments) HAV inactivated + HBV 3-dose series: Twinrix
Indications	Patients who are negative for anti-HBs and do not have chronic HBV infection
Administration	<ul style="list-style-type: none"> Administer according to CDC: Adult Immunization Schedule: <ul style="list-style-type: none"> Recommendations for Ages 19 Years and Older, 2023: HTML PDF (Table 1) Recommendations by Medical Condition and Other Indication: HTML PDF (Table 2) Notes: <ul style="list-style-type: none"> 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 [DHHS 2022]. Test for anti-HBs 4 to 16 weeks after administration of the last dose of the vaccination series.
Revaccination	Patients who do not respond to the primary HBV vaccination series (anti-HBs < 10 IU/L) should be revaccinated with Heplisav-B or a double dose of the vaccine series previously administered.
Comments	<ul style="list-style-type: none"> In patients at risk for HBV infection, initial vaccination should not be deferred if the CD4 count is < 200 cells/mm³ [DHHS 2022]. If an accelerated schedule is used, a fourth booster dose should be administered ≥ 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. PreHevbrio, a 3-antigen recombinant HBV vaccine, was approved in 2021 by the FDA for use for individuals ≥ 18 years old [FDA 2021], but experience regarding its use in patients with HIV is lacking at this time. Heplisav-B and PreHevbrio are not recommended in pregnancy because of lack of safety data [CDC 2023]. See NYSDOH AI guideline Prevention and Management of Hepatitis B Virus Infection in Adults With HIV. Covered by HRSA: Vaccine Injury Compensation Program
Abbreviations: anti-HBs, hepatitis B surface antibody; CDC, Centers for Disease Control and Prevention; FDA, U.S. Food and Drug Administration; HAV, hepatitis A virus; HBV, hepatitis B virus; HRSA, Health Resources and Services Administration.	

Table 5: Human Papillomavirus Vaccine	
Trade Name	Gardasil 9
Indications	All patients 9 to 45 years old who were not previously vaccinated or did not receive a complete 3-dose series
Administration	Administer through age 45 years as a 3-dose series according to CDC: Adult Immunization Schedule : <ul style="list-style-type: none"> • Recommendations for Ages 19 Years and Older, 2023: HTML PDF (Table 1) • Recommendations by Medical Condition and Other Indication: HTML PDF (Table 2)
Revaccination	None
Comments	<ul style="list-style-type: none"> • A 2-dose schedule is not recommended [CDC(a) 2021]. • 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 quadrivalent vaccine. • Follow recommendations for cervical and anal cancer screening in NYSDOH AI guidelines Screening for Cervical Dysplasia and Cancer in Adults With HIV and Screening for Anal Dysplasia and Cancer in Adults With HIV. • Covered by HRSA: Vaccine Injury Compensation Program
Abbreviations: CDC, Centers for Disease Control and Prevention; HPV, human papillomavirus; HRSA, Health Resources and Services Administration.	

Table 6: Influenza Vaccine	
Trade Names	See CDC influenza vaccines table
Indications	All adults with HIV
Administration	Administer annually during flu season (October through May) according to CDC: Adult Immunization Schedule : <ul style="list-style-type: none"> • Recommendations for Ages 19 Years and Older, 2023: HTML PDF (Table 1) • Recommendations by Medical Condition and Other Indication: HTML PDF (Table 2)
Revaccination	None
Comments	Covered by HRSA: Vaccine Injury Compensation Program
Abbreviations: CDC, Centers for Disease Control and Prevention; HRSA, Health Resources and Services Administration.	

Table 7: Measles, Mumps, Rubella Vaccine	
Trade Name	M-M-R II
Indications	For patients with CD4 counts ≥ 200 cells/mm ³ for ≥ 6 months who do not have evidence of MMR immunity
Administration	Administer according to the CDC: Adult Immunization Schedule : <ul style="list-style-type: none"> • Recommendations for Ages 19 Years and Older, 2023: HTML PDF (Table 1) • Recommendations by Medical Condition and Other Indication: HTML PDF (Table 2)
Revaccination	Recommended only in the setting of an outbreak
Comments	<ul style="list-style-type: none"> • Contraindicated for patients with CD4 counts < 200 cells/mm³ • The MMR + varicella vaccine (ProQuad) should not be substituted for the MMR vaccine [McLean, et al. 2013]. • 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 [Marin, et al. 2018]. • Covered by HRSA: Vaccine Injury Compensation Program
Abbreviations: CDC, Centers for Disease Control and Prevention; HRSA, Health Resources and Services Administration; MMR, measles, mumps, rubella.	

Table 8: Meningococcal Serotypes A, C, W, and Y Vaccine	
Trade Names	<ul style="list-style-type: none"> • Menactra (MenACWY-D) • Menveo (MenACWY-CRM) • MenQuadfi (MenACWY-TT)
Indications	All patients with HIV
Administration	<ul style="list-style-type: none"> • Administer 2 doses of MenACWY vaccine ≥ 8 weeks apart in those not previously vaccinated. • For those previously vaccinated with 1 dose of MenACWY vaccine, administer the second dose at the earliest opportunity ≥ 8 weeks after the previous dose. • See CDC: Adult Immunization Schedule: <ul style="list-style-type: none"> – Recommendations for Ages 19 Years and Older, 2023: HTML PDF (Table 1) – Recommendations by Medical Condition and Other Indication: HTML PDF (Table 2)
Revaccination	Administer 1 booster dose of MenACWY vaccine every 5 years.
Comments	<ul style="list-style-type: none"> • MenACWY-D should not be administered until ≥ 4 weeks after pneumococcal conjugate vaccine. • See Meningococcal Disease: NYSDOH Health Advisory and Vaccine Recommendations • Covered by HRSA: Vaccine Injury Compensation Program
Abbreviations: CDC, Centers for Disease Control and Prevention; HRSA, Health Resources and Services Administration; MenACWY, meningococcal serotypes A, C, W, and Y.	

Table 9: MenB Vaccine for Prevention of MenB Infection	
Trade Names	<ul style="list-style-type: none"> • Bexsero (4CMenB) • Trumenba (MenB-FHbp)
Indications	Patients at risk of MenB infection
Administration	Administer according to CDC: Adult Immunization Schedule, 2023: HTML PDF
Revaccination	None
Comments	<ul style="list-style-type: none"> • Bexsero (4CMenB) and Trumenba (MenB-FHbp) are not interchangeable • Not routinely recommended for people with HIV in the absence of other risk factors • Covered by HRSA: Vaccine Injury Compensation Program
Abbreviations: CDC, Centers for Disease Control and Prevention; HRSA, Health Resources and Services Administration; MenB, meningococcal serotype B.	

Table 10: Mpox Vaccine [a]	
Trade name	JYNNEOS (also called Imvamune or Imvanex)
Type of vaccine	Live virus that does not replicate efficiently in human cells
Administration	Two subcutaneous injections 4 weeks apart
Indication	Individuals with HIV ≥18 years old who are at high risk of or who have been exposed to mpox within the past 14 days
Adverse reactions	Injection site reactions such as pain, swelling, and redness. Vaccination with JYNNEOS will not cause mpox infection.
Contraindications	Severe allergy to any component of the vaccine (gentamicin, ciprofloxacin, or egg protein)
Immune response	Maximal development of the immune response takes 2 weeks after second dose.
Pregnancy/ breastfeeding	No evidence of reproductive harm from animal data. Pregnancy and breastfeeding are not contraindications for vaccination.
Abbreviation: CDC, Centers for Disease Control and Prevention.	
Note:	
a. See package insert and CDC: Interim Clinical Considerations for Use of JYNNEOS and ACAM2000 Vaccines During the 2022 U.S. Monkeypox Outbreak .	

Table 11: Pneumococcal Vaccine (see also CDC: Adult Immunization Schedules: By Age [Table 1] and Medical Condition [Table 2] and CDC: PneumoRecs VaxAdvisor)	
Trade Names	<ul style="list-style-type: none"> • Vaxneuvance (PCV15; 15-valent pneumococcal conjugate vaccine) • Prevnar 20 (PCV20; 20-valent pneumococcal conjugate vaccine) • Pneumovax 23 (PPSV23; 23-valent pneumococcal polysaccharide vaccine)
Indications	All patients with HIV
Administration	For patients who have not received a pneumococcal vaccine or whose vaccination status is unknown: Vaccinate with 1 dose of PCV15 or 1 dose of PCV20. If PCV15 is used, follow with 1 dose of PPSV23, with a minimum interval of 8 weeks between the doses.
Revaccination	Consult CDC: PneumoRecs VaxAdvisor
Comments	<ul style="list-style-type: none"> • Pneumococcal vaccination 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 the PPSV23 vaccine may be deferred until the patient's CD4 count is ≥200 cells/mm³ and/or viral load is undetectable. • The Menactra (MenACWY-D) vaccine for meningococcal serotype groups A,C, W, and Y (MenACWY) should not be administered until ≥4 weeks after pneumococcal conjugate vaccine.
Abbreviation: CDC, Centers for Disease Control and Prevention.	

Table 12: Tdap and Td Vaccines	
Trade Names	<ul style="list-style-type: none"> • Tdap: Adacel; Boostrix • Td: Tenivac; TDVax
Indications	All adult patients
Administration	Administer according to CDC: Adult Immunization Schedule : <ul style="list-style-type: none"> • Recommendations for Ages 19 Years and Older, 2023: HTML PDF (Table 1) • Recommendations by Medical Condition and Other Indication: HTML PDF (Table 2)
Revaccination	Td is usually given as a booster dose every 10 years, but it can also be given earlier after a severe and dirty wound or burn.
Comments	Covered by HRSA: Vaccine Injury Compensation Program
Abbreviations: CDC, Centers for Disease Control and Prevention; HRSA, Health Resources and Services Administration; Tdap, tetanus, diphtheria, and pertussis; Td, tetanus-diphtheria.	

Table 13: Varicella Vaccine	
Trade Name	Varivax
Indications	For patients with CD4 counts ≥ 200 cells/mm ³ who do not have evidence of immunity to varicella
Administration	Administer according to CDC: Adult Immunization Schedule : <ul style="list-style-type: none"> • Recommendations for Ages 19 Years and Older, 2023: HTML PDF (Table 1) • Recommendations by Medical Condition and Other Indication: HTML PDF (Table 2)
Revaccination	None
Comments	<ul style="list-style-type: none"> • Contraindicated for patients with CD4 counts < 200 cells/mm³ (see CDC: Adult Immunization Schedule) • Anti-varicella IgG screening should be performed in patients with no known history of chickenpox or shingles [Marin, et al. 2007]. • MMR + varicella (ProQuad) vaccine should not be used [McLean, et al. 2013]. • Antitherpetic agents should be avoided ≥ 24 hours before and for 14 days after administration [ACIP 2022; CDC(b) 2021]. • An interval of ≥ 5 months is recommended between administration of post-exposure VariZIG and varicella vaccination [ACIP 2022; DHHS 2022; CDC 2006]. • Clinical disease due to varicella after vaccination, a very rare event, should be treated with acyclovir [DHHS 2022]. • Covered by HRSA: Vaccine Injury Compensation Program
Abbreviations: CDC, Centers for Disease Control and Prevention; HRSA, Health Resources and Services Administration; IgG, immunoglobulin G; MMR, measles, mumps, rubella; VariZIG, varicella zoster immune globulin.	

Table 14: Zoster Vaccine	
Trade Names	Shingrix: RZV, adjuvanted
Indications	MCCC recommendation: Patients with HIV ≥18 years old (A2)
Administration	<ul style="list-style-type: none"> • Two intramuscular doses, given 2 to 6 months apart, regardless of past receipt of ZVL (brand name Zostavax) • Perform anti-varicella IgG screening in patients with no known history of chickenpox or shingles [Marin, et al. 2007]. • See CDC: Adult Immunization Schedule: <ul style="list-style-type: none"> – Recommendations for Ages 19 Years and Older, 2023: HTML PDF (Table 1) – Recommendations by Medical Condition and Other Indication: HTML PDF (Table 2)
Comments	<ul style="list-style-type: none"> • RZV provides strong protection against shingles and post-herpetic neuralgia. Currently, there are no data on immunogenicity 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 for people with HIV [Anderson, et al. 2022; Dooling, et al. 2018]. • As of November 2020, ZVL is no longer available for use in the United States.
Abbreviations: CDC, Centers for Disease Control and Prevention; IgG, immunoglobulin G; MCCC, Medical Care Criteria Committee; RZV, recombinant zoster vaccine; ZVL, zoster vaccine live.	

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