Human Immunodeficiency Virus (HIV) Infection

Recommended vaccines for those with HIV infection [A]	
All routine inactivated vaccines	Immunize according to routine schedule.
Hib vaccine	Incompletely immunized individuals 5 years of age and older require 1 dose.
Hepatitis A vaccine	3 doses at 0, 1, and 6 months.
Hepatitis B vaccine	Requires Hepatitis B Vaccine Higher Dose Schedule. Post-immunization serology for anti-HBs is recommended (provide 2nd series if response is < 10 IU/L).
HPV	Publicly funded for those 9-26 years of age (inclusive).
Pneumococcal vaccine	Conjugate and polysaccharide vaccine. [B] Requires once only revaccination with polysaccharide vaccine.
Influenza vaccine	Immunize yearly (all those 6 months of age and older). Inactivated influenza vaccine should be used.
MMR vaccine [C]	Refer to Immunization with Inactivated and Live Vaccines. Use Referral Form for MMR Vaccination. Separate doses by 12 weeks.
Varicella vaccine [C]	Refer to Immunization with Inactivated and Live Vaccines. Use Referral Form for Varicella Vaccination. Separate doses by 12 weeks.
Rotavirus vaccine	Infants exposed to or infected with HIV should be immunized with rotavirus vaccine according to the routine schedule. A referral is not required.

[A] For specific vaccine schedule information, refer to Part 4 - Biological Products.
[B] The age appropriate pneumococcal conjugate vaccine (PCV) series should be administered first, followed by pneumococcal polysaccharide vaccine (PPV23) at 2 years of age and older and at least 8 weeks after the last dose of PCV. If PPV23 has already been administered, PCV should be administered at least 1 year later.
[C] NACI recommends that HIV infected individuals who are not severely immunosuppressed (i.e., immunological categories 1 and 2 – see table on page 2) may be immunized with MMR and varicella vaccines. MMR and varicella vaccines can be administered on the same day or separated by 4 weeks. Use separate MMR and varicella vaccines, as MMRV vaccine is contraindicated in this population.

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There are no contraindications to the use of inactivated vaccines at any time.

As the client's illness progresses, the immune system weakens and the effectiveness of immunization decreases while the risk associated with administering live vaccines increases. MMR, varicella, and yellow fever vaccines may be given to an HIV positive client if the client's immune system is not significantly compromised (i.e., immunological categories 1 and 2 – see table below) and the risk of disease (based on anticipated exposure, age, immunization history, known susceptibility) outweighs the risk of vaccination.

Immunologic category [A]	< 12 months		1-5 years		≥ 6 years	
	CD4+ T-lymphocyte counts ($x10^6$/L)	Percent (%) of total lymphocytes	CD4+ T-lymphocyte counts ($x10^6$/L)	Percent (%) of total lymphocytes	CD4+ T-lymphocyte counts ($x10^6$/L)	Percent (%) of total lymphocytes
1	≥ 1,500	≥ 34	≥ 1,000	≥ 30	≥ 500	≥ 26
2	750-1,499	26-33	500-999	22-29	200-499	14-25

Source: The Centers for Disease Control and Prevention (CDC)

Consult the primary care physician, medical specialist or nurse practitioner most familiar with the client's current medical status prior to immunizing with live vaccine (with the exception of rotavirus vaccine).

Oral typhoid and BCG vaccines are contraindicated for an HIV positive client regardless of the degree of immunosuppression.

The ability of HIV infected individuals to respond to vaccine antigens is related to the degree of immunosuppression at the time of immunization and may be inadequate. These persons could be susceptible to vaccine preventable diseases, even after appropriate immunization, unless a recent serological test demonstrates adequate antibody concentrations. Consider passive immunoprophylaxis or chemoprophylaxis after exposure to vaccine preventable diseases even if the person previously has received the recommended vaccines.

[A] The immunologic category is based primarily on the CD4+ T-lymphocyte count; the CD4+ T-lymphocyte count takes precedence over the CD4 T-lymphocyte percentage, and the percentage is considered only if the count is missing.