Congenital Immunodeficiency States [A]

Recommended vaccines for those with congenital immunodeficiency states [B]	
All routine inactivated vaccines	Immunize according to routine schedule for inactivated vaccines.
Pneumococcal vaccine	Conjugate and/or polysaccharide vaccine depending on age. Requires once only revaccination with polysaccharide vaccine.
Meningococcal quadrivalent conjugate vaccine	Meningococcal quadrivalent conjugate vaccine for those 2 months of age and older. (This vaccine to be given in place of meningococcal C conjugate vaccine in the routine childhood immunization schedule). Reinforcement dose(s) are recommended. [C]
Hepatitis B vaccine	Requires Hepatitis B Vaccine Higher Dose Schedule. Post-immunization serology for anti-HBs is recommended (provide second series if response is < 10 IU/L.
Hib vaccine	All individuals 5 years of age and older require 1 dose regardless of immunization history.
Influenza vaccine	Immunize yearly (all those 6 months of age and older). Inactivated influenza vaccine should be used.
MMR vaccine [D, E]	Refer to Immunization with Inactivated and Live Vaccines. Use Referral Form for MMR Vaccination.
Varicella vaccine [D, E]	Refer to Immunization with Inactivated and Live Vaccines. Use Referral Form for Varicella Vaccination. Separate doses by 12 weeks.
Rotavirus vaccine [D]	This vaccine is contraindicated for infants diagnosed with Severe Combined Immunodeficiency (SCID). [F] Infants with a known or suspected immunocompromising condition should not receive rotavirus vaccine without consultation with a physician specialist or nurse practitioner. Refer to Immunization with Inactivated and Live Vaccines. Use Referral Form for Rotavirus Vaccination.

[A] Congenital immunodeficiency states are generally inherited. Examples include disorders of B-lymphocyte (humoral immunity), T-lymphocyte (cell-mediated immunity), complement system (including properdin or factor D deficiencies), or phagocytic functions.

[B] For specific vaccine schedule information, refer to Part 4 - Biological Products.

[C] If individual was previously vaccinated at 7 years of age and older: give 5 years after previous dose. If individual was previously vaccinated at 6 years of age and under: give 3 years after previous dose. Re-immunize every 5 years as long as medical condition exists.

[D] Live vaccines:

- May be considered for those individuals with antibody defects if they are not receiving regular Ig replacement therapy.
- May be considered for individuals with phagocytic defects.
- May be considered for individuals with complement deficiency.
- Are contraindicated for individuals with T cell, natural killer and mixed cell-mediated antibody defects.
- Live **bacterial** vaccines (e.g., oral typhoid vaccine) are contraindicated.

[E] MMR and varicella vaccines are recommended depending on immunization history, age and susceptibility. Use separate MMR and varicella vaccines and separate by 4 weeks. MMRV vaccine is contraindicated in this population.

[F] SCID includes a group of rare, life-threatening disorders caused by at least 15 different single gene defects that result in profound deficiencies in T- and B- lymphocyte function. In a minority of cases there is a known family history of SCID.

Congenital Immunodeficiency States

Inactivated and component vaccines can be safely administered to individuals with congenital immunodeficiencies, keeping in mind that many of the vaccine recipients will not develop an adequate immune response. Consider use of IVIg or pathogen-specific Ig if individual is exposed to vaccine preventable disease.