

Exhibit 1: Adult Immunization Schedule

| 3/1/2000 SUMMARY OF ADOLESCENT/ADULT IMMUNIZATION RECOMMENDATIONS | | | | |
|---|---|--|---|--|
| Agent | Indications | Primary Schedule | Contraindications | Comments |
| Tetanus and Diphtheria Toxoids Combined (Td) | All adults All adolescents should be assessed at 11-12 or 14-16 years of age and immunized if no dose was received during the previous 5 years. | Two doses 4-8 weeks apart, third dose 6-12 months after the second. No need to repeat doses if the schedule is interrupted. Dose: 0.5 mL intramuscular (IM) Booster: At 10 year intervals throughout life. | Neurologic or severe hypersensitivity reaction to prior dose. | WOUND MANAGEMENT: Patients with three or more previous tetanus toxoid doses: (a) give Td for clean, minor wounds only if more than 10 years since last dose; (b) for other wounds, give Td if over 5 years since last dose. Patients with less than 3 or unknown number of prior tetanus toxoid doses: give Td for clean, minor wounds and Td and TIG (Tetanus Immune Globulin) for other wounds. |
| Influenza Vaccine | a. Adults 50 years of age and older. b. Residents of nursing homes or other facilities for patients with chronic medical conditions. c. Persons ≥6 months of age with chronic cardiovascular or pulmonary disorders, including asthma. d. Persons ≥6 months of age with chronic metabolic diseases (including diabetes), renal dysfunction, hemoglobinopathies, immunosuppressive or immunodeficiency disorders. e. Women in their 2nd or 3rd trimester of pregnancy during influenza season. f. Persons 6 mo.-18 years of age receiving long-term aspirin therapy. g. Groups, including household members and care givers, who can infect high risk persons. | Dose: 0.5 mL intramuscular (IM) Given annually, each fall. | Anaphylactic allergy to eggs. Acute febrile illness. | Depending on season and destination, persons traveling to foreign countries should consider vaccination. Any person ≥ 6 months of age who wishes to reduce the likelihood of becoming ill with influenza should be vaccinated. Avoiding subsequent vaccination of persons known to have developed GBS within 6 weeks of a previous vaccination seems prudent; however, for most persons with a GBS history who are at high risk for severe complications, many experts believe the established benefits of vaccination justify yearly vaccination. |
| Pneumococcal Polysaccharide Vaccine (PPV) | a. Adults 65 years of age and older. b. Persons ≥ 2 years with chronic cardiovascular or pulmonary disorders including congestive heart failure, diabetes mellitus, chronic liver disease, alcoholism, CSF leaks, cardiomyopathy, COPD or emphysema. c. Persons ≥ 2 years with splenic dysfunction or asplenia, hematologic malignancy, multiple myeloma, renal failure, organ transplantation or immunosuppressive conditions, including HIV infection. d. Alaskan Natives and certain American Indian populations. | One dose for most people* Dose: 0.5 mL intramuscular (IM) or subcutaneous (SC) *Persons vaccinated prior to age 65 should be vaccinated at age 65 if 5 or more years have passed since the first dose. For all persons with functional or anatomic asplenia, transplant patients, patients with chronic kidney disease, immunosuppressed or immunodeficient persons, and others at highest risk of fatal infection, a second dose should be given - at least 5 years after first dose. | The safety of PPV during the first trimester of pregnancy has not been evaluated. The manufacturer's package insert should be reviewed for additional information. | If elective splenectomy or immunosuppressive therapy is planned, give vaccine 2 weeks ahead, if possible. When indicated, vaccine should be administered to patients with unknown vaccination status. All residents of nursing homes and other long-term care facilities should have their vaccination status assessed and documented. |
| Measles and Mumps Vaccines** | a. Adults born after 1956 without written documentation of immunization on or after the first birthday. b. Health care personnel born after 1956 who are at risk of exposure to patients with measles should have documentation of two doses of vaccine on or after the first birthday or of measles seropositivity. c. HIV-infected persons without severe immunosuppression. d. Travelers to foreign countries. e. Persons entering post-secondary educational institutions (e.g., college). | At least one dose. (Two doses of measles-containing vaccine if in college, in health care profession or traveling to a foreign country with second dose at least 1 month after the first). Dose: 0.5 mL subcutaneous (SC) | a. Immunosuppressive therapy or immunodeficiency including HIV-infected persons with severe immunosuppression. b. Anaphylactic allergy to neomycin. c. Pregnancy. d. Immune globulin preparation or blood/blood product received in preceding 3-11 months. | Women should be asked if they are pregnant before receiving vaccine, and advised to avoid pregnancy for 30 days after immunization. |
| Rubella Vaccine** | a. Persons (especially women) without written documentation of immunization on or after the first birthday or of seropositivity. b. Health care personnel who are at risk of exposure to patients with rubella and who may have contact with pregnant patients should have at least one dose. | One dose. Dose: 0.5 mL subcutaneous (SC) | Same as for measles and mumps vaccines. | Women should be asked if they are pregnant before receiving vaccine, and advised to avoid pregnancy for 3 months after immunization. |

| 3/1/2000 SUMMARY OF ADOLESCENT/ADULT IMMUNIZATION RECOMMENDATIONS | | | | |
|---|--|--|---|---|
| Hepatitis B Vaccine | <p>a. Persons with occupational risk of exposure to blood or blood-contaminated body fluids.</p> <p>b. Clients and staff of institutions for the developmentally disabled.</p> <p>c. Hemodialysis patients.</p> <p>d. Recipients of clotting-factor concentrates.</p> <p>e. Household contacts and sex partners of those chronically infected with HBV.</p> <p>f. Family members of adoptees from countries where HBV infection is endemic, if adoptees are HBsAg+.</p> <p>g. Certain international travelers.</p> <p>h. Injecting drug users.</p> <p>i. Men who have sex with men.</p> <p>j. Heterosexual men and women with multiple sex partners or recent episode of a sexually transmitted disease.</p> <p>k. Inmates of long-term correctional facilities.</p> <p>l. All unvaccinated adolescents.</p> | <p>Three doses: second dose 1-2 months after the first, third dose 4-6 months after the first.</p> <p>No need to start series over if schedule interrupted. Can start series with one manufacturer's vaccine and finish with another.</p> <p>Dose (<i>Adults</i>): intramuscular (IM) Recombivax HB®: 10 µg/1.0 mL (green cap) Engerix-B®: 20 µg/1.0 mL (orange cap)</p> <p>Dose (<i>Adolescents 11-19 years</i>): intramuscular (IM) Recombivax HB®: 5 µg/0.5 mL (yellow cap) Engerix-B®: 10 µg/0.5 mL (light blue cap)</p> <p>Booster: None presently recommended.</p> | <p>Anaphylactic allergy to yeast.</p> | <p>a. Persons with serologic markers of prior or continuing hepatitis B virus infection do not need immunization.</p> <p>b. For hemodialysis patients and other immunodeficient or immunosuppressed patients, vaccine dosage is doubled or special preparation is used.</p> <p>c. Pregnant women should be sero-screened for HBsAg and, if positive, their infants should be given post-exposure prophylaxis beginning at birth.</p> <p>d. Post-exposure prophylaxis: consult ACIP recommendations, or state or local immunization program.</p> |
| <p>Poliovirus Vaccine:</p> <p>IPV - Inactivated Vaccine;</p> <p>OPV - Oral (live) Vaccine</p> | <p>Routine vaccination of those ≥18 years of age residing in the U.S. is not necessary. Vaccination is recommended for the following high-risk adults:</p> <p>a. Travelers to areas or countries where poliomyelitis is epidemic or endemic.</p> <p>b. Members of communities or specific population groups with disease caused by wild polioviruses.</p> <p>c. Laboratory workers who handle specimens that may contain polioviruses.</p> <p>d. Health care workers who have close contact with patients who may be excreting wild polioviruses.</p> <p>e. Unvaccinated adults whose children will be receiving OPV</p> | <p>Unimmunized adolescents/adults: IPV is recommended - two doses at 4-8 week intervals, third dose 6-12 months after second (can be as soon as 2 months) Dose: 0.5 mL subcutaneous (SC) or intramuscular (IM).</p> <p>Partially immunized adolescents/adults: Complete primary series with IPV (IPV schedule shown above).</p> <p>OPV is no longer recommended for use in the United States.</p> | <p>IPV: Anaphylactic reaction following previous dose or to streptomycin, polymyxin B, or neomycin.</p> | <p>In instances of potential exposure to wild poliovirus, adults who have had a primary series of OPV or IPV may be given 1 more dose of IPV.</p> <p>Although no adverse effects have been documented, vaccination of pregnant women should be avoided. However, if immediate protection is required, pregnant women may be given IPV in accordance with the recommended schedule for adults.</p> |
| Varicella Vaccine | <p>a. Persons of any age without a reliable history of varicella disease or vaccination, or who are seronegative for varicella.</p> <p>b. Susceptible adolescents and adults living in households with children.</p> <p>c. All susceptible health care workers.</p> <p>d. Susceptible family contacts of immunocompromised persons.</p> <p>e. Susceptible persons in the following groups who are at high risk for exposure:</p> <ul style="list-style-type: none"> - persons who live or work in environments in which transmission of varicella is likely (e.g., teachers of young children, day care employees, residents and staff in institutional settings) or can occur (e.g., college students, inmates and staff of correctional institutions, military personnel) - nonpregnant women of childbearing age - international travelers | <p>For persons <13 years of age, one dose. For persons 13 years of age and older, two doses separated by 4-8 weeks. If >8 weeks elapse following the first dose, the second dose can be administered without restarting the schedule.</p> <p>Dose: 0.5 mL subcutaneous (SC)</p> | <p>a. Anaphylactic allergy to gelatin or neomycin.</p> <p>b. Untreated, active TB.</p> <p>c. Immunosuppressive therapy or immunodeficiency (including HIV infection).</p> <p>d. Family history of congenital or hereditary immunodeficiency in first-degree relatives, unless the immune competence of the recipient has been clinically substantiated or verified by a laboratory.</p> <p>e. Immune globulin preparation or blood/blood product received in preceding 5 months.</p> <p>f. Pregnancy.</p> | <p>Women should be asked if they are pregnant before receiving varicella vaccine, and advised to avoid pregnancy for one month following each dose of vaccine.</p> |
| Hepatitis A Vaccine | <p>a. Persons traveling to or working in countries with high or intermediate endemicity of infection.</p> <p>b. Men who have sex with men.</p> <p>c. Injecting and non-injecting illegal drug users.</p> <p>d. Persons who work with HAV-infected primates or with HAV in a research laboratory setting.</p> <p>e. Persons with chronic liver disease.</p> <p>f. Persons with clotting factor disorders.</p> <p>g. Consider food handlers, where determined to be cost-effective by health authorities or employers.</p> | <p>HAVRIX®: Two doses, separated by 6-12 months. Adults (19 years of age and older) - Dose: 1.0 mL intramuscular (IM); Persons 2-18 years of age: Dose: 0.5 mL (IM).</p> <p>VAQTA®: Adults (18 years of age and older): Two doses, separated by 6 months. Dose: 1.0 mL intramuscular (IM); Persons 2-17 years of age: Two doses, separated by 6-18 months; Dose: 0.5 mL (IM)</p> | <p>A history of hypersensitivity to alum or the preservative 2-phenoxyethanol</p> | <p>The safety of hepatitis A vaccine during pregnancy has not been determined, though the theoretical risk to the developing fetus is expected to be low. The risk of vaccination should be weighed against the risk of hepatitis A in women who may be at high risk of exposure to HAV.</p> |

Adapted from the recommendations of the Advisory Committee on Immunization Practices (ACIP). Foreign travel and less commonly used vaccines such as typhoid, rabies, and meningococcal are not included.

**These vaccines can be given in the combined form measles-mumps-rubella (MMR). Persons already immune to one or more components can still receive MMR.

