APPENDICES

Appendix A: Reserved for future use

Appendix B: Immunization Schedule

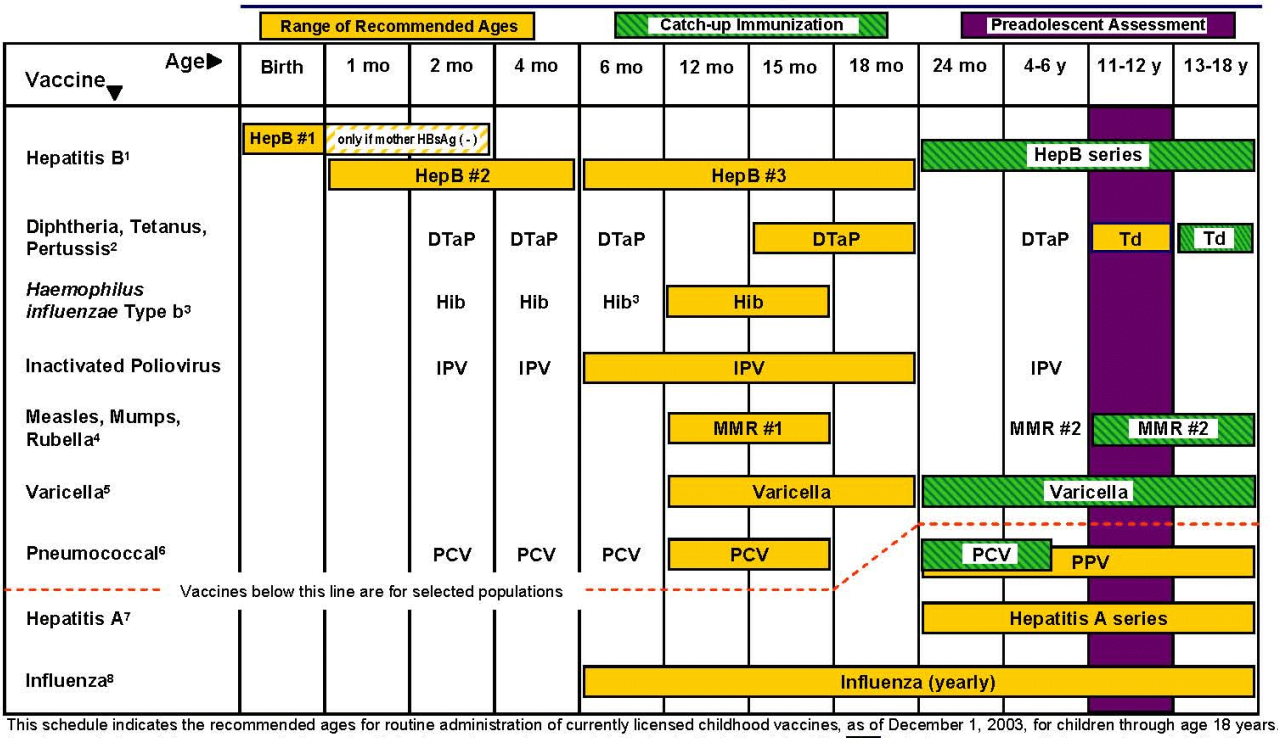
Appendix C: Child Health Evaluation and Care Recommended Schedule

Appendix D: Lead Toxicity Risk Assessment

Reserved for future use.

Appendix B

Recommended Childhood and Adolescent Immunization Schedule — United States, January – June 2004



This schedule indicates the recommended ages for routine administration of currently licensed childhood vaccines, as of December 1, 2003, for children through age 18 years. Any dose not given at the recommended age should be given at any subsequent visit when indicated and feasible. ▬ Indicates age groups that warrant special effort to administer those vaccines not previously given. Additional vaccines may be licensed and recommended during the year. Licensed combination vaccines may be used whenever any components of the combination are indicated and the vaccine's other components are not contraindicated. Providers should consult the manufacturers' package inserts for detailed recommendations. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS). Guidance about how to obtain and complete a VAERS form can be found on the Internet: http://www.vaers.org/ or by calling 1-800-822-7967.

1. Hepatitis B (HepB) vaccine. All infants should receive the first dose of hepatitis B vaccine soon after birth and before hospital discharge; the first dose may also be given by age 2 months if the infant's mother is hepatitis B surface antigen (HBsAg) negative. Only monovalent HepB can be used for the birth dose. Monovalent or combination vaccine containing HepB may be used to complete the series. Four doses of vaccine may be administered when a birth dose is given. The second dose should be given at least 4 weeks after the first dose, except for combination vaccines which cannot be administered before age 6 weeks. The third dose should be given at least 16 weeks after the first dose and at least 8 weeks after the second dose. The last dose in the vaccination series (third or fourth dose) should not be administered before age 24 weeks.

Infants born to HBsAg-positive mothers should receive HepB and 0.5 mL of Hepatitis B Immune Globulin (HBIG) within 12 hours of birth at separate sites. The second dose is recommended at age 1 to 2 months. The last dose in the immunization series should not be administered before age 24 weeks. These infants should be tested for HBsAg and antibody to HBsAg (anti-HBs) at age 9 to 15 months.

Infants born to mothers whose HBsAg status is unknown should receive the first dose of the HepB series within 12 hours of birth. Maternal blood should be drawn as soon as possible to determine the mother's HBsAg status; if the HBsAg test is positive, the infant should receive HBIG as soon as possible (no later than age 1 week). The second dose is recommended at age 1 to 2 months. The last dose in the immunization series should not be administered before age 24 weeks.

2. Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine. The fourth dose of DTaP may be administered as early as age 12 months, provided 6 months have elapsed since the third dose and the child is unlikely to return at age 15 to 18 months. The final dose in the series should be given at age ≥4 years. **Tetanus and diphtheria toxoids (Td)** is recommended at age 11 to 12 years if at least 5 years have elapsed since the last dose of tetanus and diphtheria toxoid-containing vaccine. Subsequent routine Td boosters are recommended every 10 years.

3. *Haemophilus influenzae* type b (Hib) conjugate vaccine. Three Hib conjugate vaccines are licensed for infant use. If PRP-OMP (PedvaxHIB or ComVax [Merck]) is administered at ages 2 and 4 months, a dose at age 6 months is not required. DTaP/Hib combination products should not be used for primary immunization in infants at ages 2, 4 or 6 months but can be used as boosters following any Hib vaccine. The final dose in the series should be given at age ≥12 months.

4. Measles, mumps, and rubella vaccine (MMR). The second dose of MMR is recommended routinely at age 4 to 6 years but may be administered during any visit, provided at least 4 weeks have elapsed since the first dose and both doses are administered beginning at or after age 12 months. Those who have not previously received the second dose should complete the schedule by the 11- to 12-year-old visit.

5. Varicella vaccine. Varicella vaccine is recommended at any visit at or after age 12 months for susceptible children (i.e., those who lack a reliable history of chickenpox). Susceptible persons age ≥13 years should receive 2 doses, given at least 4 weeks apart.

6. Pneumococcal vaccine. The heptavalent **pneumococcal conjugate vaccine (PCV)** is recommended for all children age 2 to 23 months. It is also recommended for certain children age 24 to 59 months. The final dose in the series should be given at age ≥12 months. **Pneumococcal polysaccharide vaccine (PPV)** is recommended in addition to PCV for certain high-risk groups. See *MMWR* 2000;49(RR-9):1-38.

7. Hepatitis A vaccine. Hepatitis A vaccine is recommended for children and adolescents in selected states and regions and for certain high-risk groups; consult your local public health authority. Children and adolescents in these states, regions, and high-risk groups who have not been immunized against hepatitis A can begin the hepatitis A immunization series during any visit. The 2 doses in the series should be administered at least 6 months apart. See *MMWR* 1999;48(RR-12):1-37.

8. Influenza vaccine. Influenza vaccine is recommended annually for children age ≥6 months with certain risk factors (including but not limited to children with asthma, cardiac disease, sickle cell disease, human immunodeficiency virus infection, and diabetes; and household members of persons in high-risk groups [see *MMWR* 2003;52(RR-8):1-36]) and can be administered to all others wishing to obtain immunity. In addition, healthy children age 6 to 23 months are encouraged to receive influenza vaccine if feasible, because children in this age group are at substantially increased risk of influenza-related hospitalizations. For healthy persons age 5 to 49 years, the intranasally administered live-attenuated influenza vaccine (LAIV) is an acceptable alternative to the intramuscular trivalent inactivated influenza vaccine (TIV). See *MMWR* 2003;52(RR-13):1-8. Children receiving TIV should be administered a dosage appropriate for their age (0.25 mL if age 6 to 35 months or 0.5 mL if age ≥3 years). Children age ≤8 years who are receiving influenza vaccine for the first time should receive 2 doses (separated by at least 4 weeks for TIV and at least 6 weeks for LAIV).

For additional information about vaccines, including precautions and contraindications for immunization and vaccine shortages, please visit the National Immunization Program Web site at www.cdc.gov/nip/ or call the National Immunization Information Hotline at 800-232-2522 (English) or 800-232-0233 (Spanish).

Approved by the Advisory Committee on Immunization Practices (www.cdc.gov/nip/acip), the American Academy of Pediatrics (www.aap.org), and the American Academy of Family Physicians (www.aafp.org).

Appendix C

Child Health Evaluation and Care Recommended Schedule

	INFANCY							EARLY CHILDHOOD					LATE CHILDHOOD				ADOLESCENCE									
AGE [2] ▸ SERVICE ▾	2-3 D [1]	By 1 month	2 mon	4 mon	6 mon	9 mon	12 mon	15 mon	18 mon	24 mon	3 Y	4 Y	5 Y	6 Y	8 Y	10 Y	11 Y	12 Y	13 Y	14 Y	15 Y	16 Y	17 Y	18 Y	19 Y	20 Y
HISTORY Initial/Interval	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MEASUREMENTS Height and Weight	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Head Circumference	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																
Blood Pressure											✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SENSORY SCREENING Vision	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Hearing	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
DEVELOPMENTAL/ BEHAVIORAL ASSESSMENT [3]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PHYSICAL EXAM [4]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PROCEDURES Hereditary/Metabolic Screening [5]	⇦	✓																								
Immunization	Refer to ACIP guidelines described in Appendix B.																									
Hematocrit or Hemoglobin						✓	⇨	✓	⇨	⇨	⇨	⇨	⇨				⇦	⇦	✓	⇨	⇨	⇨	⇨	⇨	⇨	⇨
Urinalysis													✓				⇦	⇦	⇦	⇦	⇦	✓	⇨	⇨	⇨	⇨
PROCEDURES - Patients at Risk Tuberculin Test							★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Cholesterol										★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
STD Screening																	★	★	★	★	★	★	★	★	★	★
Pelvic Exam																	⇦	⇦	⇦	⇦	⇦	⇦	⇦	★	★	★
Blood Lead Level [6]							✓			✓																
ANTICIPATORY GUIDANCE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
REFERRAL [7]							✓																			

KEY: ✓ = to be performed
★ = refer to CHEC Provider Manual for specific recommendations.
⇦ ⇨ = May be performed within this range.

Numbered footnotes are on the following page.

Appendix C

Footnotes

1. For newborns discharged in 24 hours or less after delivery, a well-baby exam should be done within 2 to 3 days of birth.

2. The listed ages are only recommendations. Individual children may require more frequent health supervision. If a child comes under care for the first time at any point on the schedule, or if any items are not accomplished at the suggested age, the schedule should be brought up to date at the earliest possible time.

3. This implies a review of the child's mental health needs and development

4. At each visit, a complete physical examination is essential, with infant totally unclothed, older child undressed and suitably draped.

5. The first test should be performed before the infant leaves the hospital. The second test should be performed at 7 to 28 days of age.

6. Children from 6 to 72 months are at risk for lead poisoning. Conduct a verbal risk assessment at each visit. Complete blood lead level tests at 12 and 24 months and any time the verbal assessment indicates a risk of lead exposure.

7. Most children should have the initial dental referral made at 12 months. However, if after performing an oral risk assessment at $\geq$ 6 month of age, the pediatrician or other pediatric health care provider believe a referral is necessary, the referral should be made to a pediatric dentist. If appropriate dental providers are not available, make the initial referral at age 3 years. Complete an oral screening at each visit and make a referral any time dental problems appear. Remind the family at each visit about the importance of preventive dental care and good oral health.

Appendix D

Lead Toxicity Risk Assessment

Read each question and mark yes or no. Discuss your answers with your child's health care provider.	**YES**	**NO**
• Does your child live in or regularly visit a house built before 1960? Was his or her child care center/preschool/babysitter's home built before 1960? Does the house have peeling or chipping paint?		
• Does your child live in a house built before 1960 with recent, ongoing or planned renovation or remodeling?		
• Have any of your children or their playmates had lead poisoning?		
• Does your child frequently come in contact with an adult who works with lead? (Examples are construction, welding, pottery, or other trades practiced in your community.)		
• Does your child live near a lead smelter, battery recycling plant, or other industry likely to release lead? (**Ask your doctor if you have questions about industries in your area.**)		
• Do you give your child any home or folk remedies that may contain lead?		
• Does your home's plumbing have lead pipes or copper with lead solder joints?		
• Does your child live near a heavily traveled major highway where soil and dust may be contaminated with lead?		