

RECOMMENDED CHILDHOOD IMMUNIZATION SCHEDULE—UNITED STATES, JANUARY TO JUNE 1996

Jacqueline Gindler, MD
Atlanta, Georgia

In January 1995, the Recommended Childhood Immunization Schedule, developed by the Advisory Committee on Immunization Practices (ACIP), the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP), was published. This unified schedule represented the first such schedule developed through a collaborative process among the recommending groups, the pharmaceutical manufacturing industry, and the Food and Drug Administration. This process is intended to maintain a common childhood immunization schedule and to work toward further simplification of the schedule.

The Recommended Childhood Immunization Schedule—United States, January to June 1996 (Figure) has been updated by these groups to incorporate newly licensed and recommended vaccines, and to clarify specific issues. Since publication of the schedule in 1995, varicella zoster virus vaccine (Var) has been licensed, and recommendations for adolescent hepatitis B vaccination have been developed. The following changes are incorporated into the Recommended Childhood Immunization Schedule:

- **General.** Footnotes have been shortened and simplified wherever possible. Practitioners should consult the *Report of the Committee on Infectious Diseases (Red Book)*,¹ the vaccine-specific recommendations of the Advisory Committee on Immunization Practices, and the official manufacturers' package inserts or the *Physicians' Desk Reference (PDR)*² for detailed information and specific recommendations for administration of vaccines.

From the National Immunization Program, Centers for Disease Control and Prevention, Atlanta, Georgia. Requests for reprints should be addressed to Dr Jacqueline Gindler, National Immunization Program, Centers for Disease Control and Prevention, 1600 Clifton Rd, Mail Stop E-61, Atlanta, GA 30333.

- **Date.** The schedule is dated January to June 1996 and will be republished in July 1996 with any changes resulting from licensure of new vaccines. This will permit providers to be certain that they are using the most current schedule and will obviate the need to publish an interim schedule should any changes be indicated before 1997.

- **Format.** A column has been added to indicate that the second dose of hepatitis B vaccine may be given to infants as early as 1 month of age, provided 1 month has elapsed since receipt of the first dose. As in the 1995 schedule, bars are used to indicate the range of acceptable ages for vaccination. Shaded bars are used to indicate catch-up vaccination (see hepatitis B, adolescent and varicella zoster virus vaccine).

VACCINE RECOMMENDATIONS Hepatitis B, Infant

Vaccine doses are presented in micrograms, rather than volumes, as several different formulations of hepatitis B vaccine are available. In addition, recommendations for vaccination of infants born to mothers with unknown hepatitis B surface antigen (HBsAg) status have been included in the footnote.

Hepatitis B, Adolescent

A bar has been added at 11 to 12 years of age to indicate that adolescents who have not previously received three doses of hepatitis B vaccine should begin or complete the 3-dose series at this visit.

Polio

A footnote has been added to indicate that although oral poliovirus vaccine (OPV) is recommended for routine vaccination, inactivated poliovirus vaccine (IPV) is indicated for certain individuals (ie, those with a com-

Age ► Vaccine ▼	Birth	1 mo	2 mos	4 mos	6 mos	12 mos	15 mos	18 mos	4-6 yrs	11-12 yrs	14-16 yrs
Hepatitis B ^{1,2}	Hep B-1		Hep B-2		Hep B-3					Hep B ²	
Diphtheria, Tetanus, Pertussis ³			DTP	DTP	DTP	DTP ³ (DTaP at 15+ m)			DTP or DTaP	Td	
<i>H. influenzae</i> type b ⁴			Hib	Hib	Hib ⁴						
Polio ⁵			OPV ⁵	OPV	OPV				OPV		
Measles, Mumps, Rubella ⁶						MMR			MMR ⁶ or	MMR ⁶	
Varicella Zoster Virus Vaccine ⁷						Var				Var ⁷	

¹ Infants born to HBsAg-negative mothers should receive 2.5 µg of Merck vaccine (Recombivax HB) or 10 µg of SmithKline Beecham (SB) vaccine (Engerix-B). The 2nd dose should be administered ≥1 mo after the 1st dose. Infants born to HBsAg-positive mothers should receive 0.5 mL Hepatitis B Immune Globulin (HBIG) within 12 hr of birth, and either 5 µg of Merck vaccine (Recombivax HB) or 10 µg of SB vaccine (Engerix-B) at a separate site. The 2nd dose is recommended at 1-2 mos of age and the 3rd dose at 6 mos of age.

² Adolescents who have not previously received 3 doses of hepatitis B vaccine should initiate or complete the series at the 11-12 year-old visit. The 2nd dose should be administered at least 1 mo after the 1st dose, and the 3rd dose should be administered at least 4 mos after the 1st dose and at least 2 mos after the 2nd dose.

³ DTP4 may be administered at 12 mos of age, if at least 6 mos have elapsed since DTP3. DTaP (diphtheria and tetanus toxoids and acellular pertussis vaccine) is licensed for the 4th and/or 5th vaccine dose(s) for children aged ≥15 mos and may be preferred for these doses in this age group. Td (tetanus and diphtheria toxoids, adsorbed, for adult use) is recommended at 11-12 years of age if at least 5 years have elapsed since the last dose of DTP, DTaP, or DT.

⁴ Three *H. influenzae* type b (Hib) conjugate vaccines are licensed for infant use. If PRP-OMP (PedvaxHIB [Merck]) is administered at 2 and 4 mos of age, a dose at 6 mos is not required. After completing the primary series, any Hib conjugate vaccine may be used as a booster.

⁵ Oral poliovirus vaccine (OPV) is recommended for routine infant vaccination. Inactivated poliovirus vaccine (IPV) is recommended for persons with a congenital or acquired immune deficiency disease or an altered immune status as a result of disease or immunosuppressive therapy, as well as their household contacts, and is an acceptable alternative for other persons. The primary 3-dose series for IPV should be given with a minimum interval of 4 wks between the 1st and 2nd doses and 6 mos between the 2nd and 3rd doses.

⁶ The 2nd dose of MMR is routinely recommended at 4-6 yrs of age or at 11-12 yrs of age, but may be administered at any visit, provided at least 1 mo has elapsed since receipt of the 1st dose.

⁷ Varicella zoster virus vaccine (Var) can be administered to susceptible children any time after 12 months of age. Unvaccinated children who lack a reliable history of chickenpox should be vaccinated at the 11-12 year-old visit.

Figure. Recommended Childhood Immunization Schedule United States, January to June 1996. Vaccines are listed under the routinely recommended ages. Bars indicate range of acceptable ages for vaccination. Shaded bars indicate catch-up vaccination: at 11 to 12 years of age, hepatitis B vaccine should be administered to children not previously vaccinated, and varicella zoster virus vaccine should be administered to children not previously vaccinated who lack a reliable history of chicken pox. (Approved by the Advisory Committee on Immunization Practices [ACIP], the American Academy of Pediatrics [AAP], and the American Academy of Family Physicians [AAFP].)

promised immune system and their household contacts) and continues to be an acceptable alternative for other persons. The schedule for IPV is included in the footnote.

MMR

The footnote has been changed to indicate that although MMR is routinely administered at 4 to 6 years of age or at 11 to 12 years of age, it may be administered at any visit, provided at least 1 month has elapsed since receipt of the first dose.

Varicella Zoster Virus Vaccine

Varicella zoster virus vaccine (Var), licensed in March 1995, has been added to the schedule. This vac-

cine is recommended for all children at 12 to 18 months of age. The footnote indicates that it may be administered to susceptible persons any time after 12 months of age, and that it should be given at the 11- to 12-year-old visit to previously unvaccinated persons who do not have a reliable history of chickenpox.

Literature Cited

1. American Academy of Pediatrics. Active and passive immunization. In: Peter G, ed. 1994 *Red Book: Report of the Committee on Infectious Diseases*. 23rd ed. Elk Grove Village, Ill. American Academy of Pediatrics; 1994:1-67.
2. Medical Economics Data. *Physicians' Desk Reference*. 49th ed. Montvale, NJ: Medical Economics Co; Inc; 1995.