Table 1. Catch-up Immunization Schedule for Persons Ages 4 Months through 18 Years Who Start Late or Who Are More Than 1 Month Behind, United States, 2009

The table below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age.

Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses			
		Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4	Dose 4 to Dose 5
Catch-up schedule for persons ages 4 months through 6 years					
Hepatitis B[1]	Birth	4 weeks	**8 weeks** (and at least 16 wks after first dose)		
Rotavirus[2]	6 wks	4 weeks	4 weeks[2]		
Diphtheria, Tetanus, Pertussis[3]	6 wks	4 weeks	4 weeks	6 months	6 months[3]
Haemophilus influenzae type b[4]	6 wks	**4 weeks** if first dose given before age 12 mos **8 weeks (as final dose)** if first dose given at age 12–14 mos **No further doses needed** if first dose given at age 15 mos or older	**4 weeks**[4] if current age is younger than 12 mos **8 weeks (as final dose)**[4] if current age is 12 mos or older and second dose given before age 15 mos **No further doses needed** if previous dose given at age 15 mos or older	**8 weeks (as final dose)** This dose only necessary for children ages 12 mos through 59 mos who received 3 doses before age 12 mos	
Pneumococcal[5]	6 wks	**4 weeks** if first dose given before age 12 mos **8 weeks (as final dose for healthy children)** if first dose given at age 12 mos or older or current age is 24 through 59 mos **No further doses needed** for healthy children if first dose given at age 24 mos or older	**4 weeks** if current age is younger than 12 mos **8 weeks (as final dose for healthy children)** if current age is 12 mos or older **No further doses needed** for healthy children if previous dose given at age 24 mos or older	**8 weeks (as final dose)** This dose only necessary for children ages 12 mos through 59 mos who received 3 doses before age 12 mos or for high-risk children who received 3 doses at any age	
Inactivated Poliovirus[6]	6 wks	4 weeks	4 weeks	4 weeks[6]	
Measles, Mumps, Rubella[7]	12 mos	4 weeks			
Varicella[8]	12 mos	3 months			
Hepatitis A[9]	12 mos	6 months			
Catch-up schedule for persons ages 7 through 18 years					
Tetanus, Diphtheria/ Tetanus, Diphtheria, Pertussis[10]	7 yrs[10]	4 weeks	**4 weeks** if first dose is given before age 12 mos **6 months** if first dose given at age 12 mos or older	**6 months** if first dose is given before age 12 mos	
Human Papillomavirus[11]	9 yrs	Routine dosing intervals are recommended[11]			
Hepatitis A[9]	12 mos	6 months			
Hepatitis B[1]	Birth	4 weeks	**8 weeks** (and at least 16 wks after first dose)		
Inactivated Poliovirus[6]	6 wks	4 weeks	4 weeks	4 weeks[6]	
Measles, Mumps, Rubella[7]	12 mos	4 weeks			
Varicella[8]	12 mos	**3 months** if the person is younger than age 13 yrs **4 weeks** if the person is age 13 years or older			

1. Hepatitis B vaccine (HepB).
- Give the 3-dose series to those not previously vaccinated.
- A 2-dose series (separated by at least 4 months) of adult formulation Recombivax HB® is licensed for children ages 11 through 15 years.

2. Rotavirus vaccine (RV).
- The maximum age for the first dose is 14 weeks 6 days. Vaccination should not be initiated for infants age 15 weeks or older (i.e., 15 weeks 0 days or older).
- Give the final dose in the series by age 8 months 0 days.
- If Rotarix® was given for the first and second doses, a third dose is not indicated.

3. Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP).
- The fifth dose is not necessary if the fourth dose was given at age 4 years or older.

4. *Haemophilus influenzae* type b conjugate vaccine (Hib).
- Hib vaccine is not generally recommended for persons age 5 years or older. No efficacy data are available on which to base a recommendation concerning use of Hib vaccine for older children and adults. However, studies suggest good immunogenicity in persons who have sickle cell disease, leukemia, or HIV infection, or who have had a splenectomy; giving 1 dose of Hib vaccine to these persons is not contraindicated.
- If the first 2 doses were PRP-OMP (PedvaxHIB® or ComVax®), and given at age 11 months or younger, the third (and final) dose should be given at age 12 through 15 months and at least 8 weeks after the second dose.
- If the first dose was given at age 7 through 11 months, give 2 doses separated by 4 weeks and a final dose at age 12 through 15 months.

5. Pneumococcal vaccine.
- Give 1 dose of pneumococcal conjugate vaccine (PCV) to all healthy children ages 24 through 59 months who have not received at least 1 dose of PCV on or after age 12 months.
- For children ages 24 through 59 months with underlying medical conditions, give 1 dose of PCV if 3 doses were received previously or give 2 doses of PCV at least 8 weeks apart if fewer than 3 doses were received previously.
- Give pneumococcal polysaccharide vaccine (PPSV) to children ages 2 years or older with certain underlying medical conditions (see *MMWR* 2000;49[No. RR-9]), incluidng a cochlear implant, at least 8 weeks after the last dose of PCV.

6. Inactivated poliovirus vaccine (IPV).
- For children who received an all-IPV or all-oral poliovirus (OPV) series, a fourth dose is not necessary if the third dose was given at age 4 years or older.
- If both OPV and IPV were given as part of a series, a total of 4 doses should be given, regardless of the child's current age.

7. Measles, mumps, and rubella vaccine (MMR).
- Give the second dose at age 4 through 6 years. However, the second dose may be given before age 4, provided at least 28 days have elapsed since the first dose.
- If not previously vaccinated, give 2 doses with at least 28 days between doses.

8. Varicella vaccine.
- Give the second dose at age 4 through 6 years. However, the second dose may be given before age 4, provided at least 3 months have elapsed since the first dose.
- For persons ages 12 months through 12 years, the minimum interval between doses is 3 months. However, if the second dose was given at least 28 days after the first dose, it can be accepted as valid.
- For persons ages 13 years and older, the minimum interval between doses is 28 days.

9. Hepatitis A vaccine (HepA).
- HepA is recommended for children older than 1 year who live in areas where vaccination programs target older children or who are at increased risk of infection. See *MMWR* 2006;55(No. RR-7).

10. Tetanus and diphtheria toxoids (Td) and tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap).
- Doses of DTaP are counted as part of the Td/Tdap series.
- Tdap should be substituted for a single dose of Td in the catch-up series or as a booster for children ages 10 through 18 years; use Td for other doses.

11. Human papillomavirus vaccine (HPV).
- Give the series to females at age 13 through 18 years if not previously vaccinated.
- Use recommended routine dosing intervals for series catch-up (i.e., the second and third doses should be given at 2 and 6 months after the first dose). However, the minimum interval between the first and second doses is 4 weeks. The minimum interval between the second and third doses is 12 weeks, and the third dose should be given at least 24 weeks after the first dose.