CD SUMMARY
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THE 2006 CHILDHOOD AND ADOLESCENT IMMUNIZATION SCHEDULES

B E A C H Y E A R, CDC produces a sched- ule of recommended immuni- zations for children. This year’s schedule reflects the latest dis- covery by CDC’s Advisory Committee on Im- munization Practices (ACIP), in which it addressed new vaccines for whooping cough and meningococcal disease and revised existing recommendations for a handful of other vaccines.

Changes from last year’s childhood and adolescent schedules are as follows: TDaP APPROVED

A new tetanus, diphtheria, and aceli- lur pertussis vaccine (Tdp) was ap- proved for use in adolescents by the Food and Drug Administration (FDA) in May 2005.

Teens 11–12 years of age should get a booster with Tdp after completing their recommended childhood DTaP series.

If the adolescent misses the Tdp booster at the 11–12-year-old visit, it can be administered anytime between 13 and 18 years of age.

The catch-up schedule for persons aged 7–18 years has been changed for Td; Tdap may be substituted for any one dose in a primary catch-up series or as a boost- er for persons age-appropriate for Td. A 5-year interval from the last Td dose is encouraged but this is used as a boost- er dose. This schedule can be found at http://www.cdc.gov/nip/rec/child- schedule.htm.

This new booster vaccine should go a long way toward reducing the acute, infectious cough of pertussis that has remained endemic in the United States for the past 50 years despite routine childhood pertussis vaccinations.1 Look for a more detailed discussion of this exciting new vaccine in an upcoming issue of the CD Summary.

MENINGOCOCCAL CONJUGATE VACCINE

The new quadrivalent meningococcal conjugate vaccine (MCV4, Menactra®) was approved by FDA on January 14, 2005.

Because adolescents and young adults are at increased risk for contracting men- ingococcal disease, ACIP recommends that this vaccine, which protects against men- ingococci of serogroups A, C, Y, and W-135, be routinely administered to all children at age 11–12 years as well as to unvaccinated adolescents at high-school entry (i.e., at about age 15 years).

College freshmen living in dormito- ries should also be vaccinated with MCV4. Children aged 2-10 years in cer- tain high-risk groups should continue to receive quadrivalent meningo- coccal polysaccharide vaccine (MPSV4, Menomune®).1

HEP B VACCINE AT BIRTH

The 2006 schedule recommends that neonates routinely get their first dose of hepatitis B vaccine at birth, a strategy that provides a “safety net” for the prevention of perinatal HBV infections.

Hepatitis B vaccination at birth should be deferred only in rare instances, and only if a copy of the lab report assuring the mother’s negative HBsAg status during this pregnancy and a physician’s order to with- hold the birth dose are documented in the infant’s medical record.

Administering four doses of hep B vac- cine is permissible (e.g., when combination vaccines are administered after the birth dose).

Infants born to HBsAg-positive mothers should be tested for HBsAg and antibody to HBsAg after completion of the vaccine series, at age 9–18 months (generally at the next well-child visit after completion of the vaccine series).1

HEP A VACCINE AT AGE 1

Hepatitis A vaccine, initially licensed for children and above, is now recommended for all children beginning at age 1 year (i.e., 12–23 months). The 2 doses in the series should be administered at least 6 months apart.

FLU RECS BROADENED

Although this schedule shows influenza vaccine as recommended only for children aged >6 months with certain risk factors, ACIP voted on February 22 to recommend that all children ≥6 months and <5 years of age should be vaccinated against influ- enza starting in the 2006/07 flu season (i.e., this fall). Vaccine supply issues may make implementation of this recommendation tricky. Look for a more detailed discussion of this new recommendation in an upcoming issue of the MMWR.

For the most up-to-date model standing immunization orders for Oregon, check our Immunization Program’s web site at http://Oregon.gov/Health/Immunizations/index.shtml.

Detailed recommendations for vaccines are also available in the manufacturers’ package inserts, ACIP statements on specific vaccines, and the American Academy of Pediatrics Committee on Infectious Diseases.1

REFERENCES

### RECOMMENDED CHILDHOOD AND ADOLESCENT IMMUNIZATION SCHEDULE UNITED STATES-2006

The tables below give catch-up schedules and minimum intervals between doses for children who have delayed immunizations. There is no need to restart a vaccine series regardless of the time that has elapsed between doses. Use the chart appropriate for the child's age.

#### CATCH-UP SCHEDULE FOR CHILDREN AGED 3 MONTHS THROUGH 6 YEARS

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Minimum Age</th>
<th>Dose 1 to Dose 2</th>
<th>Dose 2 to Dose 3</th>
<th>Dose 3 to Dose 4</th>
<th>Dose 4 to Dose 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTaP</td>
<td>6 weeks</td>
<td>8 weeks</td>
<td>12 weeks</td>
<td>18 weeks</td>
<td>24 weeks</td>
</tr>
<tr>
<td>Hepatitis B (HepB)</td>
<td>Birth</td>
<td>1 month</td>
<td>2 months</td>
<td>4 months</td>
<td>6 months</td>
</tr>
<tr>
<td>Measles, Mumps, Rubella (MMR)</td>
<td>12 months</td>
<td>12 months</td>
<td>12 months</td>
<td>12 months</td>
<td>12 months</td>
</tr>
<tr>
<td>Meningococcal (MCV4)</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
</tr>
<tr>
<td>Pneumococcal (PCV)</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
</tr>
<tr>
<td>Haemophilus influenzae type b (Hib)</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
</tr>
<tr>
<td>Varicella</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
</tr>
</tbody>
</table>

#### CATCH-UP SCHEDULE FOR CHILDREN AGED 7 YEARS THROUGH 18 YEARS

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Minimum Age</th>
<th>Dose 1 to Dose 2</th>
<th>Dose 2 to Dose 3</th>
<th>Dose 3 to Booster Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetanus, Diphtheria*</td>
<td>6 months</td>
<td>6 months</td>
<td>13 years 6 months</td>
<td>15 years 6 months</td>
</tr>
<tr>
<td>Haemophilus influenzae type b (Hib)</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
</tr>
<tr>
<td>Meningococcal (MCV4)</td>
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<td>Haemophilus influenzae type b (Hib)</td>
<td>11-12 years</td>
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<td>11-12 years</td>
<td>11-12 years</td>
</tr>
<tr>
<td>Varicella</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
<td>11-12 years</td>
</tr>
</tbody>
</table>

#### FOR CHILDREN AND ADOLESCENTS WHO START LATE OR WHO ARE MORE THAN 1 MONTH BEHIND

The tables provide catch-up schedules and minimum intervals between doses for children who have delayed immunizations. There is no need to restart a vaccine series regardless of the time that has elapsed between doses. Use the chart appropriate for the child's age.

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1. DTaP: Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP) is recommended at any visit at or after age 12 months for susceptible children (i.e., those who lack a reliable history of vaccination). The first two doses should be administered at least 6 weeks apart. DTaP vaccines that contain reduced amounts of pertussis antigen should not be used for the third dose if complete catch-up is not necessary before the fourth birthday.

2. IPV: Inactivated poliovirus vaccine (IPV) is recommended for all children aged <19 years of age. The fourth dose is not necessary if third dose was administered at age ≥4 years. OPV was not recommended for children ≥19 years of age as OPV contains live virus and has the potential to cause disease. IPV should be administered at age 4-6 months, 4-6 years, and 11-12 years. A fifth dose is recommended at age ≥16 years. IPV is recommended in children with any underlying condition that increases the risk for complications of polio. IPV should be given to children with immunodeficiency, brain damage, mental retardation, multiple sclerosis, Guillain-Barré syndrome, or other neurological disorder. IPV should also be given to pregnant women, in close contact with persons in groups at high risk, and travelers who may be exposed to polio in countries where wild poliovirus transmission is ongoing.

3. Haemophilus influenzae type b (Hib): The Hib vaccine is recommended for all children aged <5 years, regardless of the child's age if they were not previously vaccinated. Administer the 3-dose series to all children and adolescents <19 years of age. A fourth dose is not necessary if third dose was administered at age ≥4 years. IPV should be administered at age 4-6 months, 4-6 years, and 11-12 years. A fifth dose is recommended at age ≥16 years. IPV is recommended in children with any underlying condition that increases the risk for complications of polio. IPV should be given to children with immunodeficiency, brain damage, mental retardation, multiple sclerosis, Guillain-Barré syndrome, or other neurological disorder. IPV should also be given to pregnant women, in close contact with persons in groups at high risk, and travelers who may be exposed to polio in countries where wild poliovirus transmission is ongoing.

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#### Additional Information

For additional information about vaccines, including precautions and contraindications for immunization and vaccine shortages, please visit the National Immunization Program Website at www.cdc.gov/nip or call the 24-hour national toll-free information line 800-822-7967. Report suspected cases of vaccine-preventable diseases to your state or local health department.