

## Appendix A

# Summary of ACIP Recommendations for Prevention of Pertussis, Tetanus and Diphtheria Among Pregnant and Postpartum Women and Their Infants

### Use of Td or Tdap in Women Who Have Not Received Tdap Previously

- **Routine postpartum Tdap.** Pregnant women (including women who are breastfeeding) who have not received a dose of Tdap previously should receive Tdap after delivery and before discharge from the hospital or birthing center if 2 years or more have elapsed since the most recent administration of Td; shorter intervals may be used (see Special Situations). If Tdap cannot be administered before discharge, it should be administered as soon as feasible thereafter. The dose of Tdap substitutes for the next decennial dose of Td.
- **Simultaneous administration.** Tdap should be administered with other vaccines that are indicated. Each vaccine should be administered using a separate syringe at a different anatomic site.

### Contraindications to Administration of Td and Tdap

The following conditions are contraindications to administration of Td and Tdap:

- a history of serious allergic reaction (i.e., anaphylaxis) to any component of the vaccine, or
- for Tdap (but not Td), a history of encephalopathy (e.g., coma or prolonged seizures) not attributable to an identifiable cause within 7 days of administration of a vaccine with pertussis components.

### Precautions and Reasons to Defer Administration of Td or Tdap

The following conditions are reasons to defer administration of Td or Tdap:

- Guillain-Barré syndrome with onset 6 weeks or less after a previous dose of tetanus toxoid-containing vaccine;
- moderate or severe acute illness;
- a history of an Arthus reaction to tetanus toxoid- and/or diphtheria toxoid-containing vaccine less than 10 years previously;
- for adults, unstable neurologic conditions (e.g., cerebrovascular events or acute encephalopathic conditions); or

- for adolescents, any progressive neurologic disorder, including progressive encephalopathy or uncontrolled epilepsy (until the condition has stabilized).

### Special Situations

#### Deferring Td During Pregnancy to Substitute Tdap in the Immediate Postpartum Period

ACIP recommends administration of Td for booster vaccination during pregnancy if 10 years or more have elapsed since a previous Td booster. To add protection against pertussis, health-care providers may defer the Td vaccination during pregnancy and substitute Tdap as soon as feasible after delivery if the woman is likely to have sufficient tetanus and diphtheria protection until delivery. Sufficient tetanus protection is likely if:

- a pregnant woman aged <31 years has received a complete childhood series of immunization (4–5 doses of pediatric DTP, DTaP, and/or DT) and  $\geq 1$  Td booster dose during adolescence or as an adult (a primary series consisting of 3 doses of Td (or TT) administered during adolescence or as an adult substitutes for the childhood series of immunization),\*
- a pregnant woman aged  $\geq 31$  years has received a complete childhood series of immunization (4–5 doses of pediatric DTP, DTaP, and/or DT) and  $\geq 2$  Td booster doses,
- a primary series consisting of 3 doses of Td (or TT) was administered during adolescence or as an adult substitute for the childhood series of immunization,\* or
- a pregnant woman has a protective level of serum tetanus antitoxin ( $\geq 0.1$  IU/mL by ELISA).

A woman should receive Td during pregnancy if she

- does not have sufficient tetanus immunity to protect against maternal and neonatal tetanus, or
- requires booster protection against diphtheria (e.g., for travel to an area in which diphtheria is endemic<sup>†</sup>).

\* Women who have had a 3-dose series as TT instead of Td will likely have protection against tetanus but might not be protected against diphtheria. A protective titer of diphtheria antitoxin is  $\geq 0.1$  IU/mL by ELISA.

† A list of areas in which diphtheria is endemic is available at [www.cdc.gov/travel/diseases/dtp.htm](http://www.cdc.gov/travel/diseases/dtp.htm).

Alternatively, health-care providers may choose to administer Tdap instead of Td during pregnancy (see Considerations for Use of Tdap in Pregnant Women in Special Situations).

### **Postpartum Tdap When <2 Years Have Elapsed Since the Most Recent Dose of Td**

Health-care providers should obtain a history of adverse reaction after previous doses of vaccines containing tetanus and diphtheria toxoids. Limited information is available concerning the risk for local and systemic reactions after Tdap at intervals of <2 years. Providers may choose to administer Tdap to these women postpartum for protection against pertussis after excluding a history of moderate to severe adverse reactions following previous tetanus and diphtheria-toxoids-containing vaccines.

Health-care providers should encourage vaccination of household and child care provider contacts of infants aged <12 months. Women should be advised of the symptoms of pertussis and the effectiveness of early antimicrobial prophylaxis, if pertussis is suspected.

### **Considerations for Use of Tdap in Pregnant Women in Special Situations**

ACIP recommends that Td be administered when booster protection is indicated during pregnancy. Health-care providers may choose to administer Tdap instead of Td during pregnancy to add protection against pertussis in situations when Td cannot be delayed until delivery or when the risk for pertussis is increased. In such cases, the women should be informed of the lack of data on safety, immunogenicity, and pregnancy outcomes for pregnant women who receive Tdap. Whether administration of Tdap to pregnant women results in protection of the infant against pertussis through transplacental maternal antibodies is unknown. Maternal antibodies might interfere with the infant's immune response to infant doses of DTaP or conjugate vaccines containing tetanus toxoid or diphtheria toxoid.

If Tdap is administered, the second or third trimester is preferred unless protection is needed urgently. Providers are encouraged to report Tdap administrations regardless of

trimester to the appropriate manufacturers' pregnancy registry: for ADACEL,<sup>®</sup> to sanofi pasteur, telephone 1-800-822-2463 (1-800-VACCINE) and for BOOSTRIX,<sup>®</sup> to GlaxoSmithKline Biologicals, telephone 1-888-825-5249.

### **Tetanus Prophylaxis for Wound Management**

ACIP recommends administration of a Td booster for wound management in pregnant women in certain situations if  $\geq 5$  years have elapsed since the previous Td. Health-care providers may choose to administer Tdap instead of Td during pregnancy to add protection against pertussis in these situations. In such cases, the women should be informed of the lack of data on safety, immunogenicity, and pregnancy outcomes for pregnant women who receive Tdap (see Considerations for Use of Tdap in Pregnant Women in Special Situations).

### **Pregnant Women with Unknown or Incomplete Vaccination**

Pregnant women who have not received 3 doses of a vaccine containing tetanus and diphtheria toxoids should complete a series of three vaccinations, including 2 doses of Td during pregnancy, to ensure protection against maternal and neonatal tetanus. The preferred schedule in pregnant women is 2 doses of Td separated by 4 weeks and 1 dose of Tdap administered 6 months after the second dose (postpartum). Health-care providers may choose to substitute a single dose of Tdap for a dose of Td during pregnancy. In such cases, the women should be informed of the lack of data on safety, immunogenicity, and pregnancy outcomes for pregnant women who receive Tdap (see Considerations for Use of Tdap in Pregnant Women in Special Situations).

### **Reporting Adverse Events after Vaccination**

All clinically significant adverse events should be reported to VAERS even if a causal relation to vaccination is uncertain. VAERS reporting forms and information are available at <http://www.vaers.hhs.gov> or by telephone, 1-800-822-7967. Providers are encouraged to report adverse events electronically at <https://secure.vaers.org/VaersDataEntryintro.htm>.