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## Implementation of Tdap Vaccine for Adolescents and Adults

As shown in the 2006 Alaska Immunization Recommendations, *Epidemiology Bulletin* No. 2, January 10, 2006, several new vaccines/vaccine indications are being implemented in Alaska. More detailed information about these changes is provided below for Tdap and in *Epidemiology Bulletin* No. 4, January 12, 2006. Please be aware that, **UNTIL THE SUPPLIES FOR THESE VACCINES BECOME STABILIZED OVER THE NEXT FEW MONTHS, PROVIDER ORDERS MAY BE ONLY PARTIALLY FILLED.**

Pertussis (whooping cough) is a highly contagious respiratory tract infection. Although most children are protected against pertussis by vaccination during childhood, immunity wanes over time, leaving adolescents and adults susceptible. Like much of the country, Alaska is experiencing an increase in reported cases of pertussis due to increased disease and increased identification of cases from polymerase chain reaction (PCR) testing.<sup>1,2</sup>

Provisional recommendations for use of Tdap (tetanus/diphtheria/acellular pertussis for adolescents and adults) have been released by the Advisory Committee on Immunization Practices (ACIP).<sup>3</sup> These recommendations will become official when published in CDC's *Morbidity and Mortality Weekly Report (MMWR)*. Two Tdap vaccines have been licensed. GlaxoSmith-Kline's *Boostrix*<sup>®</sup> is licensed for persons 10–18 years of age, and sanofi pasteur's *Adacel*<sup>™</sup> is indicated for persons 11–64 years of age. Because of its broader approved age range, the Alaska Immunization Program will provide *Adacel*<sup>™</sup>.

### ACIP Provisional Recommendations: Tdap Use for Adolescents and Adults (11 thru 64 years of age)

Circumstance	Population Group (Age Range)	
	Adolescents (11–18 years)	Adults (19–64 years)
<b>Routine Vaccination</b>	Single dose to replace <u>single</u> Td booster*	
	Recommended at 11–12 yrs	Recommended if ≥10 years since last Td
<b>Recommended interval between prior Td &amp; Td/Tdap booster</b>	<ul style="list-style-type: none"> <li>• 5 years</li> <li>• Shorter interval permissible during pertussis outbreaks</li> </ul>	<ul style="list-style-type: none"> <li>• 10 years</li> <li>• Shorter interval permissible during pertussis outbreaks or if infant contact (see next row)</li> </ul>
<b>Preventing pertussis transmission to infants</b>	Not addressed <sup>†</sup>	<ul style="list-style-type: none"> <li>• Adults with close contact with infants &lt;12 months of age should receive Tdap</li> <li>• Suggested minimum interval of ≥2 years since most recent tetanus toxoid-containing vaccine</li> <li>• Ideally, give at least 1 mo. before close infant contact</li> <li>• Women (see special recommendations below for vaccination during pregnancy)</li> </ul>
<b>Contraindications and Precautions</b>	<ul style="list-style-type: none"> <li>• Similar to pediatric DTaP</li> <li>• Contraindicated for persons with: <ul style="list-style-type: none"> <li>- known hypersensitivity to any vaccine component</li> <li>- history of encephalopathy after previous pertussis vaccine</li> <li>- risk for hemorrhage (including hemophilia, thrombocytopenia, or receiving anticoagulants)</li> </ul> </li> <li>• Precautions indicated for persons with: <ul style="list-style-type: none"> <li>- Latex sensitivity</li> <li>- Immunosuppressed persons may not achieve expected level of response<sup>4</sup></li> </ul> </li> </ul>	
<b>Administration with other vaccines</b>	OK with all recommended vaccines	
<b>SPECIAL SITUATIONS</b>		
<b>Non-simultaneous vaccination</b>	<ul style="list-style-type: none"> <li>• OK for all vaccines (inactivated &amp; live)</li> <li>• Slightly increased rate of adverse reaction between Tdap &amp; MCV4<sup>§</sup></li> </ul>	Not addressed <sup>†</sup>
<b>Pertussis outbreaks/ other settings of increased risk</b>	Can use shorter Td to Tdap interval (~2 years)	Not addressed <sup>†</sup>
<b>Use of Td when Tdap not available</b>	<ul style="list-style-type: none"> <li>• Give Td if ≥10 yrs since tetanus/diphtheria protection</li> <li>• Can temporarily defer if &lt;10 yrs since last DTP, DTaP, DT, or Td and likely to return</li> </ul>	Not addressed <sup>†</sup>
<b>Tetanus prophylaxis in wound mgt</b>	Give Tdap instead of Td if no prior Tdap; if Tdap not available, use Td	
<b>History of pertussis disease</b>	Give Tdap per routine recommendations	
<b>No history of pertussis vaccine</b>	<ul style="list-style-type: none"> <li>• Give Tdap per routine recommendations if no contraindication</li> </ul>	Not addressed <sup>†</sup>
<b>No history of DTP/DTaP/Td/Tdap</b>	<ul style="list-style-type: none"> <li>• Give series of 3</li> <li>• Preferred schedule: #1, Tdap; #2, Td (≥4 weeks after #1); #3, Td (6–12 months after #2)</li> <li>• Tdap may substitute for any <u>one</u> of 3 Td doses in series</li> </ul>	
<b>Vaccination during pregnancy</b>	<ul style="list-style-type: none"> <li>• Not a contraindication for Td or Tdap</li> <li>• The final recommendations are still under consideration. At this time: <ul style="list-style-type: none"> <li>- if last tetanus toxoid-containing received &lt;10 years earlier, should receive post-partum, per routine recommendations and interval guidance</li> <li>- if last tetanus toxoid-containing vaccine ≥10 years earlier, should receive Td during pregnancy in preference to Tdap</li> <li>- if no history of primary 3-dose series, should begin series during pregnancy (if Td indicated during pregnancy, preferable to give vaccine during 2<sup>nd</sup> or 3<sup>rd</sup> trimester)</li> </ul> </li> </ul>	

\* Currently Tdap is licensed for one booster dose only.

<sup>†</sup> ACIP's *Provisional Recommendations* did not cover this circumstance for the designated age group.

<sup>§</sup> MCV4 is conjugated to a diphtheria protein. Persons who recently received one diphtheria toxoid-containing vaccine might have increased rates of adverse reactions, primarily localized reactions, after a subsequent diphtheria toxoid-containing vaccine when diphtheria toxoid antibody titers remain elevated from the previous vaccination.

<sup>1</sup> *Epidemiology Bulletin*. Pertussis Identified Across Alaska, Updated Pertussis Treatment and Prophylaxis Guidelines. No. 20, August 24, 2005. [http://www.epi.alaska.gov/bulletins/docs/b2005\\_20.pdf](http://www.epi.alaska.gov/bulletins/docs/b2005_20.pdf)

<sup>2</sup> *Epidemiology Bulletin*. Initial Evaluation of PCR Testing for Pertussis in Alaska. No 27, November 8, 2005. [http://www.epi.alaska.gov/bulletins/docs/b2005\\_27.pdf](http://www.epi.alaska.gov/bulletins/docs/b2005_27.pdf)

<sup>3</sup> Adolescents: [http://www.cdc.gov/nip/vaccine/tdap/tdap\\_child\\_rec.pdf](http://www.cdc.gov/nip/vaccine/tdap/tdap_child_rec.pdf) Adults: [http://www.cdc.gov/nip/vaccine/tdap/tdap\\_adult\\_rec.pdf](http://www.cdc.gov/nip/vaccine/tdap/tdap_adult_rec.pdf)

<sup>4</sup> Buck, M. Tetanus, Diphtheria, Acellular Pertussis Booster Vaccination for Adolescents. *Pediatric Pharmacotherapy*. 2005; 11(7). Children's Medical Center, University of Virginia. Available at: <http://www.healthsystem.virginia.edu/internet/pediatrics/pharma-news/july2005.pdf>