

Public Health Update

August 2006

Immunizations:

Information on New Vaccines and Tri-County Health Department new Program that Assesses Immunization Records at Childcare Facilities

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Information on New Vaccines

Varicella, Measles, Mumps and Rubella all in one injection

The Advisory Committee on Immunization Practices (ACIP) has just approved a second dose (booster dose) of Varicella for children between the ages of 4 to 6 years of age to increase longterm immunity and to help prevent breakthrough Varicella cases. You can provide the Varicella as a separate injection or if the patient needs a Measles, Mumps and Rubella (MMR) vaccination at the same visit, there is a new vaccine combination that combines Measles, Mumps, Rubella and Varicella called Proquad (MMRV). MMRV has been approved for use by the Food and Drug Administration (FDA) and ACIP since the spring of 2006. Currently MMRV is only licensed for one dose. The first dose of MMR & Varicella should be given at 12-18 months of age, with a booster dose of each given at age 4-6 years. For one of those ages, MMRV can be used instead of the individual vaccines. Remember that both of these vaccines are live viruses. If you are administering either MMR or Varicella and not both on the same day, you must wait 28 days before administering the other vaccine. For children ages 12 months-12 years, two doses of varicella vaccine should be given 3 months apart.

Diphtheria, Tetanus and Pertussis vaccine combinations

With so many D's, T's and P's it's very easy to become confused when trying to decide which vaccine is best for your patient. Table 1 is a quick-glance chart to help differentiate between the pediatric vaccines DTaP, DTP, DT and the adolescent and adult vaccines TdaP and Td. For specific details about each vaccine, you should consult the CDC's complete vaccination schedule and refer to the appropriate footnotes. In general, children ages 6 weeks through 6 years of age should receive a total of 5 DTaP vaccines. If the child has a severe allergic reaction to the Pertussis component of the vaccine (low grade fever is not an allergic reaction, but an expected side-effect) then pediatric DT should be used. DTP is no longer available in the United States but is seen on the immunization records of children who have moved here from other countries and is still considered a valid dose of vaccine in this series. Once the child has reached 7 years of age, DTaP should no longer be used. If all DTaP doses were given by age 7 years old, the child is next due for a booster at age 11 years old as long as it has been 5 years since the last tetanus-containing vaccine (Boosterix can be given starting at age 10 years/Adacel starting at age 11 years). Adolescent TdaP (Tetanus, diphtheria and acellular pertussis) is the recommended vaccine for this dose. After this, a booster dose of Td should be administered at least once every 10 years for life. For children that are behind, please see the CDC immunization schedule at the end of this document titled References for Immunizations.



Table 1. The many combinations of Tetanus, Diphtheria, and Pertussis protection.

Vaccine	Components	Dosing	Comments
DTaP	Diphtheria, Tetanus & acellular Pertussis	Pediatric 2,4,6,12-18 months old & booster at age 4-6 years old	Replaced DTP in the USA minimizing reactions
DTP	Diphtheria, Tetanus & whole-cell Pertussis	Pediatric 2,4,6,12-18 months old & booster at age 4-6 years old	Whole cell Pertussis was suspected of increased reactions
DT	Diphtheria & Tetanus	Pediatric 2,4,6,12-18 months old & booster at age 4-6 years old	Only for children who have a diagnosed allergy to Pertussis vaccine
Tdap	Tetanus, diphtheria & acellular Pertussis	Adolescent & Adult 11-12 yrs old 10 years old if using Boosterix	Used to boost Adolescent immunity to Pertussis
Td	Tetanus & diphtheria	Adolescent & Adult	Recommended every 10 years for life

Supply and Demand, Shortage of new Meningitis vaccine Menactra

Currently there are two vaccines that are available in the United States to prevent Meningitis. One is called Menomune or Meningococcal polysaccharide vaccine (MPSV4), which has been available since the 1970's and the other is Menactra or Meningococcal conjugate vaccine (MCV4) that has been available since 2005. Both vaccines work well but MCV4 is expected to have better longer-lasting protection. Menactra is licensed for children 11 years of age to adults who are 55 years old. MPSV4 is the recommended vaccine for children 2 to 10 years of age and for adults over age 55 years. The recommended age for administration of the new MCV4 vaccine is 11-12 years of age or the first year in high school or first year of college. The supply of MCV4 vaccine has not been able to keep up with the demand for the vaccine at this time. Regulating bodies are recommending withholding the dose for 11-12 year olds and only giving the vaccine for high school and college freshmen until vaccine supplies have stabilized. Meningococcal disease is a serious illness caused by a bacterium. It is a leading cause of bacterial meningitis in children 2-18 years old in the United States. Meningitis is an infection of fluid surrounding the brain and the spinal cord. Meningococcal disease also causes blood infections.

New Vaccines making a debut

A new Rotavirus vaccine called RotaTeq has also been approved by the ACIP and FDA for use since spring of 2006. It is a live oral vaccine that will follow the usual 2, 4, and 6 month of age schedule for a total of three doses. The first dose can be given as early as 6 weeks of age and must be given by age 12 weeks. The third dose should not be administered after 32 weeks of age. The minimum intervals between doses should be 4 to 10 weeks. The vaccine is currently available for ordering through the

manufacturer and through the Vaccines For Children program (VFC). Rotavirus is a virus that causes severe diarrhea, mostly in babies and young children. It is often accompanied by vomiting and fever. Rotavirus is not the only cause of severe diarrhea, but it is one of the most serious. Almost all children in the U.S. are infected with rotavirus before their 5th birthday.

New Anti-Cancer Vaccine for Human Papillomavirus

New research has shown that the Human Papillomavirus (HPV) is the leading cause of cervical cancer in women. A new vaccine has been developed by Merck called Gardasil which has been recommended by the ACIP to be routinely administered at 11 to 12 years of age. The vaccine has been licensed for administration to patients 9 to 26 years of age. The vaccine protects against 4 of the most common types of HPV that will help prevent cervical cancer and genital warts. HPV is the most common sexually transmitted infection in the United States, More than 20 million men and women in the United States are currently infected with HPV and there are 6.2 million new infections each year. HPV is most common in young women and men who are in their late teens and early 20s. By age 50, at least 80 percent of women will have acquired HPV infection. This vaccine is given in a three dose series and is currently available through the manufacturer. It has been added to the VFC program but is not yet available.

Monitoring New Vaccines

With all of the new changes in vaccination schedules and new vaccines that are being added to the schedule, some people worry about reactions and adverse events. The Vaccine Adverse Event Reporting System (VAERS) is always available for anyone who would like to report that they may have had a reaction from a vaccine. This system is very important for tracking vaccines that may be responsible for side effects and dangerous reactions. Anyone can use this system: doctors, nurses, medical assistants, parents, or patients, to report an adverse event of concern. You can report a reaction by going online to <http://vaers.hhs.gov/>, by calling 1-800-822-7967, by faxing a report to 1-877-721-0366 or finally by mailing a report to P.O. Box 1100, Rockville, MD 20849-1100.

Assessing Records at Childcare Facilities

Tri-County Health Department (TCHD) is responsible for the health inspections of licensed childcare facilities in Adams, Arapahoe and Douglas Counties. Approximately six in ten children under 5 years of age are enrolled in childcare in Colorado, and the state has one of the lowest childhood immunization rates in the United States. As a local health department, one of our goals is to improve immunization rates in children. An important step toward that goal is to improve the rate of immunizations of children in childcare facilities.

Licensed childcare facility providers are required to ensure children in their care are immunized as required by the Colorado Revised Statute 25-04-901. In addition, the Official Certificate of Immunization or Exemption must be on file for every child enrolled in the facility. Tri-County Health Department has begun to assess immunization rates in childcare facilities in our communities and to work toward bringing documentation and vaccination rates up to date. One way in which TCHD intends to accomplish this is to link our Public Health Nurses with our Environmental Health Specialists to check immunization records of children enrolled in licensed childcare facilities as part of regular TCHD inspections.

In addition, Public Health Nurses who visit childcare facilities will provide education to staff, a notification letter to distribute to parents whose children's records need to be amended and a specified timeframe for these changes to be made. When necessary, a Public Health Nurse will return four weeks later to check that progress has been made and help overcome any barriers. TCHD is working with the Colorado Department of Human Services, the childcare licensing authority, to ensure the success of this effort.

Pilot Study

Tri-County Health Department conducted a pilot study from August to November 2005 of ten licensed childcare facilities (2 in Adams, 5 in Arapahoe, 3 in Douglas). Immunization records were reviewed and notices sent to parents of under-immunized children ages 0 through 5 years. Records for older children were not reviewed because it was assumed that school nurses were reviewing immunization records of school-aged children. Through this pilot study, TCHD found that there was an increase in the number of immunization records on file and up-to-date status between TCHD's first visit and second visit for all ten facilities. Based on the pilot results, TCHD decided to assess immunization records for all licensed childcare facilities in our jurisdiction.

How Physicians Can Help

Physicians who administer vaccines have a large role in the success of this program. The following points have surfaced as concerns in reviewing immunization records through the pilot study and early phases of the project:

- Both the Advisory Committee on Immunization Practices (ACIP) and the American Academy of Pediatrics (AAP) recommend simultaneous administration of all routine childhood vaccines when appropriate.
- Physicians and other health-care providers should always ensure that they are following the most up-to-date schedules, which are available from CDC's National Immunization Program website at <http://www.cdc.gov/nip>. The newer vaccines discussed in this update have not yet been added to this schedule; it is updated every six months. Vaccines are recommended for members of the youngest age group at risk for experiencing the disease for which efficacy and safety have been demonstrated.

- Documentation of the entire date of vaccine administration (including day of month) on the child's record is necessary.
- ACIP recommendations with regard to minimum age and minimum interval between doses should be followed. ACIP allows only a 4-day grace period with respect to these intervals.
- A 3-dose series of Haemophilus influenza type b (Hib) vaccine is complete only when the third dose is administered after 12 months of age. Unvaccinated children 15-59 months of age may be given a single dose of any one of the three conjugate vaccines licensed for this age group to complete the immunization recommendations for this vaccine.

TCHD follows the Advisory Committee on Immunization Practices (ACIP) and Centers for Disease Control and Prevention (CDC) immunization recommendations. For specific details, please visit the CDC immunization website: www.cdc.gov/nip/recs/child-schedule-color-print.pdf. Included in this Public Health Update are some general recommendations on new vaccines.

Resources For Immunizations

Tri-County Health Department

TCHD Immunizations phone number: 303-451-0123

Tri-County Health Department website www.tchd.org

Colorado Department of Public Health and Environment

Colorado Immunizations Program www.cdphe.state.co.us/dc/immunization/index.html

Centers For Disease Control and Prevention (CDC)

CDC website www.cdc.gov

Vaccines For Children program (VFC) www.cdc.gov/nip/vfc/provider/provider_home.htm

CDC Immunization schedule www.cdc.gov/nip/recs/child-schedule-color-print.pdf

Vaccine Adverse Event Reporting System (VAERS)

VAERS home page <http://vaers.hhs.gov/>

A list of notifiable diseases in Colorado is available at: <http://www.cdphe.state.co.us/dc/Medlist.pdf>. Please know that upon receiving a report of any of these diseases, the public health department is likely to contact your patient to assess exposure and put appropriate control measures into place. If for some reason you would not like us to contact your patients, please let us know.

If you have questions please contact your state or local health department:

Colorado Department of Public Health and Environment:

(303) 692-2700 / (303) 370-9395 (after hours)

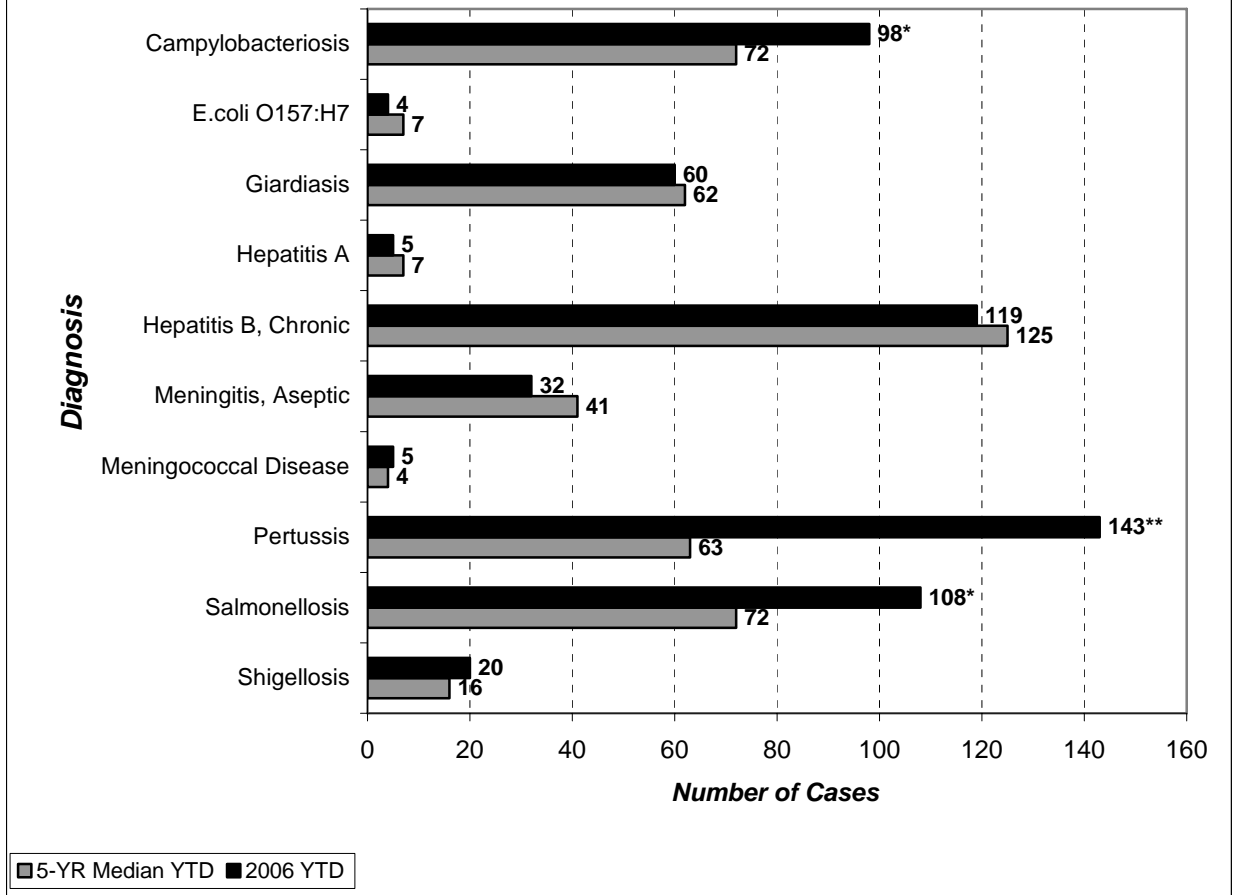
Fax: (303) 782-0338

Tri-County Health Department:

(303) 220-9200 / 303-461-2342 (after hours)

Fax: (303) 220-9208

Selected Diseases by Date of Report Adams, Arapahoe, and Douglas Counties 2006 Year-to-date Through July



* The entire state of Colorado has seen increased reports of campylobacteriosis and salmonellosis. Although the reasons are currently unknown, investigation is ongoing.

** There have been an excessive number of pertussis cases in the state of Colorado in the past year.