

Immunization Pearls

Dane County Immunization Coalition

July 2010

POSTPARTUM TDAP AND COCOONING

Why be concerned about pertussis?

Women who were not previously vaccinated with Tdap should receive a dose in the immediate postpartum period, **before discharge** from the hospital or birthing center (MMWR 5/30/08). Household contacts are the source of infection in 75-83% of the pertussis cases in infants, with parents as being the source in over half of the cases. The risk of pertussis death or severe disease is highest in the first 6 months of life and remains elevated until infants have received the initial series (3 doses) of the DTaP vaccine. Infants under 12 months of age account for 93% of pertussis deaths (145) between 2000 and 2006, with most of these deaths being in unvaccinated infants. Pertussis is now epidemic in California (California Dept of Public Health, 6/23/10). That state is on pace to have the worst pertussis outbreak in 50 years, with over 900 cases and 5 infant deaths under 3 months age this year. 600 more cases are currently under investigation. Rates of pertussis also are on the rise in numerous other states.

What is cocooning?

Cocooning is a strategy to protect young infants by encouraging Tdap/DTaP immunizations among all adults and children who have close contact with newborns. The immunizations thus wrap the baby and family members in a protective “cocoon” against pertussis. The goal of the cocooning strategy is that everyone who has contact with a newborn infant receives a Tdap/DTaP vaccination before the baby arrives, to keep the baby protected against pertussis until the infant’s own immunizations can offer protection.

Parents are the highest priority for Tdap vaccination, but siblings, grandparents (under 65 yrs old), child care providers, healthcare workers and all others that come in contact with infants are also included. Tdap vaccine should be given to non-pregnant people at least 2 wks before contact with an infant is anticipated. Any woman who might become pregnant is encouraged to receive a single dose of Tdap vaccine at any time.

Can pregnant women get the Tdap vaccine?

Although pregnancy is not a contraindication for receiving the Tdap vaccine, healthcare providers should weigh the theoretical risk and benefits before choosing to give the vaccine to a pregnant woman. Tdap vaccine should be given to a pregnant woman who is in contact with infants under 12 months of age, in an outbreak setting, or is a healthcare worker who sees children.

When should a new mom receive the Tdap vaccine?

Giving the vaccine in the hospital immediately postpartum, prior to discharge gives protection in about 2 weeks.

Can the parents of a newborn be given a dose of Tdap right after birth even though they had a dose of Td vaccine less than two years ago?

Yes. Parents and other contacts of infants should be vaccinated with Tdap as soon as possible, regardless of the time interval since the last dose of Td—even if it’s been less than 2 years since a previous Td dose. There is no “minimum interval” one needs to wait between receiving Td and Tdap when it is given to protect infants or other vulnerable patients. An interval of 2 years is suggested, but shorter intervals can be used.

(www.cdc.gov/mmwr/PDF/wk/mm5901-Immunization.pdf (see top of pg 3))



FLUZONE HIGH-DOSE SEASONAL INFLUENZA VACCINE

What is Fluzone High-Dose influenza vaccine?

It is a new influenza vaccine designed specifically for people 65 years and older.

What is the difference between regular influenza vaccine and high-dose influenza vaccine?

They are both injectable influenza vaccines, made up of the 3 flu strains most likely to cause illness for that particular flu season. The high-dose vaccine contains 4 times the amount of antigen (the component that prompts the body to make antibody) contained in regular flu shots. The additional antigen is intended to create a stronger immune response (more antibody) in the person getting the vaccine.

Why is a higher dose vaccine available for adults 65 and older?

Immunity becomes weaker with age, which places older people at greater risk of severe illness from influenza. Also, aging decreases the body's ability to produce a good immune response after getting influenza vaccine.

Does the higher dose vaccine produce a better immune response in adults 65 and older?

Clinical studies indicate a stronger immune response (higher antibody levels) with the high dose vaccine. Whether or not the stronger immune response leads to greater protection against influenza disease is not yet known. An ongoing study to determine this is expected to be completed in 2012.

Is the high-dose vaccine safe?

Its safety is similar to that of regular flu vaccines, although adverse events were reported more frequently. The most common adverse events were mild and temporary and included pain, redness and swelling at the injection site, headache, muscle aches, fever, and malaise. Most people had minimal or no adverse events.

Who can get this vaccine?

It is approved for use in people 65 years of age and older. As with all flu vaccines, it is not recommended for people with a severe allergy to chicken eggs or for people who have had a severe reaction to a flu vaccine in the past.

Does the CDC recommend one vaccine over another for people 65 and older?

CDC and the Advisory Committee on Immunization Practices (ACIP) recommend flu vaccination as the first and most important step in protecting against the flu; however, neither CDC nor ACIP is expressing a preference of one vaccine over another at this time.

Will Medicare pay for the vaccine?

It will be covered under Medicare Part B.

This document was prepared with information obtained at: http://www.cdc.gov/flu/protect/vaccine/qa_fluzone.htm.

HEPATITIS A AFTER TRAVEL TO HAITI

Recently a Dane County resident went to Haiti. When she returned, she felt well, but was silently incubating a hepatitis A infection and shedding hepatitis A virus. When she started to feel ill, her doctor diagnosed and confirmed hepatitis A infection. By then she had exposed over 125 infants, children and adults in Dane County. Fortunately, 73% of the children exposed were already immunized with at least one dose of hepatitis A vaccine, as recommended by the children's immunization schedule. This information was available quickly with

WIR access. Many doses of IG and hepatitis A vaccine had to be given to protect the others exposed, but routine immunizations had already protected most of the children exposed to the virus. With prompt follow-up and preventive action, no further cases of hepatitis A were identified.

This situation highlights the importance of routine immunizations, the benefits of WIR, and the value of travel vaccines to prevent diseases that occur less often in this country but can be brought

back and affect those in contact with a traveler.

Hepatitis A vaccine is available free to uninsured adults in 2010 only, along with other adult vaccines (hepatitis B, HPV, MMR and varicella) at Public Health-Madison & Dane County (266-4821). Other travel vaccines and medications may be recommended. For comprehensive recommendations on travel health, see: <http://wwwnc.cdc.gov/travel/content/yellowbook/home-2010.aspx>.

PNEUMOCOCCAL CONJUGATE (PCV13)

How is PCV13 different from PCV7?

PCV13 is a new pneumococcal conjugate vaccine and replaces PCV7. It contains 6 additional serotypes of *Streptococcus pneumoniae*, protecting against more disease than PCV7. In particular, PCV13 protects against serotype 19a which has become the most common pneumococcal serotype and is often resistant to antibiotics.

What are the recommendations for use?

Routine vaccination schedule is the same as PCV7: 2, 4, 6, and 12-15 months.

Should children who are only partially vaccinated with PCV7 complete the series with PCV7 or PCV13?

It is preferred that they complete the series with PCV13. The vaccines are interchangeable, and using PCV13 to complete the series is effective and safe.

Should children who already received the full 4-dose series of PCV7 be vaccinated with additional doses of PCV13?

Yes, children 14-59 months of age who are fully vaccinated with 4 doses of PCV7 should receive a single, supplemental dose of PCV13.

Older children (up through 71 months) who have an underlying medical condition who are fully vaccinated with PCV7 should receive a single dose of PCV13.

Will the Wisconsin Immunization Registry (WIR) recommend a supplemental dose at ages 14-59 months who have completed the PCV series with PCV7?

Yes; as a temporary solution, it will recommend a 5th (supplemental) dose with earliest date of 14 months. WIR

staff continue to work on a permanent solution to address the complexities of the schedule accounting for the two different products.

What is the schedule for unvaccinated children 7 months or older?

- **7-11 months:** 3 doses with dose 3 at 12-15 months, with at least 4 weeks between dose 1 and 2 and at least 8 weeks between dose 2 and 3.
- **12-23 months:** 2 doses with at least 8 weeks between doses.
- **24 -59 months (healthy children):** 1 dose
- **24-71 months (underlying medical conditions):** 2 doses with at least 8 weeks between doses.

What underlying medical conditions are indications for pneumococcal vaccination?

- Chronic heart disease, chronic lung disease, diabetes mellitus, CSF leaks, cochlear implant
- Functional or anatomic asplenia (sickle cell disease, other hemoglobinopathies, congenital or acquired asplenia, or splenic dysfunction).
- Immunocompromised persons (HIV infections, chronic renal failure, nephritic syndrome, chemotherapy, radiation therapy, solid organ transplantation, congenital immunodeficiency).

Should we contact parents of children to schedule an appointment for the child to receive the PCV13 vaccine?

No. If a supplemental dose is indicated, it should be given at the child's next medical visit, but no sooner than 8 weeks after their last dose of PCV7.



IMMUNE GLOBULIN AND LIVE VIRUS VACCINES

How does receiving blood products or immune globulin affect when to give a vaccine?

- Delay in receiving (injectable) live virus vaccine (i.e. MMR, varicella) after IG injection varies, depending on which kind of immune globulin or blood product has been used, with anywhere from 3-6 months after IG, and 3-7 months for blood products. Specific information is found at: www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/A/mmr_ig.pdf

And don't forget, if a live virus vaccine was given less than 2 wks before receiving IG, the vaccine is then invalid and will need to be repeated at some time in the future.

WHAT'S NEW WITH HPV VACCINE?

HPV is a common virus that can cause genital warts, dysplasia and cancer. Genital HPV infections are primarily transmitted by genital to genital contact. They can also infect the anal and oral areas of both females and males, in addition to causing cervical infections in women. Many individuals are unaware they have an HPV infection because they are often asymptomatic.



Who should get the HPV vaccine? Males can get it now too!

In October of 2009, FDA licensed and ACIP approved provisional use of the HPV4 (Gardasil) vaccine for **males**, ages 9-26 years of age for the prevention of genital warts caused by HPV types 6 and 11. It is available through the VFC program for use in males and females.

HPV vaccine continues to be recommended routinely for girls 11-12 years old, but can be given from 9-26 years of age to prevent both cervical cancer and genital warts.

Are genital warts a problem?

According to CDC, about 500,000 cases of genital warts are estimated to occur each year in the US among sexually active men and women. Direct medical costs related to genital warts are estimated at \$200 million per year. In addition, genital warts can have an adverse impact on the quality of life. HPV types 6 and 11 (included in the HPV vaccine) account for approximately 90% of all genital wart infections.

When should someone get the vaccine?

HPV vaccine is most effective when given before a person has become sexually active. Genital HPV infections are very common and are most often acquired shortly after the onset of sexual activity. Completion of all 3 doses gives the best protection against HPV infection. Antibody response is higher when given at the younger age ranges. So give the vaccine when a client is at your clinic and in the appropriate age range for the vaccine—don't wait!

What if the client turns 27 years old before completing the series?

If a female reaches age 26 years before the vaccination series is complete, remaining doses can be administered after age 26 years. Ideally, vaccine should be administered before potential exposure to HPV through sexual contact. (MMWR / May 28, 2010) CDC has not addressed the issue with males.

What if my client already has an HPV infection?

The HPV vaccine includes 4 killed viruses. It is very rare for someone to be infected with all 4 viruses. The client can benefit from the protection from the other viruses and should still receive the vaccine series. The vaccine does not have any therapeutic effect on an infection already acquired.

What about side effects?

As with other vaccines, there are possible side effects. Soreness and swelling at the site of immunization and headache are the more commonly noted possible effects. Syncope can occur after vaccination and has been observed among adolescents and young adults. To avoid serious injury related to syncope, vaccine providers should consider observing patients for 15 minutes after they are vaccinated.

SCHOOL SHOTS

Q. Frequently parents bring children in and tell us that “shots are needed for school.” How do I know what immunizations are required by schools in Wisconsin?

A: The answer to this one is simple—if you are following the child and adolescent immunization schedules recommended by ACIP, you will also be giving the immunizations that are required for school. The law and administrative code that govern school immunization are in Wisconsin State Statute Chapter 252.04 www.legis.state.wi.us/statutes/Stat0252.pdf and Wisconsin Administrative Code DHS 144 www.legis.state.wi.us/rsb/code/dhs/dhs144.pdf.

Wisconsin immunization law places emphasis on meeting minimum immunization requirements on entering a Wisconsin school. Children immunized according to accepted immunization schedules will exceed the minimum requirements contained in the law for all ages and grades.

New requirements are generally phased in gradually over a period of 3-6 years with the new immunization requirement affecting one or several grades each school year. This is done to decrease the burden on providers and allow for “catch up.” It does not mean you have to wait until your patient or client is in the grade affected by the new requirement. If it is recommended by ACIP, give it.

Information about specific age and grade level requirements is found on the Wisconsin Immunization Program's website <http://dhs.wisconsin.gov/immunization/reqs.htm>. But remember, in Wisconsin, if you are following the schedules recommended by ACIP for immunizing children and teens, you will be providing the immunizations required for school attendance.

BEST PRACTICES FOR IMMUNIZATIONS

Here's a recent webinar from CDC on immunization best practices:

www.cdc.gov/vaccines/ed/ciinc/2010July.htm.

Be Sure You Have The Right Patient And A Complete Record

- Check WIR for the patient's complete immunization record as well as your clinic's record.
- If you cannot find a record, look for other names the client may have used or search by birthdate.

Educate the Patient Before Immunizing

- Review the vaccines due, contraindications, side effects, and after-care instructions before giving the vaccine.
- Give the patient a current Vaccine Information Statement (VIS) for every vaccine given. Check CDC for dates of the latest versions at www.cdc.gov/vaccines/pubs/vis/default.htm. Date of publication is on lower right of back page of VIS.
- Information on vaccine safety is available online at CDC, Immunization Action Coalition and CHOPS (Children's Hospital of Philadelphia Vaccine Center). Most common concerns are addressed in the fact sheets found here: www.chop.edu/service/vaccine-education-center/hot-topics.

Wash Your Hands

- Wash your hands between every patient, using antiseptic gel, or soap and water.
- Gloves are **not** required unless your agency or the situation requires it. Situations would include: open lesions or sores on hands of provider, or if you expect to come in contact with body fluids. Gloves do not prevent needle sticks.

Give The Right Vaccine

- Carefully check the vaccine label 3 times. There are many vaccines variations, combinations, and doses (ped/adult). Similar vaccine names and packaging make it easy to make errors. DTaP (6 wks-6 yrs) and Tdap (10-64 yrs) confusion is one of the most common errors. These vaccines have the same components, but very different amounts.
- Use the right combination vaccine for the right dose in the series. Some combination vaccines can only be used for certain doses in the series. Know your vaccines and check the CDC information, your manual, and product labels! Clearly label your vaccines and include ages recommended.
- Use the right diluents. Several vaccines need reconstitution, most with their own specific diluent



which is required for adequate vaccine dosage. Only Merck's MMRII, varicella, and Zostavax share the same diluent.

- Check the expiration date of vaccine and diluent.
- No vaccine series needs to be started over if a subsequent dose is long delayed. Just give the next dose due to continue the series.

Give Vaccines At The Right Time

- Give all vaccines recommended at each visit.
- Make sure the patient is the right age and that it's the right minimum time interval between vaccines. The minimum interval table can be found at: www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/A/age-interval-table.pdf.
- Adhere as closely as possible to the recommended intervals for optimal efficacy of vaccine.
- Correct any errors. If an expired dose of live virus vaccine is given, wait 4 at least weeks to repeat the dose. If an expired dose is not a live virus vaccine, the dose should be repeated as soon as possible.

Give The Right Dose

- Vaccine doses are all age-based. Hepatitis doses seem to cause some confusion. The starting age of adult doses is different for hepatitis A, hepatitis B and the hepatitis A/B combination (Twinrix). Here's a good reference sheet: www.immunize.org/catg.d/p2081.pdf.
- Check the vaccine, the dose, and the patient's age.
- Do not split doses, or count partial doses—they are invalid and will need to be repeated. The exception is that partial doses of the nasal vaccines, rotavirus and LAIV (flu), do NOT need to be repeated if not fully administered, or patient expels part of the dose.
- Don't prefill syringes. Fill them right before administration.
- Don't leave vaccines out of the refrigerator/freezer any longer than necessary. There is a 1/2 hour limit for varicella and MMR.

Use The Right Route, Right Needle Length, Right Site

- Start with the right site. Never give vaccines in the buttocks!
- Here are some useful reference sheets:
 - » Infants, toddlers: www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/D/site-map.pdf.

- » Doses and needle length:
www.immunize.org/catg.d/p3085.pdf.
- » Adult sites:
www.immunize.org/catg.d/p2020A.pdf.
- Clean the injection site with an alcohol wipe
- Use the correct needle length. Use a 1-1/2 needle for adult/adolescent women over 200# and adult/adolescent men over 260#. This is especially important with hepatitis B as shown in recent studies: <http://pediatrics.aappublications.org/cgi/content/abstract/125/3/e508>.
- Give an IM at a 90 degree angle, SQ at a 45 degree angle.
- Only IPV and PPV23 can be given by either IM or SQ:
- Some vaccines are given ONLY by SQ: MMR, Varicella, MMRV, Zoster and MPSV4
- Aspiration is not required—no large blood vessels exist at recommended sites. If blood flashes back into the syringe, remove and dispose of the syringe and vaccine. Prepare a new syringe with new vaccine and administer in different site.
- Give vaccines in separate limbs, if possible. If you are giving more than one injection in a limb, separate the sites by 1-2 inches.
- Use combination vaccines whenever possible to reduce injections. Never mix multiple vaccines in one syringe unless it is licensed that way!

Administer vaccine safely

- The patient should be seated.
- Restrain children safely:
www.eziz.org/PDF/IMM-720ES.pdf.
- Observe the patient for 15 minutes after vaccine is administered.
- If syncope occurs, observe the patient until symptoms resolve.
- Safety needles should always be used.
- Syringes should go directly into the red box after the vaccine is given. Don't recap needles, cut the needle off, or remove the needle from the syringe.

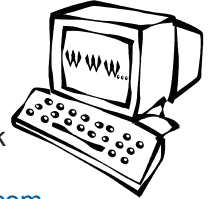
Document vaccine administration

- Document each vaccine given, dose, route, lot # in client record.
- Give the patient a record of vaccines given and when to return.
- Enter the info into WIR or your clinic data system.
- Educate your patient on how to access their records in WIR themselves. Clients go to <http://dhfsWIR.org> in the Public Immunization Record Access, click on the hyperlink, then enter name, date of birth and Social Security number. If they have problems, they can call the WIR Help Desk at 608-266-9691 for further assistance.

Check it out!

Dane County Immunization Coalition's website:
www.immunizedanecounty.org

- ✓ Minutes from the General Membership meetings
- ✓ Immunization Schedules
- ✓ Public Health's immunization clinic schedules
- ✓ Media Campaigns
- ✓ Membership
- ✓ Coalition Goals & Impact



The Coalition welcomes your feedback and suggestions for website content!
Contact: dmchugh@publichealthmdc.com



DANE COUNTY IMMUNIZATION COALITION
www.immunizedanecounty.org

Immunization PEARLS brought to you by the Immunization Practices Committee



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