IOWA DEPARTMENT OF PUBLIC HEALTH • BUREAU OF DISEASE PREVENTION AND IMMUNIZATION

IOWA Immunization Program

Immunization Update

The Iowa Immunization Program Newsletter

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Iowa's Immunization Registry Information System (IRIS) Enroll Today!

Call the IRIS Help Desk at 1-800-374-3958 for Enrollment Details or IRIS Questions.

Help Us Help You!

Is this newsletter helpful to you? What articles would you like to see? Please contact Bridget Konz at bkonz@idph.state.ia.us or 1-800-831-6293 ext. 7.

Inside This Issue

Iowa VMBIP Planning Begins

The Vaccine Management Business Improvement Project (VMBIP) represents efforts of the Centers for Disease Control and Prevention (CDC) and the National Center for Immunization and Respiratory Diseases (NCIRD) to improve current vaccine management processes at the federal, state, and local levels.

CDC/NCIRD is responsible for managing half of the nation's pediatric vaccine supply, estimated at $11 billion in annual vaccine purchases. Through the VMBIP project it is anticipated that $25 – $47 million will be saved nationally, allowing those saved funds to be used for other immunization priorities.

There are three overall goals of the VMBIP project. They are designed to identify opportunities and develop solutions toward improving vaccine efficiency, accountability, and the nation's ability to respond to public health crises. The specific goals of VMBIP are to:

- Simplify processes for ordering, distributing, and managing vaccines in order to respond more quickly and effectively to public health crises related to disease outbreaks, vaccine shortages, and disruption of the vaccine supply.
- Implement a more efficient vaccine supply system that will result in redirecting vital public health resources away from vaccine distribution and toward public health activities that will improve immunization coverage levels.
- Enable the direct delivery of vaccines to providers.

CDC projects that Iowa will "go live" and begin using VIMBIP in December 2007. As part of the implementation process, the Iowa Department of Public Health (IDPH) will begin to scale back its on-hand vaccine supply in late fall in preparation for the December "go live" date. When Iowa "goes live" IDPH will no longer maintain or ship vaccine on-site. A third-party distributor, McKesson General Medical, will manage warehousing and distribution of all vaccines previously ordered through IDPH. Currently, it is projected to take one week for McKesson to process and distribute vaccine orders.

Prior to implementing VIMBIP in Iowa, one of the most important things providers can do is assess vaccine storage capacity. IDPH plans to survey Vaccines for Children (VFC) providers to obtain a clearer picture of storage capacity in the state. Once information on storage capacity is obtained it will be made available to McKesson for future use in vaccine ordering.

Watch for further information from the IDPH Immunization Program regarding VMBIP. IDPH will continue to share progress on this exciting project as we move forward.

VFC Vaccine Accountability

Vaccine accountability is one of the VFC Programs highest priorities and is an essential Center for Disease Control and Prevention (CDC) grant requirement. Iowa's Immunization Program has a responsibility to the CDC for ensuring that vaccine loss and wastage is measured and minimized, that vaccines purchased with VFC funds are administered only to VFC-eligible children, and protecting the program against fraud and abuse.

Of the many things a clinic does each day, vaccine accountability is one of the most important, preceded by proper vaccine storage and handling.

The good news it that there are things that you can to do help assure vaccine accountability.

The first thing is to be sure that doses of vaccine that are shipped are accurately accounted for in IRIS. Without accepting vaccine in to IRIS, it is impossible to get an accurate inventory count. When vaccine is entered into IRIS as a "give" it is automatically deducted from the clinic's inventory and is reported to the VFC Program (doses administered data).

Another important step you can take to ensure accountability is to be sure to give VFC vaccine only to VFC eligible children. Using VFC vaccine on a private pay patient and then "paying back" the VFC Program when then private stock is ordered or vise versa, should be the exception - not the rule. This practice of exchanging vaccine can quickly lead to accountability issues.

Completing Doses Administered Reports, or for those clinics using IRIS completing data entry on time (within 2 weeks), is extremely important.

These reports help us to track your clinic inventory and complete CDC reports. Vaccine inventory accountability and maintenance is a vital part of the VFC program. Without up-to-date inventories, Iowa can not expect to maintain an adequate vaccine supply to vaccinate all eligible children.

IRIS Certificate Search

The Immunization Program at the Iowa Department of Public Health wants to help make school enrollment easier!

The view-only version of IRIS, called the Immunization Registry Information System – Certificate Search (IRIS-CS), is now available.

IRIS-CS can help Iowa schools by allowing school personnel to search, view and print the Certificate of Immunization.

The registry houses consolidated immunization information from healthcare providers into one reliable source. Using IRIS-CS will provide schools with required immunization information without added work on behalf of school personnel, parents, and healthcare providers.

The view-only version of IRIS for Schools is now available!

IRIS-CS can help Iowa schools by allowing school personnel to search, view and print the Certificate of Immunization.

In May, all school superintendents received a letter from the Immunization Program with a New User Request Form. Any interested schools can complete and return the form to the Immunization Program.

The Immunization Program staff will enroll and assist schools regarding the IRIS-CS installation process. For IRIS-CS questions, please call the IRIS Help Desk at 1-800-374-3958.

Vaccine Resource

Recommendations for Storage and Handling of Selected Biologicals has been revised and published in January 2007.

This booklet outlines the details of storing and handling of all vaccines. Information includes shipping requirements, condition upon arrival, storage requirements, shelf life, instructions for use, shelf live after opening, and special instructions.

This booklet is available from the CDC Web page:

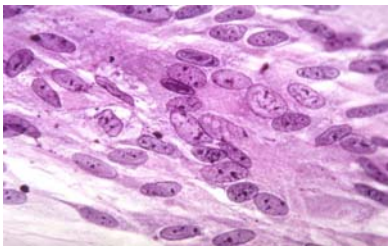
http://www.cdc.gov/nip/publications/vac_mgt_book.htm

Spotlight Vaccine Preventable Disease:

Varicella Zoster Virus

Varicella Zoster Virus (VZV) is a DNA virus and is a member of the herpes virus group. Like other herpesviruses, VZV has the capacity to persist in the body after the primary infection as a latent infection. VZV persists in sensory nerve ganglia. Primary infection with VZV results in chickenpox. Herpes zoster (shingles) is the result of recurrent infection. The virus is believed to have a short survival time in the environment.

Pathogenesis: VZV enters through the respiratory tract and conjunctiva. The virus is believed to replicate at the site of entry in the nasopharynx and in regional lymph nodes. A primary viremia occurs 4–6 days after infection and disseminates the virus to other organs, such as the liver, spleen, and sensory ganglia. Further replication occurs in the viscera, followed by a secondary viremia, with viral infection of the skin. Virus can be cultured from mononuclear cells of an infected person from 5 days before to 1 or 2 days after the appearance of the rash.



Transmission: Infection with VZV occurs through the respiratory tract. The most common mode of transmission of VZV is believed to be person-to person from infected respiratory tract secretions. Transmission may also occur by respiratory contact with airborne droplets, or by direct contact or inhalation of aerosols from vesicular fluid of skin lesions of acute varicella or zoster.

Clinical Features: The incubation period is 14–16 days after exposure, with a range of 10–21 days. The incubation period may be prolonged in immunocompromised patients and those who have received postexposure treatment with a varicella antibody–containing product.

Primary Infection (Chickenpox): A mild prodrome may precede the onset of a rash. Adults may have 1 to 2 days of fever and malaise prior to rash onset, but in children the rash is often the first sign of disease.

The rash is generalized and pruritic and progresses rapidly from macules to papules to vesicular lesions before crusting. The rash usually appears first on the head, then on the trunk, and then the extremities; the highest concentration of lesions is on the trunk (centripetal distribution). Lesions also can occur on mucous membranes of the oropharynx, respiratory tract, vagina, conjunctiva, and the cornea.

Lesions are usually 1–4 mm in diameter. The vesicles are superficial and delicate and contain clear fluid on an erythematous base. Vesicles may rupture or become purulent before they dry and crust. Successive crops appear over several days, with lesions present in several stages of development. For example, macular lesions may be observed in the same area of skin as mature vesicles. Healthy children usually have 200–500 lesions in 2 to 4 successive crops. The clinical course in healthy children is generally mild, with malaise, pruritus (itching), and temperature up to 102°F for 2–3 days.

Adults may have more severe disease and have a higher incidence of complications. Respiratory and gastrointestinal symptoms are absent.

Recovery from primary varicella infection usually results in lifetime immunity. In otherwise healthy persons, a second occurrence of chickenpox is not common, but it can happen, particularly in immunocompromised persons. As with other viral diseases, reexposure to natural (wild) varicella may lead to reinfection that boosts antibody titers without causing clinical illness or detectable viremia.

Recurrent Disease (Herpes Zoster): Herpes zoster, or shingles, occurs when latent VZV reactivates and causes recurrent disease. The immunologic mechanism that controls latency of VZV is not well understood. However, factors associated with recurrent disease include aging, immunosuppression, intrauterine exposure to VZV, and having had varicella at a young age (younger than 18 months). In immunocompromised persons, zoster may disseminate, causing generalized skin lesions and central nervous system, pulmonary, and hepatic involvement. The vesicular eruption of zoster generally occurs unilaterally in the distribution of a sensory nerve. Most often, this involves the trunk or the fifth cranial nerve. Two to four days prior to the eruption, there may be pain and paresthesia in the involved area. There are few systemic symptoms.

Complications of Varicella: Rare complications of varicella include aseptic meningitis, transverse myelitis, Guillain-Barré syndrome,

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Varicella Zoster Virus, Continued

Continued from page 3:
thrombocytopenia, hemorrhagic varicella, purpura fulminans, glomerulonephritis, myocarditis, arthritis, orchitis, uveitis, iritis, and hepatitis.

The risk of complications from varicella varies with age. Complications are infrequent among healthy children. They occur much more frequently in persons older than 15 years of age and infants younger than 1 year of age.

For instance, among children 1–14 years of age, the fatality rate of varicella is approximately 1 per 100,000 cases, among persons 15–19 years, it is 2.7 per 100,000 cases, and among adults 30–49 years of age, 25.2 per 100,000 cases. Adults account for only 5% of reported cases of varicella but approximately 35% of mortality.

Vaccine Recommendations

Routine varicella vaccination at 12-15 months and 2nd dose at 4-6 years. Minimum interval for children less than 13 years of age is 3 months.

Routine single zoster vaccination for adults 60 years of age and older regardless of previous zoster episode.

Complications of Zoster: Postherpetic neuralgia, or pain in the area of the occurrence that persists after the lesions have resolved, is a distressing complication of zoster. There is currently no adequate therapy available.

Postherpetic neuralgia may last a year or longer after the episode of zoster. Ocular nerve and other organ involvement with zoster can occur, often with severe sequelae.

Varicella Vaccine: Varicella virus vaccine is recommended for all children without contraindications at 12 through 15 months of age. The vaccine may be given to all children at this age regardless of prior history of varicella. However, vaccination is not necessary for children with reliable histories of chickenpox.

Breakthrough Varicella Disease: Immunity appears to be long lasting, and is probably permanent in the majority of vaccinees. However, approximately 1% of vaccines per year have developed breakthrough infections (*i.e.*, developed varicella disease even though they had responded to the vaccine).

Breakthrough infection is significantly milder, with fewer lesions (generally fewer than 50), many of which are maculopapular rather than vesicular. Most persons with breakthrough infection do not have fever.

Zoster Vaccine: Zoster vaccine is approved by FDA for persons 60 years and older. A single dose of zoster vaccine is recommended for adults 60 years of age and older whether or not they report a prior episode of herpes zoster.

If you have questions regarding either varicella or zoster vaccines please contact the Immunization Program at 1-800-831-6293.

Supply of Vaccines Containing Varicella-Zoster Virus

In February 2007, CDC received notice from Merck & Co., Inc. that, because of smaller-than-expected amounts of varicella-zoster virus (VZV) in its recently manufactured bulk vaccine, the company was prioritizing production of varicella (Varivax®) and zoster (Zostavax®) vaccines over production of MMR-V vaccine (ProQuad®).

In May 2007, CDC received further notice from Merck that current order projections indicate ProQuad will be unavailable beginning in July 2007.

Although timing will depend on market demand, there may be extensive back orders for the next few months. After depletion of the existing supply, **ProQuad will not be available for the remainder of 2007.** Merck is requesting that customers begin transitioning from ProQuad to MMR and Varivax at their earliest convenience.

Merck expects to meet demands for Varivax and MMR to fully support the recommended immunization schedule. This will allow for continued use of varicella vaccine for the following age groups: Routine 2-dose schedule for children aged 12--15 months and 4--6 years; Catch-up vaccination with the second dose for children or adolescents who received only 1 dose; Vaccination with 2 doses for other children, adolescents, and adults without evidence of immunity.

The supply of Zostavax is expected to be adequate for routine vaccination of adults aged ≥60 years. Address questions regarding the supply of these Merck products to Merck's National Service Center at 800-637-2590. Updates on vaccine shortages and delays are available from CDC at http://www.cdc.gov/nip/news/shortages/default.htm.

Pneumococcal Conjugate Vaccine Required for Entry into Licensed Child Care

House file 245 was signed by Governor Culver on March 9, 2007. This bill requires that a child show "evidence of adequate immunization against haemophilus influenza B and invasive pneumococcal disease" prior to enrollment in any licensed child care center.

The Iowa Immunization Program will collaborate with its advisory group to write Administrative Rules for this bill. Watch for new requirements to be in effect in 2008.

Invasive pneumococcal disease is important because the bacterium, *streptococcus pneumoniae,* causes acute bacterial infection. The bacterium, also called pneumococcus, was first isolated by Pasteur in 1881 from the saliva of a patient with rabies. The major clinical syndromes of pneumococcal disease are pneumonia, bacteremia, and meningitis. Efforts to develop effective pneumococcal vaccines began as early as 1911. With the advent of penicillin in the 1940s, interest in the vaccine declined, until it was observed that many patients died despite antibiotic treatment.

Bacteremia without a known site of infection is the most common invasive clinical presentation of pneumococcal infection among children 2 years of age and younger, accounting for approximately 70% of invasive disease in this age group.

Bacteremic pneumonia accounts for 12%–16% of invasive pneumococcal disease among children aged 2 years and younger.

With the decline of invasive Hib disease, S. pneumoniae has become the leading cause of bacterial meningitis among U.S. children younger than 5 years of age. Before routine use of pneumococcal conjugate vaccine, children younger than 1 year had the highest rates of pneumococcal meningitis, approximately 10 cases per 100,000 population while the burden of pneumococcal disease among children younger than 5 years of age remained significant.

An estimated 17,000 cases of invasive disease occurred each year, of which 13,000 were bacteremia without a known site of infection, and about 700 were meningitis. An estimated 200 children died each year from invasive pneumococcal disease. Although not considered an invasive disease, an estimated 5 million cases of acute otitis media occurred each year among children younger than 5 years of age.

If you have questions on this bill or the Administrative Rules process please contact Marnell Kretschmer at 1-800-831-6293, ext. 3.

Recommendations for the Routine Administration of Pneumococcal Vaccine (Pneumococcal Conjugate Vaccine - Prevnar)

- ***All children younger than 24 months of age*** and children age 24–59 months with a high-risk medical condition ***should be routinely vaccinated with PCV7.*** The primary series beginning in infancy consists of three doses routinely given at 2, 4, and 6 months of age.
- A fourth (booster) dose is recommended at 12–15 months of age.
- PCV7 should be administered at the same time as other routine childhood immunizations, using a separate syringe and injection site.
- For children younger than 12 months of age at vaccination, the minimum interval between doses is 4 weeks. Doses given at 12 months of age and older should be separated by at least 8 weeks.
- Unvaccinated children 7 months of age and older do not require a full series of four doses. The number of doses needed to complete the series depends on the child's current age. Unvaccinated children aged 7–11 months should receive two doses of vaccine at least 4 weeks apart, followed by a booster dose at age 12–15 months.
- Unvaccinated children aged 12–23 months should receive two doses of vaccine at least 8 weeks apart. Previously unvaccinated healthy children 24–59 months of age should receive a single dose of PCV7. Unvaccinated children 24–59 months of age with sickle cell disease, asplenia, HIV infection, chronic illness, cochlear implant, or immunocompromising conditions should receive two doses of PCV7 separated by at least 8 weeks.
- PCV7 is not routinely recommended for persons older than 59 months of age.

Severe Weather Events
Is Your Vaccine Supply Safe?

Floods, tornados and early spring ice storms can all have a devastating effect on resources such as power and transportation. When those resources are impacted so is normal vaccine storage and handling. Emergency plans to protect vaccine in the event of severe weather are vital.

Nationwide, the Vaccines for Children (VFC) Program maintains inventories in the field valued at over $11 billion.

To protect the national vaccine inventory and minimize potential monetary loss from natural disasters or other emergencies, immunization facilities should develop a Written Emergency Plan to safeguard vaccine inventories.

Emergency procedures should address vaccine protection and/or retrieval. When providers have reasonable cause to believe emerging conditions will disrupt vaccine operations, emergency procedures should be implemented in advance of the event.

Before the emergency, providers should identify an alternative storage facility (hospital, packing plant, state depot,) with back-up power (a generator) where the vaccine can be properly stored and monitored; insure availability of staff to pack and move the vaccine; maintain appropriate packing materials (insulated containers, ice packs, dry ice for Varicella/MMR vaccine); and insure a means of transport for the vaccine to the secure storage facility.

Whenever possible, facilities should suspend vaccination activities BEFORE the onset of emergency conditions to allow sufficient time for packing and transporting vaccine.

The Immunization Program has developed a Vaccine Storage and Handling Guidelines template, Emergency Response Plan, & Worksheet to assist your facility with the planning process. These documents are available on the Immunization Program Web page at: www.idph.state.ia.us/adper/common/pdf/immunization/storage_handling_guide.pdf)

www.idph.state.ia.us/adper/common/pdf/immunization/emergency_response.pdf

Questions? Please contact the Immunization Program at 1 -800-831-6293 ext. 2.

Useful Web Sites for Immunization Providers

Centers for Disease Control and Prevention
National Immunization Program
www.cdc.gov/nip

Iowa Immunization Program
www.idph.state.ia.us/adper/immunization.asp

The Immunization Action Coalition
www.immunize.org

Children's Hospital of Philadelphia
www.vaccine.chop.edu

American Academy of Pediatrics
www.aap.org

Every Child By Two
www.ecbt.org

Food and Drug Administration - Vaccines
www.fda.gov/cber/vaccines.htm

Immunization
You Call the Shots

You Call the Shots Training Module Hepatitis A Module is Now Available!

This web based training course is offered by the CDC at the Web page below. CEUs for nurses are available upon completion of the courses. Check it out!

Now available: Understanding the Basics: General Recommendations on Immunization, Diphtheria, Tetanus and Pertussis; Polio; HIB; and Influenza

Other modules under development include: Hepatitis B, MMR, Meningococcal, Overview of Bioterrorism, Pneumococcal, Vaccine Administration Practice, and Varicella

http://www.cdc.gov/nip/ed/youcalltheshots.htm