CITY OF PHILADELPHIA
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DISEASE CONTROL
IMMUNIZATION PROGRAM

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The Newsletter of the West Philadelphia Varicella Active Surveillance Project (VASP)

Number 21 August / September 2007

Remember to report all cases of chickenpox and shingles to VASP.

Cases can be reported by:
Phone: (215) 685-6833 / 6838 / 6869
Fax: (215) 685-6806
Email: mia.renwick@phila.gov
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For details on reporting other notifiable diseases in Philadelphia, visit: http://www.phila.gov/health/units/ddc/index.html

Continuing Education Opportunity for Healthcare Providers

Healthcare providers can receive continuing education credits for reviewing the updated ACIP Recommendations for the Prevention of Varicella.

Details regarding continuing education are included at the end of the June 22, 2007 *MMWR* report.

Your support and participation in VASP activities are greatly appreciated!

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Updated Recommendations for the Prevention of Varicella Featuring VASP Findings Now Available!

The Advisory Committee on Immunization Practices' (ACIP) updated guidelines for the prevention of varicella (chickenpox) were recently published in the June 22, 2007 issue of CDC's *Morbidity and Mortality Weekly Report (MMWR)*, making the recommendation for the universal 2-dose varicella vaccination regimen official. The 2007 report revises, updates, and replaces the previously published 1996 and 1999 ACIP reports on the prevention of varicella.

Findings from the West Philadelphia Varicella Active Surveillance Project (VASP) are featured in the report sections on Vaccine Era Varicella Epidemiology and Herpes Zoster Surveillance. Additionally, preliminary findings from the VASP Validity of Reported Varicella History as a Marker of Varicella-Zoster Virus (VZV) Immunity Study are noted in the section on Evidence of Immunity.

Contact VASP at (215) 685-6869 for copies of the report or view it online at: **http://www.cdc.gov/mmwr/PDF/rr/rr5604.pdf**

VASP would like to thank our surveillance sites in West Philadelphia and other community partners! The information you provide us continues to be vital to the evaluation of the varicella vaccination program.

Back to School…
Dose 2 Required for K - 1 Entry and Highly Recommended for Others

Starting in the 2007-2008 academic year, students in kindergarten and 1st grade (K - 1) will need to have received 2 doses of varicella (chickenpox) vaccine, laboratory confirmation of varicella-zoster virus (VZV) immunity, or a history of varicella documented by a healthcare provider to attend school in Philadelphia. The updated school entry requirements for K - 1 students reflect the Advisory Committee on Immunization Practices' (ACIP) revised criteria for VZV immunity (see Table 1, Page 2). Healthcare providers should check compliance with the new entry requirements among their patients entering grades K - 1, as well as provide catch-up 2nd doses to older students.

While the single-dose varicella vaccination program implemented in 1995 in the United States effectively reduced varicella disease among all age groups and moderate/severe disease among vaccinees, outbreaks in schools continued to occur. In response, ACIP recommended the universal 2-dose varicella vaccination schedule. The 2nd dose provides increased protection and has been shown during clinical trials to reduce varicella disease 3-fold compared to a single dose.

During 2006, 16 varicella outbreaks occurred at schools in Philadelphia involving 5 to 62 students and staff in each outbreak. Most outbreaks in 2006 involved populations having high single-dose varicella vaccine coverage, and 79% of the outbreak-related cases were single-dose recipients with breakthrough varicella infections. Among these breakthrough infections, slightly over two-thirds (68%) had mild rashes. Increasing 2-dose varicella vaccine coverage among all school students, not only children in grades K - 1, is one of our best strategies for preventing varicella outbreaks during the 2007-2008 school year.

VASP greatly appreciates your assistance in increasing 2-dose varicella vaccine coverage among your patients and ensuring your patients are compliant with immunization requirements for school entry. For all 2007-08 Immunization Requirements for School Entry in Philadelphia, visit http://webgui.phila.k12.pa.us/offices/s/oss/programs--services/-school-health-services

Some staffing changes have taken place within VASP recently. VASP would like to welcome Niya Spells and Priya Abraham to the project team. Niya is the new VASP Surveillance Assistant, and Priya has replaced Teenu Cherian as the VASP Research Assistant.

Please find updated contact information for VASP surveillance staff below:

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What You Need to Know About the New Criteria for Evidence of Immunity to VZV

The *2007 Recommendations for the Prevention of Varicella* include updated criteria for evidence of varicella-zoster virus (VZV) immunity. Healthcare providers should use the revised criteria presented in **Table 1** when screening their patients for immunity to VZV. Please note the universal 2-dose varicella vaccination regimen was incorporated as evidence of immunity. Any unvaccinated or partially vaccinated patient not meeting criteria 2-6 in **Table 1** should be offered appropriate varicella vaccination if eligible.

The Advisory Committee on Immunization Practices (ACIP) considered how the vaccination program has impacted varicella occurrence when revising the criteria for evidence of immunity. Persons born in the United States before 1980 with the exception of immunocompromised persons, healthcare workers, and pregnant women are now considered immune, since these individuals grew up in the pre-vaccine licensure era when disease incidence was high, resulting in very high VZV antibody seroprevalence among this group. To be considered immune, all others reporting past histories of disease as evidence of immunity will now need additional verification to confirm typical varicella disease, laboratory confirmation of disease, or appropriate links to other cases (**Table 1**). Some patients previously considered to have VZV immunity may now need to be offered vaccine under the revised criteria (e.g., an unvaccinated 14 year old with a reported history of mild varicella, but lacking laboratory confirmation and appropriate links to other cases). **VASP has developed a guide to assist healthcare providers with the verification of reported chickenpox histories, including questions for assessing clinical presentation. For copies, call (215) 685-6869 or visit** http://www.phila.gov/health/units/ddc/index.html

Table 1. Revised Criteria for Evidence of Immunity to Varicella-Zoster Virus (VZV) include any of the following:

1. **Documentation of age-appropriate vaccination with a varicella vaccine**
   a. Preschool-aged children (i.e., aged ≥12 months): 1 dose
   b. School-aged children, adolescents, and adults: 2 doses*
2. **Birth in the United States before 1980 with the exception of healthcare workers, immunocompromised persons, and pregnant women***
3. **Laboratory evidence of immunity** - positive VZV-specific Immunoglobulin G (IgG) antibody titer*
4. **Laboratory confirmation of disease** - any of the following VZV-specific laboratory test results:
   a. Polymerase Chain Reaction (PCR) positive
   b. Direct Fluorescence Antibody (DFA) positive
   c. Viral culture positive
   d. ≥4 fold acute to convalescent IgG titer increase
   e. Positive IgM titer (CDC National VZV Laboratory Assay Only)
5. **Diagnosis or verification of a history of varicella disease by a healthcare provider***
   a. Typical disease - generalized vesicular rash consisting of ≥250 lesions, fever, and malaise
   b. Atypical / mild disease ONLY IF:
      i. Laboratory confirmation OR
      ii. Transmission link to another typical or laboratory confirmed chickenpox case (e.g., sibling, household member, classmate, neighbor, or other close contact with chickenpox) occurring within 3 weeks of the patient's rash.
6. **Diagnosis or verification of a history of herpes zoster (shingles) by a healthcare provider**

Further details provided in the published report.

Other New and Notable Recommendations to Protect High-Risk Populations

The *2007 Recommendations for the Prevention of Varicella* advocate expanded use of the varicella vaccine among populations at high risk for severe varicella disease—older adolescents, adults including women of child-bearing age, and persons with Human Immunodeficiency Virus (HIV).

Routine vaccination of all healthy susceptible persons ≥13 years without evidence of immunity. The new recommendation expands the previous recommendation to vaccinate persons ≥13 years who lack immunity and have high risk for exposure or contact with persons at high risk for severe varicella illness.

Establishment of middle school, high school, and college entry vaccination requirements for varicella. Formal recommendations for childcare and elementary school entry requirements have been in place since 1999.

Prenatal assessment of VZV immunity and postpartum vaccination of susceptible women. Clinic staff should routinely screen pregnant women for varicella-zoster virus (VZV) immunity during initial prenatal visits. Birth in the United States before 1980 is not sufficient evidence of immunity for pregnant women. If a pregnant patient lacks other evidence of immunity (**Table 1**), 2 doses of varicella vaccine should be offered following delivery. It is recommended that the delivery hospital give the first dose and the obstetrics/gynecology clinic give the second dose at the postpartum visit 6-8 weeks after delivery.

Expanded use of the varicella vaccine for persons with HIV:

- Children with age-specific CD4+T lymphocyte percentages of 15% or higher.
- Adolescents and adults with CD4+T lymphocyte counts ≥200 cells / microliter.

ProQuad® Temporarily Unavailable

As a result of production problems, supplies of ProQuad®, the combination measles, mumps, rubella and varicella (MMRV) vaccine, were depleted in July 2007 and will most likely be unavailable through the end of the year. An updated notice to readers regarding production problems with supplies of vaccines containing varicella-zoster virus (VZV)—VARIVAX®, ZostaVax®, and ProQuad®—was posted in the May 11, 2007 edition of CDC's *Morbidity and Mortality Weekly Report*. **Please note the routine recommendations for use of VZV-containing vaccines have not changed.** Merck expects supplies of M-M-R II® and Varivax® will be adequate to fully implement the recommended immunization schedule, including the new 2-dose varicella vaccine regimen. Until further notice, Vaccines for Children (VFC) providers in Philadelphia should order MMR and varicella vaccines separately in place of MMRV vaccine.
For updates, visit: http://www.cdc.gov/vaccines/vac-gen/shortages/default.htm

VASP Study Notes…

Validity of Self-Reported Varicella Disease History in Pregnant Women Attending Prenatal Clinics
Findings from a VASP study examining the accuracy of a reported varicella history as measure of varicella-zoster virus (VZV) immunity among women attending prenatal clinics were published recently in the July/August 2007 issue of ***Public Health Reports***. Please contact VASP at (215) 685-6869 if you would like a copy of the article.

Laboratory Confirmation and Evaluation of Case Definitions for Diagnosing Breakthrough Varicella Infections
VASP presented findings from this study at the 2007 National Immunization Conference during a session on the *Changing Epidemiology and Diagnostics of Varicella in the Vaccine Era*. View presentations with audio from this session online at: http://cdc.confex.com/cdc/nic2007/techprogram/S7844.HTM