

This is an official  
**DHEC Health Alert**

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10408-DHA-04-04-2018-VZV

## **Varicella Zoster Virus (VZV) Outbreak**

### **Summary**

S.C. Department of Health and Environmental Control is investigating a varicella (chickenpox) outbreak among school aged children. Persons are being excluded from the school setting as required by the [Official School and Childcare Exclusion List of Contagious or Communicable Diseases](#). South Carolina law mandates reporting of varicella within 3 business days. Exposed individuals are being notified and may present to their health care provider for evaluation.

### **Guidance for Clinicians**

#### **Symptoms**

Symptoms of varicella include fever, tiredness, loss of appetite and headache which may occur before the classic symptom of the chickenpox rash develops. Patients are contagious from 1 to 2 days before onset of the rash until all lesions have crusted. Varicella infection can appear 10 to 21 days after exposure to the virus.

#### **Transmission and Risk Factors**

Humans are the only source of infection for this highly contagious virus. Person-to-person transmission occurs by the airborne route from direct contact with patients with varicella lesions; vesicles contain infectious virus that can be aerosolized. Transmission from infected respiratory tract secretions is possible but probably less common than from skin vesicles. The risk factors increase for getting varicella in persons who:

- Have never had chickenpox
- Unvaccinated individuals without evidence of immunity
- Household contacts to an index case

#### **Post-exposure Vaccination and Prophylaxis**

Vaccination is recommended for post-exposure administration for unvaccinated persons without evidence of immunity. Evidence of immunity to varicella includes any of the following:

- Documentation of age-appropriate varicella vaccination;
  - Preschool-age children (i.e., age 12 months through 3 years): 1 dose
  - School-age children, adolescents, adults: 2 doses

- Laboratory evidence of immunity or laboratory confirmation of disease
- Birth in the United States before 1980 (NOTE: Not evidence of immunity for health care personnel, pregnant women, and immunocompromised persons.)
- Diagnosis or verification of a history of varicella or herpes zoster by a health care provider
  - To verify a history of varicella, health care providers should inquire about:
    - an epidemiologic link to another typical varicella case or to a laboratory confirmed case, or
    - evidence of laboratory confirmation, if testing was performed at the time of acute disease
  - Persons who have neither an epidemiologic link nor laboratory confirmation of varicella should not be considered as having a valid history of disease. For these persons, a second dose of vaccine is recommended and should be given at the age-appropriate interval after the first dose. If a health care provider verifies the diagnosis based on the above criteria, then vaccination is not needed.

Varicella vaccine should be administered to healthy people without evidence of immunity who are 12 months or older, including adults, as soon as possible, preferably within 3 days and possibly up to 5 days after varicella or herpes zoster exposure, if there are no contraindications to vaccine use.

### **Varicella Vaccine Contraindications**

1. DO NOT administer Varicella vaccine to persons who have had a **SERIOUS ALLERGIC REACTION** (anaphylaxis or anaphylactic-like responses including generalized urticaria, or hives, wheezing, swelling of the mouth and throat, dyspnea, hypotension, and shock):
  - After a previous dose of the vaccine
  - To any components of the vaccine (e.g., gelatin or neomycin)
2. DO NOT administer Varicella or MMRV vaccine to pregnant women or to women who may become pregnant within 1 month.
3. DO NOT administer Varicella or MMRV vaccine to persons with immunosuppression due to:
  - Leukemia
  - Generalized malignancy
  - Immune deficiency disease
  - Immunosuppressive therapy (e.g., two weeks or more of daily receipt of 20 mg or more [or 2 mg/kg body weight or more] of prednisone or equivalent or receipt of chemotherapy)

## **Precautions**

As with other vaccines, varicella and MMRV vaccines should not be administered to persons with moderate to severe acute illness, with or without fever. Health care providers should determine the risk/benefit of varicella vaccination for the following persons:

- Persons with HIV infection
- Persons with receipt of antibody-containing blood products (within the previous 11 months – specific interval depends on the product)

The risk/benefit should be determined with administering the MMRV vaccine for the following persons:

- Persons with HIV infection
- Persons with history of thrombocytopenia or thrombocytopenic purpura
- Persons with personal or family (i.e., sibling or parent) history of seizures of any etiology
- Persons with receipt of antibody-containing blood products (within the previous 11 months – specific interval depends on the product)

## **Testing**

Clinical diagnosis is becoming more challenging because fewer people get chickenpox and chickenpox in vaccinated people is often mild and atypical in presentation. Therefore, laboratory confirmation is increasingly important in routine clinical practice. Vesicular fluid or a scab can be used to identify VZV using a polymerase chain reaction (PCR) test, which currently is the diagnostic method of choice.

## **Treatment**

The decision to use antiviral therapy and the route and duration of therapy should be determined by specific host factors, extent of infection, and initial response to therapy. Antiviral drugs have a limited window of opportunity to affect the outcome of VZV infection. Oral acyclovir or valacyclovir are not recommended for routine use in otherwise healthy children with varicella.

Oral acyclovir or valacyclovir should be considered for otherwise healthy people at increased risk of moderate to severe varicella, such as unvaccinated people older than 12 years, people with chronic cutaneous or pulmonary disorders, people receiving long-term salicylate therapy, and people receiving short, intermittent, or aerosolized courses of corticosteroids.

## **Control Measures**

Inform patients with suspected chickenpox to stay at home and avoid close contact with others until all lesions have crusted over, or in immunized people without crusts, until no new lesions appear within a 24-hour period. Patients may return to school or workplace after lesions have crusted. Vaccination is the best protection against chickenpox.

For questions about testing and reporting cases, contact your Regional Public Health Department that is local to your facility.

## **Resources for Additional Information**

DHEC: Varicella (Chicken Pox)

<http://www.scdhec.gov/Health/DiseasesandConditions/InfectiousDiseases/Viruses/ChickenPox/>

Immunization Education & Training <https://www.cdc.gov/vaccines/ed/youcalltheshots.html>

Varicella Vaccination Information for Healthcare Professionals  
<https://www.cdc.gov/vaccines/vpd/varicella/hcp/index.html>

## DHEC contact information for reportable diseases and reporting requirements

Reporting of **Varicella** is consistent with South Carolina Law requiring the reporting of diseases and conditions to your state or local public health department. (State Law # 44-29-10 and Regulation # 61-20) as per the DHEC 2018 List of Reportable Conditions available at:  
<http://www.scdhec.gov/Library/CR-009025.pdf>

Federal HIPAA legislation allows disclosure of protected health information, without consent of the individual, to public health authorities to collect and receive such information for the purpose of preventing or controlling disease. (HIPAA 45 CFR §164.512).

<b>Regional Public Health Offices – 2018</b>			
Mail or call reports to the Epidemiology Office in each Public Health Region			
<b>MAIL TO:</b>			
<b>Lowcountry</b> 4050 Bridge View Drive, Suite 600 N. Charleston, SC 29405 Fax: (843) 953-0051	<b>Midlands</b> 2000 Hampton Street Columbia, SC 29204 Fax: (803) 576-2993	<b>Pee Dee</b> 145 E. Cheves Street Florence, SC 29506 Fax: (843) 661-4859	<b>Upstate</b> 200 University Ridge Greenville, SC 29602 Fax: (864) 282-4373
<b>CALL TO:</b>			
<b>Lowcountry</b> <b>Berkeley, Charleston, Dorchester</b> Phone: (843) 953-0043 Nights/Weekends: (843) 441-1091  <b>Beaufort, Colleton, Hampton, Jasper</b> Phone: (843) 549-1516 ext. 218 Nights/Weekends: (843) 441-1091  <b>Allendale, Bamberg, Calhoun, Orangeburg</b> Phone: (803) 268-5833 Nights/Weekends: (843) 441-1091	<b>Midlands</b> <b>Kershaw, Lexington, Newberry, Richland</b> Phone: (803) 576-2749 Nights/Weekends: (888) 801-1046  <b>Chester, Fairfield, Lancaster, York</b> Phone: (803) 286-9948 Nights/Weekends: (888) 801-1046  <b>Aiken, Barnwell, Edgefield, Saluda</b> Phone: (803) 642-1618 Nights/Weekends: (888) 801-1046	<b>Pee Dee</b> <b>Chesterfield, Darlington, Dillon, Florence, Marlboro, Marion</b> Phone: (843) 661-4830 Nights/Weekends: (843) 915-8845  <b>Clarendon, Lee, Sumter</b> Phone: (803) 773-5511 Nights/Weekends: (843) 915-8845  <b>Georgetown, Horry, Williamsburg</b> Phone: (843) 915-8804 Nights/Weekends: (843) 915-8845	<b>Upstate</b> <b>Anderson, Oconee</b> Phone: (864) 260-5581 Nights/Weekends: (866) 298-4442  <b>Abbeville, Greenwood, McCormick</b> Phone: (864) 260-5581 Nights/Weekends: (866) 298-4442  <b>Cherokee, Greenville, Laurens, Pickens, Spartanburg, Union</b> Phone: (864) 372-3133 Nights/Weekends: (866) 298-4442
<b>For information on reportable conditions, see</b> <a href="http://www.scdhec.gov/Health/FHPP/ReportDiseasesAdverseEvents/ReportableConditionsInSC/">http://www.scdhec.gov/Health/FHPP/ReportDiseasesAdverseEvents/ReportableConditionsInSC/</a>		<b>DHEC Bureau of Disease Control</b> <b>Division of Acute Disease Epidemiology</b> 2100 Bull St • Columbia, SC 29201 Phone: (803) 898-0861 • Fax: (803) 898-0897 Nights / Weekends: 1-888-847-0902	

Categories of Health Alert messages:

<b>Health Alert</b>	Conveys the highest level of importance; warrants immediate action or attention.
<b>Health Advisory</b>	Provides important information for a specific incident or situation; may not require immediate action.
<b>Health Update</b>	Provides updated information regarding an incident or situation; unlikely to require immediate action.
<b>Info Service</b>	Provides general information that is not necessarily considered to be of an emergent nature.