

## Health Advisory

### Varicella Updates: Testing, Reporting, and Treatment January 5, 2026

#### SUMMARY POINTS

- Consider acute varicella (chickenpox) in individuals presenting with generalized vesicular rash.
- Collect a swab of lesion fluid from all patients with suspected chickenpox and send for varicella-zoster virus (VZV) PCR/NAAT.
- Provide appropriate PEP and treatment to people exposed to varicella or at high risk of severe disease, including healthy adults and adolescents.
- Call PDPH at 215-685-6748 to report suspected, probable, and confirmed cases.

#### Background:

The Philadelphia Department of Public Health (PDPH) has recently identified a small but notable increase in reported, unvaccinated varicella (chickenpox) cases among children compared with activity since 2020 when declines in varicella activity and daycare/school outbreaks occurred as a result of COVID-19 mitigation strategies. The recent increase includes outbreaks at 2 schools in the City. PDPH is sharing reminders on the clinical recognition, management, control, and prevention of varicella.

Acute varicella, or chickenpox, is a contagious, acute viral illness that causes a generalized pruritic, erythematous vesicular rash. Illness often begins with a mild prodrome of fever and malaise. In children, rash may be the first sign of illness. In unvaccinated individuals, varicella rash progresses rapidly from macular to papular to vesicular lesions before crusting. There are usually 250-500 lesions on the body in various stages. Vaccinated people usually have no prodrome and milder disease with fewer than 50 lesions. People are contagious from 2 days before the rash starts, until all lesions are crusted. Vaccinated people with mild breakthrough disease are less contagious than those who are unvaccinated. Varicella is spread through inhalation of aerosols from vesicular fluid of skin lesions and direct contact with skin lesions of someone with acute varicella or zoster. Spread from oropharyngeal secretions from a person with varicella may also occur but to a lesser extent. The incubation period ranges from 10 to 21 days, with an average of 14 to 16 days. Individuals who become infected from a contact at home often have more severe disease than the index case.

Prior to the introduction of varicella vaccine, 4 million people were infected with varicella each year, 10,500-13,500 were hospitalized, and 100-150 people died annually.

#### Reporting and Testing Patients with Suspected Chickenpox:

- Testing is encouraged for all suspected cases of chickenpox as well as shingles.
- Specimens for VZV PCR/NAAT should be sent to commercial and clinical laboratories.
- Providers should collect a swab of the lesion for VZV PCR/NAAT. Use a sterile needle to unroof the top of the vesicle. Use a flock-tipped plastic shaft swab to vigorously rub the base of the lesion to collect infected epithelial cells. Both vesicular lesions and scabs from crusted lesions will yield virus.
- Place in viral transport media or universal transport media, as required by the lab.
- Swabs used are the same type as swabs used for collection of HSV PCR, respiratory viral panels, and COVID tests.
- Other specimen types may be appropriate in certain situations in addition to VZV PCR/NAAT, and providers should refer to laboratory instructions.
- Instruct patients to stay home while awaiting results.

- Report suspected, probable, and confirmed cases to PDPH by calling 215-685-6748. Please leave a message after hours, on weekends and holidays. Varicella cases related to a congregate setting, such as a shelter, can be reported after hours, on weekends and on holidays to 215-686-4514 (press 1 for Unified Dispatch and ask for the Division of Disease Control On-Call Staff). Healthcare facilities that are located outside of Philadelphia should contact their local health departments or PADOH to coordinate testing.

**Post-exposure Prophylaxis (PEP):**

- Varicella vaccine should be administered to non-immune people without contraindications within 5 days of exposure.
- Varicella-zoster immune globulin (VariZIG) is recommended for non-immune people with exposures to varicella who are at high risk for severe varicella and who cannot receive varicella vaccine, including pregnant people, immunocompromised people, and in some cases, newborns.
- PEP with oral acyclovir or valacyclovir can be provided for immunocompromised patients not receiving VariZIG and considered for healthy adolescents and adults without immunity starting day 7 after exposure and continuing for 7 days.

**Treatment:**

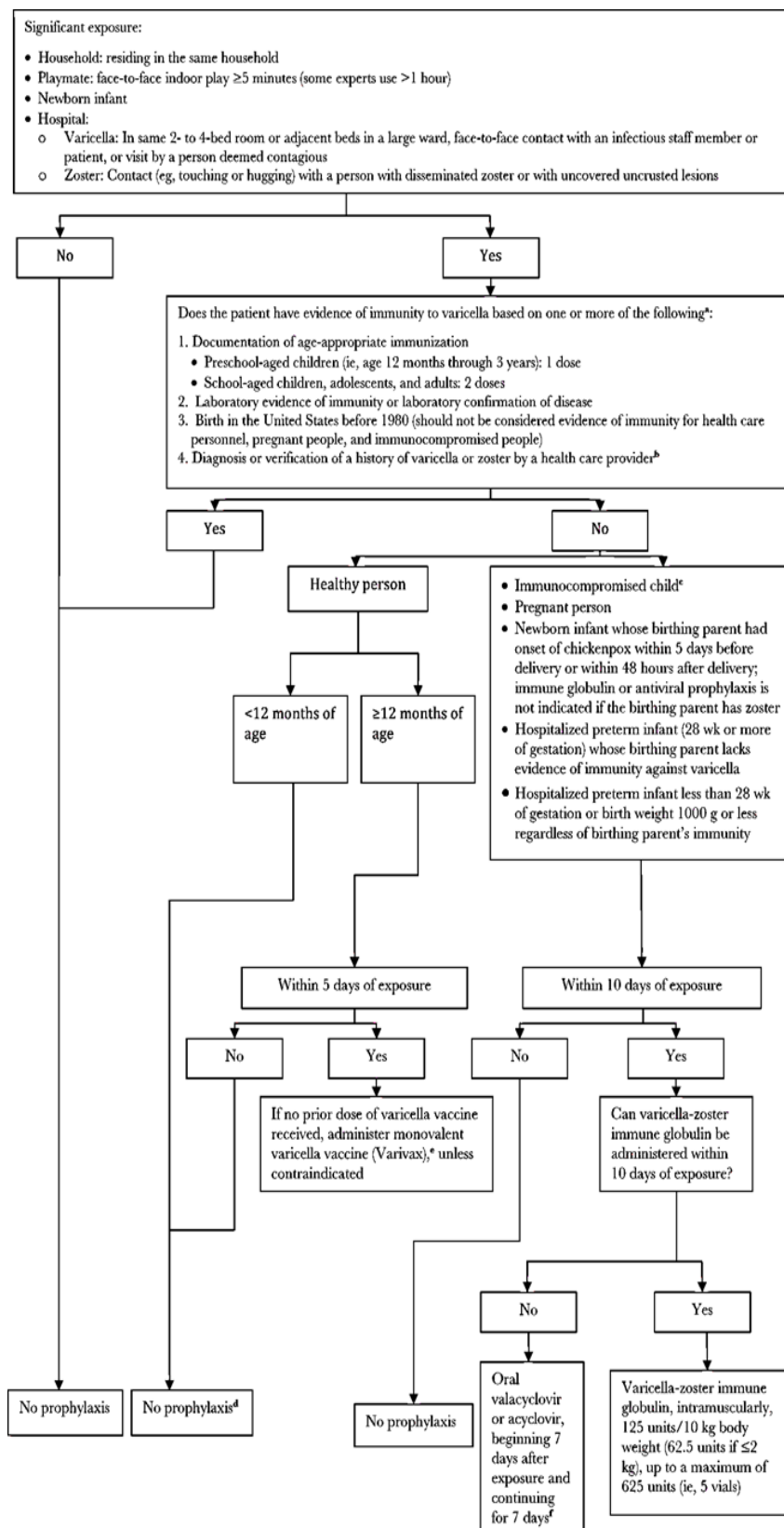
- For patients with varicella, treatment with antiviral therapy should be considered for those at increased risk of moderate to severe disease, including:
  - Unvaccinated adolescents and adults over 12 years of age
  - People with chronic cutaneous or pulmonary disorders
  - Immunocompromised people (IV therapy may be needed)
  - Secondary household cases
  - Children with immunocompromised household contacts
- Treatment works best if started within 24 hours of rash onset but may have a benefit within 72 hours of rash onset, or later in the case of immunocompromised individuals.

**Vaccination:**

- Administer routine (dose 1: 12–15 months, dose 2: 4–6 years) and catch-up vaccination with single antigen varicella vaccine or MMRV as appropriate.
- Varicella vaccine can be used for PEP in people without contraindications and without 2 prior doses of vaccine or prior infection.

**Infection Prevention and Control:**

- Maintain a high suspicion for varicella in individuals who present with varicella symptoms, particularly if the patient reports a recent exposure to someone with chickenpox or shingles.
- Create triage policies to quickly identify and isolate patients who could have varicella, including questions about recent chickenpox or shingles exposures and school outbreaks.
- Follow infection prevention and control recommendations.
- Immediately place individuals who may have varicella in airborne infection isolation rooms (AIIR), since varicella spreads between rooms through shared airspace. If an AIIR isn't available, the patient should be placed in a single room with the door closed and must mask until they can be placed in an AIIR.
- All staff should don an N95 respirator. Use other personal protective equipment (PPE) as needed for specific tasks and conduct hand hygiene before donning PPE and after doffing PPE.
- Maintain documentation of varicella immunity for healthcare workers and other employees to ensure continuity of operations after an exposure.
- Individuals with varicella can end isolation and return to daily activities, including work and school, when all lesions have crusted and no new lesions have appeared for 24 hours.



**Figure Legend:**

- IGIV indicates immune globulin intravenous.

<sup>a</sup> People who receive hematopoietic cell transplants should be considered nonimmune regardless of previous history of varicella disease or varicella vaccination in themselves or in their donors.

<sup>b</sup> To verify a history of varicella in an immunocompromised child, 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. Immunocompromised children who have neither an epidemiologic link nor laboratory confirmation of varicella should not be considered as having a valid history of disease.

<sup>c</sup> Immunocompromised children include those with congenital or acquired T-lymphocyte immunodeficiency, including leukemia, lymphoma, and other malignant neoplasms affecting the bone marrow or lymphatic system; children receiving immunosuppressive therapy, including ≥2 mg/kg/day of systemic prednisone (or its equivalent) for ≥14 days, and certain biologic response modifiers; all children with human immunodeficiency virus (HIV) infection regardless of CD4+ T-lymphocyte percentage; and all hematopoietic cell transplant patients regardless of pretransplant immunity status.

<sup>d</sup> If the exposed person is an adolescent or adult, has chronic illness, or there are other compelling reasons to try to avert varicella, some experts recommend preemptive therapy with oral valacyclovir or acyclovir (see Chemoprophylaxis, below, for dosing). For exposed people ≥12 months of age, vaccination is recommended for protection against subsequent exposures.

<sup>e</sup> If 1 prior dose of varicella vaccine has been received, a second dose should be administered at ≥4 years of age. If the exposure occurred during an outbreak, a second dose is recommended for preschool-aged children younger than 4 years for outbreak control if at least 3 months have passed after the first dose.

<sup>f</sup> See Chemoprophylaxis, below, for dosing. If varicella-zoster immune globulin and either valacyclovir or acyclovir are not available, IGIV may be administered (400 mg/kg).