

2023 Jamestown Canyon Virus in Pennsylvania

DATE:	7/18/2023
TO:	Health Alert Network
FROM:	Debra L. Bogen, MD, FAAP, Acting Secretary of Health
SUBJECT:	2023 Jamestown Canyon Virus in Mosquitoes in Pennsylvania
DISTRIBUTION:	Statewide
LOCATION:	Statewide
STREET ADDRESS:	n/a
COUNTY:	n/a
MUNICIPALITY:	n/a
ZIP CODE:	n/a

This transmission is a “Health Advisory,” and provides important information for a specific incident or situation; may not require immediate action.

HOSPITALS: PLEASE SHARE WITH ALL MEDICAL, PEDIATRIC, NURSING AND LABORATORY STAFF IN YOUR HOSPITAL; **EMS COUNCILS:** PLEASE DISTRIBUTE AS APPROPRIATE; **FQHCs:** PLEASE DISTRIBUTE AS APPROPRIATE **LOCAL HEALTH JURISDICTIONS:** PLEASE DISTRIBUTE AS APPROPRIATE; **PROFESSIONAL ORGANIZATIONS:** PLEASE DISTRIBUTE TO YOUR MEMBERSHIP; **LONG-TERM CARE FACILITIES:** PLEASE SHARE WITH ALL MEDICAL, INFECTION CONTROL, AND NURSING STAFF IN YOUR FACILITY

SUMMARY

- Pennsylvania’s first Jamestown Canyon virus (JCV) positive mosquito pools were identified in Lackawanna and Luzerne counties in June 2023.
- Health care providers should have a heightened clinical suspicion for JCV virus infection in persons with clinically compatible symptoms (similar to West Nile and Powassan virus).
- For questions, please call your local health department or DOH at 1-877-PA-HEALTH.

On June 6, the first Jamestown Canyon virus (JCV) positive mosquito pools were collected in Pennsylvania in Lackawanna and Luzerne counties by the Pennsylvania Department of Environmental Protection mosquito surveillance program. These results were confirmed by the Centers for Disease Control and Prevention (CDC). Since testing mosquito pools for JCV began in 2022, these are the first in Pennsylvania to be identified. The first mosquito positive pools indicate JCV is circulating in Pennsylvania and infection in residents is possible.

EPIDEMIOLOGY OF JAMESTOWN CANYON VIRUS INFECTIONS IN PENNSYLVANIA

Since 2003, there has been one human JCV case in Pennsylvania, which was reported in 2013. JCV can be spread by many types of mosquitoes, depending on location and time of year. Mosquitoes become infected when they feed on deer or other animals that have the virus in their blood. Infected mosquitoes can then spread the virus to people and other animals by biting them.

Many people infected with JCV do not have symptoms. For people with symptoms, the time from the mosquito bite to feeling sick ranges from a few days to two weeks. Initial symptoms can include fever, fatigue, headache, cough, sore throat, or runny nose. More severe symptoms can include encephalitis, meningitis, stiff neck, confusion, loss of coordination, difficulty speaking, or

seizures. In general, about half of patients reported with JCV are hospitalized, and deaths associated with this virus are rare. Between 2011–2022, 281 JCV cases were reported in the U.S. from 23 states ([CDC data on JCV can be found here](#)). Few persons in Pennsylvania are tested for JCV; therefore, case counts may be underreported.

WHEN TO CONSIDER JAMESTOWN CANYON VIRUS TESTING FOR YOUR PATIENT

The Pennsylvania Department of Health (DOH) reminds health care providers to:

- consider testing for arboviral infections in persons presenting with undifferentiated febrile illness or signs of meningoencephalitis,
- ask about recent travel history and recent mosquito bite exposures, and
- collect appropriate diagnostic specimens.

All arbovirus infections (e.g., infections due to Jamestown Canyon virus, West Nile, dengue, chikungunya, Zika, Powassan, etc.) are reportable to DOH within 24 hours of diagnosis in Pennsylvania.

For more guidance on JCV and other arboviruses go to the “[2023 Pennsylvania West Nile and Other Arbovirus Testing Guidance](#)” document found on the [DOH Vectorborne webpage](#).

All specimens submitted for JCV and other arboviruses (such as West Nile, Eastern equine encephalitis, St. Louis encephalitis, La Crosse encephalitis virus, Powassan, Heartland, or Bourbon viruses) must be sent to DOH Bureau of Laboratories (BOL), along with the submission form completely filled out. For specimen instructions and form, go to the [DOH BOL](#) webpage and fill out the [Arbovirus testing form](#).

DIAGNOSIS OF JAMESTOWN CANYON VIRUS INFECTIONS

Diagnosis is usually made by serology, typically by a Jamestown Canyon virus-specific (Ig) M test followed by a confirmatory plaque reduction neutralization test (PRNT). However, it is not known how long IgM antibodies can be detected in serum following a JCV virus infection; therefore, a positive IgM antibody test may reflect past infection.

There are no JCV vaccines available and treatment of JCV disease is supportive only. Patients with severe meningeal symptoms often require pain control for headaches and antiemetic therapy and rehydration for associated nausea and vomiting. Patients with encephalitis require close monitoring for the development of elevated intracranial pressure, seizures, and inability to protect their airway. For more information on JCV, go to the [CDC JCV website](#).

For questions, please call your local health department or DOH at 1-877-PA HEALTH.

Categories of Health Alert messages:

Health Alert: conveys the highest level of importance; warrants immediate action or attention.

Health Advisory: provides important information for a specific incident or situation; may not require immediate action.

Health Update: provides updated information regarding an incident or situation; unlikely to require immediate action.

This information is current as of July 18, 2023 but may be modified in the future.