

July 27, 2022

Health Alert Notice for District of Columbia Health Care Providers
Human Parechovirus (PeV)

SUMMARY

The Centers for Disease Control and Prevention (CDC) announced on July 12, 2022, that parechovirus (PeV) is currently circulating in the United States. Parechoviruses are a group of viruses known to cause a spectrum of disease in humans. Since May 2022, the CDC has received reports from healthcare providers in multiple states of PeV infections occurring in neonates and young infants. Since there is no systematic surveillance for PeV in the United States, it is unknown how the number of reported cases compares to previous years. Since PeV testing has become more widely available in recent years, it is possible that the increased number of reported cases reflects increased testing.

Since May 2021, there have been a total of 6 confirmed cases of PeV in District of Columbia (DC) residents. Reported cases have been mild to moderate in severity with ages ranging from a few days to several months old. Presenting symptoms included a fever above 100.4 °F, tachycardia, fussiness or irritability, lethargy, poor feeding, and/or mild diarrhea. The average hospital stay was 2-3 days with supportive care prior to discharge home. Clinicians are encouraged to include PeV in the differential diagnoses of neonates and infants presenting with fever, sepsis-like syndrome, or neurologic illness (seizures, meningitis) without another known cause and to test for PeV in children with signs and symptoms compatible with PeV infection (see below). Commercial laboratory assays and multiplex platforms for meningitis and encephalitis are available to test cerebrospinal fluid (CSF) for PeV. To date, all PeV positive specimens tested and typed at the CDC were type PeV-A3.

BACKGROUND

Human parechoviruses (PeVs), members of the *Picornaviridae* family, share the same taxonomic family with enteroviruses. PeVs are non-enveloped RNA viruses. Only one of the four known species of PeV, PeV-A, is known to cause disease in humans (primarily children) with clinical manifestations ranging from asymptomatic or mild symptoms to severe illness. Most children have been infected with PeV by the time they start kindergarten. Common symptoms in children between 6 months and 5 years include upper respiratory infection, fever, and rash. More severe illness including sepsis-like symptoms, seizures, and meningitis or meningoencephalitis can occur in infants less than 3 months with highest risk to neonates, however, long-term neurodevelopmental outcomes are rare. Examination of CSF often has few or no white blood cells. Of the known types of PeV-A, type 3 (PeV-A3) has most often been associated with severe disease. PeVs are widespread and circulate worldwide. Like enteroviruses, some PeV types circulate more in the summer and fall. PeV-A3 demonstrates a cyclical pattern with peaks occurring biennially. No specific therapeutics for PeV exist so treatment of PeV infections is supportive care.

The incubation period for PeV is unknown and transmission can occur via the fecal-oral and respiratory routes in both symptomatic and asymptomatic individuals. Viral shedding can occur from the upper respiratory tract from 1-3 weeks and the gastrointestinal tract for up to 6 months after infection.

RECOMMENDATIONS FOR CLINICIANS

- Be aware that PeVs commonly circulate in the summer and fall. Consider PeV infection in a neonate or infant presenting with fever, sepsis-like syndrome, or signs of neurologic illness, in the absence of an identified pathogen,
- Become familiar with your laboratory's specimen collection, storage, and shipping procedures. Testing for PeV is available at commercial clinical laboratories. Hospitals may use multiplex meningitis and encephalitis panels for CSF testing that include PeV.
- In the hospital, consider cohorting infants with PeV infection to avoid healthcare-associated transmission in nurseries or neonatal intensive care units.

- Use [Contact, Droplet, and Standard Precautions](#). In most clinical situations, alcohol-based hand sanitizer (ABHS) with an alcohol content of at least 60% is preferred for cleaning hands. Although non-enveloped viruses like PeV may be less susceptible to alcohol than enveloped viruses, ABHS may offer the benefits of improved skin tolerance and overall compliance. However, hands should be washed with soap and water after patient care involving diapering or toileting, before eating or feeding, and if hands are visibly soiled (e.g., dirt, blood, body fluids).
- For more information about general infection control practices see:
 - *Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings –Recommendations of the HICPAC* (Healthcare Infection Control Practices Advisory Committee) at cdc.gov/hicpac/recommendations/core-practices.html
 - *Transmission Based Precautions* at cdc.gov/infectioncontrol/basics/transmission-based-precautions.html

Reporting to DC Health

- **Please notify DC Health about confirmed PeV cases by emailing doh.epi@dc.gov AND** submitting a Notifiable Disease and Condition Case Report Form online at dccovid.force.com/provider/s/login.
- DC Health will reach out for additional information and coordinate sample sequencing with CDC as needed.

REFERENCES

- Abedi GR, Watson JT, Nix WA, Oberste MS, Gerber SI. Enterovirus and Parechovirus Surveillance — United States, 2014–2016. *MMWR Morb Mortal Wkly Rep* 2018;67:515–518. DOI: dx.doi.org/10.15585/mmwr.mm6718a2
- Center for Preparedness and Response (CPR). (2022). *Recent reports of human parechovirus (PeV) in the United States—2022*. Centers for Disease Control and Prevention (CDC) Health Alert Network (HAN). emergency.cdc.gov/han/2022/han00469.asp
- Chapter 170: *Introduction to the Enteroviruses and Parechoviruses* and Chapter 172: *Coxsackieviruses, Echoviruses, Newer Enteroviruses, and Parechoviruses-* in Mandell, Douglas and Bennett’s *Principles and Practice of Infectious Diseases*, 7th edition, 2010.

**For more information, or to report PeV cases, please contact the
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