

SYNOPSIS

03/17/2020

Review of “Detection of COVID-19 in children in early January 2020 in Wuhan, China”

Article citation: Liu W, Zhang Q, Chen J, Xiang R, Song H, Shu S, et al. Detection of COVID-19 in children in early January 2020 in Wuhan, China. *N Engl J Med*. 2020 Mar 12 [Epub ahead of print]. Available from: <https://www.nejm.org/doi/full/10.1056/NEJMc2003717>

One-Minute Summary

- The authors performed a **retrospective analysis of 366 hospitalized pediatric cases with respiratory infections** in Wuhan, China.
- The previously healthy pediatric patients (≤ 16 years) were admitted to any one of three branches of Tongji Hospital (Central Wuhan) from January 7 to January 15, 2020.
- **Throat swabs** collected on admission were tested by real-time PCR for a suite of viral pathogens, including coronavirus disease 2019 (COVID-19).
 - The **most common** pathogens detected were **influenza A** (6.3%; 23/366), **influenza B** (5.5%; 20/366), **adenovirus** (4.4%; 16/366) and enterovirus (4.1%; 15/366).
 - **COVID-19 was detected in 1.6% (6/366) of patients.**
- Symptom onset to hospitalization for COVID-19 cases ($n=6$) **ranged from three to five days.**
 - The **median age was 3 years** (range 1 to 7 years).
 - Common clinical signs and symptoms: fever $>39^{\circ}\text{C}$ (100%; 6/6), cough (100%; 6/6), swollen tonsils (100%; 6/6), pharyngeal congestion (83.3%; 5/6) and vomiting (66.7%; 4/6).
 - **Pneumonia was demonstrated by CT in 4/6 (66.7%) patients.**
 - **One patient (16.7%) was admitted to the pediatric intensive care unit.**
 - **All patients recovered** (duration of hospitalization: median of 7.5 days; range 5-13).
- The study demonstrates that pediatric COVID-19 cases, with moderate to severe illness, were occurring in the early stages of the epidemic.

Additional Information

- None of the patients nor their family members reported direct exposure to the Huanan Seafood Market.
- **One patient resided outside of Wuhan** and had not travelled outside of her city in the month prior to symptom onset. The source of infection for this patient remains unknown.

PHO Reviewer’s Comments

- The sample size for pediatric COVID-19 patients was low; therefore, clinical findings may not be generalizable to all pediatric patients.
- Supplementary data included summary of clinical laboratory results, temporal patterns of cases and key events, geographic locations of the hospitals, and chest CT scan images.

Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Review of “Detection of COVID-19 in children in early January 2020 in Wuhan, China”. Toronto, ON: Queen’s Printer for Ontario; 2020.

Disclaimer

This document was developed by Public Health Ontario (PHO). PHO provides scientific and technical advice to Ontario’s government, public health organizations and health care providers. PHO’s work is guided by the current best available evidence at the time of publication.

The application and use of this document is the responsibility of the user. PHO assumes no liability resulting from any such application or use.

This document may be reproduced without permission for non-commercial purposes only and provided that appropriate credit is given to PHO. No changes and/or modifications may be made to this document without express written permission from PHO.

Public Health Ontario

Public Health Ontario is a Crown corporation dedicated to protecting and promoting the health of all Ontarians and reducing inequities in health. Public Health Ontario links public health practitioners, front-line health workers and researchers to the best scientific intelligence and knowledge from around the world.

For more information about PHO, visit publichealthontario.ca.

