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SYNOPSIS

04/02/2020

Review of "Asymptomatic and presymptomatic SARS-CoV-2 infections in residents in a long-term care skilled nursing facility – King County, Washington, March 2020"

Article citation: Kimball A, Hatfield KM, Arons M, James A, Taylor J, Spicer K, et al. Asymptomatic and presymptomatic SARS-CoV-2 infections in residents of a long-term care skilled nursing facility — King County, Washington, March 2020. MMWR Morb Mortal Wkly Rep. 2020 Mar 27 [Epub ahead of print]. Available from: https://www.cdc.gov/mmwr/volumes/69/wr/mm6913e1.htm?s_cid=mm6913e1_&deliveryName=USCDC_921-DM24113

One-Minute Summary

- This study reports the prevalence of asymptomatic and pre-symptomatic coronavirus disease 2019 (COVID-19) outcomes in a long-term care skilled nursing facility in King County, Washington, 16 days after a health care worker worked at the facility while symptomatic.
- 76/82 (93%) of residents were assessed for symptoms (e.g., fever, cough, shortness of breath). These residents were also tested for COVID-19 (regardless of symptoms) using reverse-transcriptase PCR. Of these, 23 (30%) were positive.
- **Of the 23 residents that tested positive for COVID-19, 10 (43%) had symptoms, and 13 (57%) were asymptomatic on the day of testing.**
    - Seven days after testing, 10 of the 13 previously asymptomatic residents developed symptoms upon re-evaluation and were re-categorized as pre-symptomatic on the day of testing, bringing the **proportion of asymptomatic infections down to 3/23 (13%).**
- Cycle threshold (Ct) values among residents with COVID-19 indicated large quantities of viral RNA in asymptomatic (21.9 to 31.0), pre-symptomatic (15.3 to 37.9), and symptomatic (typical symptoms: 18.6 to 29.2; atypical symptoms only: 24.3 to 26.3) residents, **with no significant differences between the mean Ct values in the four symptom status groups (p = 0.3).**
- Symptom screening initially failed to identify approximately half of residents with COVID-19.
- Asymptomatic and pre-symptomatic infections likely contribute to transmission in these settings.

Additional Information

- Of the 82 residents, 3 (4%) refused testing, 2 (2%) with COVID-19 symptoms were transferred to a hospital before testing, and 1 (1%) was unavailable.
- The demographic characteristics between those who initially tested positive and negative for COVID-19 were similar.

- Limitations include: challenges associated with accurate symptom ascertainment in persons with cognitive impairment and other disabilities, and results are limited to residents of a nursing home facility and may not apply to the general population.
- The authors recommend that once a confirmed case is identified in a nursing home facility, all residents should be placed on isolation precautions if possible, with considerations for extended use or reuse of personal protective equipment, as needed.

PHO Reviewer's Comments

- None

Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Review of "Asymptomatic and presymptomatic SARS-CoV-2 infections in residents of a long-term care skilled nursing facility — King County, Washington, March 2020". Toronto, ON: Queens's Printer for Ontario; 2020.

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