

SYNOPSIS

02/25/2020

Review of “Potential presymptomatic transmission of SARS-CoV-2, Zhejiang Province, China, 2020”

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One-Minute Summary

- This study reports on a **two-family cluster** of persons infected with SARS-CoV-2 in Zhoushan, Zhejiang Province, China.
- The index patient (person W) was a 45-year-old male who arrived from Wuhan on January 5, 2020 for an academic conference and had dinner with two colleagues (Persons A and D, males age 29 and 42 years, respectively) on January 6, 2020 using shared plates.
- Person W returned to Wuhan on January 7, 2020. He developed fever, cough, sore throat and malaise on January 8, 2020. He reported to hospital and was confirmed to have COVID-19.
- Persons A and D had **no other known potential exposure to COVID-19**. They were both found to be positive for COVID-19 on January 19, 2020 following several days of illness.
- Persons A and D each transmitted COVID-19, confirmed by reverse transcriptase (RT)-PCR, to one and two close family members, respectively. **The family members remain asymptomatic at the time of publication.**
- The authors hypothesize that infections in persons A and D resulted from **transmission from person W while he was presymptomatic.**

Additional Information

- Person A, 29-year-old male, developed symptoms of fever and cough on January 10 (four days after last exposure to person W), but was not tested for COVID-19 until nine days after symptom onset.
 - Person A lived with his 28-year-old wife and 21-year-old sister. Both were confined to home starting on the day of his admission to hospital. Both remain asymptomatic. His wife tested positive for COVID-19 on January 20. His sister tested negative on January 21, 2020, but the study does not report whether she was subsequently tested again.
- Person D, 42-year-old male, developed fever, cough and myalgia on January 12 (six days after last exposure to person W), but was not tested for COVID-19 until seven days after symptom onset, upon learning that person A had tested positive.

- Person D lived with his 41-year-old wife and 12-year-old son. Both were confined to home on the day of Person D's hospital admission. Testing on January 21 confirmed both to be positive for COVID-19. Both remain asymptomatic.
- On January 20, a phone interview was conducted with person W. He denied any prodromal symptoms on January 6, the night he dined with his colleagues; however, the authors note that Person W might not have accurately recalled his symptoms from 14 days prior.
- The authors note that limitations of this study include that asymptomatic patients may have failed to report mild symptoms and that other exposures for persons A and D cannot be ruled out.

PHO Reviewer's Comments

- Of the three family members of persons A and D with asymptomatic infection, two (the wives of persons A and D) had two sequential negative RT-PCR tests, indicating that their illness had resolved; however, the third family member (the 12-year-old son of person D) had three positive tests and no negative tests were reported. It is unknown whether he continued to be asymptomatic or whether he developed symptoms after this case report was submitted to the journal.

Citation

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