

The Centre for Evidence-Based Medicine

Evidence Service to support the COVID-19 response



Infectivity of Asymptomatic SARS-CoV-2 Carriers

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COVID-19: Infectivity of asymptomatic SARS-CoV-2 carriers.
Jefferson T, Spencer EA, Heneghan C.

<https://www.cebm.net/study/covid-19-infectivity-of-asymptomatic-sars-cov-2-carriers/>

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Included in [Transmission Dynamics of COVID-19](https://www.cebm.net/evidence-synthesis/transmission-dynamics-of-covid-19/) [https://www.cebm.net/evidence-synthesis/transmission-dynamics-of-covid-19/].

Reference	Gao M, Yang L, Chen X, et al. A study on infectivity of asymptomatic SARS-CoV-2 carriers [published online ahead of print, 2020 May 13]. Respir Med;169:106026.[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7219423/] 2020
Study type	
Country	Guangdong province, China
Setting	Hospital
Funding Details	Science and Technology Planning Project of Guangdong Province
Transmission mode	Contact, droplets
Exposures	In-hospital observation

Bottom Line

None of the 455 contacts of a single case of asymptomatic SARs-CoV 2 turned positive after a month.

Evidence Summary

A Study on 455 contacts (224 hospital staffs, 196 family members and 35 fellow patients) of a 22-year-old woman with no specific symptoms of COVID-19 who was in hospital for over a month. The woman had a complex cardiocirculatory pathology due to congenital abnormality and was tested for COVID-19 but showed no specific symptoms of COVID-19 throughout her stay in hospital.

The contacts were:

- Fellow patients (n=35) aged around 62 years who had contact with the case or who had circulated within 1.5 metres of her bed or shared a ward for a median of 4 days. All wore masks. All remained negative after 14 days. All were quarantined.
- Family members of patients in the ward (n=196) with contact for a median of 5 days. 172 remained negative after 14 days “as far as the authors know”. 24 “escorts” were negative. All were quarantined locally.
- Hospital staff (n=222) who had been in contact for a variable length of time from 2 hours to several days with a median age of 35 years. All wore full PPE with N95 respirators and remained negative after 14 days. None were quarantined.

What did they do?

The study was carried out in the hospital with interviews, tests and data linkage from January to end of February 2020. Information was retrospectively collected from electronic medical records and other data from documents recorded by related departments. All hospital staffs were tested twice for SARS-CoV-2 nucleic acid, and the results were negative.

Study reliability

There was only one case and lack of detailed information on family members. The authors called for replication of their study in larger studies to verify their conclusions.

Clearly defined setting	Demographic characteristics described	Follow-up length was sufficient	Transmission outcomes assessed	Main biases are taken into consideration
Yes	Yes	Yes	Yes	Unclear *

* Some of the follow-up data on family contacts may be missing.

What else should I consider?

In the study, asymptomatic COVID-19 carrier was defined as a patient without related clinical symptoms, but whose SARS-CoV-2 test was positive. Patients and family members were quarantined but hospital staff were not because of their standard protective measures – all personnel working in ED used N95 mask, isolation gowns and wore goggles.

About the authors



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