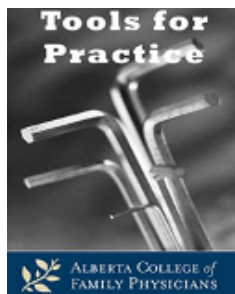


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COVID-19 Rapid Reviews

Along with regular Tools for Practice, the PEER team will be writing rapid reviews to address COVID-19 topics relevant for primary care. The evidence is changing rapidly and it is possible that as you read this, new evidence will already be available. We will try our best to stay in front and keep you up-to-date during these challenging times.



Stealth style transmission? Covert data on COVID-19

Clinical Question: What is the evidence for asymptomatic transmission of COVID-19 (including those who will remain asymptomatic and those who are early and not symptomatic yet)?

Bottom Line: Transmission of COVID-19 can occur in people who are currently asymptomatic. Case reports suggest this occurs in 6-13% of cases, although modelling suggests this might be higher. The importance of asymptomatic transmission is heightened by reports that ~50% of carriers are asymptomatic when an entire population (example cruise ship) is tested. Physical distancing should assist in preventing transmission from asymptomatic individuals.

Evidence:

- Transmission:
 - 468 COVID-19 transmission cases in China.¹
 - In 13% (59/468) of cases, the secondary patient reported symptoms before the source.
 - 157 COVID-19 transmission cases in Singapore.²
 - In 6% (10/157) of cases, the secondary patient reported symptoms 1-3 days before the source.
 - Other case reports of pre-symptomatic/asymptomatic transmission in family, business and hospital settings reported.³⁻⁷
- Proportion of COVID-19 positive patients who are asymptomatic at time of testing:

- From testing all individuals in a closed environment:
 - 331/712 (47%): cruise ship passengers.⁸
 - 13/23 (57%): long-term care residents.⁹
 - 50-75%: entire small town in Italy (Numbers not reported).¹⁰
- Modelling studies estimate that pre-symptomatic or asymptomatic transmission may occur in 23-62% of cases.¹¹⁻¹³
- Limitations:
 - Difference between asymptomatic (those who test positive for COVID-19, but never become symptomatic^{7,14}) and pre-symptomatic (transmission from the source to a secondary patient before the source develops symptoms) often not clearly reported.
 - Recall bias of symptoms, dates and exposures.
 - Presumption that symptomatic exposure 'trumps' asymptomatic transmission.
 - Asymptomatic cases not always identified.
 - Assumption that those who test positive for COVID-19 are infectious.
- Incubation period and time to spread:
 - The mean incubation period (time before person becomes symptomatic) is ~5 days, may be up to 14 days.¹⁵
 - Infected individuals can transmit ~4-8 days after becoming infected, possibly before symptoms develop.^{11,12,16-19}
- Viral Load:
 - Viral loads of asymptomatic and symptomatic patients appear similar.^{9,20}
 - Viral load is highest at symptom onset or in the first week.^{13,20-24}
 - Theoretically may increase pre-symptomatic transmission.¹³
 - In contrast, peak viral load of MERS and SARS patients is ~ 7-10 days after symptom onset.²²

Context:

- Initially WHO suggested that pre-symptomatic and asymptomatic infections were "rare/not a major driver of transmission"²⁵, but now recognize it may occur.¹¹
- Physical distancing and other methods should reduce transmission between asymptomatic individuals.

Authors:

Christina Korownyk MD CCFP & Michael Kolber MSc MD CCFP

Disclosures:

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