

## **Most people infected with SARS-CoV-2 develop symptoms**

*Study suggests asymptomatic cases may account for about 20% of infections*

While some people who contract SARS-CoV-2 infections never experience any symptoms, there remains disagreement about what proportion of total infections these cases comprise. A study in *PLOS Medicine* by Diana Buitrago-Garcia at University of Bern and colleagues suggests that true asymptomatic cases of SARS-CoV-2 comprise a minority of infections.

The full spectrum and distribution of the severity of COVID-19 symptoms are not well understood. Some infected people may experience severe infections resulting in viral pneumonia, respiratory distress syndrome, and death, while others remain completely asymptomatic or develop mild, nonspecific symptoms. To better understand the proportion of people who become infected with SARS-CoV-2 and never develop any symptoms, as well as the proportion of people who are asymptomatic at the time of diagnosis, but develop symptoms later, researchers systematically reviewed literature using a database of SARS-CoV-2 evidence between March and June 2020. The authors then analysed 79 studies reporting empirical data on about 6,616 people, 1,287 of whom were defined as asymptomatic in order to determine the proportion of infected people who never developed symptoms. While the study was limited in its inability to ascertain the impact of false negatives, the researchers were able to estimate that about 20% of COVID-19 infections remained asymptomatic during follow up.

Accurate estimations of true asymptomatic and presymptomatic infections are critical to understanding SARS-CoV-2 transmission at the population level and for populations to adopt appropriately tailored public health strategies. Future research should include prospective longitudinal studies that document symptom status. Improved accuracy of serological tests is also needed to reduce the number of false negatives. Since each person infected with SARS-CoV-2 is initially asymptomatic, the proportion that will go on to develop symptoms is estimated to be around 80%, suggesting that presymptomatic transmission may significantly contribute to overall SARS CoV-2 epidemics.

According to the authors, "The findings of this systematic review of publications early in the pandemic suggests that most SARS-CoV-2 infections are not asymptomatic throughout the course of infection. The contribution of presymptomatic and asymptomatic infections to overall SARS-CoV-2 transmission means that combination prevention measures, with enhanced hand and respiratory hygiene, testing tracing, and isolation strategies and social distancing, will continue to be needed".

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