Faster identification and isolation of COVID-19 symptomatic individuals found to shorten average serial interval

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An international team of researchers has found that identifying and isolating COVID-19-infected symptomatic individuals can shorten the average serial interval. In their paper published in the journal *Science*, the group describes their study of patients in China during the initial stages of the global pandemic and what they found.

As it became evident that people in Wuhan were being infected by a new virus in December 2019, officials in China began taking measures to stop its spread without a vaccine or even medications to treat patients. Officials used the only tools they had: isolation and mask orders. In this new effort, the researchers looked at the impact of the serial interval on the spread of the disease.

The serial interval of an infectious disease such as COVID-19 is defined as the period of time between the onset of symptoms in an infected person and when another person is infected by that individual and begins to have symptoms. To learn more about its impact on the pandemic, the researchers looked at the average serial interval for people in Wuhan during its early stages. They also noted that during the early stages of the pandemic, it was assumed that the average serial interval was approximately eight days. This was because it had been that duration for both SARS and MER. But as data became available, it became evident that the average serial interval for COVID-19 was not a single number, but one that could change depending on circumstances.

In their work, the researchers compiled and analyzed data describing 677 infection pairs for the period January 9 to January 22—and in so doing, found an average serial interval of 7.8 days. But data from January 30 to February 13 showed it to be 2.2 days. The researchers suggested the shortening of the average serial interval was due to implementation of isolating procedures—the lockdown enacted by the government. These findings have led the researchers to conclude that identifying infected people more quickly and isolating them can lead to reductions in the average serial interval and a reduction in the spread of the disease. Their findings were bolstered by the dramatic drop in infections after the Wuhan lockdown was implemented.

More information: Sheikh Taslim Ali et al., Serial interval of SARS-CoV-2 was shortened over time by nonpharmaceutical interventions, *Science* (2020). DOI: 10.1126/science.abc9004