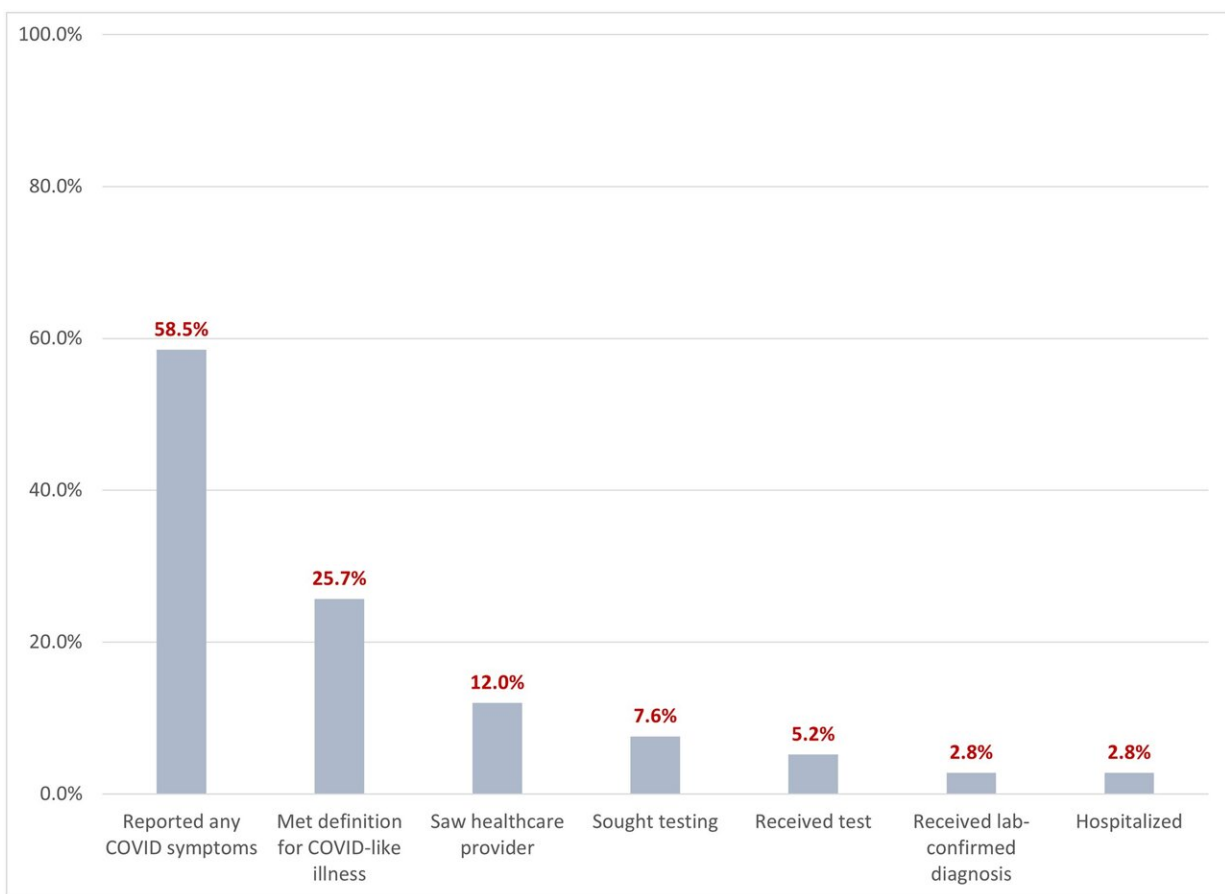


# Early in US pandemic, household crowding was risk factor for severe COVID-19 infection

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SARS-CoV-2 symptoms among persons screened for enrollment in the CHASING COVID Cohort Study, April 2020. Credit: *PLOS ONE* (2022). DOI: 10.1371/journal.pone.0271786

Toward the beginning of the COVID-19 pandemic in the U.S., stay-at-home measures helped stop the spread of the virus. At the same time, it may have shifted transmission to homes where, in many cases, entire families were suddenly spending more time together in close quarters.

To investigate household crowding as a risk factor for severe COVID-19 disease, a team of researchers from the CUNY Institute for Implementation Science in Population Health (ISPH) conducted a study using interview data from 6,831 U.S. adults screened for the Communities, Households and SARS/CoV-2 Epidemiology (CHASING) COVID Cohort Study in April 2020.

The researchers found that household crowding not only increased the risk of infection, but also increased the risk of severe COVID-19 disease, requiring hospitalization. Having [children](#) in the home was also a risk factor for being hospitalized with the virus. Small children have been shown to be less likely to present symptoms or to have a severe case, the authors explain. Nonetheless, they seem to have similar viral load levels to those of adults, and may play an important role in driving COVID-19 transmission in households.

"When children introduce infection into the household, adult infections may go unrecognized for longer, leading patients to delay care and be sicker by the time they receive care," explains Distinguished Professor Denis Nash, the study's lead author.

"Since community prevalence is often at its peak at the time stay-at-home measures are put in place, continued transmission in many households after lockdown is highly likely," Nash said. "Moreover, there were no vaccines to protect people against severe disease when this study was conducted, making it most relevant for future pandemics. The findings suggest that mask wearing and other [safety measures](#) should be implemented in homes following stay-at-home orders in future

pandemics to limit household transmission and [severe disease](#)."

**More information:** Denis Nash et al, Household factors and the risk of severe COVID-like illness early in the U.S. pandemic, *PLOS ONE* (2022). [DOI: 10.1371/journal.pone.0271786](https://doi.org/10.1371/journal.pone.0271786)

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