

Asymptomatic COVID-19 patients also contaminate the environment

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Both symptomatic and asymptomatic COVID-19 patients have the capability of contaminating their surroundings, according to a new study published in *mSphere*, an open-access journal of the American Society for Microbiology. The data, which comes from a patient study conducted in China, demonstrates the importance of environmental

cleaning in areas occupied by patients with COVID-19.

"Placement of COVID-19 patients in rooms with [negative pressure](#) may bring a false feeling of safety and rigorous environment cleaning should be emphasized," write lead study author Zhiyong Zong, MBBS, Ph.D., from the Department of Infection Control, West China Hospital, Sichuan University, Chengdu, China, and colleagues.

While it has been well recognized that the virus SARS-CoV-2, the causative agent of COVID-19, can be acquired by objects or materials which are likely to carry infection, such as clothes and furniture, the contamination of patients' surroundings by SARS-CoV-2 is largely unknown and understudied.

In the new study, researchers sampled the surroundings and the air of 6 negative pressure non-[intensive care unit](#) (ICU) rooms with 13 laboratory confirmed COVID-19 patients who had returned from overseas in a designated isolation ward in Chengdu, China. The study cohort included 2 asymptomatic patients. Sampled sites included bedrails, room and toilet door handles, light switches, foot flush buttons, sink rims, sink and toilet bowls and drains, bedside tables, bedsheets, pillows, equipment belts on wall, floor, air exhaust outlets and air.

The researchers found that 44 of 112 surface samples (39.3%) were positive for SARS-Cov-2, detected by real-time polymerase chain reaction (PCR). All of the air samples were negative.

"The findings suggest that patient surroundings in this non-ICU negative pressure isolation ward for COVID-19 patients with mild disease or no symptoms were extensively contaminated by SARS-CoV-2," write Dr. Zong and colleagues. "In particular, in a single room with an asymptomatic patient, 4 sites including bedrail, pillow, bedsheets and the air exhaust outlet were SARS-CoV-2 positive. This highlights that

asymptomatic COVID-19 patients can contaminate their surroundings and therefore make persons who have direct contact with them such as their family members and [healthcare workers](#) be exposed to SARS-CoV-2"

The researchers say that isolation of asymptomatic COVID-19 patients at home impose risks to their [family members](#) and that shelter hospitals may be a better option. "The findings also highlight that environmental cleaning should be emphasized," the researchers write.

Provided by American Society for Microbiology

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