

Latest coronavirus study implicates fecal transmission

February 8 2020



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Diarrhea may be a secondary path of transmission for the novel coronavirus, scientists said Friday following the publication of the latest study reporting patients with abdominal symptoms and loose stool.

The primary path is believed to be virus-laden droplets from an infected person's cough, though researchers in early cases have said they focused

heavily on patients with respiratory symptoms and may have overlooked those linked to the [digestive tract](#).

A total of 14 out of 138 patients (10 percent) in a Wuhan hospital who were studied in the new paper by Chinese authors in the *Journal of the American Medical Association (JAMA)* initially presented with diarrhea and nausea one or two days prior to development of fever and labored breathing.

The first US patient diagnosed with 2019-nCoV also experienced loose bowel movements for two days and the virus was subsequently detected in his stool, and there have been other such cases in China documented in the *Lancet*, albeit infrequently.

"Importantly, 2019-nCoV has been reported elsewhere in the feces of patients with atypical abdominal symptoms, similar to SARS which was also shed in urine, suggesting a fecal transmission route which is highly transmissible," William Keevil, a professor of environmental healthcare at the University of Southampton said in a comment to the UK's Science Media Centre.

The possibility is not totally surprising to scientists, given that the new virus belongs to the same family as SARS.

Fecal transmission of SARS was implicated in sickening hundreds in Hong Kong's Amoy Gardens housing estate in 2003. A rising plume of warm air originating in bathrooms contaminated several apartments and was transported by wind to adjacent buildings in the complex.

Based on the literature, "The 2019-nCoV virus found in stool may be transmitted through fecal spread," added Jiayu Liao, a bioengineer at the University of California, Riverside.

But, he added, "We still do not know how long this virus can survive outside the body—HIV can only survive roughly 30 minutes outside the body—and what temperature range the 2019-nCoV is sensitive to."

Fecal spread could present new challenges to the virus's containment, but is more likely to be a problem inside hospitals, which can become "amplifiers" of epidemics, said David Fisman, an epidemiologist at the University of Toronto.

Benjamin Neuman, a virology expert at Texas A&M University-Texarkana, cautioned that while fecal transmission was "certainly worth considering," "droplets and touching contaminated surfaces then rubbing eyes, nose or mouth" were likely the main way the [virus](#) was transmitted based on current data.

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Citation: Latest coronavirus study implicates fecal transmission (2020, February 8) retrieved 3 May 2024 from <https://medicalxpress.com/news/2020-02-latest-coronavirus-implicates-fecal-transmission.html>

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