

COVID-19 Research Watch

June 10, 2020

ZOONOSES

[First Reported Cases of SARS-CoV-2 Infection in Companion Animals — New York, March–April 2020](#)¹

Two domestic cats living in households in the United States with persons who were positive or suspected positive for COVID-19 were confirmed to be infected with SARS-CoV-2 by RT-PCR. Symptoms exhibited by the cats included sneezing, coughing, nasal and ocular discharge, lethargy, and loss of appetite. Both cats fully recovered. While human-to-animal transmission of the SARS-CoV-2 virus can occur, animals are not suspected of playing a major role in spreading COVID-19. However, this One Health study suggests that animals that test positive for SARS-CoV-2 should be kept separate from other animals and humans, and humans with suspected or confirmed COVID-19 should similarly limit contact with animals.

NON-PHARMACEUTICAL INTERVENTIONS

[The effect of large-scale anti-contagion policies on the COVID-19 pandemic](#)^{2*}

This study estimated the effect of non-pharmaceutical interventions, also referred to as anti-contagion policies, on the number of COVID-19 cases in China, France, Iran, Italy, South Korea, and the US based on 1,717 different policies implemented on the local, regional, national level. This study found that the COVID-19 pandemic is in fact being slowed by these interventions and project that in the absence of these interventions, China would have seen 465 times the number of observed confirmed cases while Italy would have seen 17 times and the US would have seen 14 times the observed number of confirmed cases. In total, this study estimated that large-scale anti-contagion interventions averted 530 million total infections across the six countries, including 60 million infections in the US, 54 million in Iran, 49 million in Italy, 45 million in France, and 38 million in South Korea.

*Note: This study was published as an accelerated article. Though unedited at the time of publication, this study has been peer-reviewed.

PEDIATRIC PRESENTATION

[Clinical Characteristics of 58 Children With a Paediatric Inflammatory Multisystem Syndrome Temporally Associated With SARS-CoV-2](#)³

This study assessed the clinical and laboratory characteristics of fifty-eight children in England admitted between March 23 and May 16, 2020 presenting with fever and evidence of inflammation, who met the criteria for paediatric inflammatory multisystem syndrome temporally associated with SARS-CoV-2 (PIMS-TS). The authors compared the findings with the clinical presentation of patients with Kawasaki Disease (KD) and KD shock syndrome admitted to European and American hospitals from 2002 to 2019. Of the 58 children, 15 were positive by PCR and 40 were positive by IgG antibody test for

evidence of SARS-CoV-2 infection. All 58 children presented with fever and nonspecific symptoms, 50% developed shock, 22% met criteria for KD, and 14% had aneurysms or coronary artery dilatation. The findings of this study indicate that PIMS-TS is different from other paediatric inflammatory diseases; however, further research is needed in order to develop an optimal treatment for PIMS-TS.

SAMPLING EFFORTS

Swabs Collected by Patients or Health Care Workers for SARS-CoV-2 Testing⁴

Conducted in the Puget Sound region of Washington, this cross-sectional study evaluated the sensitivity of self-collected tongue, nasal, and mid-turbinate swab specimens by RT-PCR using samples collected from 530 patients presenting with symptoms of upper respiratory infection. Using nasopharyngeal (NP) swab specimens collected by health care workers for a comparison, the estimated sensitivities of the three types of samples from the patients were 89.8%. This study demonstrates the usefulness of collecting self-collected tongue, nasal, or mid-turbinate specimens for testing and diagnosis of COVID-19, particularly given the potential for patients to sneeze, cough, or gag during NP swab collection, which puts health care workers at increased risk of transmission.

ADDITIONAL RESOURCES

[UCSF Library COVID-19 Research and Information Resources](#)
[UCSF Institute for Global Health Sciences COVID-19 Resources](#)
[UC Davis One Health Institute COVID-19 FAQs](#)
[Harvard Viswanath Lab Myths vs Facts](#)

Note on this Document: This document was assembled by graduate and doctoral students attending the University of California, San Francisco with the intent of facilitating the rapid dissemination of information to the global community in order to help during this time. Canice Christian and Alyssa Bercasio contributed to these summaries. This work is volunteer based.

References:

- (1) Newman A, Smith D, Ghai RR, et al. First Reported Cases of SARS-CoV-2 Infection in Companion Animals — New York, March–April 2020. *MMWR Morb Mortal Wkly Rep*. ePub: 8 June 2020. DOI: <http://dx.doi.org/10.15585/mmwr.mm6923e3>
- (2) Hsiang, S. et al. The effect of large-scale anti-contagion policies on the COVID-19 pandemic. *Nature* <https://doi.org/10.1038/s41586-020-2404-8> (2020).
- (3) Whittaker E, Bamford A, Kenny J, et al. Clinical Characteristics of 58 Children With a Pediatric Inflammatory Multisystem Syndrome Temporally Associated With SARS-CoV-2. *Jama* 2020; : 1–11
- (4) Tu Y-P, Jennings R, Hart B, et al. Swabs Collected by Patients or Health Care Workers for SARS-CoV-2 Testing. *N Engl J Med* 2020; : 1–3.