

**COVID-19 Research Watch**  
June 8, 2020

**MODELS**

**[Effects of non-pharmaceutical interventions on COVID-19 cases, deaths, and demand for hospital services in the UK: a modelling study<sup>1</sup>](#)**

This article aimed to understand the effects of different control measures on preventing a large demand on hospital services in the UK due to COVID-19. In one of the scenarios modelled, the authors found that implementing all 4 interventions for 12 weeks (closing schools, self-isolation of symptomatic people, physical distancing, shielding older people), may not be adequate to prevent hospitals from exceeding ICU capacity. In another scenario, implementing shorter periods of strict lockdown measures while consistently enforcing physical distancing measures, may be able to prevent exceeding the capacity of hospitals. While the authors emphasize that each scenario would perform differently in each locality, they summarize that implementing stricter and more drastic lockdown protocols may be required to prevent a surge in cases that would overwhelm the healthcare system.

**NON-CLINICAL TRENDS**

**[Psychological Distress and Loneliness Reported by US Adults in 2018 and April 2020<sup>2</sup>](#)**

The authors compared survey responses of 1,468 US adults from April of 2020 to national data from 2018, to analyse the prevalence of symptoms of serious psychologic distress in the context of COVID-19. In this analysis, the authors found that symptoms of serious psychological distress were greater in April of 2020 (13.6%) than in 2018 (3.9%). In particular, symptoms of psychological stress were highest among adults aged 18 to 29 years (24.0% 2020 vs. 3.7% 2018), low income (19.3% 2020 vs. 7.9% 2018), and Hispanic adults (18.4% 2020 vs. 4.4% 2018). The authors surmise that because reports of loneliness slightly increased from 11% in 2018 to 13.8% in 2020, other factors might be driving this increase in psychological distress, including financial insecurity, uncertainty about the future, or fear of COVID-19 infection.

**PEDIATRIC PRESENTATION**

**[Epidemiology, Clinical Features, and Disease Severity in Patients With Coronavirus Disease 2019 \(COVID-19\) in a Children's Hospital in New York City, New York<sup>3</sup>](#)**

Zachariah et al conducted a case series study using the electronic medical records of fifty pediatric patients admitted with COVID-19 in a New York City hospital between March 1 and April 15, 2020. The authors found the median time between development of symptoms and admission was four days for adolescents and one day for younger children and infants. There were numerous findings regarding severe disease: obesity was significantly associated with disease severity, inflammatory markers were significantly elevated at

admission and during hospitalization for those with severe disease, and both infants and patients who were immunocompromised did not have increased risk of severe disease. The findings also suggest diverse manifestations of COVID-19, leading the authors to recommend that hospitals should be alert to the variable presentations and test liberally.

An [editorial](#) commenting on this paper noted that while previous reports have found 50% of children with COVID-19 to have fever, the study by Zachariah et al found 80% of hospitalized children had fever<sup>4</sup>. The editorial lists the numerous areas where more information on COVID-19 in children is needed: causes of severe inflammatory syndrome, transmissibility of the virus between children, and the underlying disparities that lead to higher rates of fatal COVID-19 among African Americans and Hispanics.

[SARS-CoV-2-related pediatric inflammatory multisystem syndrome, an epidemiological study, France, 1 March to 17 May 2020<sup>5</sup>](#)

On April 30<sup>th</sup>, France set up national surveillance for pediatric inflammatory multisystem syndrome (PIMS) in order to assess this emerging disease and potential associations with COVID-19. Belot et al found that 156 cases had been notified as of May 17<sup>th</sup> and the authors classified these cases based on clinical features and SARS-CoV-2 status (79 were classified as confirmed pediatric inflammatory multisystem syndrome (CoV-PIMS), 16 as probable CoV-PIMS, 13 as possible CoV-PIMS and 48 as not related/inconclusive CoV-PIMS). The authors found the peak in the epidemic curve of CoV-PIMS cases occurred 4-5 weeks after the peak of the COVID-19 epidemic, which may suggest that PIMS could be a post-infectious manifestation of COVID-19. The authors also found the geographic distribution of CoV-PIMS cases to be comparable to the geographic distribution of COVID-19 hospitalizations, based on descriptive maps. The clinical presentations differed between the CoV-PIMS cases and the non-CoV PIMS cases in median age, clinical features, and severity; the authors suggest that early recognition of CoV-PIMS is essential for effective management.

**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. Carina Ashkar and Sarah Gallalee contributed to these summaries. This work is volunteer based.

**References:**

- 1 Davies NG, Kucharski AJ, Eggo RM, Gimma A, Group CC-19 W, Edmunds WJ. The effect of non-pharmaceutical interventions on COVID-19 cases, deaths and demand for hospital services in the UK: a modelling study. *medRxiv* 2020; **2667**: 2020.04.01.20049908.
- 2 McGinty EE, Presskreischer R, Han H, Barry CL. Psychological Distress and Loneliness Reported by US Adults in 2018 and April 2020. *JAMA*. Published online June 03, 2020. doi:10.1001/jama.2020.9740
- 3 Zachariah P, Johnson CL, Halabi KC, et al. Epidemiology, Clinical Features, and Disease Severity in Patients With Coronavirus Disease 2019 (COVID-19) in a Children's Hospital in New York City, New York. *JAMA Pediatr*. Published online June 03, 2020. doi:10.1001/jamapediatrics.2020.2430
- 4 Newland JG, Bryant KA. Children in the Eye of the Pandemic Storm—Lessons From New York City. *JAMA Pediatr*. Published online June 03, 2020. doi:10.1001/jamapediatrics.2020.2438
- 5 Belot A, Antona D, Renolleau S, et al. SARS-CoV-2-related paediatric inflammatory multisystem syndrome, an epidemiological study, France, 1 March to 17 May 2020. *Euro Surveill*. 2020;25(22):pii=2001010. <https://doi.org/10.2807/1560-7917.ES.2020.25.22.2001010>