

COVID-19 Research Watch
May 15, 2020

CLINICAL PRESENTATION

[The Effects of Pregnancy on Women with COVID-19: Maternal and Infant Outcomes](#)¹

This paper briefly summarizes some of the existing literature reflecting the effects of COVID-19 on pregnant women. Schwartz highlights a study by Li et al completed in Hubei Province, China indicating that infected pregnant women often had absent or mild respiratory symptoms and none of the pregnant women in their study developed severe respiratory complications. In addition, they found a higher incidence of premature delivery in COVID-19 confirmed pregnant women and no evidence of intrauterine transmission of COVID-19. To supplement this study, several case studies and reports in which COVID-19 has caused severe and life-threatening disease amongst pregnant women were discussed. With increasing evidence of the potential of COVID-19 to impact maternal and infant outcomes, Schwartz recommends establishing national registries of pregnant women, as has been done in several countries, including Australia, Italy, and Great Britain.

[Characteristics and Outcomes of Recipients of Heart Transplant With Coronavirus Disease 2019](#)²

In this study, the authors retrospectively reviewed clinical outcomes for 28 COVID-19 positive patients who received heart transplants in New York City. Because transplant recipients require immunosuppression for successful transplantation, the authors examined the relationship between the immune system and COVID-19 disease progression. The study found that the case fatality rate of these patients was 25%, a rate higher than what has been observed in other patient populations. It is unclear whether cardiovascular risk factors, immunosuppression, or the heart transplant caused the increased risk of mortality, but the high fatality rate suggests that immunosuppression may not be protective against COVID-19 and further understanding of the disease in immunosuppressed patients is required.

MODELS

[Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: a modelling study](#)³

This study aimed to quantify the potential additional maternal and under-five deaths indirectly caused by COVID-19 through disruption of health systems and decreased food access in 118 low-income and middle-income countries. The authors estimated coverage reduction as a product of workforce, supplies, demand, and access reduction, and assumed an increase in the prevalence of wasting in children. Using three scenarios of coverage reduction (reduced by 5%, 10%, and 25%) and wasting prevalence (increased by 10%, 20%, and 50%), the models estimated that in the least severe scenario an additional 253,500 under-five deaths and 12,200 maternal deaths would occur over a six-month period, and in the most severe scenario an additional 1,157,000 under-five child deaths and 56,700 maternal deaths would occur during the same time period. Disruption of health systems and decreased food access have negative repercussions for maternal and child deaths in low-income and middle-income countries and the authors encourage policy

makers to consider this information as they make decisions in the weeks and months to come.

[Projected early spread of COVID-19 in Africa through 1 June 2020](#)⁴

This study utilized a branching process model to estimate the timing of the spread of COVID-19 in Africa through June 1, 2020. The study found that of the 45 countries and territories in Africa which reported cases before March 23, all were projected to reach 1,000 cases by the end of April 2020 and 10,000 additional cases within the next few weeks. Furthermore, the study predicts that the timing of increases in COVID-19 cases across the continent will be largely synchronous. The authors call for increased preparations across Africa to ready healthcare systems and citizens alike for the projected wave of COVID-19 infections.

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. Shivali Joshi and Guntas Padda contributed to these summaries. This work is volunteer based.

References:

- 1 Schwartz DA. Effects of Pregnancy on Women with COVID-19: Maternal and Infant Outcomes | Clinical Infectious Diseases | Oxford Academic. *Clin Infect Dis* 2020; published online May 11. <https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa559/5835848?searchresult=1> (accessed May 14, 2020).
- 2 Latif F, Farr MA, Clerkin KJ, *et al.* Characteristics and Outcomes of Recipients of Heart Transplant With Coronavirus Disease 2019. *JAMA Cardiol* 2020; published online May 13. DOI:10.1001/jamacardio.2020.2159.
- 3 Robertson T, Carter ED, Chou VB, *et al.* Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: a modelling study. *Lancet Glob Heal* 2020; **0**. DOI:10.1016/S2214-109X(20)30229-1.
- 4 Pearson CA, Van Schalkwyk C, Foss AM, O'Reilly KM, Pulliam JR. Projected early spread of COVID-19 in Africa through 1 June 2020. *Eurosurveillance* 2020; **25**: 2000543.