

Effect of COVID-19 on maternal and neonatal services

Authors' reply

We thank Asma Khalil and colleagues, Jogender Kumar, and Deepak Jha and colleagues for their feedback in response to our analysis on the indirect effects of the COVID-19 pandemic lockdown in Nepal on intrapartum care and outcomes (preterm births, stillbirths, and neonatal mortality).¹

As noted by Khalil and colleagues, our study underestimated the true burden of stillbirths because the data are facility-based and we excluded women who did not have a fetal heart sound at admission and women with an antepartum stillbirth occurring before admission. Although we included stillbirths that occurred after admission, the data were not disaggregated by time of stillbirth. In Nepal, gestational age estimation is commonly based on the last menstrual period, with few women having ultrasonography-dated pregnancy. We are doing additional research now on antenatal care and associated factors.

We agree with Kumar that our study provides new evidence on the indirect effect of lockdown during the pandemic and appreciate the list of queries requiring further investigation. We particularly agree that health worker to patient ratio is crucial and further investigation is underway using a subset of the sample. Further research will be needed to unpack what is needed to prevent deaths during the pandemic.

Jha and colleagues contribute complementary data from Nepal's health management information system, showing a 32.6% decline in the national institutional delivery rate, which is a major disruption even if less than what was shown in our study (52.4%). Although limitations of health management information

systems (eg, timeliness,² accuracy of reporting³) can be an issue, we highly value the need to invest in better routine systems to enable tracking of coverage and quality of care at a national level and especially during pandemics. Our prospective observational study was limited to the facilities that were participating in the SUSTAIN and REFINE studies, but these do account for 11.2% of national births in Nepal. We acknowledge that these results might differ over a longer study period, once the hard lockdown was eased, but we note that disruptions are ongoing.

We hope that our results will be useful in guiding policy makers to help protect women and their newborn infants during the pandemic, to highlight issues that will be important to address after the pandemic, and to build a stronger health system in Nepal. Additionally, there is a pressing need for community mobilisation⁴ and inclusive participation⁵ in programming and evidence generation for mothers and neonates. Disparities have widened during this pandemic and hard-won progress towards the Every Newborn Action Plan and Sustainable Development Goals are now at risk, especially for the poorest people.

We declare no competing interests.

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