Maternal deaths in Brazil from severe COVID-19 respiratory disease: time for a global commitment to ending health disparities

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In this issue, Takemoto et al. report on 124 maternal deaths among individuals with SARS-CoV-2 attributable acute respiratory distress syndrome (ARDS) in Brazil, leveraging an ARDS surveillance system established by the Brazilian Ministry of Health in 2009 in response to the H1N1 pandemic (Takemoto et al. *BJOG* 2020;127: 1618–26). A total of 978 pregnant or postpartum individuals with ARDS who met the criteria for coronavirus disease 19 (COVID-19) and whose survival status was known, were identified through this reporting mechanism between 26 February and 18 June 2020. Risk factors for maternal mortality included diabetes, cardiovascular disease, obesity and postpartum presentation.

This is the largest series of maternal deaths published to date and contributes to our evolving understanding of COVID-19 in pregnancy. While early reports from China suggested the natural course of COVID-19 infection was not exacerbated by pregnancy (Chen et al. *Lancet* 2020;395:809–15), a subsequent review of US surveillance data indicated that pregnancy and the puerperium increased risk of hospitalisation, ICU admission and mechanical ventilation (Ellington et al. *MMWR Morb Mortal Wkly Rep* 2020;69:769–75). The case fatality rate presented in this series by Takemoto et al. is a disturbing 12.7%

for pregnant and postpartum women. Unfortunately, the authors did not capitalise on the opportunity to compare this rate with that in nonpregnant individuals of reproductive age reported to the same surveillance system, missing an opportunity to evaluate whether pregnancy increases vulnerability to severe consequences of COVID-19. It should be emphasised that this rate pertains only to individuals with COVID-19 respiratory disease severe enough to be reported to the national ARDS surveillance system. Furthermore, an additional 433 pregnant/postpartum women with SARS-CoV-2 attributable ARDS in the national database (30% of the total) were excluded from analysis as information on survival was missing; therefore, the true case fatality rate may be higher or lower. Regardless, this is a sobering number of maternal deaths identified in just under 4 months following the first reported case of COVID-19 in Brazil.

The study's findings echo another pattern emerging from epidemiological data, namely, that communities of colour are bearing the brunt of the pandemic. White race was protective against death (adjusted odd ratio [aOR] 0.58, 95% CI 0.35–0.99). Estimated mortality was highest (29.0%) in a geographical area with the largest proportion of non-white, uninsured and nonworking residents in the country. Similar findings have

been reported in the USA, where racism and concentrated socio-economic disadvantage predict an increased risk of viral acquisition, morbidity and mortality from COVID-19 (Moore et al. *Morb Mortal Wkly Rep* 2020;69:1–5; Emeruwa et al. *Obstet Gynecol* 2020; online ahead of print).

The authors emphasise that the pandemic in Brazil has placed additional stress on a prenatal care infrastructure with challenges at baseline. Variation in maternal mortality rates, among the most egregious of health disparities, will likely widen during this pandemic. Although data available from the Brazil ARDS surveillance system did not allow for international comparison, it is likely that geographical differences in maternal mortality from COVID-19 also exist on a global scale. As a worldwide community, this pandemic has highlighted how urgent it is for us to commit globally to social reengineering, eliminating health disparities and addressing health equity to protect our most vulnerable populations.

Disclosure of interests

None declared. Completed disclosure of interest forms are available to view online as supporting information. ■