

## Efforts to combat maternal mortality due to COVID-19 in Brazil

Dear editor,

It is with great satisfaction that we thank you for your interest in our article on maternal mortality due to COVID-19 in Brazil.<sup>1</sup> We clarify that although the article was published in 2021, when it was accepted by the Journal, it included only data referring to 2020. We agree that it needs to be updated, and data published both in national and international journals need to be included, to correct the inevitable time gaps due to the delay between submission and publication of scientific articles.

Two years after the pandemic breakout, there has been a great advance in epidemiological, clinical, obstetrical discoveries related to treatment and prevention of COVID-19 in pregnancy and puerperal period. There is no longer any doubt about the unequivocal increase in mortality from COVID-19 in this group of patients,<sup>2,3</sup> as well as about the various unfavorable maternal, fetal and neonatal outcomes.<sup>2,4</sup> In fact, the most recent data from the Brazilian Obstetric Observatory point to 1,966 pregnant and postpartum women died from COVID-19, with 1,506 maternal deaths in 2021 (227% more than in 2020).<sup>5</sup>

There is also no doubt that vaccination can and should be performed, preferably with mRNA vaccines, whose effectiveness and safety have been demonstrated in several studies that concluded that there is no increased risk of pregnancy loss or adverse fetal effects.<sup>6,7</sup> Unfortunately, in Brazil there was a delay in decision-making for vaccination against SARS-CoV-2 in all pregnant and postpartum women. Only on July 6<sup>th</sup>, 2021 the Technical Note 02/2021 was published with this recommendation in the country,<sup>8</sup> which lead to a huge number of preventable maternal deaths. We emphasize that of the 1,506 maternal deaths that occurred in Brazil, 1,153 occurred until July,

before Technical Note 02/2021,<sup>8</sup> and 353 from July, without any record in early 2022 until January 15.<sup>5</sup>


It is also worth noting that, to date, vaccination of pregnant women is moving at a slower pace compared to the general population, with only 55% of pregnant women receiving one dose and 45% receiving two doses.<sup>5</sup> Many obstacles are still imposed on vaccination, which are: the requirement of a medical prescription persists (recommended by Technical Note 02/2021)<sup>8</sup> in some states, adolescents were not included in the initial recommendation and unfortunately doctors in an anti-vaccine position who, despite scientific evidence, have discouraged vaccination, being frequent cases of information based on fake news about its use in pregnancy.


Despite the lower adherence to vaccination by pregnant and postpartum women, we can see a decrease in the fatality rate of Severe Acute Respiratory Syndrome due to COVID-19. In 2020, this rate was 7.2%, increasing to 13.7% in 2021, with a variation from 5.0% to 14.0% until July and then decreasing to 1.0% at the end of 2021. Until the current period, of the writing of this Letter, there is a record of 829,603 fully immunized pregnant and postpartum women in Brazil.<sup>5</sup>


We agree with and praise the initiative of the Brazilian Obstetric Observatory COVID-19, which has been extremely important for researchers and the public, democratizing access to Data Science and providing important information about the magnitude of the effect of COVID-19 in both pregnancy and puerperal period in terms of SARS cases, maternal deaths and data on vaccination.<sup>5</sup>

We join the researchers of the Brazilian Obstetric Observatory. Because our own group has a huge interest



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in the topic “COVID-19 and Pregnancy” and since the beginning of the pandemic, we have expressed our concern about the possible effects of COVID-19 on the pregnancy-puerperal cycle. We published the first article to warn about maternal deaths by COVID-19 in Brazil<sup>9</sup> and several others that followed analyzing the factors associated with death, evidencing important care failures, in addition to social and racial inequality,<sup>10</sup> explaining a large part of maternal deaths from COVID-19 in the country.<sup>11</sup> In addition to the research we are together in the greater objective of preventing more deaths from happening, given that they were, for the most part, preventable.

### Authors' contribution

All authors participated in the construction of the letter to the editor and approved the final version.

The authors declare no conflict of interest.

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