

Gynecology

Call to action for a South American network to fight COVID-19 in pregnancy

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New cases of coronavirus disease 2019 (COVID-19) are reported daily worldwide. What began as a localized outbreak of an epizootic disease has now become a pandemic of unprecedented proportions, as declared by the World Health Organization (WHO).¹ In South America, as of April 30, 2020, Brazil has the highest number of confirmed cases (n=80 246), followed by Peru (n=36 976) and Ecuador (n=24 934). It is important to note that the first confirmed case of COVID-19 in South America was announced on February 26, 2020, described as an imported case. Local transmission has followed a geometric progression.²

There are limited available data on the effects of COVID-19 in pregnancy, although similar diseases have been linked to preterm birth and severe maternal morbidity followed by organ dysfunction or failure.³ Although no current studies have identified that pregnant women are at a higher risk for severe COVID-19 infection, as occurs with influenza A (H1N1) pdm09 infection, some physiological changes inherent in pregnancy may justify susceptibility to viral respiratory infections. Hence, pregnant women with respiratory diseases should be treated as a top priority owing to the increased risk of adverse consequences. Despite few cases reported so far and

with the curve still showing a progressive increase in Brazil and South America, recent deaths during pregnancy and the postpartum period have caused social concern and raised awareness about an appropriate scientific response.

To understand the burden of disease on maternal and perinatal outcomes related to COVID-19 infection, we propose activation of a South American network of maternity facilities in different countries across the continent. This proposal will allow researchers to work together for the rapid generation of purposeful evidence to mitigate the effects of COVID-19 infection and prospectively gather knowledge about the disease course.

With epidemiological use of quantitative and qualitative methods and a rapid response committee, the aim of the network is to: (1) understand the burden of COVID-19 in pregnant women along with related maternal and perinatal outcomes; (2) comprehend the impact on health facilities and professionals; and (3) inform on barriers and facilitators to deal with the pandemic, collaborating on a pragmatic use of resources. Furthermore, biological samples can be collected to build a biobank infrastructure aimed at future studies to investigate

the diagnosis and pathophysiology of the disease during pregnancy, as well as its potential long-term implications.

Briefly, the network will work on five fronts:

1. Every woman admitted for delivery will be tested for identification of disease prevalence, including asymptomatic cases.
2. Symptomatic women will receive follow-up care from the time of hospital admission/clinical evaluation to complete recovery or death. Biological samples (placenta, blood cord, milk, maternal and newborn blood, stool) will be collected from symptomatic women to assess viral infection, inflammation, and possible systemic repercussions of the infection, thus contributing to our understanding of the disease and current gaps in knowledge about the risks of vertical transmission.
3. Pregnant women and health professionals suffering from this new condition will be approached to better understand their knowledge, beliefs, and expectations following their experience.
4. A public health response can be built through a multicenter international effort to combat this unknown disease.
5. An ecological study on the monthly analysis of the number of live births, the indirect effects of the pandemic on the number of deliveries (number of monthly births), and factors associated with this variation. A trend analysis will be performed between previous periods and during and after the pandemic.

Over 15 Brazilian referral centers from different regions across the country are already engaged, most of which have participated in previous multicenter network studies, including the 2009 influenza A (H1N1) pandemic⁴ and others that allowed the construction of research capacity (equipment and training) with biobank resources. In addition, other South American facilities—through the Latin American Center for Perinatology (CLAP/PAHO/WHO) collaboration—are approaching the network study to involve many other countries. These countries have similar social and economic standards and the burden of infection will be impacted by the particularities and health system infrastructure of each country. With the collaboration between the Brazilian and CLAP/Latin American networks, coordinated by CEMICAMP—a Brazilian research center for studies on reproductive and perinatal health and the WHO hub for the Human Reproduction Program—this network study may connect maternity hospitals all over the continental region.

COVID-19 does not respect borders and our efforts should not be restricted to our own locations. More than ever before, we must work

in networks, as a unified team. We invite colleagues from facilities in other countries across the continent to contact us so that we can make a joint effort. Together we can build local knowledge to help understand and face this pandemic.

AUTHOR CONTRIBUTIONS

All authors contributed equally to the original idea, manuscript writing, critical review, and approval of the final version.

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CONFLICTS OF INTEREST

The authors have no conflicts of interest.

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