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Correspondence

The importance of COVID-19 screening and testing in the obstetric patient population

To the Editor,

We reviewed with interest the recent article and accompanying infographic published by Herman and colleagues regarding anesthesia management of the obstetric patient in the era of COVID-19 [1]. We commend the authors for a compelling visual summary of strategies to help care for patients as well as protect obstetric anesthesia providers from possible SARS-CoV-2 transmission. However, we observed that the authors do not mention the important issues of SARS-CoV-2 screening and testing among parturients. These considerations are essential to patient and provider safety in the COVID era, but also present particular challenges in the obstetric patient population. We describe these challenges and provide a brief summary and analysis of recent data regarding COVID-19 testing in pregnant and laboring patients.

The initial literature on COVID-19 in pregnant women focused on symptomatic patients who subsequently tested positive for the virus [2]. However, several recent publications demonstrate the risk of asymptomatic infection among pregnant and laboring women. A report on symptom-directed and then universal testing of pregnant women at two academic hospitals in New York City found that 14 (32.6%) of 43 patients confirmed to have SARS-CoV-2 infection were asymptomatic at the time of presentation to Labor and Delivery triage [3]. A study by Sutton and colleagues [4] in the *New England Journal of Medicine* described a subsequent period of universal SARS-CoV-2 testing for parturients at the same two institutions. In this analysis, 4 out of 4 symptomatic patients tested positive for SARS-CoV-2 at the time of presentation, as did 29 (13.7%) of 211 asymptomatic patients; overall, 29 out of 33 (87.9%) infected parturients were asymptomatic [4].

The reported prevalence of asymptomatic COVID-19 infections among parturients is particularly notable, as signs and symptoms of late pregnancy and even uncomplicated labor (e.g. shortness of breath and fatigue) may overlap with symptoms of SARS-CoV-2 infection. Interestingly, the high percentage of asymptomatic infections among parturients [3,4] suggests that nonspecific symptoms in pregnant patients may more often be attributed to pregnancy than to COVID-19. These observations support a low threshold for testing parturients for COVID-19, even if they present with symptoms that occur in normal pregnancy; this is particularly important in communities with high rates of SARS-CoV-2 infection.

In addition, the recent reports of asymptomatic COVID-19 infection elevate concerns regarding the accuracy of existing tests. In non-pregnant patients, false negative SARS-CoV-2 RT-PCR results have been reported in up to 18% of radiology-confirmed cases [5]. When applied to the data presented by Sutton and colleagues [4], in which nearly 90% of parturients were asymptomatic, this error rate implies a large volume of undetected infections among obstetric patients, due to a combination of symptom-based testing and testing errors.

In aggregate, the available data suggest that significant numbers of pregnant and laboring women with COVID-19 may be either asymptomatic or may have symptoms incorrectly attributed to normal pregnancy; these women may, furthermore, have false negative RT-PCR results. As part of obstetric anesthesia care considerations, and particularly in communities and institutions with high burdens of SARS-CoV-2 infection, it may be prudent to routinely manage parturients as high risk for COVID-19 infection and to encourage conservative measures that ensure optimal patient care, as well as provider preparedness. Although many of these particulars were outlined by Herman and colleagues [1], the data presented here emphasize the importance of implementing universal testing for the protection of patients and clinicians alike.

Declaration of competing interest

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