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Universal testing of patients and their support persons for severe acute respiratory syndrome coronavirus 2 when presenting for admission to labor and delivery at Mount Sinai Health System



TO THE EDITORS: The coronavirus disease 2019 (COVID-19) caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been declared a pandemic by the World Health Organization.¹ The disease spread at an accelerated rate in densely populated cities such as New York City, which is considered an epicenter for the disease in the United States.

Within the Mount Sinai Health System, we began to care for pregnant women with COVID-19 in March of 2020. In April 2020, a policy was implemented to perform universal SARS-CoV-2 testing for women planning to deliver at Mount Sinai Health System and their designated support persons to inform obstetrical and neonatal practices.

During the testing period from April 4th to April 15th, 2020, 307 women with no symptoms of COVID-19 who presented for admission to labor and delivery in 2 institutions at Mount Sinai Health System underwent SARS-CoV-2 testing. Among the 307 women, 50 had a positive test result for SARS-CoV-2 infections, and the prevalence of asymptomatic infection in this group was 16.3% (50/307). Among these 307 women, 91 did not have a support person present. Of the remaining 216 support persons, 17 declined testing, leaving 199 available for testing. All support persons were administered an infectious screening tool on entry, and all tests results returned negative.² Of these 199 support persons who underwent SARS-CoV-2 testing, the prevalence of infection was found to be 19.6%, with 39 support persons having a positive test result for infection (39/199).

We explored the concordance and discordance rates between patients and support persons. With regard to support persons with patients with a positive test result for

SARS-CoV-2 infection, 23 of 28 (82.1%) had a positive test result. However, for patients who had a negative test result for infection, only 16 of 171 (9.4%) support persons tested positive for infection (Table). The comparison of patients with a positive test result with those who had a negative test result corresponds to a difference in the risk of the support person being positive for infection of 72.8 (95% confidence interval [CI], 57.9–87.6) and a relative risk of infection of 8.8 (95% CI, 5.3–14.4).

Based on these findings, it is apparent that there was a high proportion of patients and support persons who were asymptomatic at the height of the pandemic in New York City hospitals. Our data suggest that universal testing of patients and support persons may address the use of personal protective equipment to further protect healthcare workers. Testing of support persons may also affect newborn care precautions. In addition, SARS-CoV-2 testing informs hospitals to separate patients who test positive for infection in the postpartum units. This initiative offers protection to healthcare workers, mothers, and newborns who are at risk of SARS-CoV-2 infection. Given the high rate of asymptomatic maternity patients and support persons, universal testing provides enhanced safety for all. ■

Ayisha Buckley, MD
 Department of Obstetrics, Gynecology, and Reproductive Medicine
 Mount Sinai Hospital, Icahn School of Medicine
 5 E 98 St NY, 2nd floor
 New York, NY 10029
Ayisha.buckley@mssm.edu

TABLE
Overall test results of pregnant patients and support persons tested for SARS-CoV-2

Delivery type	Patient result	Support person result				All	
		Negative		Positive		N	%
		N	%	N	%		
Spontaneous	Negative	155	90.6	16	9.4	171	100.0
	Positive	5	17.9	23	82.1	28	100.0
	All	160	80.4	39	19.6	199	100.0

Ninety-one patients did not have a support person present. Of the remaining 216 support persons, 17 declined testing leaving 199 available for testing.

SARS-CoV-2, severe acute respiratory syndrome coronavirus 2.

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Angela Bianco, MD

Joanne Stone, MD

Department of Obstetrics, Gynecology, and Reproductive Medicine
Mount Sinai Hospital, Icahn School of Medicine
New York, NY

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