

# Journal Pre-proof

Universal testing of patients and their support persons for COVID-19 when presenting for admission to Labor and Delivery within the Mount Sinai Health System

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Letter to the Editors

Title: **Universal testing of patients and their support persons for COVID-19 when presenting for admission to Labor and Delivery within the Mount Sinai Health System**

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Letter to the Editors

Title: **Universal testing of patients and their support persons for COVID-19 when presenting for admission to Labor and Delivery within the Mount Sinai Health System**

The coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome 2 (SARS-CoV-2) virus has been declared a pandemic by the World Health Organization (WHO) (1). It spread at an accelerated rate in densely populated regions such as NYC which is considered an epicenter.

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 within the Mount Sinai Health system, as well as their designated support persons so as to inform obstetric and neonatal practices.

During the testing interval of April 4- 15, 2020, 307 asymptomatic women presenting in labor to two institutions within Mount Sinai Health System, underwent SARS-CoV 2 testing. Among the 307 women tested, 50 SARS CoV-2 infections were detected. The prevalence of asymptomatic infection in this group was 50/307 (16.3%). Among these 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 upon entry and all screened negative (2). Of these 199 support persons who underwent SARS-CoV 2 testing 39 were infected with a prevalence of 19.6% (39/199).

We explored concordance/discordance rates between patients and support persons. Among SARS-CoV 2 infected patients, 23/28 (82.1%) support persons were infected. However only 16/171

(9.4%) support persons were infected when patients tested negative. Importantly COVID negative patients had COVID positive support persons 6.2% of the time. (Table 1) Comparing positive to negative patients, this corresponds to a difference in the risk of the support person being positive of 72.8 (95% CI: 57.9, 87.6) and a relative risk of 8.8 (95% CI: 5.3, 14.4).

Based on these findings, it is apparent that there was a high proportion of asymptomatic COVID-19 infected patients and support persons at the height of the pandemic in N.Y.C hospitals. Our data suggests that universal testing of patients and support persons may direct use of PPE and more adequately protect health care workers. Testing of support persons may also impact newborn care precautions. Additionally, the results of SARS-CoV-2 testing informs how patients are cohorted on postpartum units offering protection to uninfected women and newborns. Given the high rate of asymptomatic infected maternity patients and support persons, universal testing provides enhanced safety for all.


#### References:

1. New York State Department of Health. Coronavirus disease 2019 (COVID-19) <https://www.health.ny.gov>
2. Centers for Disease Control, CDC. Coronavirus 2019 (COVID-19) <https://cdc.gov/coronavirus/2019>

Table 1. Support Persons COVID-19 Test Results Overall based on Patient Results

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

Note: 91 patients did not have a support person present. Of the remaining 216 support persons 17 declined testing leaving 199 available for testing.



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The lead author\* affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

Signed by: \_\_\_\_\_

\*The manuscript's guarantor.