

Table 1. Respirator Fit Test Cycle Results

Respirator No.	Fit Test Cycle									
	1	2	3	4	5	6	7	8	9	10
Control 1 ^a	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Control 2	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Fail	Pass
Control 3	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Control 4	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Control 5	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Fail
VHP 1 ^b	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
VHP 2	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
VHP 3	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
VHP 4	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
VHP 5	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

^aControl: 1870 respirator used without reprocessing.

^bVHP: 1870 respiratory used with vaporized hydrogen reprocessing.

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RE: Universal SARS-CoV-2 testing on admission to the labor and delivery unit: Low prevalence among asymptomatic obstetric patients

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To the Editor—In their recent publication, Goldfarb *et al*¹ reported a low prevalence of coronavirus disease 2019 (COVID-19), 1.5%, among asymptomatic pregnant women in Boston presenting for admission to labor and delivery between April 18, 2020, and

May 5, 2020. Noting that their rate was substantially lower than that reported in New York City, the authors theorized that it might be due to their patients (1) being tested >30 days after physical distancing orders were in place; (2) the population density of Boston being less than New York City; and (3) New York women under-reporting symptoms due to New York hospitals banning support people from labor and delivery.¹

Studying similar universal screening in pregnant women presenting to labor and delivery at Einstein Medical Center Philadelphia during the same time frame as the Boston study,

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we found that 9.6% of 114 consecutive asymptomatic women tested positive for severe acute respiratory coronavirus virus 2 (SARS-CoV-2). None of those 11 SARS-CoV-2-positive pregnant women had any COVID-19-related symptoms.

The much higher rate of asymptomatic COVID-19 infections that we found (9.6% vs 1.5%) cannot be explained by the 3 theories proposed by Goldfarb *et al.* Our Philadelphia COVID-19 testing data are from the same period as the Boston study, when physical distancing orders were also in place. Although Boston does have fewer people per square mile (13,841) than New York City (27,000), Philadelphia has an even lower population density (11,854 people per square mile). On March 28, 2020, prior to the Boston study's time frame (and ours), Governor Andrew Cuomo announced an executive order that New York hospitals were required to allow 1 person to accompany a patient throughout their labor and delivery. This was issued several days after 2 major New York City hospital systems banned support people from labor and delivery rooms because of the coronavirus pandemic in effort to protect patients, babies, and labor and delivery healthcare providers.²

Based upon our findings, as well as others³, the very low rate of asymptomatic pregnant women infected with SARS-CoV-2 in the Boston study may be an outlier during the early stages of the pandemic, with a more accurate infection rate being much higher. The

higher rate of asymptomatic pregnant women infected with SARS-CoV-2, who may still infect healthcare providers and others, demonstrates the importance of universal testing of pregnant women admitted to labor and delivery, as well as precautions such as mask wearing and hand washing.

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Validation of a small-size pooling approach targeting hospital surveillance of SARS-CoV-2 infection

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To the Editor—The ongoing coronavirus disease 2019 (COVID-19) pandemic, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), started in December 2019 as a large viral pneumonia outbreak in the city of Wuhan, China.¹ The disease spread from Wuhan to other countries, and the World Health Organization declared it a pandemic by March 11, 2020 (<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen>). With vaccine development currently underway, the rapid identification of disease carriers and their close contacts represents the only effective measure to limit SARS-CoV-2 spreading.²

Hospitals are hotbeds for SARS-CoV-2 transmission; healthcare workers (HCWs) are at high risk of being infected and of further transmitting the virus to vulnerable patients.³ Thus, infection control strategies based on SARS-CoV-2 testing in HCWs and patients are necessary.⁴ Unfortunately, this type of disease

surveillance is limited by the overwhelming demand for SARS-CoV-2 molecular diagnostic analyses.^{3,5,6}

To increase COVID-19 testing capacity, procedures based on pooling of naso-oral pharyngeal (NOP) swab specimens have been recently proposed.^{7–9} However, the validation of the sample pooling approach is crucial to assess its diagnostic accuracy and to avoid false-negative results. Recent studies describing the detection of SARS-CoV-2 RNA in pools of 5 to 32 samples reported false-negative rates up to 10% for large groups, suggesting that smaller sample pools are a good compromise to increase sample processing capacity while maintaining test reliability.^{6–9} Since 5-sample pools were shown to efficiently detect SARS-CoV-2 RNA in RT-PCR assays,⁷ we chose to test and validate this approach using a high-throughput RNA extraction and amplification platform. The Sant' Andrea Hospital of Rome (Italy) has put in place a SARS-CoV-2 surveillance program focused on the periodic screening of HCWs and preventive screening of patients (before hospitalization). In total, 2,035 people from the surveillance program (1,437 HCWs and 598 patients) were enrolled in this study. The molecular diagnostic workflow we used for SARS-CoV-2 detection included the following elements: (1) NOP swab sampling using the COPAN UTM-RM virus transport medium (Copan Diagnostics,

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