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## Specialized prenatal care delivery for coronavirus disease 2019—exposed or —infected pregnant women

**OBJECTIVE:** Because of the coronavirus disease 2019 (COVID-19) pandemic, medical practices are adjusting care delivery to minimize exposure risk for patients and health-care workers. Prenatal care presents an interesting challenge, as many visits must occur in person and should not be delayed. The severity of COVID-19 in pregnancy remains unclear; therefore, COVID-19—positive and quarantined COVID-19—exposed pregnant women need access to essential obstetrical care and evaluation to ensure disease stability. Although telehealth can be used to provide care

and reduce exposure, there are circumstances when in-person visits are indicated.<sup>1</sup> In some cases, pregnant women with COVID-19 have been unable to receive needed prenatal care because of insufficient infection control measures. Thus, the objective of this study is to demonstrate feasibility of a cohorted prenatal care model that isolates COVID-19—positive and quarantined COVID-19—exposed pregnant women in a separate clinic location to provide obstetrical care while minimizing exposure risk.

**TABLE**  
**Characteristics of patients managed by OB COVID-19 clinic**

Characteristics	Total population Overall, n (%) n=85	COVID-19 diagnosis		P value
		COVID-19—negative, n (%) n=22	COVID-19—positive, n (%) n=63	
Maternal age, y, median (IQR)	29 (25, 33)	31 (26, 35)	29 (25, 33)	.30
Race and ethnicity				<.01
White	12 (12.5)	8 (38.1)	4 (6.5)	
Black	17 (20.5)	7 (33.3)	10 (16.1)	
Latinx	49 (59.0)	3 (14.3)	46 (74.2)	
Asian	5 (6.0)	3 (14.3)	2 (3.2)	
BMI, kg/m <sup>2</sup> , median (IQR)	30.6 (26.7–35.8)	27.5 (26–31.8)	31.2 (27.2–36.3)	.14
Multiparous	61 (71.8)	14 (63.6)	47 (74.6)	.41
Chronic hypertension	7 (8.2)	3 (13.6)	4 (6.4)	.37
Type 2 diabetes	3 (3.5)	2 (9.1)	1 (1.6)	.16
Gestational age at OB COVID-19 clinic visit, wk, median (IQR)	29.6 (20.3–36.1)	30.4 (24.1–36.0)	28.7 (18.6–36.1)	.64
Presented with fevers	32 (37.7)	3 (13.6)	29 (46.0)	.01
Presented with cough	48 (56.5)	10 (45.5)	38 (60.3)	.32
Presented with dyspnea	27 (31.8)	6 (27.3)	21 (33.3)	.38
Visit reason				.13
COVID-19 symptoms	37 (43.5)	13 (59.1)	24 (38.1)	
Routine OB care	48 (56.5)	9 (40.9)	39 (60.9)	
Delivered	41 (48.2)	13 (59.1)	28 (44.4)	
Mode of delivery (n=41)				.44
Vaginal	28 (68.3)	7 (53.9)	21 (75)	
Planned cesarean	9 (22.0)	4 (30.8)	5 (17.9)	
Unplanned cesarean	4 (9.7)	2 (15.3)	2 (7.1)	

BMI, body mass index; COVID-19, coronavirus disease 2019; IQR, interquartile range; OB, obstetrics.

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**STUDY DESIGN:** We conducted an institutional review board–approved retrospective cohort study of gravid women from a single academic health system’s obstetrics (OB) COVID-19 clinic. Women receiving prenatal care within a 3-hospital system with COVID-19 or at high risk based on the American College of Obstetricians and Gynecologists COVID-19 algorithm<sup>2</sup> were eligible for care in the OB COVID-19 clinic. Nurses at each site providing obstetrical care were trained on following the algorithm, ordering testing, and scheduling. Clinic services offered in a location with car-side check-in and a separate entrance and bathrooms. The clinic was staffed by a consistent team with training in donning and doffing personal protective equipment (PPE) (2 medical assistants and 1 maternal-fetal medicine specialist). In addition, 1 staff member was designated as PPE observer and escort. Home pulse oximeters were distributed when indicated. Following resolution of COVID-19 quarantine, patients resumed care with their primary obstetrical practice. Demographic data, pregnancy complications, and outcomes were abstracted. Data were analyzed using descriptive statistics.

**RESULTS:** Between March 18, 2020, and July 30, 2020, 85 women were seen in the OB COVID-19 clinic, of whom 63 had COVID-19. A total of 46 patients had known exposures: 25 (54%) were family-related, 20 (43%) were work-related, and 1 (3%) were travel-related. Another 27 women had unknown exposure. Of those with known exposure etiology, those with family-related (80%) and work-related (75%) exposures were most likely to receive positive test results. Latinx women were more likely to have COVID-19 than other racial and ethnic groups ( $P<.01$ ) (Table). Among the 63 COVID-19–positive women, 6 (9.5%) were asymptomatic, 49 (77.8%) had mild disease, 6 (9.5%) had moderate disease, and 2 (3.2%) had severe disease. Only 7 patients required hospitalization. The length of stay ranged from 1 to 6 days; 3 patients received remdesivir, and none received corticosteroids. No patients developed fetal growth restriction, and 28 (44%) of the women have delivered (Table). Three healthcare workers developed COVID-19 infection.

**CONCLUSION:** Cohorted obstetrical care during the COVID-19 pandemic allows an algorithm-driven method of

providing prenatal care for COVID-19–positive and quarantined COVID-19–exposed pregnant women while minimizing exposures in clinics providing routine prenatal care.<sup>3</sup> The clinic serves as a resource for a 3-hospital health system for pregnancy-related COVID-19 queries. This approach optimizes resource allocation across the health system, develops experts in donning and doffing PPE, and ensures that patients with COVID-19 in pregnancy receive consistent assessment and care recommendations. ■

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