Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

OUD care after adjusting for patient and hospital characteristics (Table 1).

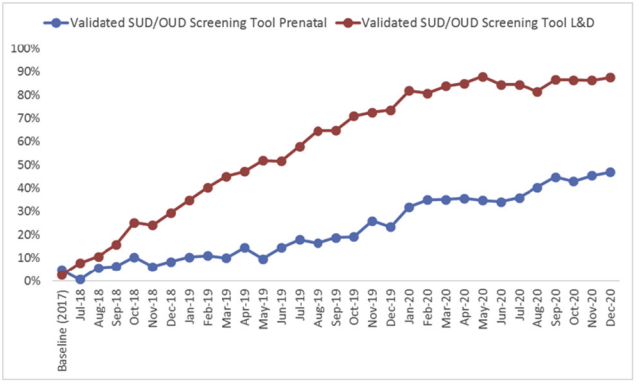
CONCLUSION: A statewide QI initiative was associated with increased screening for OUD prenatally and during delivery admission. Pregnant patients with OUD are more likely to get optimal care with prenatal identification of OUD. Statewide QI efforts should continue efforts to increase prenatal screening for OUD.

Table 1: Percent of pregnant patients screened with a validated tool prenatally versus during delivery admission and association with optimal OUD care [Medication Assisted Treatment (MAT), Linkage Recovery Treatment Services (RTS), and Narcan counseling], adjusted for hospital and patient characteristics, July 2018 – December 2020, using generalized linear mixed effects models.

	MAT			Linkage to RTS			Narcan counseling		
	%	OR (95% CI)	p-value	%	OR (95% CI)	p-value	%	OR (95% CI)	p-value
OUD identified prenatally	66.4%	9.53 (6.68, 13.59)	<0.001	69.3%	2.86 (2.13, 3.82)	<0.001	28.8%	2.01 (1.20, 3.36)	0.008
OUD identified during delivery admission	18.3%			36.3%			10.6%		

*Variables adjusted for include patient and hospital characteristics: time (6-month increments), maternal age, maternal race, birth volume, and percent of patients on Medicaid, at of delivering hospital.

Figure 1. Monthly sample of delivering patients from participating hospitals showing improvement in documentation of OUD screening with a validated tool prenatally and at delivery admission, baseline Quarter 4 2017 to December 2020.



1103 Comparing systemic inflammation in pregnancy for patients participating in group versus individual prenatal care

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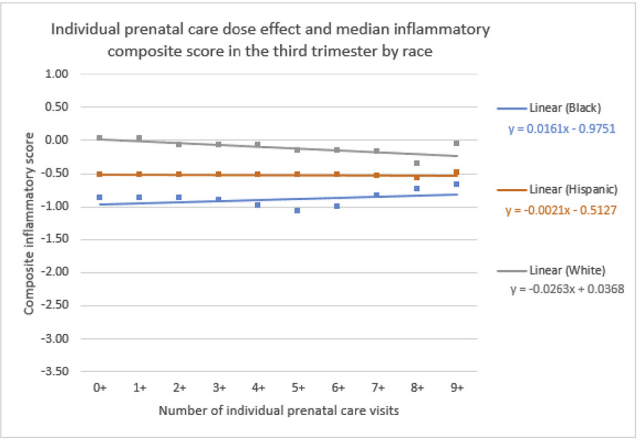
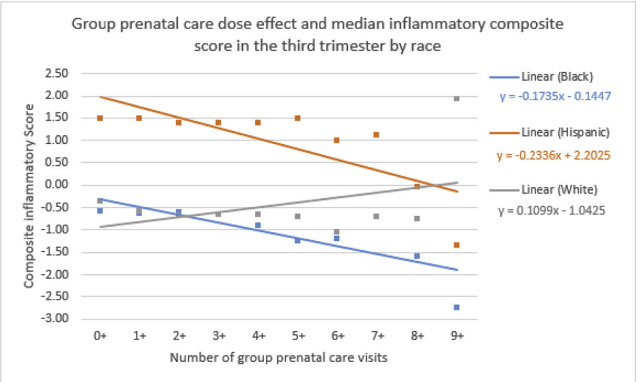
OBJECTIVE: Group Prenatal Care (GPNC) has been associated with improved birth outcomes when compared to Individual Prenatal Care (IPNC) particularly for Black patients, though the physiologic mechanisms of action are unclear. Inflammation may contribute to earlier delivery and fetal growth restriction. Our objective was to examine whether GPNC was associated with reduced maternal inflammation during gestation.

STUDY DESIGN: This is a subset of 675 participants in the Cradle randomized trial comparing birth outcomes for GPNC vs IPNC. Participants were included if they completed at least one prenatal visit, had no recent infection, and provided serum samples between 5-24 and 36-41 weeks gestation. Serum inflammatory measures (IL-10, IL-1ra, IL-6, TNFα, and CRP) were log-transformed for normality as appropriate and a composite was created by summing z-scores of all inflammatory markers. Race was self-reported. Multivariable models were used to determine the association of prenatal care treatment and the inflammatory composite, adjusted for race, income, fetal sex, pre-pregnancy BMI, and gestational age at blood draw. We also examined the median composite inflammatory score by visit number, group, and race.

RESULTS: In the adjusted model, there was no association between the composite inflammatory score when comparing GPNC vs IPNC (B: 0.10; p= 0.68). However, we observed decreasing median inflammatory scores as the number of GPNC visits increased (B: -0.067); this dose effect was not observed for IPNC (B: 0.0075) (Fig. 2). When stratified by race, an increasing number of GPNC visits resulted in decreased inflammatory scores for Black (B: -0.17) and Hispanic (B: -0.23) participants (Fig. 1). In IPNC, there was limited dose affect across racial groups (B: -0.026) (Fig. 2).

CONCLUSION: Our results demonstrate no differences in systemic inflammation in GPNC vs IPNC. However, a potential dose response effect was seen with decreasing inflammatory scores as the number of GPNC visits increased, particularly among Black and Hispanic patients. Future work should explore other physiologic pathways of action.





1104 Increased prevalence of high grade placental pathology with first trimester SARS-CoV-2 infection

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OBJECTIVE: COVID19 in pregnancy is associated with adverse perinatal outcomes, but specific placental pathology is not known. Furthermore, placental findings by trimester of infection have not been described.

STUDY DESIGN: This is a multicenter prospective study of pregnant persons with confirmed SARS-CoV-2 infection. Pregnant patients were recruited after any type of positive SARS-CoV-2 antigen PCR testing. Placental specimens were collected at delivery and a perinatal pathologist evaluated inflammatory pathology, including acute and chronic inflammation, and vascular pathology, including maternal and fetal vascular malperfusion. Pathology was graded (none, low, and high grade). Fishers exact test was used to compare the prevalence of lesions by trimester of infection. Gestational age (GA) at delivery was compared by trimester of infection using Wilcoxon rank sum. Logistic regression tested the association of time from infection to delivery and presence of high grade inflammatory and/or vascular pathology.

RESULTS: Seventy patients were enrolled. Eleven (15.7%) were infected in the 1st trimester and 59 (84.3%) in the second or third trimester. Patients with 1st trimester infection delivered earlier with median GA of 37 weeks compared to 39 weeks for 2nd/3rd trimester infection, (Table 1, p=0.04). There was no difference in the prevalence of placental inflammation or vascular malperfusion by trimester (Table 2). However, the prevalence of any high grade placental inflammatory and/or vascular pathology was significantly higher for 1st trimester infections (Table 2, 63.6% 1st trimester vs 27.1% 2nd/3rd trimester, p=0.03). Longer interval between GA at infection and delivery was associated with increased odds of high grade inflammatory and/or vascular pathology (OR 1.06, 95% 1.002, 1.124, p =0.04).

CONCLUSION: First trimester infection with SARS-CoV-2 and longer interval from infection to delivery is associated with a higher prevalence of high grade inflammatory and/or vascular pathology at delivery. Future work should explore clinical implications of these findings.

Table 1. Patient characteristics by trimester of SARS-CoV-2 infection (1st trimester vs 2nd/3rd trimester)

	1st trimester infection (N = 11)	2nd or 3rd trimester infection (N = 59)	p-value
GA at delivery (weeks)	37 [36,39]	39 [38,40]	0.04
Interval to delivery (weeks)	28 [25,30]	10 [5,18]	<0.0001
Race			0.48
Black	0 (0%)	10 (17.0%)	
Hispanic	4 (36.4%)	16 (27.2%)	
White	5 (45.5%)	27 (45.8%)	
Asian	1 (9.1%)	3 (5.1%)	
Other/Unknown	1 (9.1%)	3 (5.1%)	
Public insurance	4 (36.4%)	33 (55.9%)	0.33
Asymptomatic infection	0	4 (7.0%)	>0.99

Table 2. Histologic placental lesions by trimester of SARS-CoV-2 infection (1st trimester vs 2nd/3rd trimester).

		1st trimester infection (N = 11)	2nd or 3rd trimester infection (N = 59)	p-value
Chronic inflammation	Any	6 (54.6%)	17 (28.8%)	0.16
	Low grade	3 (27.3%)	10 (17.0%)	0.19
	High grade	3 (27.3%)	7 (11.9%)	
Acute inflammation	Any	5 (45.5%)	30 (50.9%)	>0.99
	Low grade	4 (36.4%)	27 (45.8%)	0.56
	High grade	1 (9.1%)	3 (5.1%)	
Maternal vascular malperfusion	Any	6 (54.6%)	16 (27.1%)	0.09
	Low grade	3 (27.3%)	9 (15.3%)	0.13
	High grade	3 (27.3%)	7 (11.9%)	
Fetal vascular malperfusion	Any	2 (18.2%)	15 (25.4%)	>0.99
	Low grade	2 (18.2%)	14 (23.7%)	>0.99
	High grade	0 (0%)	1 (1.7%)	
High grade inflammatory and/or vascular pathology		7 (63.6%)	16 (27.1%)	0.03

1105 Infection morbidity after discharge in women with "benign" postpartum fever during delivery hospitalization

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OBJECTIVE: Postpartum (PP) fevers are often thought to be benign and self-limited if unaccompanied by other signs of infection. We evaluated rates of post-discharge infections in patients with a "benign" PP fever.

STUDY DESIGN: Retrospective cohort study of all deliveries at a single center (2013-18). Patients were excluded if they had diagnosed infections (i.e. chorioamnionitis, endometritis), received antibiotics for infection treatment, or had a VTE prior to discharge from delivery admission. Patients were categorized into two groups: those with a "benign" PP fever (T >100.4F and no diagnosis/treatment during hospitalization) and those without fever. The primary outcome was infection (endometritis, wound infection, UTI) diagnosed after hospital discharge. Outcomes were compared between groups and adjusted odds ratios (95% CIs) calculated using multivariable logistic regression. Stratified analyses based on timing and severity of fever were planned.

RESULTS: Of 24,637 deliveries during the study period, 18,143 were analyzed - 225 (1%) had a "benign" PP fever. Patients with fever were more likely to be younger, nulliparous, have longer lengths of membrane rupture, have an epidural and receive a blood transfusion ($p < 0.05$). Patients with "benign" PP fever had an increased odds of post-discharge infection (6% vs. 2%, aOR 2.45 [1.34-4.51]), specifically wound infections (Table). While patients with fever were also significantly more likely to be readmitted, other secondary outcomes were similar between groups (Table). Outcomes were not different when stratified by temperature ranges. But, patients with fever > 48 hrs PP were significantly more likely to experience both post-discharge infection and readmission; fever < 24 hrs PP was not associated with increased infection morbidity (Figure). In fact, fever >55 hrs PP was highly predictive of post-discharge infection (AUC 0.86 [0.82-0.90]).