Supplementary Online Content

Angelidou A, Sullivan K, Melvin PR, et al. Association of maternal perinatal SARS-CoV-2 infection with neonatal outcomes during the COVID-19 pandemic in Massachusetts. *JAMA Netw Open*. 2021;4(4):e217523. doi:10.1001/jamanetworkopen.2021.7523

eFigure. Participating MA Hospitals, Level of Care, and Yearly Births

eTable 1. MA Newborn Cases With Positive SARS-CoV-2 Testing Born to Mothers With SARS-CoV-2

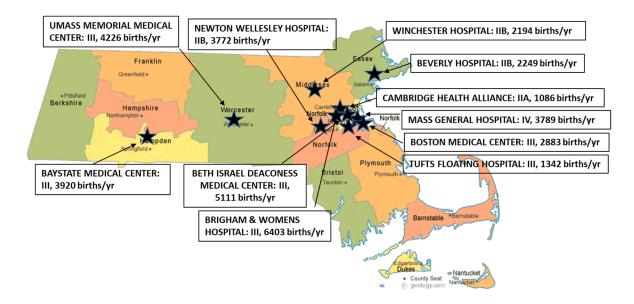
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This supplementary material has been provided by the authors to give readers additional information about their work.



eFigure. Participating MA Hospitals, Level of Care and Yearly Births

Source: Massachusetts Department of Public Health, 2017.

Testing period	In-hospital				After discharge	
Case number	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6
Hospital	A	A	А	В	С	A
Maternal race/ethnicity	Hispanic	Non-Hispanic Black	Hispanic	Non- Hispanic White	Non- Hispanic Other	Hispanic
Maternal language	English	English	Spanish	English	Spanish	Spanish
SVI ≥90 th percentile	Yes	No	Yes	Yes	No	Yes
Maternal COVID-19 symptoms at delivery	Yes	Yes	Yes	No	No	Yes
Mode of delivery	Cesarean	Cesarean	Cesarean	Cesarean	Vaginal	Vaginal
Preterm infant	Yes	Yes	No	No	No	No
Gestational Age	35 wk 1 d	35 wk 1 d	38 wk 0 d	38 wk 0 d	41 wk 0 d	40 wk 2 d
Timing of infant testing	HD1/HD2/ HD5	HD1/HD2/HD4 /HD5	HD1/HD2/ HD5	HD3	HD2	HD1/HD2/ ED D5
Sequence of infant testing	+/+/+	-/inconclusive/ invalid/+	-/+/-	+	+	-/-/+
Neonatal signs	Respiratory distress, feeding immaturity	Respiratory distress	None	None	None	Nasal congestion, rhinorrhea, sneezing
Any rooming- in	No	No	Yes	Yes	Yes	No
Any direct breastfeeding	No	No	Yes	No	Yes	No

eTable 1. MA Newborn Cases with Positive SARS-CoV-2 Testing Born to Mothers With SARS-CoV-2.

Abbreviations: ED, Emergency Department; HD, Hospital Day; NHB, non-Hispanic Black; NHW, non-Hispanic White; SVI, Social Vulnerability Index

eTable 2. Characteristics of Newborns Who Were Tested vs Not During Their Hospital Stay.

Variable	Infants tested during hospital stay (N= 225)	Infants not tested during hospital stay (N=30)	P Value ^a
Social factors			
Maternal race/ethnicity, No. (%)			.20
Hispanic, any race	110 (48.9)	13 (43.3)	
Non-Hispanic white	40 (17.8)	10 (33.3)	
Non-Hispanic black	43 (19.1)	5 (16.7)	
Non-Hispanic other	32 (14.2)	2 (6.7)	
Black race or Hispanic ethnicity, No. (%)			.38
Yes	153 (68.0)	18 (60.0)	
No	72 (32.0)	12 (40.0)	
Maternal language status, No. (%)			.24
English	117 (52.0)	19 (63.3)	
Non-English	108 (48.0)	11 (36.7)	
Maternal SVI, No. (%)			.66
SVI ≥90 th percentile	61 (27.1)	7 (23.3)	
<90 th percentile	164 (72.9)	23 (76.7)	
Pregnancy and delivery factors			
Maternal illness, No. (%)			.54
Symptomatic	70 (31.1)	11 (36.7)	
Asymptomatic	155 (68.9)	19 (63.3)	
Cesarean delivery, No. (%)			.51
Yes	98 (43.6)	15 (50.0)	
No	127 (56.4)	15 (50.0)	
Preterm birth (<37 wk), No. (%)			.12
Yes	50 (22.2)	3 (10.0)	
No	175 (77.8)	27 (90.0)	
Newborn Characteristics			
Month of Birth, No. (%)			.95
March	15 (6.7)	2 (6.7)	
April	68 (30.2)	11 (36.7)	
May	78 (34.7)	10 (33.3)	
June	50 (22.2)	5 (16.7)	
July	14 (6.2)	2 (6.7)	
Preterm (< 37 wk) or LBW (< 2500 g), No. (%)			.05
Yes	59 (26.2)	3 (10.0)	
No	166 (73.8)	27 (90.0)	

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Resuscitation at Birth, No. (%)			.56
Drying and stimulation	177 (78.7)	25 (83.3)	
Oxygen, positive pressure of any kind, intubation, or chest compressions	48 (21.3)	5 (16.7)	

Abbreviations: LBW, low birth weight; SVI, Social Vulnerability Index. *P* values account for hospital clustering using Cochran-Mantel-Haenszel chi-square tests.

Variable	Infants with negative test (N= 220)	Infants with positive test (N=6)	P Value ^a	
Social factors				
Maternal race/ethnicity, No. (%)			.97	
Hispanic, any race	108 (49.1)	3 (50.0)		
Non-Hispanic white	39 (17.7)	1 (16.7)		
Non-Hispanic black	42 (19.1)	1 (16.7)		
Non-Hispanic other	31 (14.1)	1 (16.7)		
Black race or Hispanic ethnicity, No. (%)			.48	
Yes	150 (68.2)	4 (66.7)		
No	70 (31.8)	2 (33.3)		
Maternal language status, No. (%)		· · ·	.71	
English	114 (51.8)	3 (50.0)		
Non-English	106 (48.2)	3 (50.0)		
Maternal SVI, No. (%)			.05	
SVI ≥90 th percentile	57 (25.9)	4 (66.7)		
<90 th percentile	163 (74.1)	2 (33.3)		
Pregnancy and delivery factors				
Maternal illness, No. (%)			.50	
Symptomatic	68 (30.9)	3 (50.0)		
Asymptomatic	152 (69.1)	3 (50.0)		
Cesarean delivery, No. (%)			.28	
Yes	94 (42.7)	4 (66.7)		
No	126 (57.3)	2 (33.3)		
Preterm birth (<37 wk), No. (%)			.26	
Yes	49 (22.3)	2 (33.3)		
No	171 (77.7)	4 (66.7)		
Hospital practices				
Any rooming-in, No. (%)			.07	
Yes	142 (64.5)	2 (33.3)		
No	78 (35.5)	4 (66.7)		
Any direct breastfeeding, No. (%)			.08	
Yes	127 (57.7)	2 (33.3)		
No	93 (42.3)	4 (66.7)		

eTable 3. Characteristics of Newborns with Negative and Positive SARS-CoV-2 Test(s).

Abbreviations: SVI, Social Vulnerability Index. ^aP values account for hospital clustering using Cochran-Mantel-Haenszel chi-square tests.

eTable 4. Characteristics of Newborns With and Without Post-Discharge EMR Information.

	Any Infant Post-Discharge Encounter?			
Variable	No (N=104)	Yes (N=151)	P value ^a	
Maternal Demographics/Social Factors				
Race/Ethnicity, No. (%)				
Underrepresented Minority (Hispanic or Black)	60 (57.7)	111 (73.5)	.84	
Language, No. (%)				
English	66 (63.5)	70 (46.4)	.52	
Spanish	27 (26.0)	57 (37.7)		
Other	11 (10.6)	24 (15.9)	1	
Maternal Age, mean (SD), y	30.1 (6.0)	30.5 (6.5)	.58	
Newborn Characteristics				
Inborn, No. (%)	101 (97.1)	146 (96.7)	.69	
Female, No. (%)	56 (53.8)	75 (49.7)	.87	
Month of Birth, No. (%)				
March	11 (10.6)	6 (4.0)		
April	26 (25.0)	53 (35.1)		
Мау	31 (29.8)	57 (37.7)	.002	
June	28 (26.9)	27 (17.9)	1	
July	8 (7.7)	8 (5.3)	1	
Preterm (< 37 wk) or LBW (< 2500 g), No. (%)	26 (25.0)	36 (23.8)	.07	
Resuscitation at Birth, No. (%)				
Drying and stimulation	79 (76.0)	123 (81.5)		
Oxygen, positive pressure of any kind, intubation, or chest compressions	25 (24.0)	28 (18.5)	.75	

Abbreviations: LBW, low birth weight. ^aP values account for hospital clustering using Cochran-Mantel-Haenszel chi-square tests.

eTable 5. Newborn Cases Who Were Re-Hospitalized Within 30 Days From Birth Hospital Discharge.

	Case 1	Case 2	Case 3	Case 4
Clinical synopsis	Presented to the ED on day of life 3 with hematemesis, had an apneic/bradycardic episode and was admitted for full sepsis evaluation. Was discharged after 48 hours of antibiotics, blood culture subsequently returned positive for micrococcus luteus thought to be a contaminant	Admitted at 2 weeks of life for initiation of propranolol for a ventricular arrhythmia	Admitted for hyperbilirubinemia due to G6PD deficiency	Admitted for respiratory distress and was subsequently diagnosed with laryngomalacia
Viral testing done	No	Yes	No	Yes
Viral test results	NA	Negative	NA	Negative

Abbreviations: NA, Not applicable.