

WELCOME to the

*Planning and Clinical Management of Perinatal
COVID-19 cases*

Session will start in less than 15 minutes



COVID 19 and the Newborn

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No conflicts

- Some slides borrowed from Elizabeth Glaser Pediatric AIDS foundation webinar



Objectives

- Understand what we know about perinatal infection and mechanism
- Identify Issues of Management- PPE, DR attendance, discharge
- Understand recommendations for in-hospital care, testing and discharge
- Identify best practices around postnatal monitoring.



Why Such Rapid Global Spread?



- **Ease of transmission** – respiratory droplets, touching contaminated surfaces
- High attack rate because:
 - **Infectious before symptoms** – viral shedding 1-3 d before symptoms (*Wei WE. MMWR 2020 Apr 10*).
 - **Prolonged shedding after symptoms** - median duration 17 days; more severe disease = higher viral load, ↑ duration shedding (*Xu K. Clin Infect Dis. 2020 Apr 9; Xu K. Clin Infect Dis 202 Apr 9; Pan Y. Lancet Infect Dis 2020 Feb 24*)
 - **Transmission from asymptomatic persons** (*Bai Y. JAMA 2020 Feb 21, Rothe C. NEJM 2020 Mar 5*).
- **Population level lack of immunity** - Novel virus, no “herd immunity” globally
- **Ease of importation** of cases – due to widespread global travel

Can newborns get COVID 19

- In utero transmission is possible but hard to prove
- Reports from China found no evidence of in utero transmission. Some reports of specific IgM and IgG in newborns- may or may not be real.
- BUT : newborns can acquire disease , most if not all of which is postnatal.

DATA ARE STILL LIMITED- WE NEED MORE!!



Newborns of Women with COVID-19



Symptoms	# Papers with data	Number/total sample	Percent
Neonatal asphyxia	31	2/358	0.6%
Neonatal death	33	1/364*	0.3%
Neonatal symptoms	23	34/171	20%
Type of symptoms			
Fever	5	6/21	29%
Respiratory distress	5	9/201	45%
Gastrointestinal	4	4/15	26%
Abnormal chest x-ray	12	28/120	23%

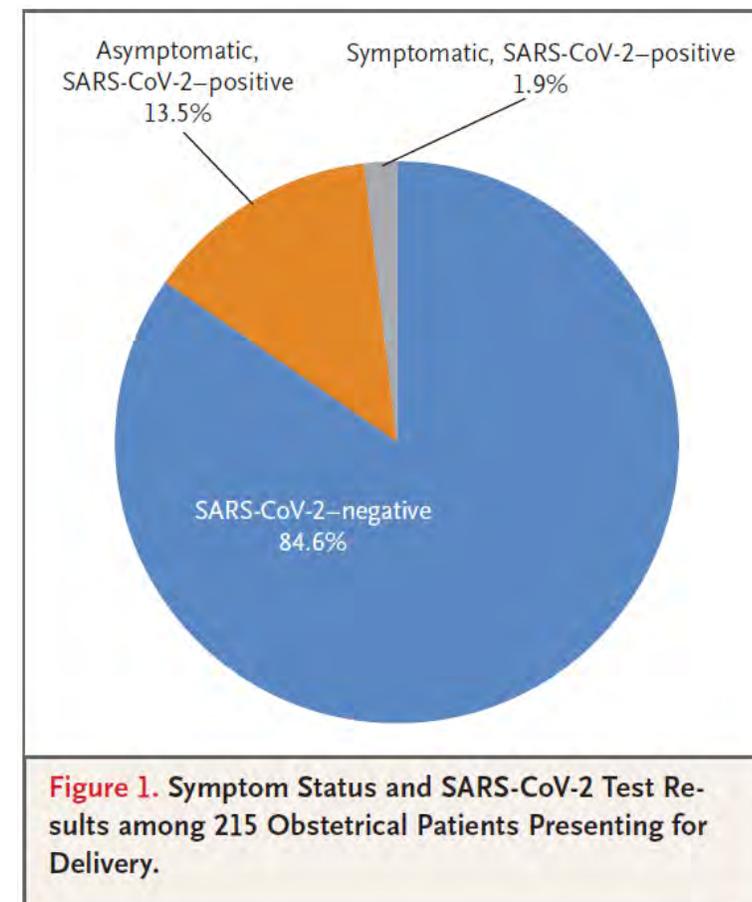
→ **Severe neonatal outcomes rare, and most not felt associated with maternal COVID-19. Neonatal symptoms were seen in about a quarter (not clearly related); chest x-rays generally performed in infants with respiratory symptoms, not asymptomatic infants.**

*Preterm 34-week gestation infant with multiple organ failure, DIC, shock, died at 9 days; no rtPCR was done

Universal SARS-CoV-2 Screening in NYC Demonstrates High Rate of Asymptomatic Women with Positive rtPCR Test

Sutton D et al. N Engl J Med. 2020 Apr 13 (epub)

- Reported on 215 pregnant women delivered at NY Presbyterian and Columbia U Hospital in NYC March 22-April 4, where universal NP rtPCR testing being done in labor.
- 4/215 (1.9%) had symptoms, all positive.
- 29/210 (13.7%) of women without symptoms who were tested were positive.
- Thus, 29/33 (87.9%) positive for SARS-CoV-2 had no symptoms at admission.
- Fever developed PP in 3/29 (10%) initially without sx.



How relevant is NY data

- Concerning that most cases asymptomatic
- On the other hand, disease prevalence is apparently high in the NYC population. Is it the same in Northern NE?

**DATA is limited- We need more data,
more testing to better know!!**



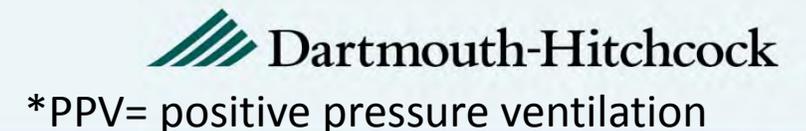
Brief Recommendations

- Gowns gloves procedural mask and eye protection for most encounters with newborns born to + or PUI mothers.
- N95 mask or respirator mask when aerosol generating procedures are done: *PPV, intubation, tracheal suctioning, NC flow > 2 L, CPAP

Delivery: Attendance based on normal institutional guidelines

**Would re-evaluate attendance at planned C/S at term

** If you attend + or PUI, would recommend N95 /respirator



Separation of infant from +/-PUI mother

- Recommended
 - Real risk of transmission to newborn
 - Potential NB illness
 - High risk of transmission to family etc
- Can be kept 6 feet from mother in isolette



What About Breast Milk Transmission of SARS-CoV-2

- SARS-CoV-2 rt PCR evaluated in 14 breast milk samples.
 - All tested negative for virus
- Postnatally, transmission more likely through close contact of infected mother with infant than through breast milk.
- RECOMMEND – EXPRESSED milk fed by healthy person
- Public Health vs Personal Choice?



Testing of infant with +/-PUI mother

- Bathing after birth
- First testing molecular assay at 24 hours of age: swabs of throat and nasopharynx
- Repeat testing at 48 hours-
 - May skip if discharged but there are reports of positives only at 48 hours or later, so risk increased
- Recommend waiting until 24 hours for discharge to allow normal screening



Discharge if mother is +/-PUI

Positive by testing but no symptoms: d/c home with close follow up by phone or visit

Negative testing:

Home with a healthy caregiver available.

Mother to remain 6 feet away

If closer, mask and handwashing



Issues

- Reconsider which births require pediatric attendance – the silver lining? Certainly can use “Standby”
- Follow up care at home:
 - Case by case depending of available caregivers
 - Monitoring for symptoms by phone or visits
- Readmissions-
 - No clear guidance. If infant is well with no exposures and has only been home with well (negative) mother, would treat as healthy
 - If positive mom, positive infant- admit to isolation and PPE as above.



SUMMARY

- Remember- most issues when mother is Positive or PUI- not everyone!
- This is a highly contagious disease and the data we need is only partially available- so continue to stay tuned
- Asymptomatic carriage means that there may be a risk from “healthy” patients, and this colors our approach as we attempt to assess that risk
- The recommendations on when to use what PPE are useful and based on best available data. Consider at which births you are really needed.
- Breast milk is still the best- but best given by expression and feeding by a healthy caregiver
- Test the infant of a positive/PUI mother, plan post discharge care accordingly!

