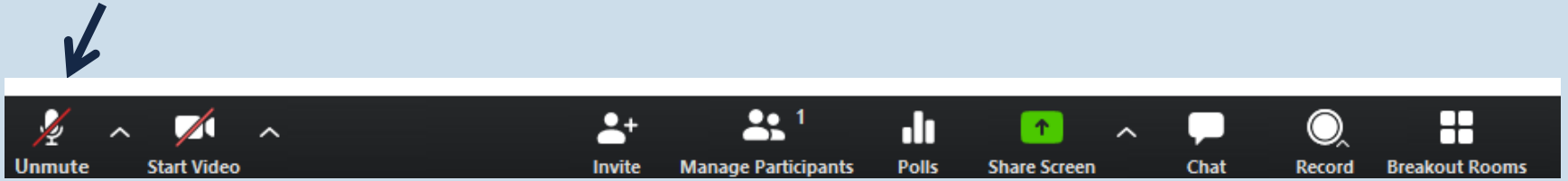
Supporting Your Obstetric & Neonatal Units During COVID-19

August 28, 2020
12 - 1 PM

Webinar Logistics

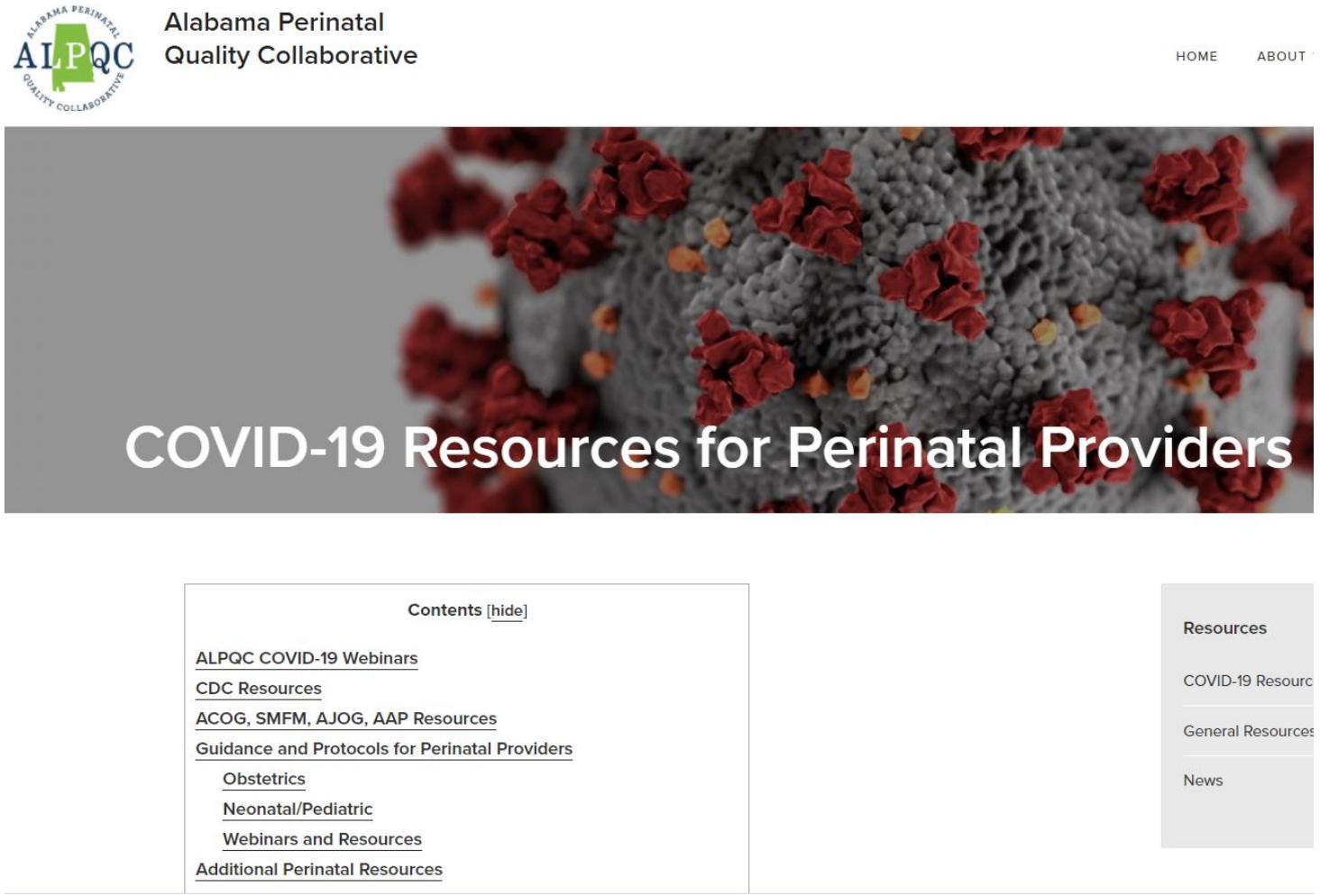
- Attendees are automatically muted upon entry
  - **Please ensure you are on mute** when not speaking to avoid background noise
    - You can mute/unmute yourself by clicking on the microphone icon



- We will answer questions at the end during the Q&A session.
  - Please enter questions/comments in the "**Chat**" box
- Slides will be made available after the webinar via email and at alpqc.org

Overview

- Introduction
- Guidelines and strategies for the management of suspected and confirmed COVID-19 infection in pregnant patients and neonates
- Q&A
- Please let us know if your hospital would like to share a case on an upcoming webinar -- can enter it into the chatbox or email eguillaumet@uab.edu



www.alpqc.org

Updated OB Resources www.alpqc.org

- ACOG Practice Advisory (Updated 8/12/2020)
- ACOG COVID-19 FAQs for Obstetrician-Gynecologists, Obstetrics (Updated 8/4/2020)
- ACOG COVID-19, Pregnancy, and Breastfeeding: A Message for Patients (Updated 8/12/2020)
- SMFM COVID-19 and Pregnancy: WhatMFM Subspecialists Need to Know (Updated 7/23/2020)
- ACOG COVID-19 FAQs for Obstetrician-Gynecologists, Ethics. (7/14/2020)
- **SMFM Management Considerations for Pregnant Patients with COVID-19 (Updated 7/2/2020)**
- ACOG Statement on CDC Data on COVID-19 and Pregnancy (6/24/2020)
- CDC Characteristics of Women of Reproductive Ave with Lab-Confirmed SARS-CoV-2 Infection by Pregnancy Status (6/26/20)
- **Preeclampsia Foundation Patient Resource**: How To Take Your Blood Pressure. (5/1/2020)
- AJOG MFM Coronavirus Guidance

Updated Neonatal Resources www.alpqc.org

- AAP Clinical Guidance on Cloth Face Coverings (updated 8/12/2020)
- AAP Testing Guidance (Updated 8/12/2020)
- AAP Family Presence Policies for Pediatric Inpatient Settings During the COVID-19 Pandemic (Updated 8/7/2020)
- CDC Evaluation and Management Considerations for Neonates at risk for COVID-19 (Updated 8/3/20)
- AAP Breastfeeding Guidance Post Hospital Discharge for Mothers or Infants with Suspected or Confirmed SARS-Co V-2 Infection (Updated 7/29/2020)
- AAP Management of Infants Born of Mothers with Suspected or Confirmed COVID-19: (Updated 7/22/2020)
- AAP Guidance on Newborn Screening During COVID-19 (Updated 7/16/2020)
- AAP Multisystem Inflammatory Syndrome in Children (MIS-C) Interim Guidance (Updated 7/13/2020)

Birth Equity Resources www.alpqc.org

- CDC HEAR HER Campaign: includes strategies to promote birth equity and reduce preventable maternal mortality (Aug 2020)
- AAP Racism and its Effects on Pediatric Health
- CDC COVID-19 Response Promising Practices in Health Equity II (July 2020)
- SMFM Strategies to provide equitable care during COVID-19 (May 2020)
- ACOG Addressing Health Equity During the COVID-19 Pandemic (May 2020)
- SMFM Strategies to overcome racism's impact on pregnancy outcomes (May 2020)
- AAP The impact of racism on child and adolescent health (Aug 2019)
- ACOG Reduction of Peripartum Racial and Ethnic Disparities: a conceptual framework and maternal safety consensus bundle (May 2018)
- ACOG CO 729 - Importance of Social Determinants of Health and Cultural Awareness in the Delivery of Reproductive Health Care (January 2018)
- Racial/Ethnic Disparity in NICU Quality of Care Delivery

COVID-19 National Registry - OB

PRIORITY:

- Nationwide registry for pregnant and postpartum women with suspected or confirmed COVID-19
- Goal: understand the impact of COVID-19 on the health and wellbeing of pregnant women and newborns
- To refer a patient (any language spoken) or to learn more, visit https://priority.ucsf.edu/about-priority

National Survey on Telehealth Expansion During COVID-19 - OB

- Survey of pregnancy care providers
- Research study sponsored by the Health Resources and Services Administration
- Goal:
  - **identify recent challenges in use of telehealth for provision of pregnancy care**
  - **inform need for policy change and resource mobilization**
- Can complete survey whether you have used telehealth or not
- 5-7 mins to complete

- https://covid19-ob.sirs.unc.edu/national-survey

COVID-19 National Registries-Neonatal

AAP Section on Neonatal Perinatal Medicine (SONPM) National Perinatal COVID-19 Registry

- Inviting hospitals to participate in effort to obtain more evidence on the relative risks of transplacental, perinatal, and postnatal transmission of COVID-19, and efficacy of infection control practices
- To learn more, visit https://services.aap.org/en/community/aap-sections/sonpm/in-the-spotlight/

VON-SONPM COVID-19 Impact Audit

- Tool to help newborn care teams understand the impact of COVID-19 in their units and in the neonatal community
- Goal: inform local and national decision-making for program evaluation & QI.
  - Open to all hospitals caring for infants, regardless of VON membership
  - Conducted on a single day of your choice, may choose to repeat each month
- To learn more, visit https://public.vtoxford.org/covid-19/

Obstetric Guidance & Management Strategies

Brian Brocato, DO, FACOG

Maternal-Fetal Medicine

UAB Medicine

Shannon Shumate Lambert, MSHA, BSN, RN

Director of L&D, OB ED, Antepartum

Brookwood Baptist Health

ALPQC Webinar: Supporting Your Obstetric and Neonatal Units During COVID-19

Brian Brocato, DO
Maternal-Fetal Medicine
ALPQC Obstetrics Lead

Outline

- Recent evidence/data regarding COVID-19 and pregnancy
- Updates from Guidelines
  - CDC
  - ACOG
  - SMFM

Characteristics of Women of Reproductive Age with Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status — United States, January 22–June 7, 2020
CDC Morbidity and Mortality Weekly Review (MMWR)

- Released by CDC June 25, 2020
- DOI: http://dx.doi.org/10.15585/mmwr.mm6925a1external icon.
- Population – women age 15-43 with known pregnancy status and lab confirmed COVID-19 (91,412)
- 8,207 pregnant women (9%)
- Data collected – demographic characteristics, pregnancy status, underlying conditions, clinical signs/symptoms, outcomes (hospitalization, ICU admission, mech vent and death)

Characteristics of Women of Reproductive Age with Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status — United States, January 22–June 7, 2020
CDC Morbidity and Mortality Weekly Review (MMWR)

Main Summary for pregnant women

1. Increased risk of ICU admission (RR 1.6)
2. Increased risk of mechanical ventilation (RR 1.9)
3. No increase in mortality (RR 0.8)
4. ICU admission more common among Asian, Hispanic/Latino, Black women when compared to entire group

Characteristics of Women of Reproductive Age with Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status — United States, January 22–June 7, 2020
CDC Morbidity and Mortality Weekly Review (MMWR)

- Other findings:
  - Most common underlying comorbidities:
    - Chronic lung disease
    - CV disease
    - Diabetes
  - Age stratification:
    - All outcomes more frequent among age 35-44, compared to 15-24

- Limitations of the data:
  - Could not separate hospitalization cause – related to COVID 19 or Pregnancy
    - ICU admission and mech ventilation rare for pregnancy admission

Characteristics of Women of Reproductive Age with Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status — United States, January 22–June 7, 2020
CDC Morbidity and Mortality Weekly Review (MMWR)

- Conclusion:

  “To reduce occurrence of severe illness from COVID-19, pregnant women should be counseled about the potential risk for severe illness from COVID-19, and measures to prevent infection with SARS-CoV-2 should be emphasized for pregnant women and their families. “

SMFM and ACOG comments on CDC results:

Acknowledging Limitations of Data:

- COVID-19 in pregnancy increases risk of ICU admission, mechanical ventilation but not death. Asian, Hispanic and Black women are disproportionately affected by COVID-19 during pregnancy.
- Counseling should be balanced by reassurance of relatively low absolute risk increase in ICU admission (0.6%) and mechanical ventilation (0.2%)
- Based on current data, absolute risk is still substantially lower than that of pandemic H1N1 influenza during pregnancy:
  - Pregnant women made up 5% of deaths
  - ICU admission7-fold increase

Optimization of health and avoiding exposures to COVID-19

- Maintaining prenatal care appointments
- Wearing a mask and other recommended PPE, if applicable, at work and in public
- Washing hands frequently
- Maintaining physical distancing
- Limiting contact with other individuals as much as practicable
- Maintain an adequate supply of preparedness resources including medications

COVID-19 Adverse Obstetrical and Perinatal Outcomes

- Preterm labor
- Stillbirth
- Fetal growth restriction
- Oligohydramnios
- Venous thrombosis

COVID-19 Adverse Obstetrical and Perinatal Outcomes

Do women with COVID-19 need additional antenatal surveillance?

ACOG & SMFM :

- “management similar to recovering from influenza”
- Assessment of fetal growth in the third trimester.
  - Consider antenatal testing due to risk of FGR and oligohydramnios
- Not an indication for delivery, unless improving maternal status
- Reasonable to delay delivery until a negative test, or quarantine status lifted

COVID-19 Adverse Obstetrical and Perinatal Outcomes

- Thrombophrophylaxis
  - Increased coagulopathy with COVID-19 infection
  - Pregnancy is hypercoagulable state
- Prophylactic anticoagulation in severe or critically ill pregnant patients
- Consider prophylactic anticoagulation treatment in non-critical illness

In-utero transmission of COVID-19

- Reports of:
  - PCR samples of placenta, amniotic fluid and cord blood show rare positivity
  - Cord blood SARS-CoV-2 IgM detected in cord blood
  - Case description – 35 weeks, abnormal fetal tracing:
    - Placenta, amniotic fluid, neonatal blood, rectal, nasopharyngeal swabs +
    - Neonate showed transient neurological compromise
  - Case description – 34 weeks, preterm labor, maternal fever, diarrhea (COVID-19+)
    - Class B DM, LGA fetus, latent syphilis tx during pregnancy
    - Vaginal delivery, infant separated, NICU for prematurity, glucose and COVID exposure
    - Day 2 – infant – fever, resp distress, tachypnea
    - Nasopharyngeal swab + at 24 and 48 hrs, placenta

In-utero transmission of COVID-19

- Summary
  - Although there are cases of apparent/possible in-utero exposure, it appears it is a rare event

1. Sisman, Julide MD*; Jaleel, Mambarambath A. MD*; Moreno, Wilmer MD†; Rajaram, Veena MD‡; Collins, Rebecca R.J. MD‡; Savani, Rashmin C. MBChB*; Rakheja, Dinesh MD‡; Evans, Amanda S. MD§ Intrauterine Transmission of SARS-COV-2 Infection in a Preterm Infant, The Pediatric Infectious Disease Journal: September 2020 - Volume 39 - Issue 9 - p e265-e267
doi: 10.1097/INF.0000000000002815

2. Patanè L, Morotti D, Giunta MR, et al. Vertical transmission of COVID-19: SARS-CoV-2 RNA on the fetal side of the placenta in pregnancies with COVID-19 positive mothers and neonates at birth [published online ahead of print, 2020 May 18]. *Am J Obstet Gynecol MFM*. 2020;2(3):100145. doi:10.1016/j.ajogmf.2020.100145

Thank you

COVID-19 Neonatal Guidance & Management Strategies

Claudette Poole, MD
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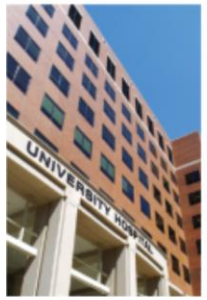
UAB Medicine

Updated Guidance: Management of Infants Born to Mothers with COVID-19

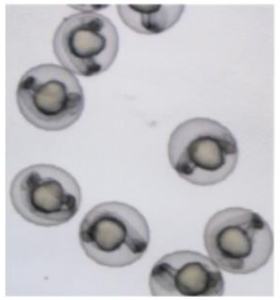
- **AAP Committee on Fetus and Newborn,**
- **Section on Neonatal Perinatal Medicine, and Committee on Infectious Diseases**
- **Presented by Dr Claudette Poole (Assistant Professor of Pediatrics, Division of Pediatric Infectious Diseases, UAB)**

UAB HEALTH SYSTEM










Background – what we now know

- 8th months in
- Burden of disease is in adults
- Infections occur in infants and children – severe presentations are rare and mortality in infants and children is very rare
- Pregnancy – asymptomatic to severe
- Predispose to premature delivery
- Perinatal transmission (transplacental) documented but rare
- Breast milk – reports of PCR +
- From perinatal registry – 3 to 5% of infants born to COVID+ mothers test positive within 96 hours – most do well (no difference if separate at birth or room-in)

What we know about modes of transmission

- Mostly droplet spread – like RSV and influenza
- Can survive on surfaces – so fomite spread a possibility but not main mode of transmission
- Question of airborne spread – certainly in the right circumstances can aerosolize small droplets that remain suspended in the air – travel on air currents then settle on conjunctivae or inhaled of susceptible persons
- Virus recovered from saliva, blood, urine and stools – so contact spread certainly a possibility – but portal of entry the eye and oropharyngeal mucosa

What we know about period of contagion

- Persons with mild or no symptoms
- 24 to 48 hours prior to onset of symptoms
- Very limited culture positive virus from any site beyond 10 days in mildly symptomatic

Or 20 days in severely symptomatic / immunocompromised (despite prolonged periods of PCR positive test)

- Reports of infants infected by older / adult contacts (not aware of providers being infected by infants)
- Our own data – infants have the highest viral loads (by a 1000 fold compared to older age groups) and does not appear to be associated with disease severity in contrast to adult data

New guidelines – at birth

- Delivery considered an aerosolizing environment – need to use PPE as such
- No longer recommend routine separation of infant from COVID+ mother at birth – recommend mom wears mask but encourage skin-to-skin.
- Still recommend bathing infant
- Swab nasopharynx at 24 and 48 hours. (If baby well - can discharge before 48 swab obtained / or can obtain 1 swab between 24 to 48 hours)
- If mom chooses to separate / too ill: dedicated separate nursery
- Surgical mask, gown and gloves (face shield / goggles) – patient encounters
- N95 / respirator – aerosolizing procedure (nasal suctioning, NC O2, nebulizer, bag-mask resus) – *at UAB instituted universal face shield and N95 for all aerosolizing procedure regardless of COVID status.*

During Hospitalization

- Baby rooming with COVID+ mom (mom to wear mask when caring for baby)
- On discharge home – encourage help by uninfected caregiver, mom to wear mask for 10 days)
- If admitted to NICU – assume baby positive until testing negative x 2 by PCR from NP swab
- Visitation of COVID+ parents: cleared for visitation if 10 days since onset of illness in mild disease or test if asymptomatic. No repeat testing necessary. If severe disease / immunocompromised – then 20 days from onset of symptoms. No repeat testing necessary. (Some open bay units – using 20 days for all)
- Exposed individuals (e.g. spouse of COVID+ mom) – 14 days from time of positive test
- Symptom screening and universal masking. Only parents allowed in unit. Closed shared family spaces

Treatment of neonate with SARS-CoV2

- Supportive care
- Dexamethasone
- Surfactant
- remdesivir – clinical trial (both at UAB and COA enrolling infants)
- Anakinra
- Convalescent plasma? eIND

Our experience with infants at COA

- No + screens in UAB well baby nursery / UAB RNICU
- 13 infants < 3 months admitted to COA since March 2020
- 10 < 30 days of life
- Earliest = 4 days old
- Presentations: well appearing febrile neonate, URI, bronchiolitis, apnea
- Most hospitalized 48 hours - rule out sepsis duration
- 2 became critically ill
- viral loads in the millions
- + family exposure

Case 1 – community vs perinatal acquisition

- 4 day F born FT, NSVD – no complications (mom not tested at delivery – several COVID+ family members)
- Presented apnea – over days progressed to respiratory failure and hypotension
- Pneumothorax, hyperinflammatory syndrome
- Rx: dexamethasone, remdesivir (10 days), surfactant, anakinra, convalescent plasma
- Intubated and ventilated for > 3 weeks
- Gradual decline in viral load (became PCR negative after a month)

Case 2 - HAI

- Full term infant born with TGA – diagnosed post-natally when developed hypoxia (mom screened COVID –ve at delivery)
- Tolerated initial surgical procedures well – unable to extubate post surgery
- Worsening respiratory status at 14 days of life – COVID+ at 16 days
- Had a RT + exposure, and mother COVID+
- Rx: surfactant, dexamethasone, remdesivir (10 days), anakinra
- Rocky course, but eventual recovery.

Lessons learned

- Keep COVID19 in differential for infants – (sepsis / bronchiolitis)
- Perinatal transmission occurs – 3 to 5% - regardless of separation
- Severe disease – respiratory / hyperinflammatory
- Therapeutics to consider: surfactant, remdesivir, dexamethasone, anakinra, convalescent plasma
- Risk for contagion given high viral loads regardless of severity
- Universal mask wearing effective – dramatic reduction in HCW infections at UAB (cases continue – unmasked encounters)

DISCUSSION PANEL

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Q&A

THANK YOU