



# COVID-19 Strategies for OB & Neonatal Units

April 17, 2020 12:00 – 1:00pm





Please be certain you are on "*mute"* when not speaking to avoid background noise.

Whether you have joined by phone or computer audio, you can mute and unmute yourself by clicking on the microphone icon.



#### The following shortcuts can also be used

For PC: Alt + A : Mute or Unmute

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*For telephone:* \*6 : Mute or Unmute

# ZOOM 2

# Housekeeping: Chat box



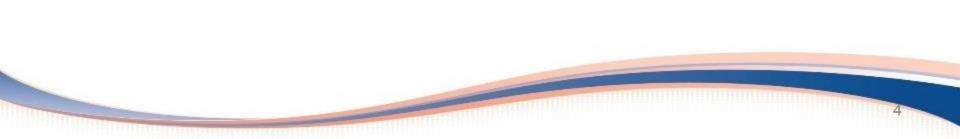


# Housekeeping: We Are Recording Now



IL PQC

Illinois Perinatal Quality Collaborative



## COVID-19

- IL PQC Illinois Perinatal Quality Collaborative ng leadership and
- Thank you to IDPH for ongoing leadership and partnership.
- During this time our goal at ILPQC is to continue to be a source of information and support for our hospital teams, providers, nurses who care for pregnant women and newborns across the state. Sharing across hospitals is key.
- Our thoughts are with those who have lost loved ones and all front line workers.

# ILPQC weekly webinars

- Much is unknown. And what we know is changing quickly.
- The strategies shared today are examples from individual institutions not IDPH or ILPQC recommendations.
- Having weekly COVID-19 strategies for OB/Neonatal Units webinars every Friday at noon. Please see <u>https://ilpqc.org/covid-19-</u> <u>information/</u> for future webinar registration, prior recorded webinars and Q/A's from those webinars.
- Please put questions/comments into the chatbox or email directly to <u>info@ilpqc.org</u>

IL

#### Overview

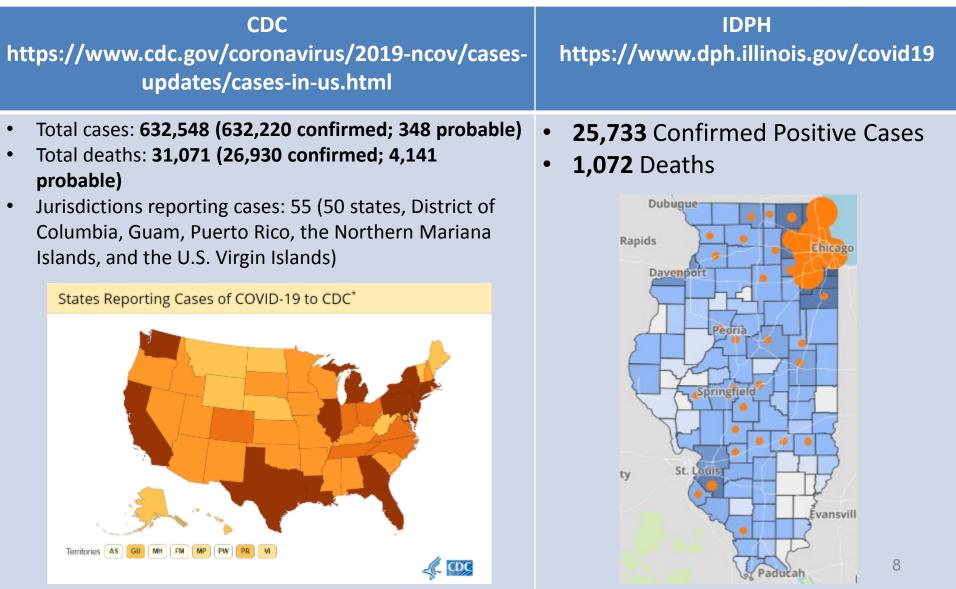
- Introduction
- Discussion of OB Unit Strategies
  - Thaddeus (Ted) Waters, MD Maternal-Fetal Medicine, Rush
    University Medical Center
  - Catalin S. Buhimschi, MD, MMS, MBA- Director, Division of MFM, Director OB Service & Patient Safety, UI Health
  - Emily Miller, MD Maternal-Fetal Medicine, Northwestern University
  - Rob Abrams, MD, Executive Director SIU Center for Maternal Fetal Medicine, HSHS St. John's Hospital, Springfield
- Discussion of Neonatal Unit Strategies
  - Andrew Berenz, MD, Neonatology, Rush University Medical Center
  - Leslie Caldarelli, MD, NICU Director, Prentice Women's Hospital, Chicago
  - Justin Josephsen, MD, Medical Director St. Mary's Hospital NICU, Neonatologist Cardinal Glennon Children's Hospital, St. Louis

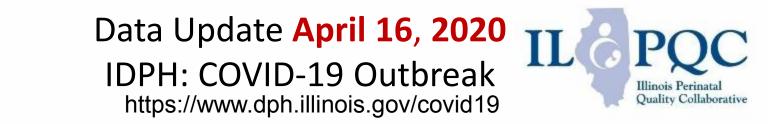
Wrap Up



#### Data Update **April 16**, **2020** CDC/IDPH: COVID-19 Outbreak

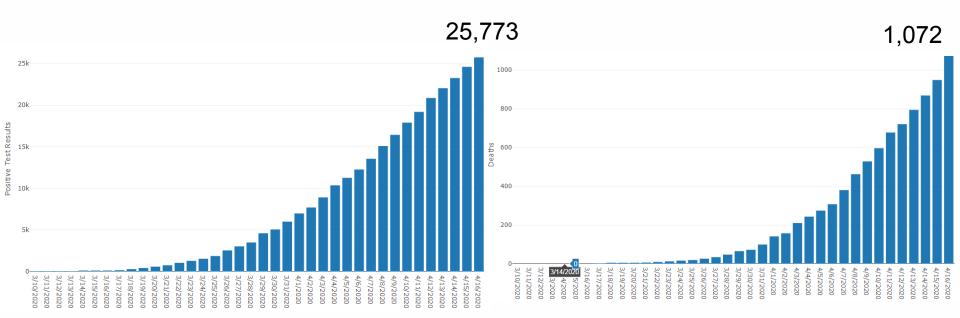






IL Positive Cases Over Time

IL Deaths Over Time



Data Update April 16, 2020

IDPH: COVID-19 Outbreak

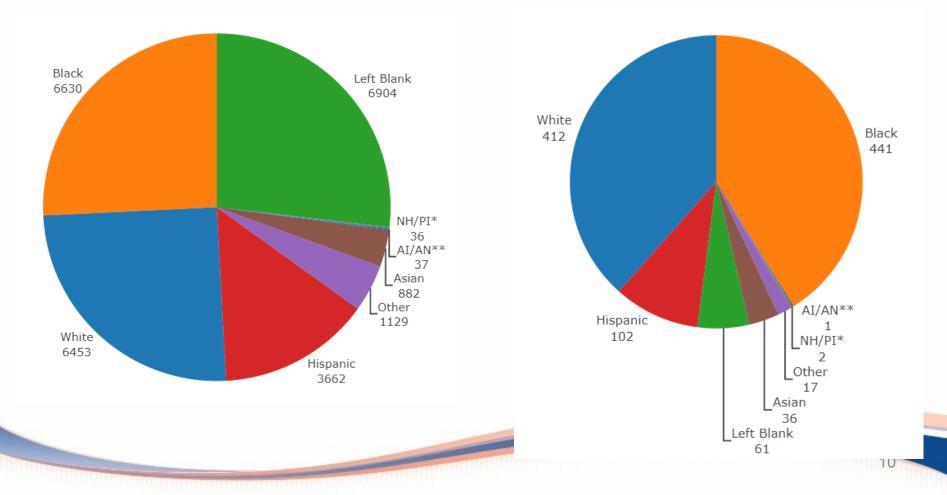
#### Race Demographics



https://www.dph.illinois.gov/covid19

**Confirmed Cases** 

Deaths



# **ILPQC COVID-19 Webpage** www.ilpqc.org





Home About News / COVID-19

Initiatives

Contac

#### **COVID-19 Information for ILPQC Hospital Teal**

Given these unprecedented times, we wanted to reach out and express our support to all of you on the front lines caring for p your concern for the health of our patients and for the health of each of you, your colleagues and families. We will continue t national and state sources regarding the care of pregnant women and newborns during the COVID-19 crisis and will additior our monthly team webinars, we will also share COVID-19 information as it is available and hold a space for teams to share ex will join us as you are able.

Our thoughts are with those affected and continue to be affected by this crisis. Please stay safe and healthy.

#### Resources

Example COVID-19 Hospital Policies/Protocols/Resources

CDC Resources

ACOG, SMFM, and AJOG Resources

Perinatal Mental Health Resources

**COVID-19 National Registries** 

Relevant News Articles

**ILPQC** posts national guidelines and OB & Neonatal COVID-19 example hospital protocols & resources

please note dates as guidelines are changing rapidly

Example COVID-19 Hospital Policies/Protocols/Resources

#### https://ilpgc.org/covid-19information/

# Updated OB/Neo Resources ILC

- <u>Strategies to reduce risk from work to families at home</u> (3.26.20)
- AJOG: COVID-19 In Pregnancy Early Lessons (3.27.20)
- IDPH: Recommended Guidance for the Care of Pregnant Women and Newborns During the COVID-19 Pandemic (3.30.2020)

Illinois Perinatal Ouality Collaborative

- ACOG/SMFM Clarify CDC's Recommendations on Use of PPE (3.31.2020)
- <u>AAP- FAQs: Management of Infants Born to Mothers with Suspected or Confirmed</u> <u>COVID-19</u> (4.2.2020)
- <u>AAP- Initial Guidance: Management of Infants Born to Mothers with COVID-19</u> (4.2.2020)
- <u>AJOG: COVID-19 infection among asymptomatic and symptomatic pregnant women:</u> <u>Two weeks of confirmed presentations to an affiliated pair of New York City hospitals</u> (4.7.2020)
- <u>SMFM: COVID-19 and Pregnancy: What MFM Sub-Specialists</u> <u>Need to Know (4.11.2020)</u>
- <u>NEJM: Universal Screening for SARS-COV-2 in Women Admitted</u> <u>for Delivery</u> (4.13.2020)\*\*
- <u>SMFM and SOAP: Labor and Delivery COVID-19 Considerations</u> (4.14.2020)



The NEW ENGLAND JOURNAL of MEDICINE

CORRESPONDENCE



Universal Screening for SARS-CoV-2 in Women Admitted for Delivery

D. Sutton and Others 4/13/20

- Between March 22 and April 4, 2020, **215 pregnant women** delivered at 2 NYC hospitals. All were screened on admission for symptoms of Covid-19.
- Four women (1.9%) had fever or other symptoms of Covid-19 on admission, and all tested positive for SARS-CoV-2 (<u>Figure 1</u>).
- 210 of the 211 women who did not have symptoms were tested;
  29 (13.7%) were positive for SARS-CoV-2.
- 29 of the 33 patients who were positive for SARS-CoV-2 at admission (87.9%) had no symptoms of Covid-19 at presentation.
- 29 asymptomatic women who were positive on admission, fever developed in 3 (10%) before postpartum discharge (median length of stay, 2 days).
- 1 patient, negative on admission became symptomatic postpartum; repeat SARS-CoV-2 testing 3 days after the initial test was positive.



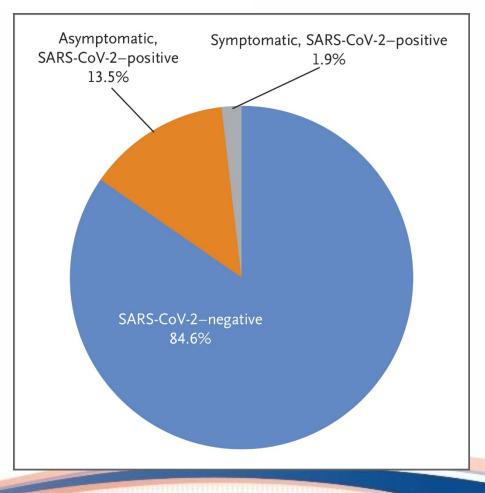
#### CORRESPONDENCE



#### Universal Screening for SARS-CoV-2 in Women Admitted for Delivery

D. Sutton and Others 4/13/20

- 3/22/20-4/4/20
- 215 deliveries
- 211 asymptomatic
- 2% (4 pts symptoms on admission) SARS-CoV-2+
- 13.7% (29/210) all asymptomatic pts
  SARS-CoV-2 +
- 87.9% SARS-CoV-2 (29/33) did not have symptoms
- 10% (3/29) developed fever before PP discharge
- 1 SARS-CoV-2 neg pt developed symptoms pp SARS-CoV-2+ 3 days after neg test



# COVID-19 OB & Neonatal National Registries



#### **OB Registry:**

- PRIORITY: Nationwide registry established by UCSF for pregnant and postpartum women with suspected COVID-19 or confirmed diagnosis. The goal is to gather a high volume of nationwide data quickly.
- CDC is collecting surveillance data on pregnant women with COVID through a supplement to the regular case report form (CRF), which should be completed on all COVID-19 cases. The <u>CRF can be found online</u>.

#### **Neonatal Registry:**

 Section on Neonatal-Perinatal Medicine (SONPM) <u>National</u> <u>Perinatal COVID-19 (NPC-19) Registry</u>

## Mental Health Resources



- During this crisis heightened awareness of need for mental health resources for our patients and staff.
- IL Perinatal Depression Program MOMS Hotline
  1-866-364-MOMS (1-866-364-6667)

24/7 & answered live by licensed mental health professionals

- Postpartum Depression Illinois Alliance: 1-847-205-4455
- NAMI (National Alliance for the Mentally III) Help line 1-800-950-NAMI (1-800-950-6264)
- <u>Postpartum Support International</u> (800-944-4773)
- Mental Health and Coping During COVID-19 | CDC
- <u>Resources for providers, families, and leaders to support the</u> <u>health and well-being of communities impacted by COVID-19</u>

# IL Perinatal Depression & Anxiety Hotline



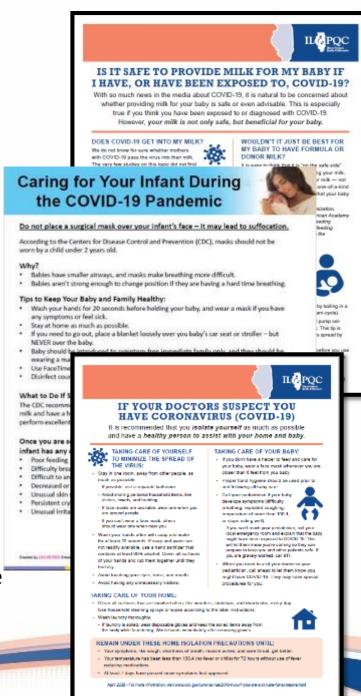
- Answered live 24/7
- Staffed by licensed mental health professionals trained in perinatal mood & anxiety disorders
- Support for moms, partners, families & providers



# New Patient Education

#### Resources

- Advocate Children's Hospital: <u>Caring for Your Infant</u> <u>During the COVID-19 Pandemic</u> (4.14.2020)
- March of Dimes: <u>COVID-19: What You Need to</u> <u>Know About its Impact on Moms and Babies</u> (4.8.2020)
- <u>IL EverThrive: Protecting and Caring for Your Family</u> <u>During the Coronavirus Outbreak (4.3.2020)</u>
- <u>SMFM Information for Women & Families</u> (4.3.2020)
- <u>"Is It Safe to Provide Milk for my Baby if I Have, or</u> <u>Have Been Exposed to, COVID-19"</u> (Adapted by ILPQC with permissions 4/2020)
- <u>"If Your Doctors Suspect You Have COVID-19"</u> (Adapted by ILPQC with permissions 4/2020)
- MoMMA's Voices COVID-19 Patient Resources Page<sup>®</sup> (Last Updated 4.5.2020)
- <u>The 4th Trimester Project's patient education</u> website on COVID-19 For New Moms (3.2020)



# Birth Equity and COVID19



- Mass General OB/GYN: Equity in the Time of COVID-19 (4.8.2020)
- MGH Boston Example Birth Equity and COVID-19 Workflow (4.3.2020)
- APA: Combating bias and stigma related to COVID-19 (3.25.2020)
- <u>Project Implicit (Harvard): COVID-19 Brief Implicit Association Test</u> (Shared 4.10.2020)
- <u>Partners in Healthcare: COVID-19 Resources for People with</u> <u>Disabilities Multilingual Resources (Shared 4.10.2020)</u>
- <u>Contra COVID: organization dedicated to helping Latino and</u> <u>immigrant families</u>

#### Birth Equity and COVID19 IL PQC MGH, Boston 4.8.20

- 1) New models of care for COVID, attention to how they might work or need to be modified for vulnerable communities
- Telehealth language lines available
- Consider increased frequency of "touches" in the postpartum period
- Early hospital discharge consider patient resources when determining optimal discharge timing
- Access to Home BP cuff kits for all pregnant/postpartum patients
- Consider follow up and support needed for Covid+ moms & newborns discharged postpartum
- 2) Confirm screening for social determinants of health, IPV and depression with telehealth visits
- 3) Enable women's reproductive choices, access to contraception
- 4) Consider how implicit bias may contribute

## DISCUSSION OF OB UNIT STRATEGIES



## **OB** Discussion Panel



- Thaddeus (Ted) Waters, MD Director Maternal-Fetal Medicine, Rush University Medical Center
- Catalin S. Buhimschi, MD, MMS, MBA- Director, Division of MFM, Director OB Service & Patient Safety, UI Health
- Emily Miller, MD Maternal-Fetal Medicine, Northwestern University
- Rob Abrams, MD, Executive Director SIU Center for Maternal - Fetal Medicine, HSHS St. John's Hospital, Springfield



Director Maternal Fetal Medicine, Rush University Medical Center

## THADDEUS WATERS, MD

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# Rush University OB Basics

- ILC PQC Illinois Perinatal Quality Collaborative
- Academic Medical Center located on western side of Chicago
  - Opened in 2012
  - Tower built to handle pandemic with 130% surge capacity and ability to "flip" entire floors to negative pressure
- 2,300 annual deliveries (2019), 24 residents
- 10 labor and delivery rooms
  - Negative pressure rooms on L&D and antepartum
- 5 triage rooms
- 5 prep/hold/recovery rooms
- 3 OR
- 72 bed NICU



# Rush COVID-19 OB strategies<sup>II</sup>

- Universal point of care testing with rapid COVID-19 test for all obstetric patients admitted to hospital (as of 4/9/2020)
  - Patients that decline testing are considered PUI
  - No visitors for PUI or COVID-19 positive in labor
  - 1 visitor for COVID-19 negative patients
- PPE used for all women positive for COVID-19 and PUI (including those that decline testing)
- N95 used for all COVID-19 positive women or PUI:
  - at time of delivery (during the second stage or at time of cesarean) or
  - with other potentially aerosolizing procedures

## Rush COVID-19 strategies



- Surge plan for OB patients:
  - Clinic closures for one point of outpatient access
  - Staff reassigned for team approach (3 days on 3 off), emergency OB privileges given to providers
  - Separate COVID-19 units within the hospital with negative pressure
  - Sections of L&D and antepartum are designated to cohort PUI or COVID-19 patients
  - 2 negative pressure rooms on L&D and antepartum
  - In significant surge triage would become a COVID-19 area for laboring patients

## Rush COVID-19 OB Case

- 3/31: 22 year old admitted at 35w4d with asthma exacerbation and influenza like illness
  - Shortness of breath, cough, chills x 3 days, partner with symptoms
  - WBC 11k, AST/ALT: 17/9, Cr 0.7, CXR: L-sided retrocardiac opacity, 02 98% RA
  - Meds per pulm: prednisone, Symbicort, Montelukast, albuterol
  - Influenza/RSV negative, COVID-19 test performed, PUI admit to COVID-19 unit
- 4/1: 02 sat 92-95% on 2L NC, RR 26, HR 133, FHT cat 1, move to L&D (-pressure rm)
  COVID-19 +, Patient stabilized on 3L NC, WBC 9, CXR faint ground-glass opacities
- 4/3: new diagnosis of gestational hypertension,
  - plan repeat COVID-19 testing on 4/8, IOL at 37 weeks
- 4/4: Sats >95% on RA, symptomatically improved
- 4/8: repeat COVID-19 test positive
  - Plan IOL 37 weeks, PPE in labor and N95 mask at delivery, baby 7 days NICU
  - Father of baby (now resolved from suspected COVID-19 infection) allowed to be with mom in labor with PPE and can visit NICU with PPE
  - Patient delivered with VAVD 4/9, discharged post partum without complications

#### Lessons Learned



- Case highlighted (OB side)
  - Concerns around separation of mom and baby with +COVID-19
  - Issues of repeat testing after positive (when and how many negative results needed)
  - Challenges of visitors unique to this situation
- Patient still had evidence of COVID-19 infection despite being >7 days from initial test and presentation with significant clinical improvement for >72 hours

### Lessons Learned



- Universal point of care testing workflows
  - Education and training
  - PPE requirements
  - Plan for newborns for women who are COVID-19 positive or decline testing (PUI during labor)
- Approach to women with prior positive COVID-19 test
  - CASE demonstrated potentially longer than anticipated resolution of infection despite significant clinical improvement
  - Unclear length of infection resolution in OB patients
- Visitors for PUI or COVID-19 positive patients
- PPE and N95 utilization



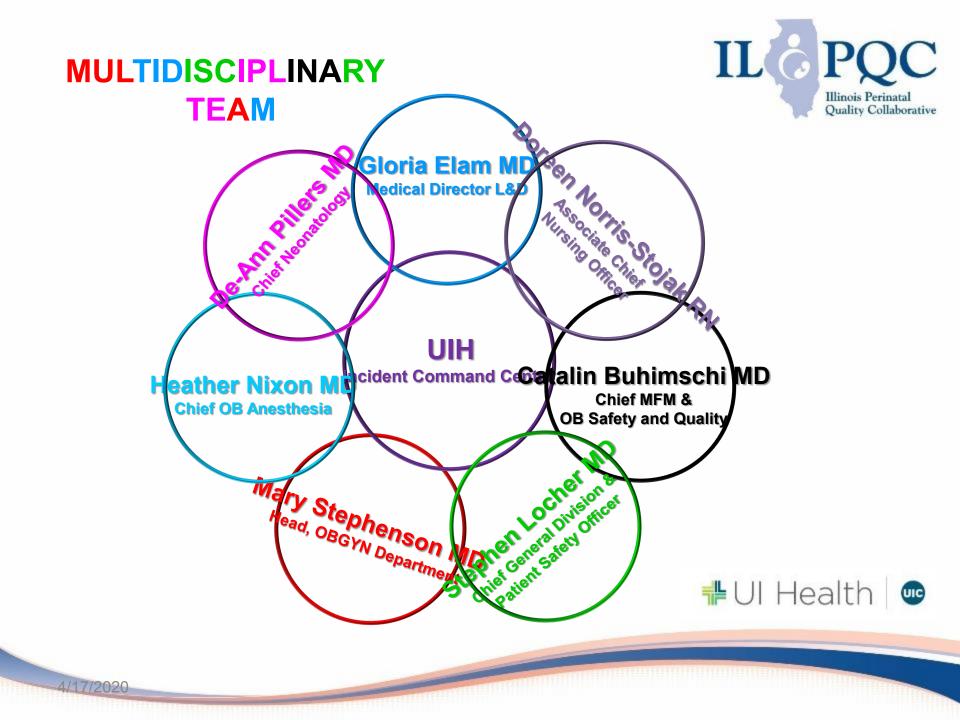
University of Illinois at Chicago

**Department of Obstetrics and Gynecology** 

**Director, Division of Maternal-Fetal Medicine** 

**Director, Obstetrics Service & Patient Safety** 

# CATALIN S. BUHIMSCHI, MD, MMS, MBA



# UI Health Key COVID Strategies IL C PQC Symptom Screening:

- SMF/ACOG/SOAP Screen Inpatient/Outpatient
- 1. How do you feel?
- 2. Do you have fever?
- 4. Do you have difficulty breathing or SOB?
- 5. Do you have difficulty breathing without grasping for air?
- 6. Do you needed to stop frequently when walking across the room?
- 7. Did you cough blood?
- 8. Do you have any new chest pain or pressure in the chest when coughing?
- 9. Did you lose your taste or smell?
- 10. Are you unable to keep liquids down?
- 11. Do you have dizziness when standing (dehydration)?
- 12. Did you have recent contact with COVID patients?
- 13. Do you have sick (signs of cold) family members?
- Universal wearing masks/universal temp screening

# UI Health Key COVID Strategies

- Admission COVID+ Parturient
  - Previable: appropriate COVID unit
  - Viable: Disposition to MICU/ICU/PICU, +COVID floor unit or L&D COVID bed-based on clinical assessment
- Transports: UIC-IDPH Administrative Perinatal Center
  - Adult Emergency Room Provider, case by case basis
- Discontinuation of precautions for COVID+
  - Test based strategy: resolved fever, improved respiratory sxs, 2 neg tests
  - Non Test Based Strategy: 7 days from sxs first appeared and > 72 hrs since fever resolved and respiratory symptoms improved

### UI Health Key COVID Strategies IL PQC Universal Screening

- POC Test-based strategy
  - Approved by UIC
  - Sites: OBER, L&D, Adult ED
  - Type of POC testing (viral genome, viral nucleic proteins)
  - (+) POC test result confirmation by RT-PCR
  - (-) POC test result confirmation by RT-PCR (+/- symptoms)
  - Universal PUI categorization pending POC test results
  - PPE health care providers pending results
  - POC testing vs Temp screening visitors
  - Testing 24-48 hours prior to elective procedures (eg CD, ECV)
- POC Test-based strategy
  - Qualitative detection of IgM and IgG antibodies against SARS-CoV-2

# UI Health Key COVID Strategies IL C PQC OB Equipment COVID+

- C-Section pack
- Laminated contact list posted on the patient door
- NST Monitor with extended cords and fetal strip paper, ziplock bag and labels
- WOW for RN charting
- Cap
- N95
- Goggle (face mask with shield as alternative) \*
- Double gloves Sizes 6-8.5
- Gown
- Chlorhexidine scrub
- Shoe covers
- Surgical lamps
- Postpartum hemorrhage kit (Methergine, Cytotec, Carboprost, Tranexamic acid)

### **UI Health OB Strategies**



- UI Health: <u>COVID-19+ Clinical</u> <u>Algorithms</u> (4.15.2020)
- <u>https://www.cdc.gov/coronavirus/2019</u>
  <u>-ncov/hcp/disposition-hospitalized-</u>
  <u>patients.html</u>



Maternal Fetal Medicine, Northwestern University

# EMILY MILLER, MD

# Northwestern Memorial Hospital OB Strategies



- Northwestern Medicine COVID-19 Resources
  - <u>OB Universal Testing Protocol: Scheduled</u>
    <u>Admissions</u> (4.14.2020)
  - <u>OB Universal Testing Protocol: Unscheduled</u>
    <u>Admissions</u> (4.14.2020)
  - High Risk Exposure Protocol (4.14.2020)
  - <u>Baby Circumcision</u> (4.13.2020)
  - Prior COVID-19+ Test Protocol (4.10.2020)
  - <u>OB PPE Table</u> (4.10.2020)
  - Mom-Baby Postpartum Testing Protocol (4.7.2020)



Director of Obstetrics – South Central Illinois Perinatal Center

# ROBERT M. ABRAMS, MD

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#### SIU Obstetric COVID 19 Resources IL Q PQC Ulinois Perinatal Quality Collaborative

- SIU Health: <u>COVID-19: Changes in Pregnancy and</u> <u>Maternity Care Advice for Women and Their Families</u> (4.16.2020)
- SIU COVID-19 Resources: <u>SIU COVID + and PUI Education</u> <u>for Huddles</u> (4.14.2020)
- <u>Easy to understand donning/doffing PPE PAPR</u> <u>instructions</u> (4.13.2020)
- <u>SIU L&D Checklist: Admission of COVID-19 + Patient or</u> <u>PUI</u> (4.9.2020)
- SIU COVID Simulations: <u>Antenatal Admission</u>, <u>Labor &</u> <u>Vaginal Delivery</u>, and <u>Cesarean Delivery</u> (4.2.2020)

# **OB** Discussion Panel



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# **OB** Questions/Discussion



- Questions from chat box
- Questions from registration
- Questions from 4.10.2020 webinar
- <u>Questions from 4.3.2020 webinar</u>

# DISCUSSION OF NEONATAL UNIT STRATEGIES



# **Discussion Panel**



- Justin Josephsen, MD, Medical Director St. Mary's Hospital NICU, Neonatologist Cardinal Glennon Children's Hospital, St. Louis
- Leslie Caldarelli, MD, NICU Director, Prentice Women's Hospital, Chicago
- Andrew Berenz, MD, Neonatology, Rush University Medical Center



Rush University Medical Center,

Associate Medical Director, NICU

# ANDREW BERENZ, MD

# Rush University Medical Center IL PQC

- 72 Beds
  - All Private rooms (1 negative pressure)
  - Divided into 3 geographically distinct pods
- RUMC Baby Friendly 2016 no transitional care nursery available





- NICU planning for delivery/transportation for COVID+ infants initiated 2/28
- Collaboratively (with OB) developed protocols for transport, delivery and admission for PUI and COVID+ patients (evolving with developing recommendations)
- RUMC- universal temperatures at entry, universal surgical mask usage
- RUMC substantial surge planning and coordination for entire hospital-
  - PICU moved into one NICU pod with consolidation of beds (March 30th).
  - PICU space transitioned into adult ICU beds (March 31<sup>st</sup>)



- NICU- established provider coverage calendar through the end of April in case of illnesses
- Nutrition and Pharmacy services transitioned to rounding virtually with bedside teams daily.
- Established Virtual Rounding infrastructure and schedule in the case of significant impacts of illness on medical providers





- Pregnant mother with known COVID-19+ illness, recovered clinically.
- Mother 13 days from onset of illness, > 7 days from resolution of fever and symptoms. Day 11 (PCR) still positive, but clinically resolved.
- Per protocol plan at start of induction was to separate mother from infant (infant to NICU) and initiate testing on infant.



## Case Baby C

- NICU attends delivery
  - Minimal resuscitation team (airborne/contact precautions) with back-up available outside room
- Healthy AGA infant delivered vaginally with Apgars 9,9
- Infant placed transport isolette, admitted to NICU in designated PUI/COVID section of NICU
- Infant on contact/droplet precautions
- Father able to visit also with contact/droplet PPE
- Mother initiated pumping for exclusive breast milk (mother's choice)
- Normal newborn care for infant, fed expressed mother's milk as available.
  - Monitored glucoses and remained euglycemic.

# Case Baby C



- Per protocol, rtPCR testing at 24 hours (negative), 48, 72 hrs.
- On DOL2, mother to be discharged home <u>without</u> isolation recommendations from infection control
  - Mother now declining separation and wanting to be discharged with newborn.
- Infant medically stable, results of 48 hour testing not available (~24 hr turnaround).
- Infant discharged home after lengthy discussion with mother about unknown risks. Our official recommendation for minimum 72 hour monitoring and repeat testing at 72 hours. Did not obtain consent, but documented discussion and recommendation.
- Discharged home with arranged follow-up plans with our Pediatrics Clinic next morning.

# Challenges/ Lessons Learned



- Difficulty to determine safety in timing of delivery.
  - Clinical vs testing criteria: positive test > 7 days after symptoms resolved
- Parental perspectives of safety
  - Home vs in-hospital recommendations
  - Declines recommendations
- Difficulties establishing exclusive Mother's own milk feedings when separated
  - Mother to be discharged home
- Father's PPE difficult to maintain in our unit

# NEONATAL QUESTIONS/DISCUSSION



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- Questions from chat box
- Questions from meeting registration
- Questions from 4.10.2020 webinar
- <u>Questions from 4.3.2020 webinar</u>

# Thank You



- We continue to give thanks to the nurses, doctors, health care workers, public health teams and others across our state at work confronting the COVID-19 pandemic.
- Please send questions, comments and recommendations, cases / willingness to share for future COVID-19 OB/Neo discussion webinars to info@ilpqc.org
- Recording of this webinar will be available at www.ilpqc.org

## THANKS TO OUR

### **FUNDERS**







**JB & MK PRITZKER** 

**Family Foundation** 

Email info@ilpqc.org or visit us at www.ilpqc.org