IL PQC
Illinois Perinatal Quality Collaborative

COVID-19 Strategies for OB & Neonatal Units

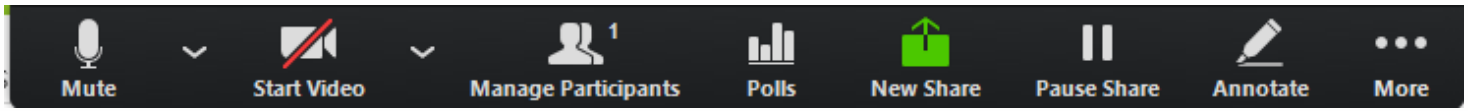
April 3, 2020

12:00 – 1:00pm

Welcome

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.



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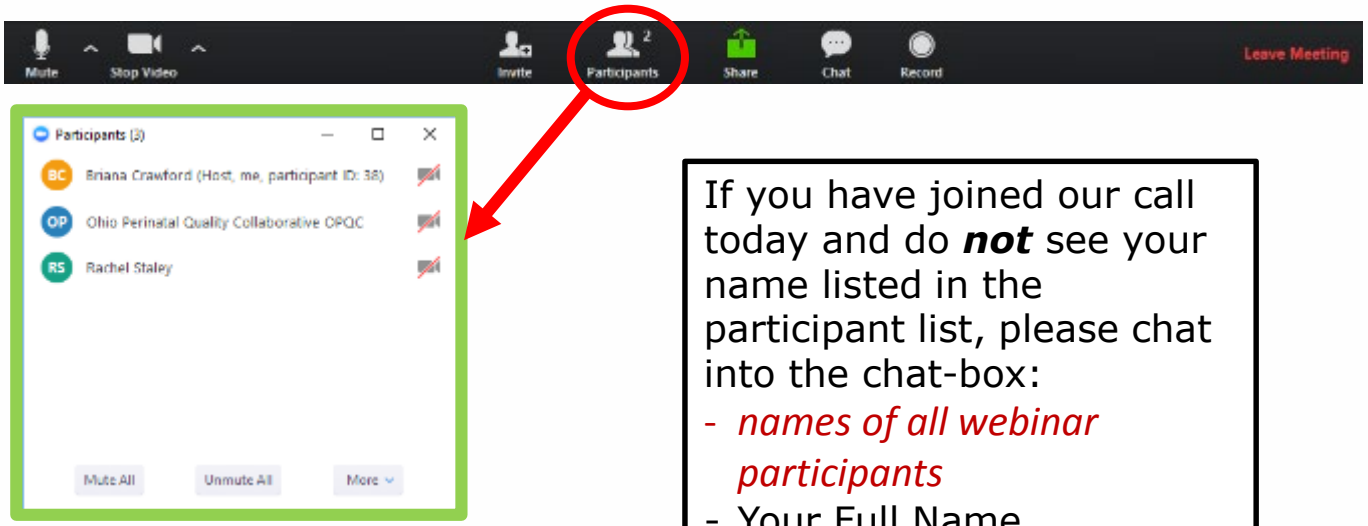
For Mac: Shift + Command + A: Mute or Unmute

For telephone: *6 : Mute or Unmute

Housekeeping: Chat box

Housekeeping: Participant Code

- **PLEASE BE CERTAIN TO USE YOUR PARTICIPANT CODE!!**
  - **#participant code#**



If you have joined our call today and do ***not*** see your name listed in the participant list, please chat into the chat-box:

- *names of all webinar participants*
- Your Full Name
- Organization
- Email Address

This call will now be recorded.

COVID-19

- 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.
- Our focus and concern is for healthcare workers on the front lines of this crisis and the patients we are all working to keep safe.

In Memory

Judy Wilson-Griffin, MSN, RNC-OB, C-EFM
SSM Health St. Mary's Hospital

Nursing crosses all barriers and all disciplines, Wilson-Griffin said,
and seeing people in good times and bad times has taught her a lot. She tells her students that being clinically proficient won't get them far by itself.
"Anybody can be good technically," she said "but without compassion, there is always going to be something missing."

http://www.stlamerican.com/salute_to_excellence/healthcare_luncheon/nursing-excellence-with-compassion/article_3bdec864-ad5e-11e2-9dc9-001a4bcf887a.html

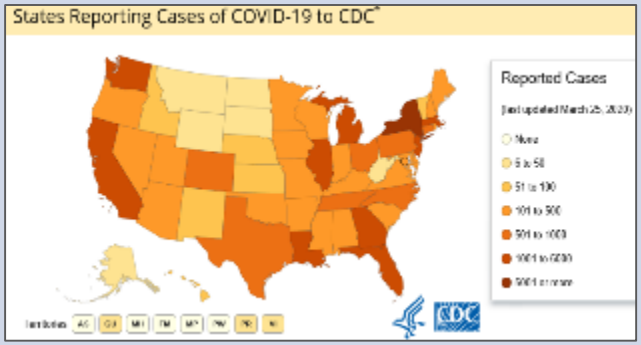
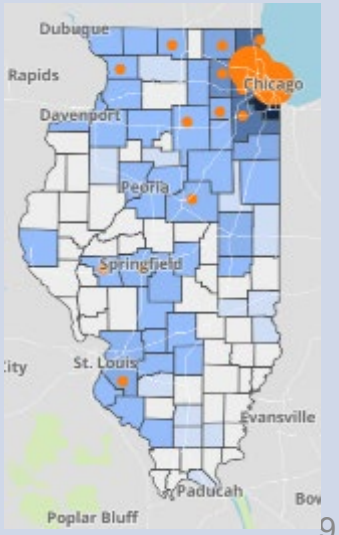
Todays webinar

- Much is unknown. And what we know is changing quickly.
- The strategies shared today are examples from individual institutions not IDPH or ILPQC recommendations.
- We will plan follow up COVID-19 webinars as an ongoing platform for discussion across OB and neonatal providers in IL. We need your feedback to improve, please let us know future topics or format that you would prefer.
- Please put questions/comments into the chatbox or email directly to info@ilpqc.org

Overview

- **Introduction**
- **Discussion of OB Unit Strategies**
  - Rob Abrams, MD, Executive Director - SIU Center for Maternal - Fetal Medicine, HSHS St. John's Hospital, Springfield
  - Julia Bregand-White, MD, Maternal-Fetal Medicine, University of Chicago Medical Center
  - Richard Silver, MD, Obstetrics and Gynecology Chair, NorthShore University HealthSystem, Evanston
- **Discussion of Neonatal Unit Strategies**
  - Leslie Caldarelli, MD, NICU Director, Prentice Women's Hospital, Chicago
  - Malika Shah, MD, Newborn Nursery Director, Prentice Women's Hospital, Chicago
  - Beau Batton, MD, Chief of Neonatology, SIU School of Medicine, HSHS St. John's Hospital, Springfield
  - Justin Josephsen, MD, Medical Director – St. Mary's Hospital NICU, St. Louis

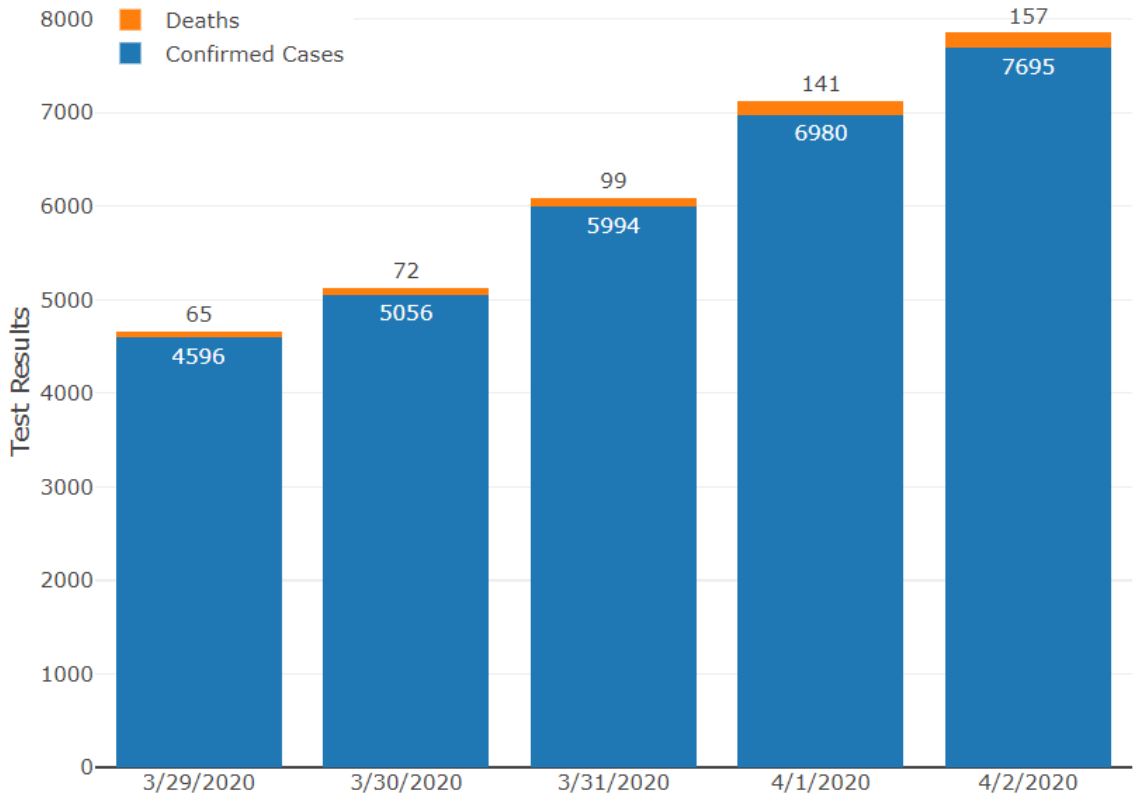
Data Update **April 2, 2020**
WHO/CDC/IDPH: COVID-19 Outbreak

WHO https://www.who.int/emergencies/diseases/novel-coronavirus-2019	CDC https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html	IDPH https://www.dph.illinois.gov/covid19
Updated : 2 April 2020 Coronavirus (COVID-19) outbreak • **900,306** Confirmed cases • **45,693** Confirmed deaths • **206** Countries, areas or territories with cases 	•Total cases: **213,144** •Total deaths: **4,513** •Jurisdictions reporting cases: 55 (50 states, District of Columbia, Puerto Rico, Guam, the Northern Mariana Islands, and US Virgin Islands) * Data include both confirmed and presumptive positive cases of COVID-19 reported to CDC or tested at CDC since January 21, 2020, with the exception of testing results for persons repatriated to the United States from Wuhan, China and Japan. 	• **7,695** Confirmed Cases in Illinois • **157** Deaths • **61** Counties 

Data Update **April 2, 2020**
WHO/CDC/IDPH: COVID-19 Outbreak

Illinois Confirmed Cases

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



IDPH Perinatal Advisory Committee Statement on COVID-19

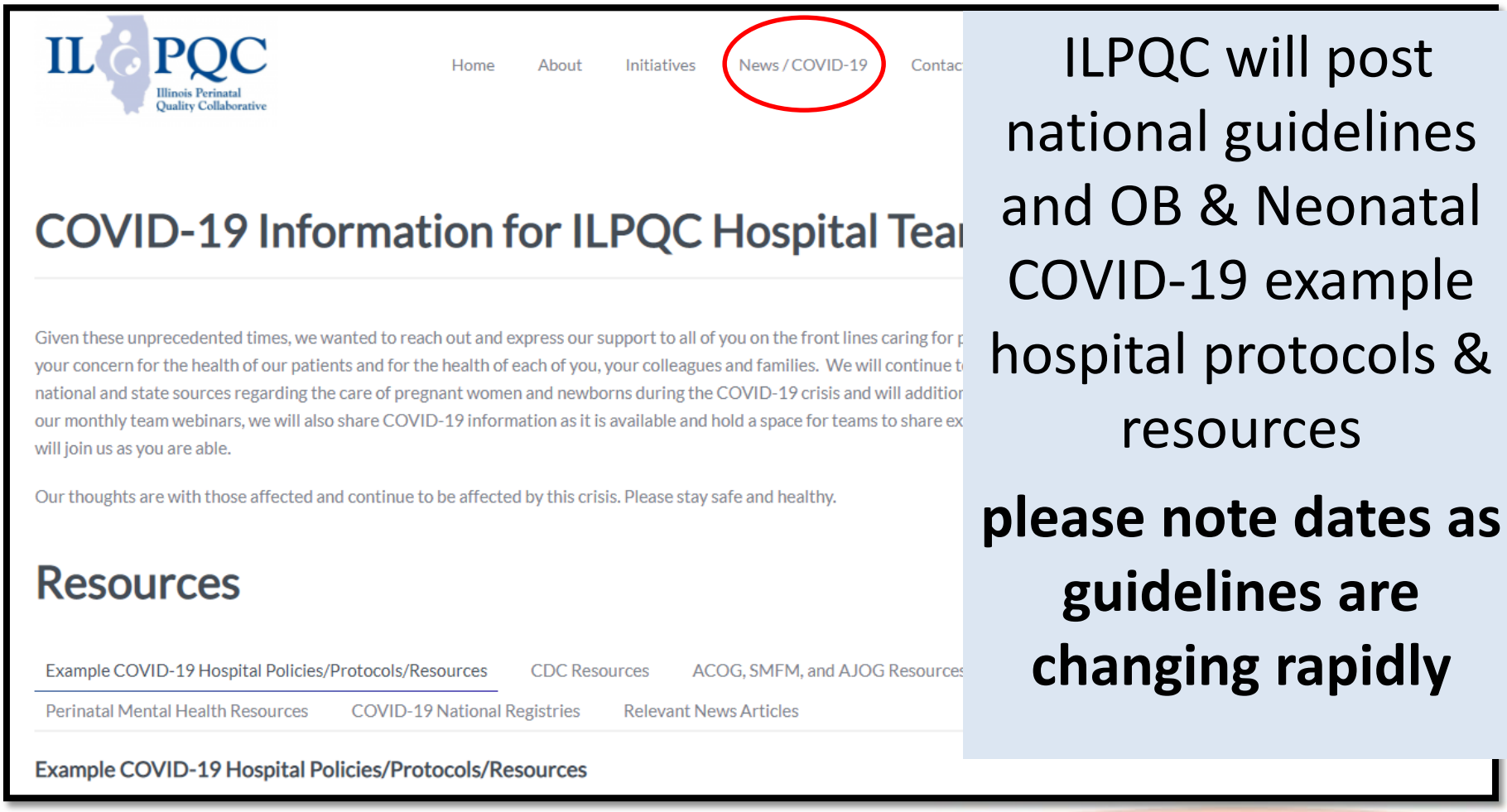
The IDPH Perinatal Advisory Committee (PAC) supports the recently published recommendations **3/27/20** related to the COVID-19 pandemic from the Society of Maternal Fetal Medicine regarding obstetrical care and appropriate distribution of PPE resources in order to full protect obstetrical providers, pregnant women, and their partners. While these recommendations may not apply to each and every clinical setting, PAC supports careful consideration of these concerns.

Link here for SMFM COVID-19 considerations and AJOG COVID-19 in pregnancy, early lessons.

IDPH Guidance 3/30/20

- IDPH released guidance for the care of pregnant women and newborns during the Covid 19 pandemic.
- See overview of guidance in slides at the end of this slide set.
- Link to guidance: IDPH: Recommended Guidance for the Care of Pregnant Women and Newborns During the COVID-19 Pandemic

ILPQC COVID-19 Webpage www.ilpqc.org



ILPQC will post national guidelines and OB & Neonatal COVID-19 example hospital protocols & resources

please note dates as guidelines are changing rapidly

https://ilpqc.org/covid-19-information/

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 **CRF can be found online**.

Neonatal Registry:

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

Maternal Health Resources

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

  1-847-205-4455
- NAMI (National Alliance for the Mentally Ill) Help line
  1-800-950-NAMI (1-800-950-6264)
- Mental Health and Coping During COVID-19 | CDC

DISCUSSION OF OB UNIT STRATEGIES

Panel

- **Rob Abrams, MD,** Executive Director - SIU Center for Maternal - Fetal Medicine, HSHS St. John's Hospital, Springfield
- **Julia Bregand-White, MD,** Maternal-Fetal Medicine, University of Chicago Medical Center
- **Richard Silver, MD,** Obstetrics and Gynecology Chair, NorthShore University HealthSystem, Evanston

Director of Obstetrics – South Central Illinois Perinatal Center

ROBERT M. ABRAMS, MD

IL PQC
Illinois Perinatal Quality Collaborative

SIU MEDICINE

South Central Illinois
PERINATAL CENTER

Robert M. Abrams, MD
Director of Obstetrics – South Central IL Perinatal Center
Executive Director – SIU Center for Maternal-Fetal Medicine
Southern Illinois University School of Medicine

South Central Illinois
PERINATAL CENTER

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31 hospitals

2 correctional centers

37 counties in Illinois

Care of PUI/COVID-19 patient in labor

- Patient and support person will be admitted to COVID Pregnancy Unit
  - HSHS St. John's Hospital antepartum floor will be the site of this unit
  - 2 negative pressure rooms
  - 10 other rooms which may be used if negative pressure rooms are occupied
  - Overflow to main hospital COVID unit
- Nursing staff specifically trained for care of these patients will comprise the core team
- Limiting delivery to one provider, usually highest level of training (Attending or Chief Resident)
- PPE for team will include gown, gloves, and powered air-purifying respirator (PAPR)
  - N95 and face shield also acceptable for those hospitals without PAPR
- Postpartum care will occur in same room

Patient develops symptoms in labor (fever or cough)

- Must treat as PUI/COVID+ until proven otherwise
  - Patients may present with a HELLP syndrome-like picture (thrombocytopenia, elevated LFTs)
  - Diffuse abdominal pain may be only symptom
  - May be completely asymptomatic
  - May have false negative COVID 19 testing
- Must have heightened suspicion for COVID-19 for minor symptoms
- Labor in place
- Careful monitoring for decompensation

PPE Considerations for non PUI/COVID 19 patients

- Given very recent preliminary data from New York City, a significant amount of pregnant patients who are COVID+ may be asymptomatic
  - 28% of COVID+ patients were asymptomatic upon admission for induction of labor
  - Decompensation may occur with minutes to days after delivery
- Expert opinion: *(MFM Guidance for Covid 19, Boelig/Berghella, AJOG)*
  - ALL pregnant patients on L&D wear a mask
    - Dependent on local supply chain
  - **ALL providers wear a mask – Strong consideration for N95 during ALL deliveries (second stage)**
    - HSHS St. John's Hospital – ALL providers on L&D wear goggles and surgical masks

Surge planning

- Springfield has 2 hospitals (HSHS St. John's Hospital and Memorial Medical Center)
  - Average daily deliveries at each hospital are 4-6
- 31 OB/GYNs representing 3 practices (SIU, Springfield Clinic, Women's Health Consultants)
- If number of OB/GYNs is reduced to 20, we will enter into emergency mode
  - Deliveries will be pooled among all groups
  - 1 OB/GYN at St. John's with back-up / 1 OB/GYN at MMC (OB Hospitalist)
- Smaller hospitals in network may only have 1-4 OB providers
  - If no providers available, Administrative Perinatal Center will transport patients appropriately

Workforce considerations – staying safe

- Resident physicians have been split into 2 teams, alternating weeks
- All Labor & Delivery staff should maintain 6-feet distancing, specify computers or wipe clean between users
- Avoid providers going to ED for GYN consults and also providing care on L&D, consider team approach to reduce providers L&D
- Nursing staff should not float to other units in the hospital
- 1 nurse can be responsible for watching fetal monitors while the others chart from other areas. They can rotate this responsibility every few hours.
- Strategies to reduce risk from work to families at home

Outpatient considerations

MFM Guidance for COVID-19 , Boelig/Berghella AJOG

- TeleHealth / Limit prenatal visits
- Limit ultrasounds
  - Dating at 11-13 weeks
  - Anatomy at 20 weeks (follow AIUM modifications)
  - Growth U/S (if indicated) at 32 weeks
- Ultrasonographers should wear masks and eye protection due to close prolonged contact
  - Consider masks for patients (per expert opinion discussed previously)
- Modify antenatal testing guidelines

COVID Resources Discussed

SIU Obstetric COVID 19 Resources:

- SIH COVID Simulations: Antenatal Admission, Labor & Vaginal Delivery, and Cesarean Delivery (4.2.2020)
- SIH L&D Checklist: Admission of COVID-19 + Patient or PUI (4.2.2020)
- SIH COVID + and PUI Education for Huddles (4.2.2020)

COVID 19 OB articles and guidance

- *MFM Guidance for Covid 19, expert opinion, Boelig/Berghella, AJOG* (3.19.20)
- SMFM COVID-19 considerations (3.27.20)
- AJOG COVID-19 In Pregnancy Early Lessons from NY (3.27.20)
- Protection for Obstetrical providers and Patients, Berghella, AJOG (shared 3.27.20)
- Strategies to reduce risk from work to families at home (3.26.20)

Maternal-Fetal Medicine, University of Chicago Medical Center

JULIA BREGAND-WHITE, MD

Case 1: 34yo G2P1001 IOL at term, required CS, drop in platelets

- Mother
  - 40w1d presents for contractions, on ROS + for 1w of rhinorrhea , nasal congestion and body aches → COVID testing sent on admission
  - IOL for decal on tracing at term, placed on precautions and admitted to COVID + room
  - COVID + on HD 2, limited to 1 MD provider, 1 mom RN, 1 baby RN
  - Cesarean for failure to progress and NRFA to be done in negative pressure OR
  - GHTN diagnosed PPD1 with low platelets 115,000, repeated PPD 2 same and no change in clinical picture so discharged with home isolation for at least 14 days to limit exposure to others
  - Follow up daily calls to check status after JAMA article suggested decompensation risk
- Baby
  - Routine care, allowed to room with mother, circumcised, discharged DOL 3 with mom and plan for outpatient follow up within 1w

Patient 1 Lessons Learned

- Orientation of staff to COVID workflow and protocol
  - Consider simulation and orientation to COVID specific protocols as each new L&D team starts their first shift during COVID time frame
- Orientation staff to negative Pressure OR
  - Scrubbing into a negative pressure room, donning/doffing PPE
  - Minimize staff in OR to essential, have additional staff on standby should complications arise
  - Maneuvering patient bed in/out while maintaining negative pressure
- Babies of COVID + patients
  - Should they room in, extra testing, allowed to have circumcision, routine follow up within quarantine time frame since parent is positive
- Visitors
  - Limit visitors to 1 person, must remain in the patient room during entire stay
  - Should symptomatic partners be asked to leave and if so can there be another support person allowed to stay?
- Consideration of prolonged postpartum stay based on lab findings rather than just symptoms- ID can contribute to decision

Case 2- 28 yr old G1P0 +cough required outpatient follow up, delivered precipitously

- Mother
  - 30w6d Triage evaluation for cough x2-3 days and strange smells.
  - Deceleration in triage required admission, betamethasone
  - COVID + on HD2, fetal tracing appropriate, discharged
  - Required outpatient antenatal testing due to IUGR while COVID +
  - 32w2d presented in active labor and upon arrival of the team to the triage room infant was on the bed with a good cry
  - Placed in negative pressure room after delivery (since delivered in triage) for remainder of stay and discharged on PPD 1
- Neonate
  - Premature but stable
  - COVID testing sent DOL 2
  - Receiving donor milk, mom pumping, closed NICU

Case 2 Lessons Learned

- All ILI patients considered PUI regarding precautions
  - Rate of asymptomatic patients motivates
    - Universal masking of staff
    - N95 use after 2nd stage and during CS in ALL patients
- Importance of PPE even in the setting of clinical emergencies
  - There is no emergency that bypasses need for safe PPE

- Outpatient monitoring when delay can not be considered
  - Last scan of the day, deep cleaning afterwards, separate entrance/exit, PPE for ultrasonographer
  - Creation of separate COVID/PUI/ILI clinic with ANT and prenatal care capabilities

University of Chicago Medical Center OB Covid Strategies

- Outpatient / Triage Protocols

  UCM Outpatient Management of COVID-19 +/ILI/PUI Patients (4.1.2020)
  https://ilpqc.org/wp-content/uploads/2020/04/Covid_ILI20Clinic_OBGYN20Outpatients_4.1.20.jbw_.pdf

- Inpatient Protocols

  UCM COVID-19 Inpatient Standard Procedure (4.1.2020)
  https://ilpqc.org/wp-content/uploads/2020/04/UCMC20COVID20Inpatient20Resources_4.1.2020.pdf

NorthShore University HealthSystem- Evanston Hospital

RICHARD SILVER, MD

NorthShore
University HealthSystem

NorthShore University HealthSystem

COVID-19 System
OB Staffing Strategy

April 3rd, 2020

Healthcare for what's next.

NorthShore COVID-19 Priorities

- **Patient Safety**
- **Team Member Safety**
- **Facility Enhancement** (ICUs, EDs, ICUs, Inpatient)
- **Clarification on NorthShore PPE Philosophy & Practices**

NorthShore University HealthSystem

DATA UNDER VALIDATION

The data CART (Coronavirus Analytics Research team) | Data as of 11:59 pm April 1, 2020

# of Patients Tested	# of Positive Patients	# of Negative Patients	# of Recovered Patients	# of Deceased Positive Patients	# of Pending Tests
8,065	1,548 (20.6%)	5,948	180	10	569

Currently Hospitalized - All # of + Patients	All Hosp - EV	All Hosp - GB
84	30	54

Currently Hospitalized - ICU only # of + Patients	ICU - EV	ICU - GB
20	2	18

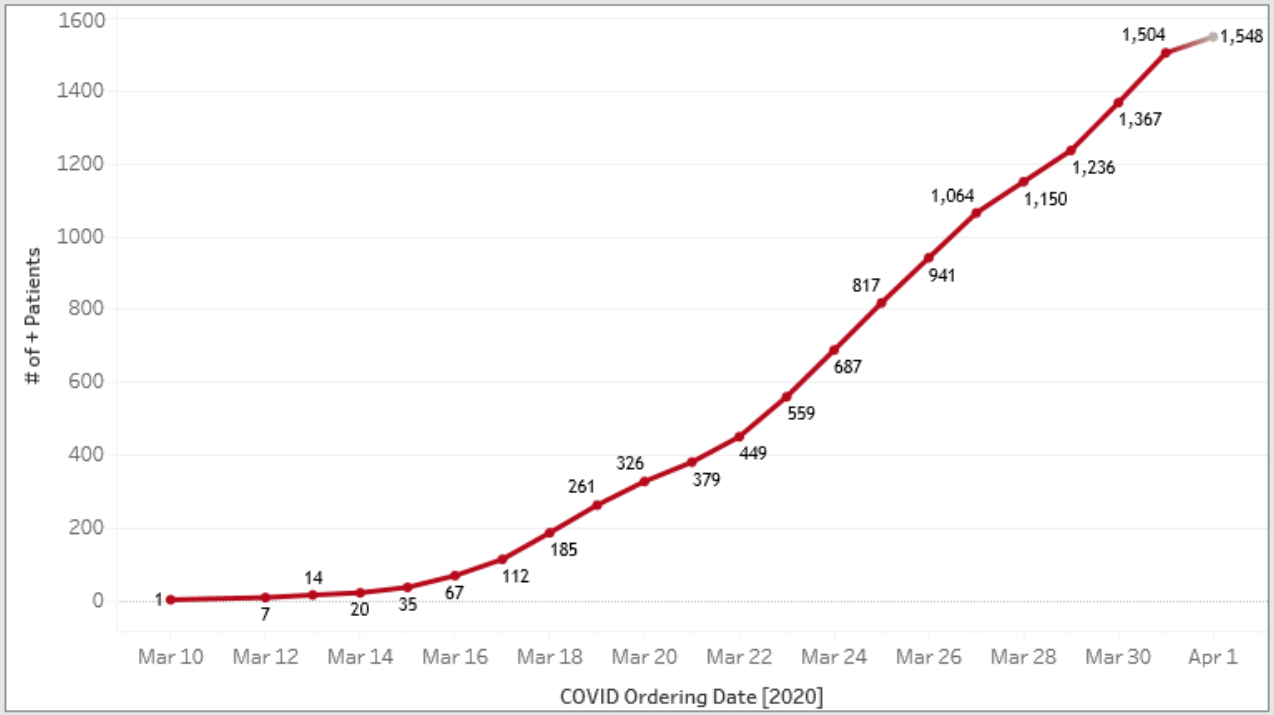
Positive Patient Outcomes

ICU Hospitalized	20
Hospitalized (Not ICU)	64
ICU Hospitalized-Discharged	1
Hospitalized (Not ICU)-Disch..	60
Not Hospitalized	1,393
Deceased - COVID Positive	10

Select a View

COVID Test Running Total - Positives

Yesterday's COVID Test Running Total Trend - Positives are incomplete and d not accurately reflect the trend.

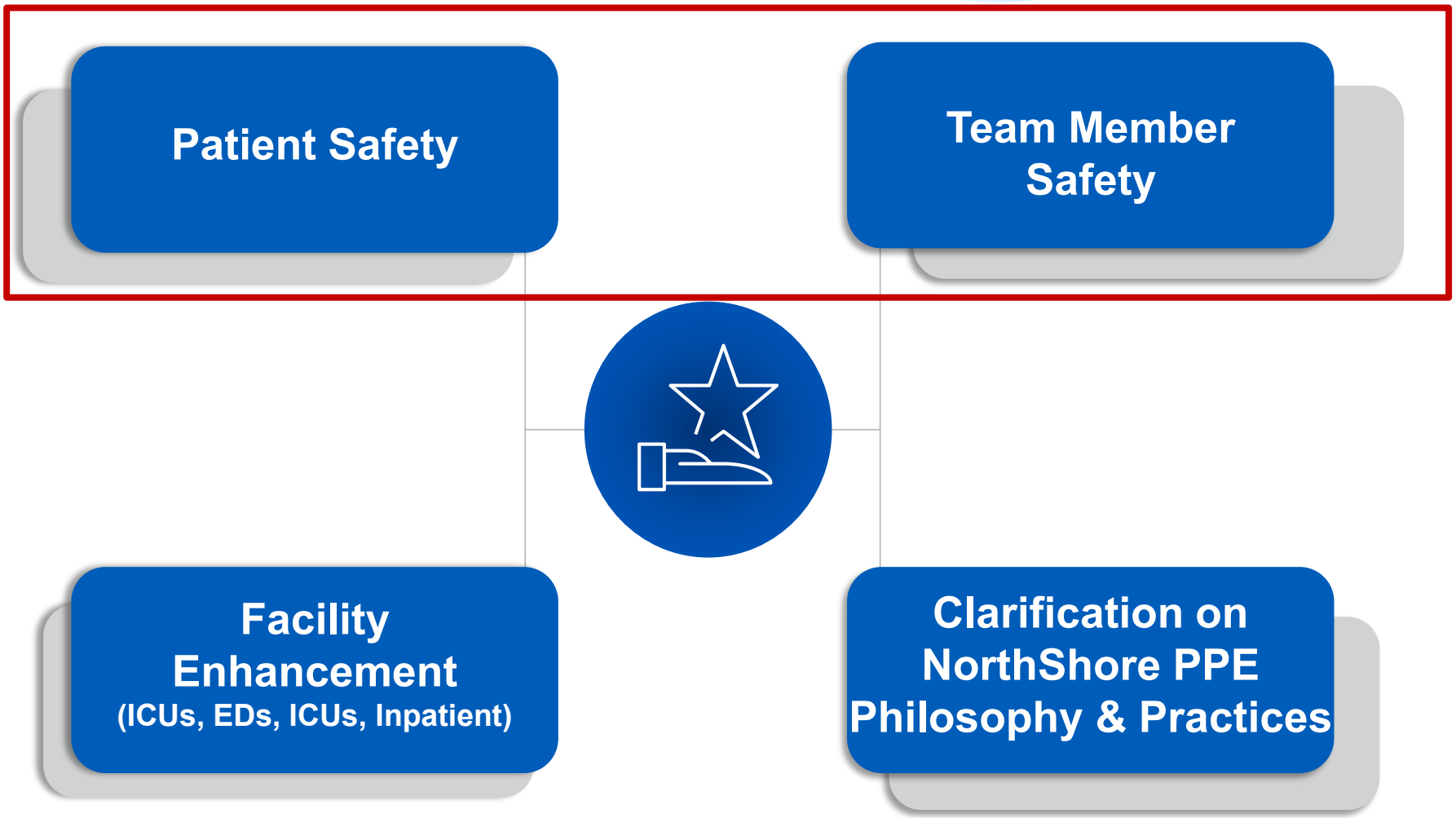


Positive Tests - Patient's Home Location

COVID Enhancements

- Immediate Care vs. Emergency Department
  - Designation of 4 Super-ready Immediate Care sites
  - Development of COVID e-visits
  - Development of Drive-thru testing
- COVID Campus
  - Glenbrook Hospital
- Telehealth Capabilities
- Provider Volunteer Labor Pool

NorthShore COVID-19 Priorities



Platoon Care For Patients

- 3 segments of care:
  - L&D, Antepartum/Postpartum, GYN Emergency Room
- 5 days on, 10 days off, working 12-hour shifts
- Team size predicated on clinical volume and efficiencies derived from aggregating staff, who are from disparate business units

Team	MD/DO	CNM	Residents	Total
L&D	3	1	2	6
Rounds	1	0	1	2
GYN	1	0	1	2

Platoon Care For Patients

- Reduces the risk for cross contamination between patients, providers and staff
- Provides a 10-day reserve period for providers to detect symptoms
- Reduces the risk that we will run out of critical providers
- Permits providers to recharge their batteries while staying off the hospital campus

NorthShore University Health System Covid 19 Ob Strategies as of (4.1.20)

- Evanston Hospital & Highland Park Hospital Obstetrics COVID-19 Workflow (4.1.20)

Additional Updates: NorthShore OB 4.2.20

- Consider early epidurals for all laboring patients. You should be aware that anesthesia will need to properly donn their PPE before intubation on all patients because intubation carries a high risk of aerosolization, and asymptomatic patients are capable of viral shedding. Consequently, early epidurals when appropriate can minimize the likelihood of encountering this scenario.
- Both ACOG and SMFM have recommended against giving supplemental oxygen via facemask in the setting of fetal heart rate decelerations.
  - The evidence would suggest there is no improvement in outcomes with maternal O2 administration in this setting, and
  - Supplemental oxygenation may result in aerosolization.
  - As a result, our L&D nurses have been instructed to not give supplemental oxygen in this setting.
- **Recently revised recommendations from NorthShore regarding masks:**
- Anyone who works in any area where you are interacting with patients, is required to wear a mask for the duration of their shift.
- Anyone who works in any non-patient care area and unable to maintain proper social distancing, is required to wear a mask for the duration of their shift.
- · Anyone who works in any non-patient care area and able to maintain proper social distancing, is NOT required to wear a mask.
- **Regarding Labor and Delivery PPE:**
- · **N95 masks and face shields should be worn by all providers in the room for all cesarean sections**, including patients at low risk for COVID-19. Full PPE should be worn by all providers in the room for cesarean sections for all COVID+/PUI patients.
- · **Masks should be worn for all laboring patients**. Although a standard mask is adequate, I would **recommend an N95 mask should also be worn for all laboring patients**, including patients at low risk of COVID-19. **Face shields or goggles should also be worn for all patients** if a splash risk is present.

QUESTIONS

DISCUSSION OF NEONATAL UNIT STRATEGIES

Panel

- **Beau Batton, MD,** Chief of Neonatology, SIU School of Medicine, HSHS St. John's Hospital, Springfield
- **Malika Shah, MD,** Newborn Nursery Director, Prentice Women's Hospital, Chicago
- **Justin Josephsen, MD**, Medical Director – St. Mary's Hospital NICU, St. Louis
- **Leslie Caldarelli, MD,** NICU Director, Prentice Women's Hospital, Chicago

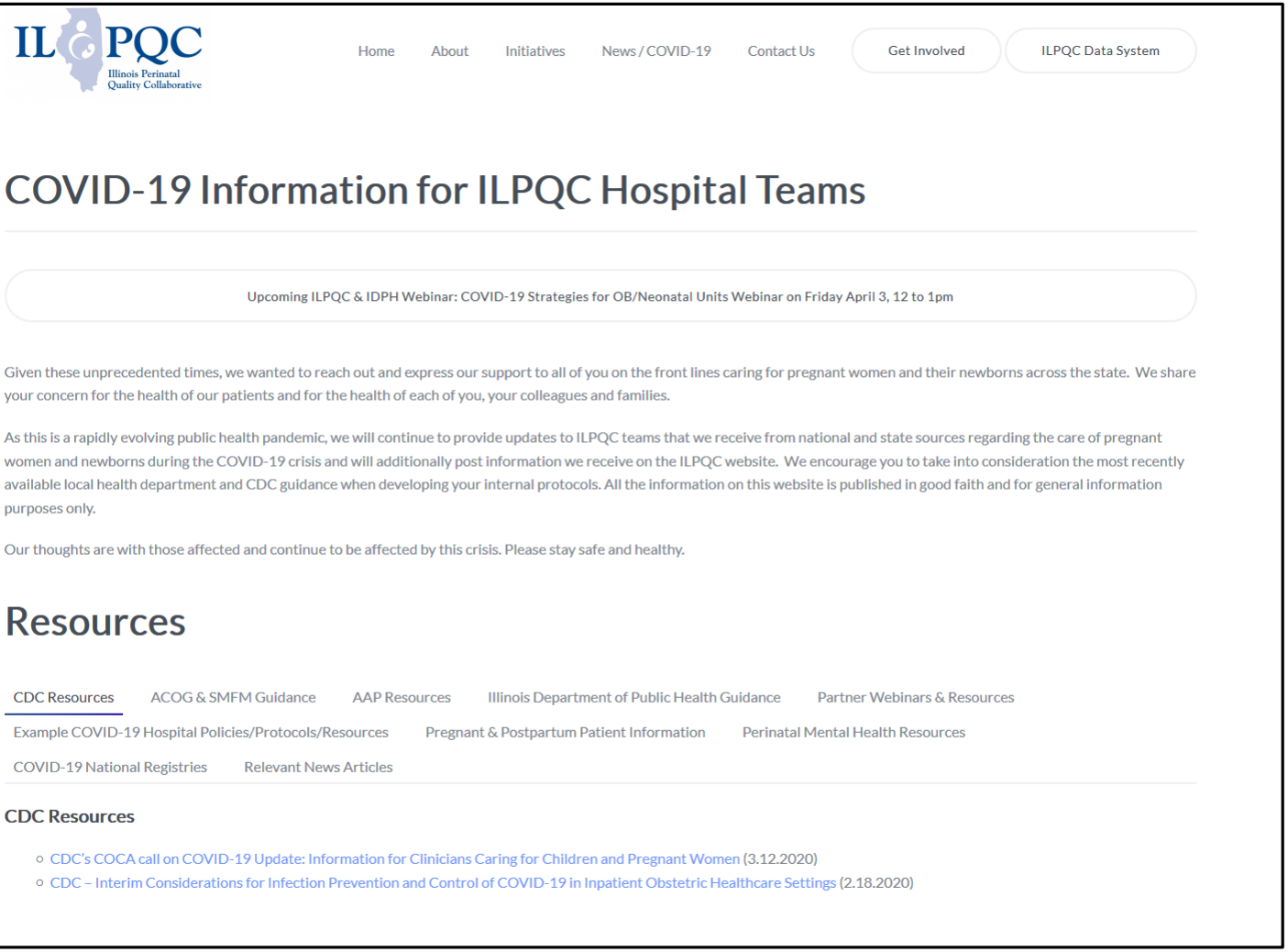
Overview

- High and low-risk delivery preparation for PUI and COVID-19 positive women
- After Delivery: In patient newborn nursery considerations and safe discharge
- Infant Testing
- After Delivery: Considerations for admission to NICU

High and low-risk delivery preparation for PUI and COVID-19 positive women

HSHS St. John's Hospital

BEAU BATTON, MD



ILPQC Illinois Perinatal Quality Collaborative

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COVID-19 Information for ILPQC Hospital Teams

Upcoming ILPQC & IDPH Webinar: COVID-19 Strategies for OB/Neonatal Units Webinar on Friday April 3, 12 to 1pm

Given these unprecedented times, we wanted to reach out and express our support to all of you on the front lines caring for pregnant women and their newborns across the state. We share your concern for the health of our patients and for the health of each of you, your colleagues and families.

As this is a rapidly evolving public health pandemic, we will continue to provide updates to ILPQC teams that we receive from national and state sources regarding the care of pregnant women and newborns during the COVID-19 crisis and will additionally post information we receive on the ILPQC website. We encourage you to take into consideration the most recently available local health department and CDC guidance when developing your internal protocols. All the information on this website is published in good faith and for general information purposes only.

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

Resources

CDC Resources ACOG & SMFM Guidance AAP Resources Illinois Department of Public Health Guidance Partner Webinars & Resources
Example COVID-19 Hospital Policies/Protocols/Resources Pregnant & Postpartum Patient Information Perinatal Mental Health Resources
COVID-19 National Registries Relevant News Articles

CDC Resources

- CDC's COCA call on COVID-19 Update: Information for Clinicians Caring for Children and Pregnant Women (3.12.2020)
- CDC – Interim Considerations for Infection Prevention and Control of COVID-19 in Inpatient Obstetric Healthcare Settings (2.18.2020)

COVID-19 PPE Requirements per CDC Guidelines

HSHS ILLINOIS

LAST UPDATED: **03/27/2020**

Applies to all hospital and ambulatory settings.

	PPE required for providers entering patient room or with direct patient contact					PPE for Patient
	GOWN	PROCEDURAL /SURGICAL MASK	EYE PROTECTION	RESPIRATOR (PAPR/N95/P100)	NEGATIVE PRESSURE ROOM *(when available)*	MASK
Patients without respiratory symptoms.						
Inside patient room	⊘	✓	👓	⊘	⊘	⊘
Colleagues in patient care areas or ambulating or transporting patients outside of room	⊘	✓	👓	⊘	⊘	✓
Interaction with a patient with respiratory symptoms (cough, shortness of breath, sore throat). *NOTE: In hospital setting, place in droplet isolatio*						
While obtaining respiratory specimen (swabber)	✓	⊘	👓	😷	⊘	⊘
Direct patient contact (i.e., close contact within six feet, in-room care, patient screening)	⊘	✓	👓	⊘	⊘	⊘
Transporting or ambulatating patient outside of room	⊘	✓	👓	⊘	⊘	✓
Interaction with a patient who is confirmed COVID-19, known PUI (person under investigation) or screened as high-risk for COVID-19. *NOTE: Consider changing scrubs at the end of shift; hospital provided scrubs may be requested.*						
Direct patient contact (i.e., close contact within six feet, in-room care, patient screening)	✓	⊘	👓	😷	For aerosol generating procedures *(BiPAP, CPAP, Optiflow, EZ PAP, bronchoscopy, nasotracheal suction, intubation, nebulizer treatments)*	⊘
Ambulating patient	**Patient is to be confined to patient room**					
Transporting patient	✓	✓	👓	⊘	⊘	✓
Colleagues walking through hallways in non-patient care areas and reception/waiting areas. *(A patient care area is where patients may be examined or treated.)*	**NO PPE NECESSARY**					
Colleagues in groups larger than 10 where social distancing is not possible. *(Social distancing is standing or sitting greater than 6 feet apart)*	⊘	✓	⊘	⊘	⊘	

043-3333-HSHS 03/27/20

Reference: www.cdc.gov/coronavirus/2019-ncov/downloads/summary-of-IPC-guidance-P.pdf

PPE & Infection Control Precautions

Hospital wide:

Protective eyewear and surgical mask in all patient areas, screening questions and temperature check at each entrance

Delivery room, mother is COVID (+) or PUI:

PAPR (N-95 in O.R.), gown, gloves, protective eyewear, two teams (DR and transport)

Neonate PUI:

Negative airflow room (NICU), N-95 mask, gown, gloves, isolation from mother, don/doff officer outside of room

Delivery Room Precautions

Guideline: Delivery & Admission Logistics for a Neonate Born to a Woman who is COVID-19 (+) or a PUI

Recommendations are changing frequently and these guidelines may not reflect the most recent information available. In some cases, clinical judgement may warrant additional considerations.

Population:
Infants born to a mother who is known to be COVID-19 positive or a person under investigation (PUI) for COVID-19. All such neonates will be cared for in NICU A8 after birth irrespective of gestational age or symptoms present.

Delivery room attendance:
Team 1 consists of the NICU Charge Nurse and Neonatologist (Neonatal Nurse Practitioner to be present in the delivery at the discretion of the neonatologist). If possible **Team 2** (a second NICU nurse and a second neonatologist/NNP) should be present outside of the delivery room to receive the infant after initial stabilization and this RN will admit the infant.

NICU Charge Nurse Responsibilities:
- Notify the covering neonatologist of the expected delivery
- Contact maintenance (ext. 45359 during the day and the operator at night) to confirm that negative airflow is working in A8 and that the alarm is turned on.
- Ensure that maintenance has placed a physical seal around the door between A8 and the rest of pod A
- Ensure Personal Protective Equipment (PPE) is readily available in the A8 anteroom, including PAPRs, gowns, hair covering, gloves, eye coverings and surgical masks.
- Ensure the NICU nurse assigned to care for the infant has been fitted and has an appropriately sized N-95 mask/PAPR

Delivery Room Care:
Vaginal Deliveries in room 329 or 330 (not in the OR)-
- Prior to entering the delivery room, perform hand hygiene and don PPE
- Place transport isolette in hallway outside of anteroom prior to delivery. Ensure both end portholes have sleeves that close or are covered with sterile towels/linens to close off portholes
- Prior to entering room, don PPE: PAPR, gown, and two sets of clean gloves
- Team 2 must wear PPE (including an N-95 mask, eye goggles, hair covering, gown, and gloves) and remain in the hallway outside of the anteroom until the delivery room team exits.
- Following delivery, perform neonatal stabilization in the delivery room per NRP Guidelines
- Do not give surfactant in the delivery room
- Do not use CPAP with nasal prongs in the delivery room or during transport
- Once stabilized, prepare infant for transport to A8
- Team 2 or Obstetrical team member ensures all portholes of the transport isolette are closed properly and moves the transport isolette from the hallway to the anteroom
- Once the doors between the hallway and anteroom are closed, Team 1 enters brings the transport isolette from the anteroom into the delivery room and closes the anteroom door
- Load infant into isolette in the delivery room
- Team 1 wipes down the transport bed with sanitizing wipes in the delivery room
- Delivery room handoff:
  - Prior to hand-off, team 1 removes 2nd glove layer and wipes down transport isolette after cleaning with sanitizing wipes
  - Team 2 should be in the anteroom with the door from the anteroom to the hallway closed
  - Team 1 pushes transport isolette out of the delivery room into anteroom (but remains in the delivery room) and transfers care of infant to Team 2.
  - Team 1 communicates infant's status and respiratory support to Team 2
  - Team 1 closes door from the delivery room to the anteroom
  - Team 2 receives transport isolette, wipes it down with sanitizing wipes a second time, and exits the anteroom only after the door to the delivery room has closed
  - Team 2 doffs with officer supervision then transports the infant to the NICU.
  - Once team 2 has transported neonate to the NICU, Team 1 exits the delivery room, doffs PPE, and returns to the NICU.
- **NOTE: if a second team is not available, then Team 1 exits the delivery room with the transport isolette into the anteroom. In the anteroom, Team 1 doffs, applies hand hygiene, then dons new PPE. With new PPE, Team 1 transports neonate to NICU.**

Guideline: Care of the Neonate born to a woman who is COVID-19 (+) or a PUI

These guidelines are intended for care of a neonate born to a woman with suspected or confirmed COVID-19. All neonates born to a woman who is COIVD-19 (+) or a person under investigation (PUI) will initially be cared for in NICU A8 irrespective of the infant's gestational age, physical examination, or acuity. Recommendations are changing frequently and these guidelines may not reflect the most recent information available. In some cases, clinical judgement may warrant additional considerations.

NICU A8 Room Preparation (NICU Charge Nurse):

- Contact maintenance (ext. 45359 during the day/operator at night) to confirm that negative airflow is working on A8 and the alarm is turned on.
- Ensure that maintenance has placed a physical seal around the door between A8 and the rest of Pod A.
- Ensure Personal Protective Equipment (PPE) is readily available in the A8 anteroom, including PAPRs, gowns, gloves, hair covering, eye coverings and surgical masks.
- Call Central to order up PAPR's (3)
- Ensure the NICU nurse assigned to care for the infant has been fitted and has an appropriately sized N-95 mask

Delivery room care and neonatal transport to NICU A8:
See "Guideline: Delivery Room/Admission Logistics for a Neonate Born to a Woman who is COVID-19 (+) or a PUI"

Newborn Care:

- By definition, the neonate is a PUI. S/he should be tested for COVID-19 after birth (NOTE: the type, timing, and number of COVID-19 tests performed will be determined at the time of admission in consultation with IDPH and the hospital's Infection Control Committee)
- At all times, all personnel in A8 should be wearing PPE, including gown, gloves, hair covering, eye goggles, and either an N-95 mask or PAPR
- Following admission to A8, the neonate should be stabilized per routine care
- The neonate should be bathed as soon as is reasonably possible after birth
- The neonate cannot leave A8 and s/he should be cared for in an enclosed isolette until discharge or a negative screen, except when being fed or held by a support person or the bedside nurse
- No aerosolized medications should be given
- Non-invasive respiratory support should be avoided
- All labs should be drawn by the RN and placed in biohazard bag per routine. The labs should be passed out the door to another RN who is holding a clean biohazard bag. Call the lab and notify them of the PUI/COVID-19 status prior to sending.
- While the mother is COVID (+) or a PUI, she cannot visit the NICU
- One designated support person for the neonate will be allowed to visit:
  - S/he must be a family member and wear the appropriate band/hospital identification
  - S/he must be asymptomatic and not a PUI
  - S/he must don appropriate PPE while in A8

- For proper handling of breast milk: See "Guideline: Handling of Breast Milk for Mothers who are COVID-19 (+) or PUI"
- For sterile procedures: See "Guideline: Sterile Procedures for Neonate born to a woman who is COVID-19 (+) or a PUI"
- For endotracheal intubation (not a sterile procedure):
  - The procedure should occur in A8 with the doors closed and negative airflow
  - Minimize personnel present: neonatologist, bedside nurse, respiratory therapist
  - All personnel in A8 should have on PPE, ***including a PAPR***, gown, eye protection, hair covering, and two sets of gloves
  - Once the intubation is completed, one set of gloves should be removed and discarded, and hand hygiene should be performed on the second set of donned gloves

NOTE: all providers should use a PAPR or N-95 mask while in A8 at all times

Well Newborns/ Level II	PUI/ COVID-19 +
Environment: Routine as usual in mother's room **Minimal movement of newborn from room so as to reduce exposure.**	**Environment:** • Isolation- negative air flow room • Warmer, delivery tackle box w/ stethoscope, cardio/respiratory monitor, ophthalmoscope/otoscope heads in isolation room
Notification: Per physician preference	**Notification:** **Notify PCP and Neo/NNP as soon as you are aware mother is PUI/ COVID-19**
Delivery: Only exception to routine, **NO ID picture**	**MOM IS NOT ALLOWED SUPPORT PERSON!** ****Designated asymptomatic caregiver can wait in NB isolation room** **Delivery/ Vaginal: Essential Personnel ONLY** Nursery personnel in full PPE to remain behind curtain during delivery *Labor RN to bring baby to Nursery RN, baby is taken immediately to NB isolation room* **Delivery/ C-section: Essential Personnel ONLY** • Same as above. Mother will be behind a drape, nursery personnel to remain on opposite side of this. • *Baby, **once stabilized**, taken per transporter **(located either in scrub room or OR ante room)** to NB isolation room*
Resuscitation: • Per NRP Guidelines	**Resuscitation: AWARE/ PREPARE!** • Per NRP Guidelines; **If in OR, Neo will decide when baby stable enough to be moved to isolation room;** C/R Monitor, Sigma Pump, Syringe pump, IV supplies, bolus, umbilical line, Optiflo Junior, Vent, etc can be immediately available **outside ante room.**
Cord gas: Per routine	**Cord Gas: Cat II/III tracings, resuscitation, and/or Apgar at 5" < 6.** Labor staff to draw up per routine/ throw away if not needed.
Transition: Per routine	**Transition:** Limit contact to <10", otherwise, maintain 6+ foot distance
Level II Infant/ Antibiotics: Brought to Level II where 6 foot distancing between newborns maintained	**Level II Infant./ Antibiotics:** Remains in NB isolation room **on continuous CR and pulse oximetry monitoring;** Nursery RN present at all times, limited contact as much as possible; Maintain 6 foot distance when not providing care
Post Transition/ Care: **Nurse: Routine care** **Father/S.O:** *Only other person who can be in room;* Can leave room/hospital and return (at this time)	**Post Transition/ Care:** **Nurse:** In room if caregiver not present/ maintaining 6 foot distance; Limit interactions with newborn to 10" if possible; When caregiver present, routine rounding **Designated Asymptomatic Caregiver:** Wear mask, gown, gloves and goggles; May leave room/hospital
Breastfeeding: Per routine	**Breastfeeding: Decision to provide breastmilk should be discussed between the mother (in coordination with her family) and the PCP or his/her designee;** Mother will be provided designated breast pump; Mother to wash hands and breasts prior to pumping and puts on gloves; Bottles labeled with date and time; Wipe bottles with bleach wipes
Exams/ Circumcisions/ Weights: **Exams:** to be performed in mother's room so as to have as little movement of newborn as possible **Circumcisions:** May be performed in parents room or in exam room; **Only 1 baby allowed in circ room at any given time. NO exceptions!** **Weights:** scale placed on cart where weight is perform with assist from nursery RN at entrance of room BEHIND pulled curtain (door side)	**Exams/ Circumcisions:** **Exams:** To be performed in NB isolation room **Circumcisions:** To be determined per OB/PCP/Neo If performed, equipment left in room until discharge. Spray and place in biohazard bag **Weights:** Weighed on warmer scale in room
24 Hour State Testing/ TcB/TsB/Labs: CCHD, Newborn Screening **Hearing screening**: Screener placed BEHIND pulled curtain (door side) with leads through drape to baby; Wipe down with gray top cleaner; TCB/TSB to be performed in mother's room; Any venous labs to be performed in mother's room	**24 Hour State Testing/ TcB/TsB/Labs:** • CCHD and Newborn Screening performed in isolation room • **Hearing Screening: delayed to day of discharge to decrease the occurrence of false failed tests. Screening equipment may be brought into room.** Wipe down with bleach wipes in anteroom *after* doffing gear, hand hygiene, and new gloves ***Same process as above for bilimeter and glucometer!** • **All labs:** performed in isolation with specimen placed in biohazard bag in room; passed out door and dropped into clean double bag; Please call and let lab know of PUI/COVID-19 status
Discharge: • Early discharge for all patients is encouraged, however newborns MUST meet defined discharge criteria • **Vaginal – 24 hours and C-section – 48 hours**	**Discharge:** • Early discharge for all patients is encouraged, however newborns MUST meet defined discharge criteria • **Vaginal – 24 hours and C-section – 48 hours** • Mother should wear mask. Baby is placed in car seat **carried by healthy asymptomatic designated caregiver or** on mother's lap • Both are covered with clean sheets • **Call COVID-19 transport to Discharge patient @ 588-7601**

After Delivery: Newborn considerations and Discharge

Prentice Women's Hospital

MALIKA SHAH, MD

Newborn Nursery

- Mom/baby isolation pathway options
- Visitors
- PPE considerations for providers and support family member(s)
- Breastfeeding/breastmilk administration
- Discharge preparing for a safe discharge
  - Hearing screens for COVID and non-COVID exposed infants
- Guidance for first pediatrician visit
- Discussion of early discharges for all COVID and non-COVID patients (pros/cons/caveats)

Parent Discharge Sheet

SSMHealth

IF YOUR DOCTORS SUSPECT YOU HAVE CORONAVIRUS (COVID-19)

It is recommended that you ***isolate yourself*** as much as possible and have a ***healthy person to assist with your home and baby.***

TAKING CARE OF YOURSELF TO MINIMIZE THE SPREAD OF THE VIRUS:

- Stay in one room, away from other people, as much as possible.
  - If possible, use a separate bathroom.
  - Avoid sharing personal household items, like dishes, towels, and bedding
  - If face masks are available, wear one when you are around people.
  - If you can't wear a face mask, others should wear one when near you.
- Wash your hands often with soap and

TAKING CARE OF YOUR BABY:

- If you don't have a helper to feed and care for your baby, wear a face mask whenever you are closer than 6 feet from you baby
- Proper hand hygiene should be used prior to and following all baby care.
- Call your pediatrician if your baby develops symptoms (difficulty breathing, repeated coughing, temperature of more than 100.4, or stops eating well).
  - If you can't reach your pediatrician, call your local emergency room and explain

Vertical Transmission Review;
Testing of infants (or mothers)

SSM Health St. Mary's Hospital- St. Louis

JUSTIN JOSEPHSEN, MD

Vertical Transmission Risks

- 9 infants, no PCR confirmed transmission
  - Chen H, Guo J, Wang C, et al. Clinical characteristics and intrauterine vertical transmission potential of COVID-19 infection in nine pregnant women: a retrospective review of medical records. Lancet. 2020;395(10226):809-815. doi:10.1016/S0140-6736(20)30360-3
- At least 2 more case series, up to 38 infants without transmission

Vertical Transmission Risks

- 6 infants, no PCR confirmed transmission
  - However, 2 infants had elevated IgM titers
    - Zeng H, Xu C, Fan J, Tang Y, Deng Q, Zhang W, Long X. Antibodies in Infants Born to Mothers With COVID-19 Pneumonia. JAMA. 2020 Mar 26.
- 3 infants with early onset infection
  - PCR positive at 48 hours
    - Zeng L, Xia S, Yuan W, Yan K, Xiao F, Shao J, Zhou W. Neonatal Early-Onset Infection With SARS-CoV-2 in 33 Neonates Born to Mothers With COVID-19 in Wuhan, China. JAMA Pediatr. 2020 Mar 26
- All reported infants with positive COVID-19 have mild symptoms (except one 55 day old, who recovered)

Testing

- Newborn testing
  - If
  - Who
  - When
  - How
- Variability in the sensitivity of testing

AAP 4/2/2020


American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®
Search All AAP
FAQs: Management of Infants Born to Mothers with Suspected or Confirmed COVID-19
Critical Updates on COVID-19 / FAQs: Management of Infants Born to COVID-19 Mothers

AAP link on ILPQC website

Q: Should I test babies to determine if they are infected with SARS-CoV-2?

A: If available, testing well newborns will facilitate plans for care after hospital discharge; will determine the need for ongoing precautions and use of personal protective equipment among hospitalized infants; and will contribute to our understanding of viral transmission and newborn illness.

- Newborns should be bathed after birth to remove virus potentially present on skin surfaces.
- Testing should be done first at ~24 hours of age
- Repeat testing should be done ~48 hours of age, unless the infant is discharged home prior to this time
- Use one swab to sample first the throat and then the nasopharynx. Place single swab in one viral transport media tube and send to lab for molecular testing
- For infants who are positive on their initial testing, follow-up testing of combined throat/nasopharynx specimens should be done at 48-72 hour intervals until two consecutive negative tests

Non-test based

- If mother is a PUI or is COVID-19 positive, isolation may be discontinued when mother is
  - fever free (<100.0F) for >72 hours without taking medications for purpose of treating a fever, AND
  - symptom free, AND
  - at least 7 days after onset of symptoms (whichever criteria occurs last).

https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-hospitalized-patients.htm

After Delivery: Considerations for admission to NICU

Prentice Women's Hospital

LESLIE CALDRELLI, MD

NICU Considerations

- Admission
- Bath
- Precautions/Isolation
- Aerosolizing Procedures
- Testing
- Isolettes
- Breastmilk
- Visitation
- Discharge

QUESTIONS

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 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

IDPH
Illinois Department of Public Health

CDC
Centers for Disease Control and Prevention

DHS
Illinois Department of Human Services

JB & MK PRITZKER
Family Foundation

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

ADDITIONAL RESOURCES

ILPQC
Illinois Perinatal Quality Collaborative

SMFM and SOAP: Labor and Delivery COVID-19 Considerations

(3.27.2020)

SMFM & SOAP LABOR AND DELIVERY COVID-19 CONSIDERATIONS 3/27/20

Cohorting and Other Strategies for Exposure Mitigation

- Cohorting—co-locating patients who are persons under investigation (PUI) and women who test positive for SARS-CoV2 into a restricted area of the hospital.
- A clinical risk assessment for COVID-19 symptoms should be performed immediately upon arrival to the hospital to facilitate optimal patient placement and staff personal protective equipment (PPE) utilization.
- Hospital visitors should be restricted or eliminated for women who test positive for SARS-CoV2 or PUIs.

Patient Rooms

- Women who test positive for SARS-CoV2 or PUIs should ideally be placed in an isolation room.
- Airborne infection isolation rooms (single-patient negative-pressure rooms with a minimum of 6 air changes per hour), if available, can be used if performance of aerosolizing procedures is anticipated. In general, isolation rooms with droplet and contact precautions are recommended.
- In general, negative-pressure ORs should not have open surgical equipment. Teams should coordinate with local infection prevention teams to inform these decisions.

PPE for HCWs

- Women who test positive for SARS-CoV2 or PUIs should wear a surgical mask at all times as clinically able.
- All HCWs should implement droplet and contact precautions with eye protection (i.e., gown, gloves, surgical mask, face shield or goggles) for clinical interactions with patients suspected or confirmed COVID-19 and follow CDC guidelines
- N95 masks should be used in any room [eg, labor and delivery room (LDR), OR] whenever an aerosolizing procedure is being performed or likely to be performed on a patient with suspected or confirmed COVID-19.

Obstetric Triage and Testing Procedures

- Labor and delivery leadership should coordinate with hospital practices regarding outpatient screening opportunities for pregnant women with exposure to or symptoms of SARS-CoV2.
- Pregnant (particularly those in the third trimester) and breastfeeding women should be prioritized in screening algorithms if possible given the change in clinical guidance that might ensue in the setting of a positive screen.

Antepartum

- **Antenatal corticosteroids (ANCS):** Prolonged exposure to high-dose steroids has been associated with worsening SARS-CoV2 patient outcomes in the general population.
- **Magnesium for fetal neuroprotection:** The benefits of magnesium sulfate for fetal neuroprotection should be weighed against potential risks of maternal respiratory depression. This balance might shift as gestational age advances and is based on maternal respiratory status.
- While some have suggested avoiding the use of **nonsteroidal anti-inflammatory drugs (NSAIDs)** for symptoms suggestive of SARS-CoV2 infection, this practice is controversial and data are lacking.
- **Prenatal ultrasonography** should be used judiciously and reserved for situations when results would likely alter clinical management.

- Internal monitors: Internal monitors (ie, fetal scalp electrodes, intrauterine pressure catheters) may be necessary modalities to optimize fetal monitoring. Although data are limited, they so far do not suggest maternal-to-fetal transmission of SARS-CoV2 is likely to occur. Decision-making about internal monitors will evolve as more data become available.

- Each hospital should facilitate discussions between obstetric care, maternal-fetal medicine, neonatology, critical care, infectious disease, and obstetric anesthesiology providers regarding pregnancy management in the setting of worsening maternal respiratory status.

Postpartum Care

- Obstetric clinicians should be aware of hospital and CDC guidelines pertaining to the recommendation for neonatal separation from the mother after delivery for PUIs and women with SARS-CoV2.
- Teams should be prepared to educate patients early regarding these recommendations and plan for alternative neonatal protective plans (eg, maternal mask and glove use, bassinet in the room but distanced from mother, etc.) if the mother declines separation or when hospital capacities do not allow for separation.
- In accordance with the American College of Obstetricians and Gynecologists, breastfeeding or pumping for women who are SARS-CoV2 positive or PUIs is still recommended. However, the neonate may be at risk of SARSCoV2 acquisition via respiratory droplets while breastfeeding.

L&D Practices in Setting of Community Spread

- Hospital visitors should be restricted (broadly). In some settings, such as COVID+ -cohorted areas, visitors may be eliminated. These restrictions are institution dependent.
- If visitors are restricted for general medical or surgical hospitalizations, exceptions should be considered for labor and delivery and postpartum and in settings of bereavement.
- Designated visitors should be asked to remain in the hospital room during their visitation. Hospitals can consider whether patient food services or provision of other basic care supplies can be expanded to facilitate this practice.

IDPH: Recommended Guidance for the Care of Pregnant Women and Newborns During the COVID-19 Pandemic

Version 1.0 (3.30.2020)

3/30/20 IDPH RECOMMENDED COVID-19 GUIDANCE FOR CARE OF PREGNANT WOMEN & NEWBORNS

Prehospital Considerations

- Pregnant patients COVID-19 confirmed, Persons Under Investigation (PUIs), or any active symptoms of COVID-19: notify OB unit prior to arrival, facility can make appropriate infection control preparations before patient arrival
- Confirmed COVID-19 or PUI is arriving via transport by EMS: driver contact ED to follow local or regional transport protocols
- Healthcare providers should notify infection control personnel at their facility of anticipated arrival of pregnant patient who is COVID-19 confirmed or PUI

During Hospitalization

- Healthcare facilities to ensure recommended infection control practices for hospitalized pregnant patients who have COVID-19 or PUI are consistent with CDC Interim Infection Prevention & Control Recommendations
- Healthcare facilities should follow above infection control guidance on managing visitor access
- Infants born to mothers with confirmed COVID-19 should be considered PUIs. As such, infants should be isolated according to above recommendations

Mother/Baby Contact

- To reduce the risk of transmission of the virus that causes COVID-19 from the mother to the newborn, facilities should consider temporarily separating (e.g., separate rooms) the mother who has confirmed COVID-19 or is a PUI from her baby until the mother's transmission-based precautions are discontinued, as described in the Interim Considerations for Disposition of Hospitalized Patients with COVID-19.
- The decision to discontinue temporary separation of the mother from her baby should be made on a case-by-case basis in consultation with clinicians, infection prevention and control specialists, and public health officials.

Breastfeeding

- During temporary separation, mothers who intend to breastfeed should be encouraged to express their breast milk to establish and maintain milk supply. If possible, a dedicated breast pump should be provided.

- If a mother and newborn do room-in and the mother wishes to breastfeed, she should put on a facemask and practice hand hygiene before each feeding.

Hospital Discharge

- Discharge for postpartum women should follow recommendations described in the Interim Considerations for Disposition of Hospitalized Patients with COVID-19.
- For infants with pending testing results or who test negative for the virus that causes COVID-19 upon hospital discharge, caretakers should take steps to reduce the risk of transmission to the infant, including following the Interim Guidance for Preventing Spread of Coronavirus Disease 2019 (COVID-19) in Homes and Residential Communities.