COVID-19
What Maternity and Neonatal Care Providers Are Learning

May 22, 2020

12 – 1 pm EST

Ohio Perinatal Quality Collaborative

Through collaborative use of improvement science methods, reduce preterm births & improve perinatal and preterm newborn outcomes in Ohio as quickly as possible.

Today’s presenters:

Heather Kaplan, MD, MSCE
OPQC neo faculty/CCHMC

David Harper, MD
ProMedica Toledo

Molly Carey, MD
University of Cincinnati
UC Health

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University of Washington
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Marybeth Fry, M.Ed.
Akron Children’s
Hospital Medical Center

Welcome

- **Goals:**
  - Share practicalities of implementing strategies now
  - Discuss what people are doing in situations where it is unclear and guidance doesn't exist
  - **ALL TEACH ~ ALL LEARN**

- The focus of today's webinar is:
  - Universal testing of pregnant women to Labor & Delivery
  - Adapting or adopting telehealth for perinatal patients and newborns

- Plans:
  - The slide deck and recording of this webinar will be posted on the OPQC website
  - We will provide shared resource links on the website and update regularly

Silver Linings

The PDSA Cycle

Act

- What changes are to be made?
- Next cycle?
- Adopt, Adapt, or Abandon

Plan

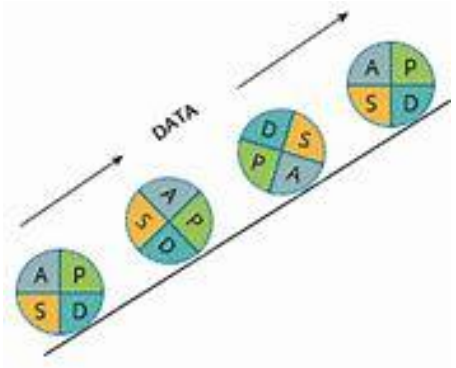
- Hypothesis or Idea
- Questions and predictions
- Plan to carry out the cycle (who, what, where, when)

Study

- Complete the analysis of the data
- Compare data to predictions
- Summarize what was learned

Do

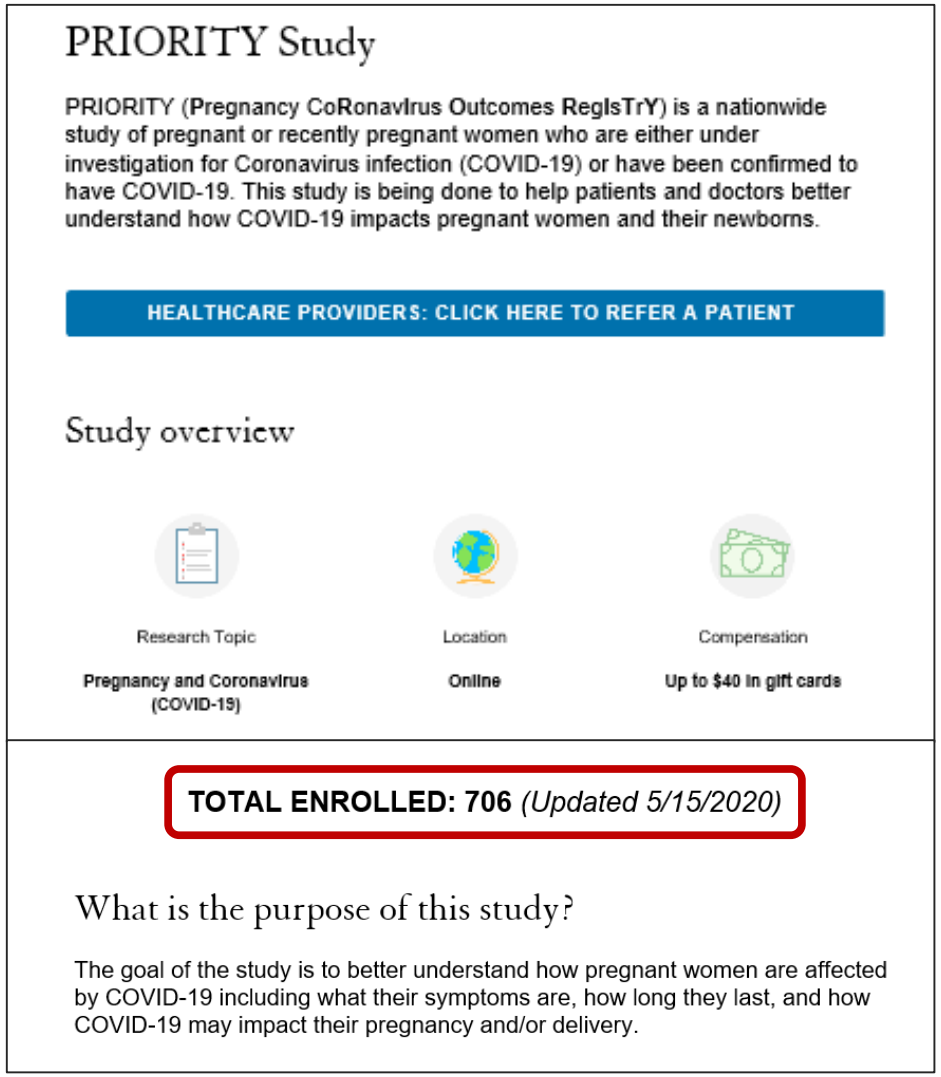
- Carry out the plan
- Document problems and unexpected observations



Participating in COVID-19 Obstetrical Registry

Updated May 22, 2020

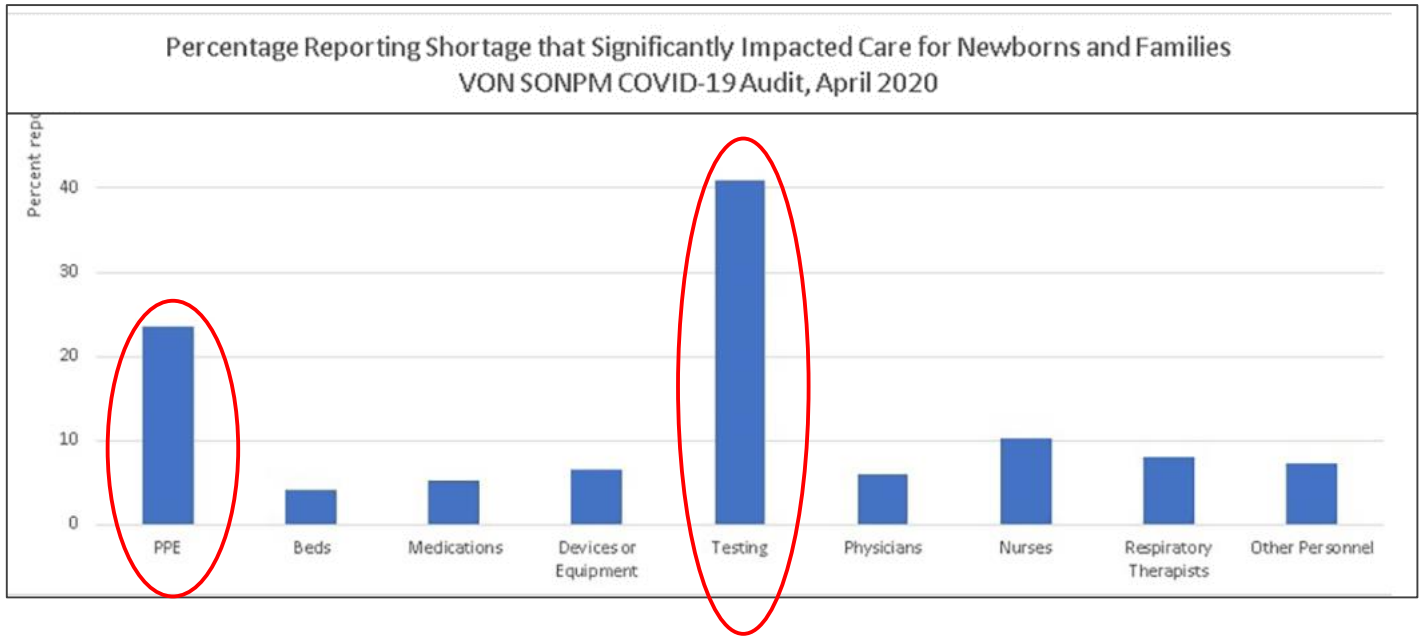
- **https://priority.ucsf.edu/**



Vermont Oxford Network Audit Results: April Audit

Updated May 22, 2020

- Results from 434 hospitals in 24 countries!
  - 54 confirmed cases, 311 suspected cases of pregnant women
  - Low numbers of newborns with suspected or confirmed COVID-19 (0 to 14)
  - 54% experienced at least one shortage of equipment, testing or personnel



Ohio Specific Results

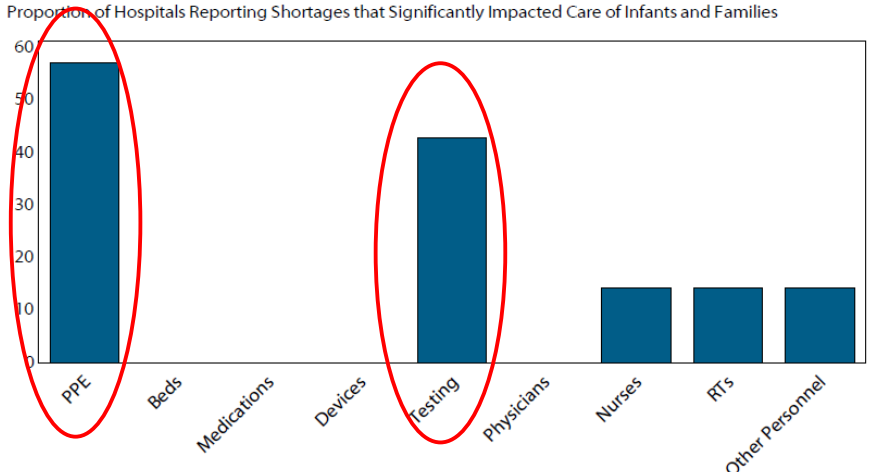
13 participating hospitals (9 participated in the entire audit)

Updated May 22, 2020

Confirmed and Suspected COVID-19 Cases at 9 Hospitals

	n	Census	Range	Confirmed Cases	Range	Suspected Cases	Range	Total Cases	Range
Mother-Baby Rooms	4	49	(5, 44)	0	(0, 0)	0	(0, 0)	0	(0, 0)
Level I Nursery	2	0	(0, 0)	0	(0, 0)	0	(0, 0)	0	(0, 0)
Level II Unit	1	50	(50, 50)	0	(0, 0)	0	(0, 0)	0	(0, 0)
Level III Unit	3	42	(16, 26)	0	(0, 0)	1	(0, 1)	1	(0, 1)
Level IV Unit	2	142	(71, 71)	0	(0, 0)	0	(0, 0)	0	(0, 0)
Special COVID-19 Unit	2	0	(0, 0)	0	(0, 0)	0	(0, 0)	0	(0, 0)
Total	14	283	(21, 71)	0	(0, 0)	1	(0, 1)	1	(0, 1)

Of the 14 units audited on a single day, there were 283 patients hospitalized, 0 confirmed infant COVID-19 cases, 1 suspected case



More hospitals reporting PPE shortages (~60% vs. 25%), similar testing shortages

Overall Impact of COVID-19 on the Ability of Hospitals to Provide Care for Infants and Families

	n	%
None	2	28.6
Only minor disruptions to care	5	71.4
Unable to provide necessary care to some infants	0	0.0
Unable to provide necessary care to most or all infants	0	0.0

All hospitals reporting no or minor disruptions to care

AAP SONPM NPC-19 Registry

Updated May 15, 2020

Updated May 22, 2020

- Provides population data on dyads of mothers who deliver and test positive for COVID-19 infection between 14 days before through 3 days after delivery, and their infants
  - There is an amendment under review to extend data collection to include mothers who had COVID-19 infection earlier in pregnancy, but the infection resolved by the time of delivery
- 5 hospitals in Ohio are participating:
  - Akron Children's Hospital
  - MetroHealth System
  - University Hospitals Cleveland Medical Center
  - ProMedica Toledo Children's Medical Hospital
  - St. Vincent Mercy Medical Center
- Data on 304 mother/infant dyads from 139 hospitals (36 states + DC)

(National Registry for Surveillance and Epidemiology of Perinatal COVID-19 Infection)

May 15, 2020: 139 Participating Centers

Updated 5/15/2

Updated May 22, 2020

Inborn/Outborn

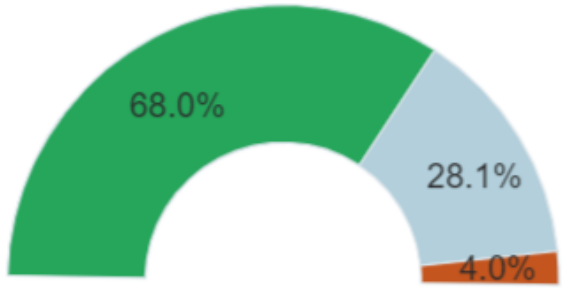
304 mother/infant dyads

Black	White	Asian	American Indian	Hawaiian	Other
94	112	18	1	2	68

Hispanic	Non-Hispanic
124	175

31.8% Black
37.9% White
41.5% Hispanic

Maternal Status at Admission



COVID-19 Positive	PUI
230	74

Descriptors

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Gestational Age at Birth

39 wks (Median) Range: 17-43

Birth Weight

3098 gms (Mean) Range: 850 to 5050

Duration of Hospital Stay

3.8 days (Mean) Range: 1-34

Final Disposition

300 babies were discharged home, 1 death, 1 SB

Vaginal 191 C-section 112

Male: 173

Female: 130

Separated at Birth:

Yes: 165

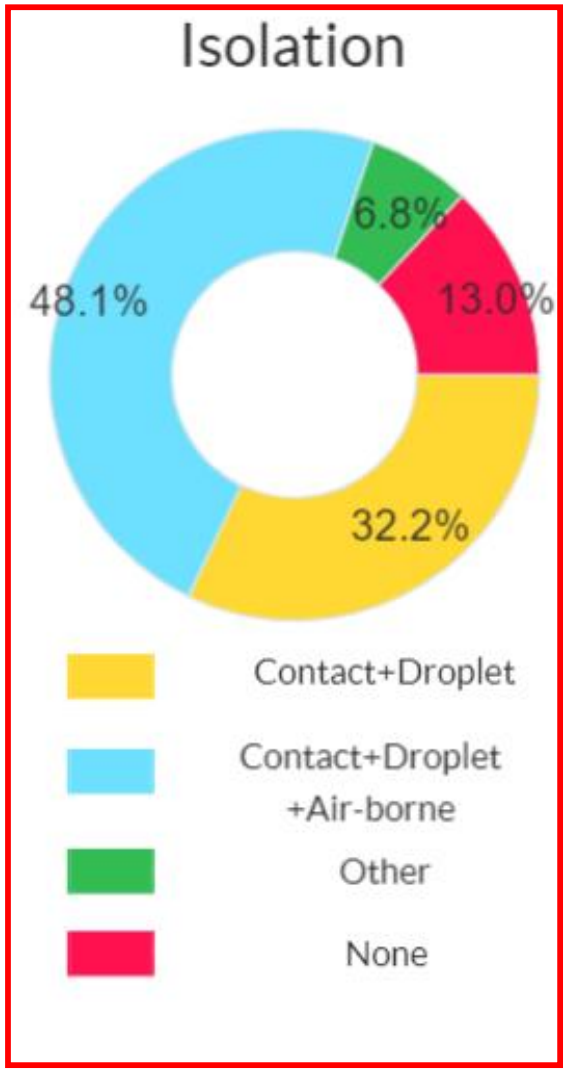
No: 137

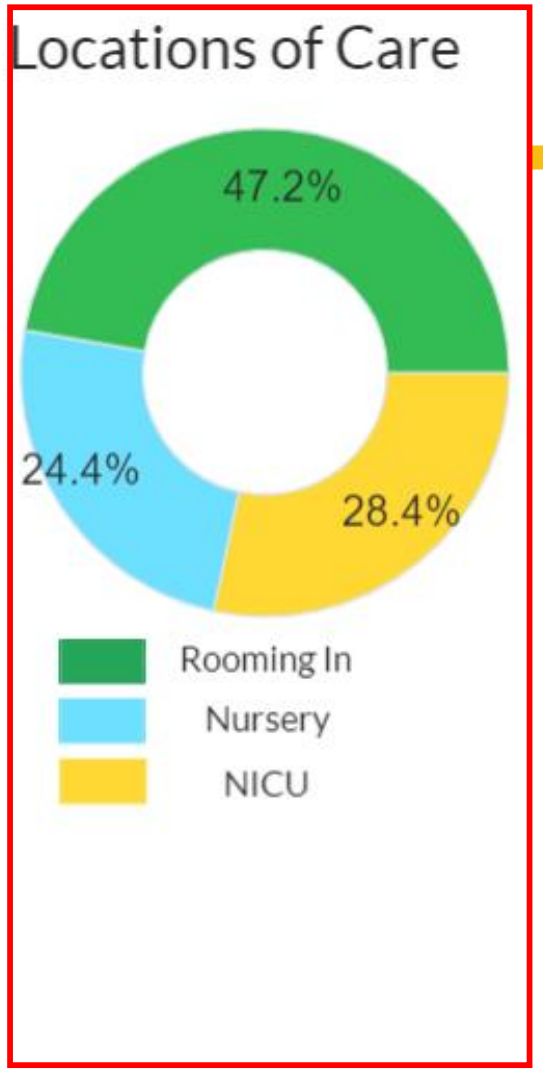
54.6% Separated

Infant SARS-CoV-2 Testing:

Yes: 249 (12 Pos)

No: 54





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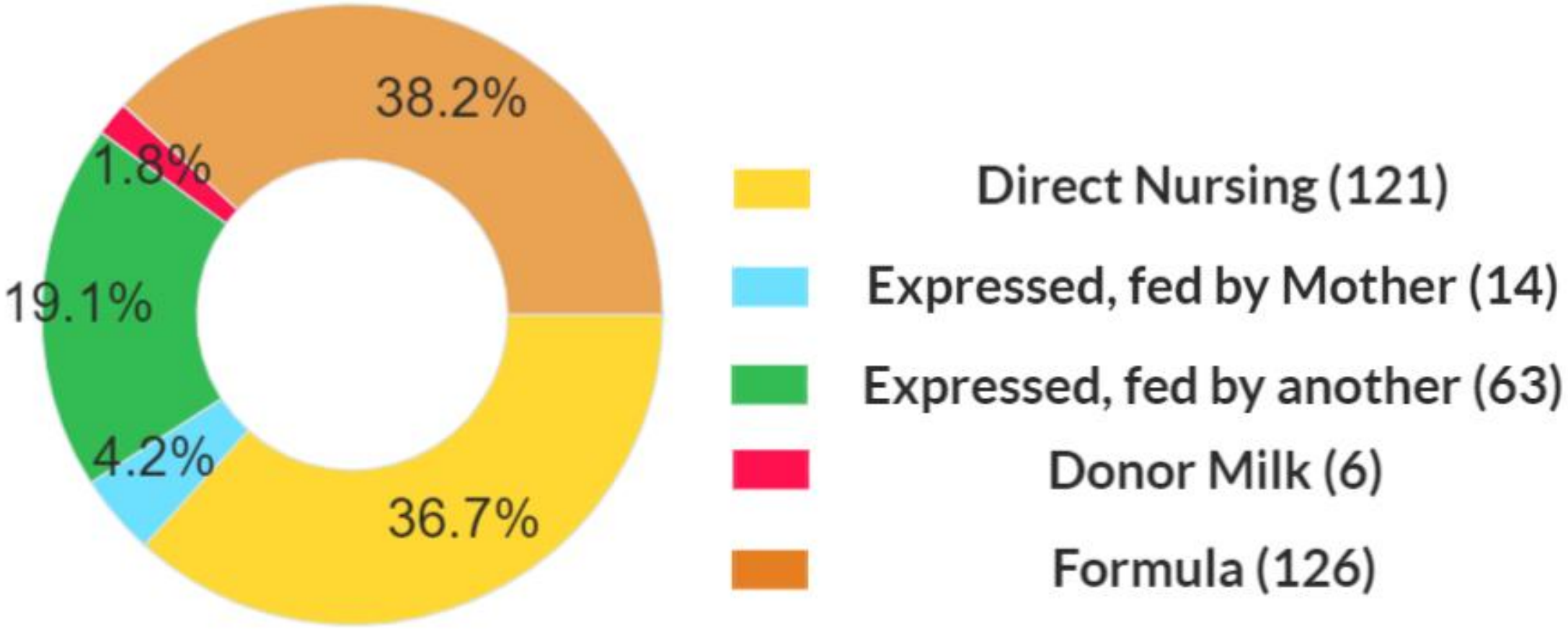
Type of Infant Feeding



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There are still opportunities to contribute and learn…

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- Join the VON Audit for May: https://public.vtoxford.org/covid-19/
- Participate in the NPC-19 Registry (scroll to the bottom): https://services.aap.org/en/community/aap-sections/sonpm/
- Join the VON COVID-19 in Newborn Care webinar on May 28th to explore more audit results and address other questions about the impact on newborn care

While there are likely only a small number of mother-infant dyads affected by COVID-19 in Ohio right now, we may still see a spike or insidious increase in cases as public health policies change. Participating in these registries enables us to help everyone learn! #InThisTogetherOhio

Registration question result

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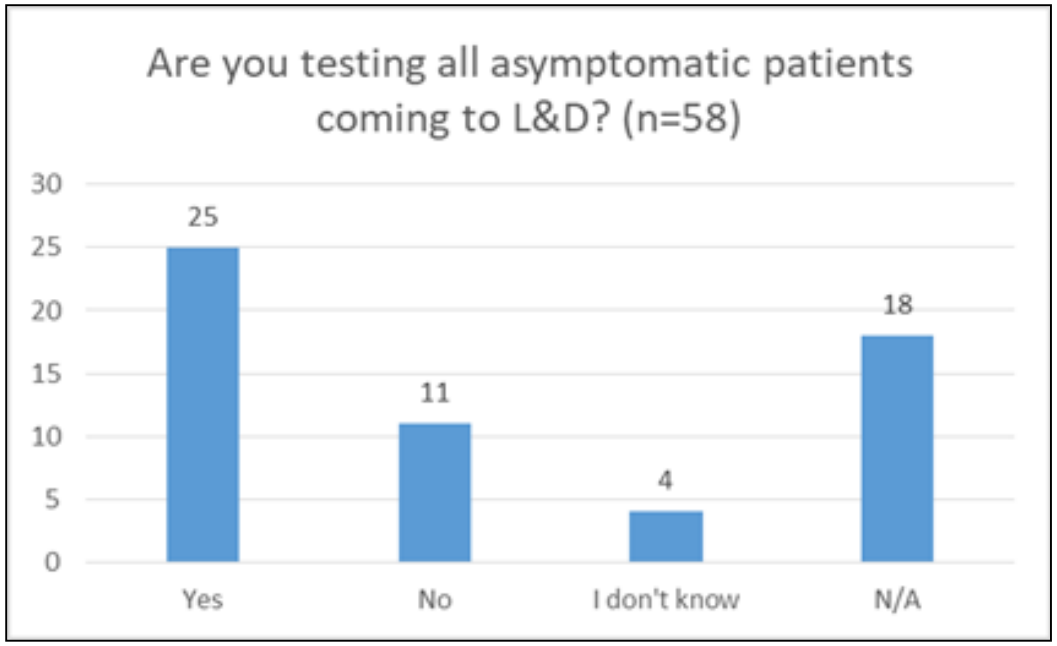
Are you testing all asymptomatic patients coming to L&D?



Universal Testing of L&D Patients

David Harper, MD
Director of Quality and Safety
Obstetrics and Gynecology
ProMedica Health Systems

Covid-19 timeline

Updated May 22, 2020

Jan. 23: The Ohio Department of Health makes coronavirus a mandatory reportable disease in Ohio

March 9: Gov. DeWine declares a State of Emergency after three people test positive for coronavirus in Ohio.

March 11: WHO declares PANDEMIC

March 12: K-12 schools to shut down

March 15: All bars and restaurants to close dining rooms

March 17: Elective surgeries and procedures in hospitals be delayed

March 17: First algorithm at ProMedica for managing COVID patients

March 22: Gov. DeWine and Acton announce a stay-at-home order

March 24: ACOG publishes *Outpatient Assessment and Management for Pregnant Women With Suspected or Confirmed Novel Coronavirus (COVID-19)*

March 27: Dr. Berghella publishes *Labor and Delivery Guidance for COVID-19*; the first review advocating expanded SARS testing in OB patients

April 6: Start COVID Call Coverage at Toledo Hospital

April 7: Early NYC OB experience published that 13% of all admitted OB patients are SARS positive and asymptomatic

April 17: Start preadmission SARS-CoV-2 testing for all patients scheduled for Induction or Cesarean Delivery

ProMedica Toledo Hospital

Updated May 22, 2020

Outpatient OB needing SARs-C0V-2 testing

- Scheduled cesareans
- Scheduled inductions

patient identification and notification for testing

- Nursing managers will maintain EPIC Snapboard Schedule up to date
- Tests to be done 48 hrs before procedure
- Regional Transport Coordinator(RTC) or designee will
  - call patient
  - notify testing center of patients that need testing
  - complete and send Screening form to Test Center by email/fax

Testing Center arranges testing

- Testing Center will
  - call patient to register
  - schedule testing
  - place order

Test Resulted Patient Notified

- Results expected within 24 hours
- Promedica lab enters result into epic
- Testing center will notify patient and place a result note in chart

Pt is negative

Deliver at original hospital

PATIENT IS POSITIVE

Per EID plan, patient will deliver at Bay Park Hospital

RTC notifies Provider of positive result

RTC notifies BPH clinical manager of result and patient information

BPH L/D manger to coordinate scheduling at BPH with provider

Updated May 22, 2020

PROMEDICA EXPERIENCE

	Patients Scheduled	Patients Tested	Negative	Positive	Delivered before result available	Not tested: Declined	Not tested : Error	Not tested: Medical reason	Average length for result (hrs)	Min (hrs)	Max (hrs)
Week 1:	59	49	49	0	4	4	1	1	34	20	93
Week 2:	73	59	58	1	8	2	0	2	35	5	95
Week 3:	66	57	56	1	6	2	1	0	16	3	39
Week 4:	69	55	55	0	10	2	0	2	39.	9	118
Totals	267	**220**	**218**	**2**	28	10	2	5	31.2		

- There have been 5 SARS-CoV-2 positive patients who have delivered at Bay Park Hospital (COVID designated Hospital) and were discharged home
- All delivered babies have had negative SARS-CoV-2 testing
- There has been 5 SARS-CoV-2 positive patients seen at Bay Park Hospital who were discharged home undelivered

ProMedica Toledo Hospital

Updated May 22, 2020

What are we seeing in the world

Location	Total tested n	Total positive n (%)	Asymtomatic Positive n (%)
Long Island	161	32 (19.9)	21 (13.0)
Milan	139	3 (2.2)	1 (0.8)
London	129	9 (7)	8 (6.2)
New York City	215	33 (15.4)	29 (13.7)
Mount Sinai, NYC Testing preadmission asymptomatic	155(patient) 146(support)	24 (15.5) 14 (9.6)	24 (15.5) 14 (9.6)
Northwestern	635	23 (3.6)	10 (1.6)
Cedars-Sinai, LA	82	1 (1.2) was symptomatic	0 (0)

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WHERE DO WE GO FROM HERE

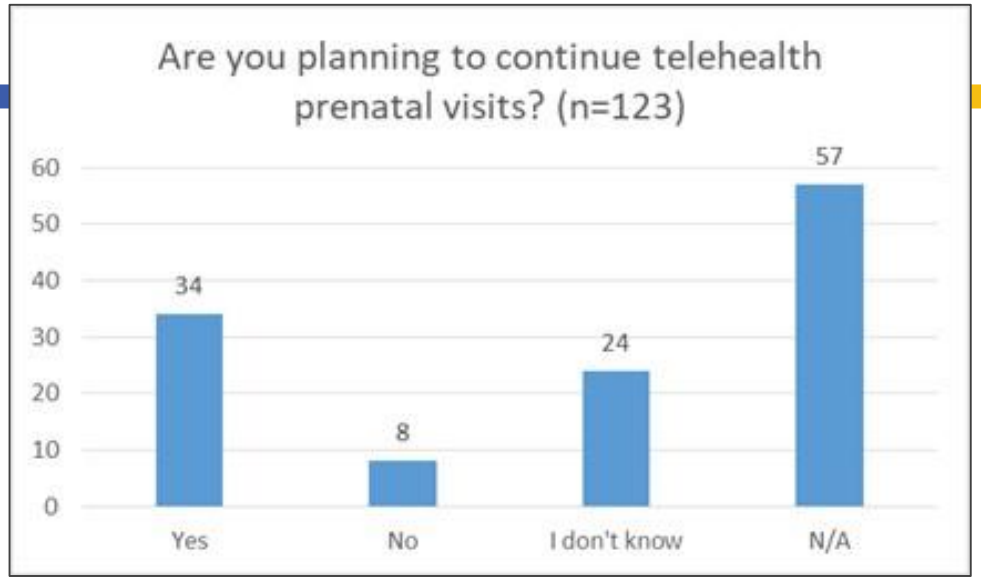
1. Continue preadmission SARS-CoV-2 testing
2. Add rapid universal testing for all obstetrical admissions
3. How long do we continue this testing
4. What is the role of antibody testing
5. Do we change our approach based on prevalence?

ProMedica Toledo Hospital

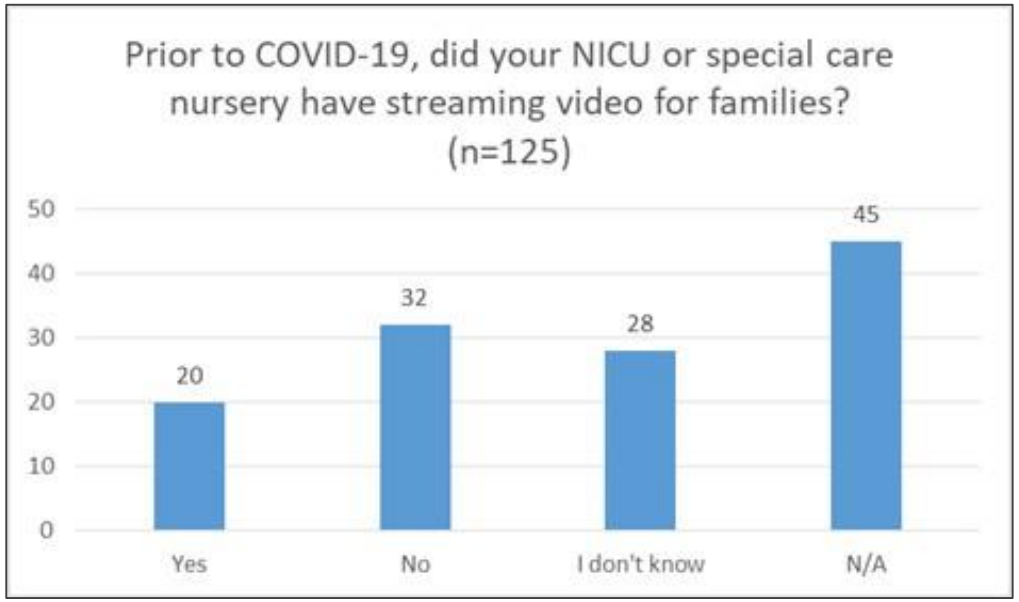

CERTIFIE

Registration Poll Results

- Are you planning to continue telehealth prenatal visits?
  - □ Yes
  - □ No
  - □ Uncertain
  - □ N/A



- Prior to COVID-19, did your NICU or Special Care Nursery have streaming video for families?
  - □ Yes
  - □ No
  - □ Uncertain
  - □ N/A



Telehealth for OB patients

Molly Carey, MD & Emily DeFranco, DO, MS

University of Cincinnati College of Medicine

Divisions of Obstetrics & Gynecology & Maternal-Fetal Medicine

Telehealth for OB patients

Updated May 22, 2020

- Resources
  - ACOG Committee opinion #798 “Implementing Telehealth in Practice” Feb 2020
  - ACOG COVID-10 FAQs for OBGYNs, Telehealth https://www.acog.org/clinical-information/physician-faqs/covid-19-faqs-for-ob-gyns-telehealth
  - https://www.acog.org/clinical-information/physician-faqs/-/media/287cefdb936e4cda99a683d3cd56dca1.ashx
- Phone versus Video Visits

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Professor - University of Cincinnati College of Medicine
Director, Maternal-Fetal Medicine
Vice-Chair, Obstetrics

University of Cincinnati Medical Center | UC Health

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Telehealth for routine prenatal care

Updated May 22, 2020

Gestational Age	In-Person Visit	Ultrasound	Comments
<11			telephone intake
11-13	X	X (Dating/NT)	initial OB labs
20	X	X (anatomy)	
28	X		labs/vaccines
32	X	X (if indicated)	
36	X	X (if indicated)	GBS/STI screening
37 weeks - Delivery	X		weekly until delivery
Postpartum			telehealth

Boelig RC, Saccone G, Bellussi F, Berghella V, MFM Guidance for COVID-19, *American Journal of Obstetrics and Gynecology MFM* (2020), doi: https://doi.org/10.1016/j.ajogmfm.2020.100106.

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University of Cincinnati Medical Center | UC Health

Telehealth for routine prenatal care

Updated May 22, 2020

- Group Prenatal Care
  - 4 active groups as of March 15
    - 80 % participants desire virtual group care

- Timeline
  - Secure virtual platform
  - Adapt centering activities for virtual platform
  - Ensures patients have tools to participate

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Telehealth for high-risk OB patients

Updated May 22, 2020

- Diabetes in pregnancy
- Ultrasound-based MFM consult
- Preconception consult

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Telehealth for high risk OB patients

Updated May 22, 2020

- “This visit was a televisit during the coronavirus, so was a little unusual, but the staff and doctor were very helpful.”

- “Due to COVID-19 issues, this in-person appt was changed to a phone call, which was very convenient. It was great to be able to stay on schedule with my appt. Communication on mychart is so awesome to help stay up to date with health concerns, issues, questions, pharmacy refills, billing etc!”

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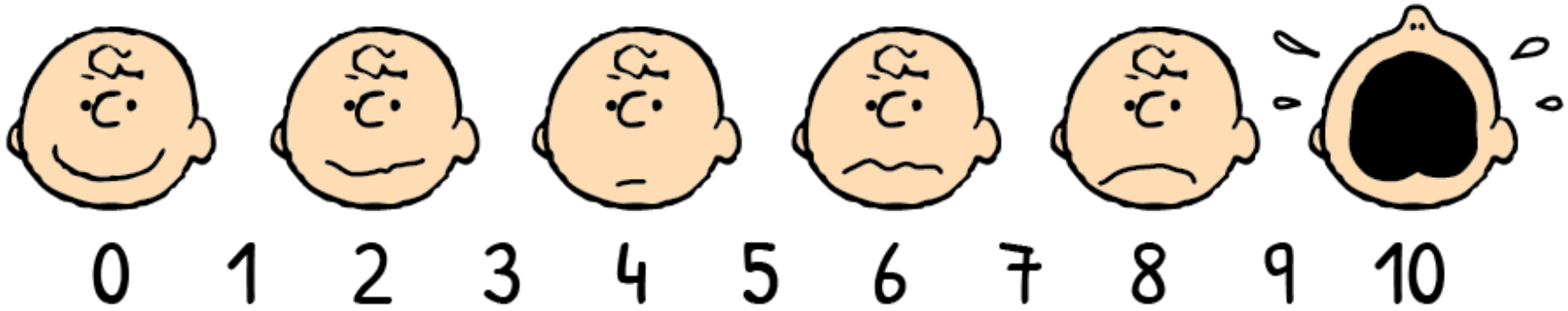
Vice-Chair, Obstetrics

Telehealth for routine prenatal care

Updated May 22, 2020



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Telehealth for OB patients

Updated May 22, 2020

- Responsible re-entry
  - Incorporate telehealth and in person visits
  - Fine tuning and expanding use of virtual platforms
  - Some team members continue to work from home
    - Dieticians, CDE, APPs, Community Health Care Workers, Lactation

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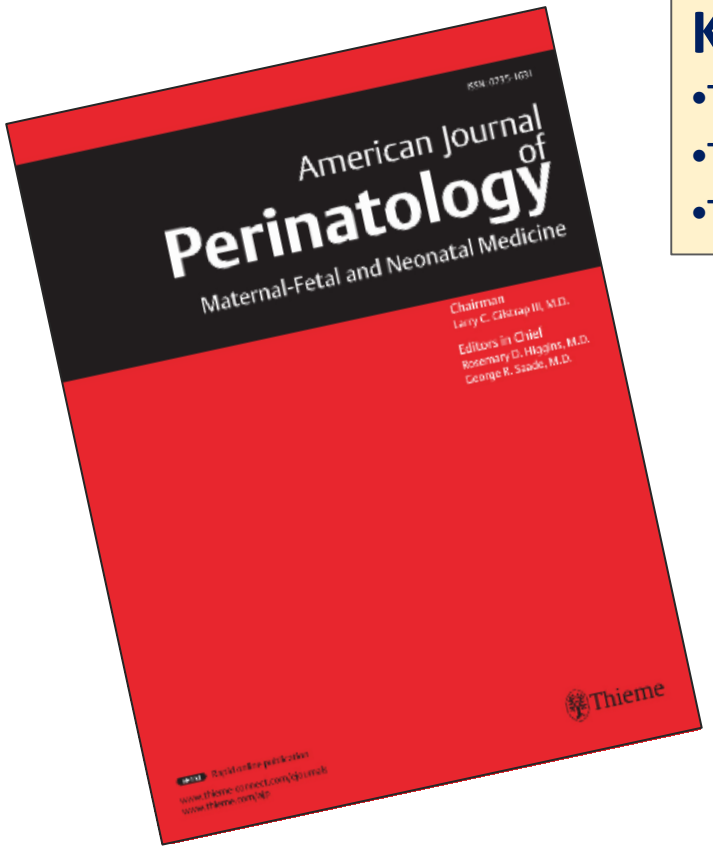
Telehealth Supportive Care

Rachel Umoren, MD, MS
University of Washington
Seattle Children's Hospital

In-Hospital Telehealth Supports Care for Neonatal Patients in Strict Isolation

DOI: 10.1055/s-0040-1709687

Updated May 22, 2020



Key Points

- Telehealth supports patient care in isolation.
- Telehealth reduced health care provider exposures.
- Telehealth conserves personal protective equipment.

In-Hospital Telehealth Supports Care for Neonatal Patients in Strict Isolation.

Umoren RA[1], Gray MM[1], Handley S[1], Johnson N[1], Kunimura C[1], Mietzsch U[1], Billimoria Z[1], Lo MD[1]

Author information

American Journal of Perinatology, 07 Apr 2020,
DOI: 10.1055/s-0040-1709687 PMID: 32268382

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Abstract

The aim of this study is to determine the feasibility of "in-hospital" inpatient telemedicine within a children's referral hospital to facilitate inpatient care activities such as interprofessional rounding and the provision of supportive services such as lactation consultations to pediatric patients in strict isolation. To test the feasibility of in-hospital video telemedicine, a dedicated telemedicine device was set up in the patient's room. This device and the accompanying Bluetooth stethoscope were used by the health care team located just outside the room for inpatient rounding and consultations from supportive services. Video telemedicine facilitated inpatient care and interactions with support services, reducing the number of health care providers with potential exposure to infection and decreasing personal protective equipment use. In the setting of strict isolation for highly infectious viral illness, telemedicine can be used for inpatient care activities such as interprofessional rounding and provision of supportive services. · Telehealth supports patient care in isolation.. · Telehealth reduced health care provider exposures.. · Telehealth conserves personal protective equipment..

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Adjunct Associate Professor | Global Health
Director, NEST Program/Neonatal Telemedicine
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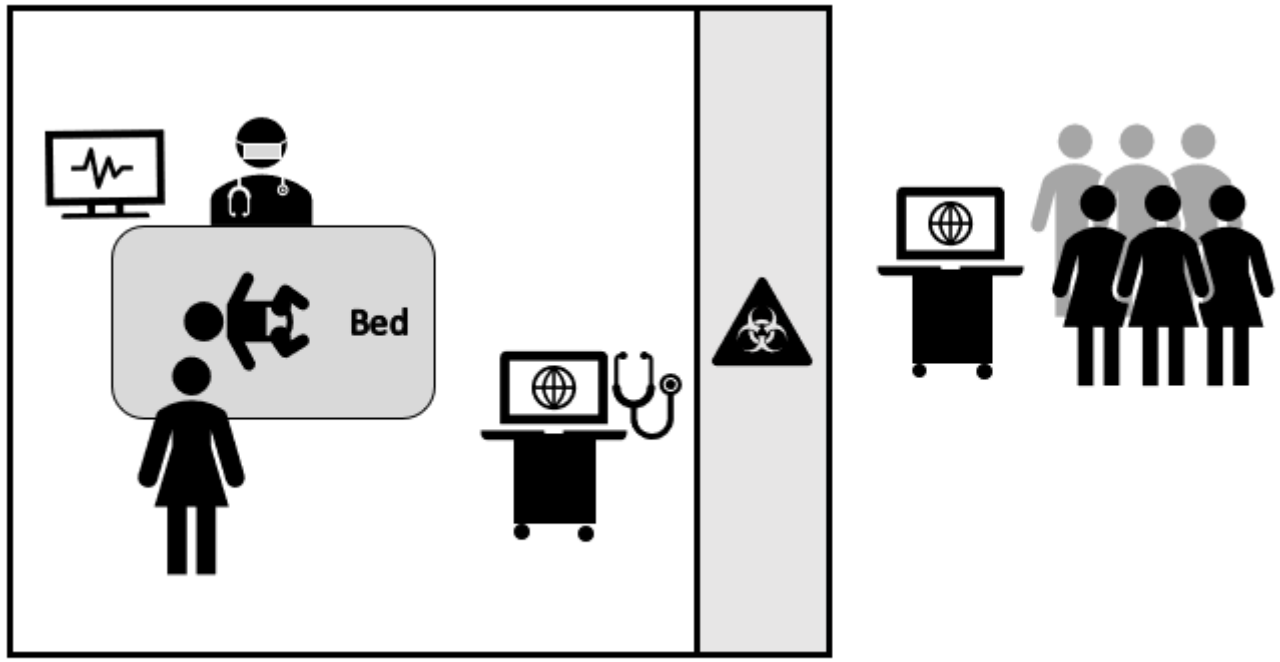
Telehealth Supportive Care

Updated May 22, 2020



Umoren RA, Gray MM, Handley S, Johnson N, Kunimura C, Mietzsch U, Billimoria Z, Lo MD. In-Hospital Telehealth Supports Care for Neonatal Patients in Strict Isolation. American Journal of Perinatology. 2020 Apr 8.

Telerounding
Lactation consults

Umoren RA, Gray MM, Handley S, Johnson N, Kunimura C, Mietzsch U, Billimoria Z, Lo MD. In-Hospital Telehealth Supports Care for Neonatal Patients in Strict Isolation. American Journal of Perinatology. 2020 Apr 8.

Rachel A. Umoren, MD, MS

DEPARTMENT OF PEDIATRICS
UNIVERSITY of WASHINGTON

Telehealth Supportive Care

Keilman AE, Umoren R, Lo M, *et al* Virtual protective equipment: paediatric resuscitation in the COVID-19 era *BMJ Simulation and Technology Enhanced Learning* Published Online First: 18 May 2020.

Updated May 22, 2020

Resuscitation team structure and PPE compliance

	Pre-COVID (2019)	COVID era
Resuscitations reviewed	40 clinical PED resuscitations	12 (8 simulations (2 special isolation units and 6 PEDs) and 4 clinical PED resuscitations)
Number of staff in resuscitation room	Goal: 13–18 Team leader, airway physician, survey physician, order entry physician, history/family physician, medication administration nurse, medication preparation nurse, documenter, circulating nurse (one to two), cardiopulmonary resuscitation coach, circulating technician (one to two), respiratory therapy (one to two), social work and consultants (one to three) Actual total team : 14–19 (range)	Goal: 4–5 Airway physician, bedside physician (combining role of survey physician and assistant for procedures), bedside nurses (one to two) and respiratory therapy Actual total team size: 4–6 (range)
Compliance with recommended PPE*	22.5% (9/40)	83.3% (10/12)

- *PPE for PED pre-COVID resuscitations was gowns, simple face masks and gloves; in the COVID era, PPE standards were updated regularly per availability and guidelines.

Telehealth facilitated PPE conservation and adherence to PPE standards through “Inside” and “Outside” pediatric resuscitation teams

Communicative Strategies in the NICU

Marybeth Fry, M.Ed.
Akron Children's Hospital Medical Center
Lead Family Advisor - VON NICQ Collaborative

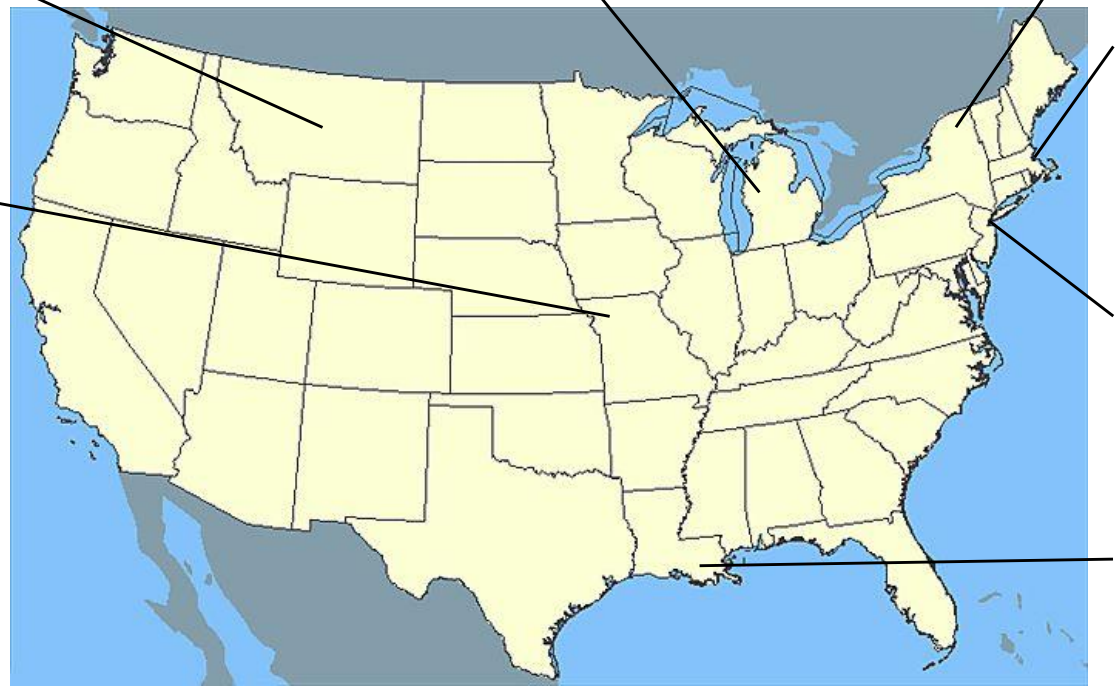
Communication in the NICU

Updated May 22, 2020

Benefis Hospital
Great Falls, MT
-1 parent per 24 hours
-using NICView to connect families and babies
-telemed used to connect medical team and families due to distance

Children's Mercy
Kansas City, MO
-using NICView to connect families and babies
-using telemed for care conferences

Helen DeVos Children's Hospital
Grand Rapids, MI
-1 parent per 24 hours; recently back to 2 24/7 for stay
-Zoom for parent education classes
-using Microsoft Teams to connect families with babies



Golisano Children's Hospital
Rochester, NY
-1 parent for entire stay
-phone calls to families for rounds
-20 bedside cameras with plans to purchase 50 for unit

Beth Israel Deaconess Medical Center
Boston, MA
-1 parent per day
-phone calls , FaceTime and Zoom at parent request
-Kindles provided through donation placed at bedsides of babies with COVID+ mothers who cannot be physically present

St. Barnabas Medical Center
Livingston, NJ
-24/7 access for parents who are COVID-
- COVID+, need 2 negative tests to return to NICU
-Phone calls and FaceTime used to connect families to medical team and their babies
-Subspecialties are using telemedicine

Women's Hospital
Baton Rouge, LA
-7 staff iPads being used with Zoom to connect families to their babies
-24/7 access for parents who are COVID-

Marybeth Fry, M.Ed.
NICU Family Care Coordinator – Akron Children's Hospital Medical Center
Lead Family Partner - VON NICQ/iNICQ Collaboratives

Akron Children's Hospital

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Communication in the NICU

Updated May 22, 2020

Toledo Children's Hospital
Before COVID-19
-2 parents, 2 additional support people
Currently
-2 parents for duration of stay
-No technology used for rounds or to connect families and babies, but webcams for each bedside are coming

Dayton Children's Hospital
Currently
-2 parents for duration of stay
-use of Skype and FaceTime is encouraged for families to stay connected to babies

Good Samaritan Hospital
Before COVID-19
-2 parents, additional support people submitted to list
Currently
-2 parents for duration of stay
-using iPads to connect babies and families; webcams ordered for each bedside

St. Elizabeth's Hospital
Before COVID-19
-2 parents, additional support people submitted to list
Currently
-2 parents for duration of stay
-using webcams to connect families and babies

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Lead Family Partner - VON NICQ/iNICQ Collaboratives

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Communication in the NICU

Updated May 22, 2020

Akron Children's Hospital, Akron, OH

- **Former State**
  - 2 parents (or mother and designee), 24/7 access to participate in care of baby
  - 4 additional people chosen by parents/mother for access
  - Visitors permitted with parents/mother present
  - Maximum 4 people in patient room at a time

- **COVID-19 Limitations (mid-March to present)**
  - 2 parents for duration of stay with 24/7 access to participate in care of baby
    - 1 at any given time
    - Wednesday, 5/21 – 2 parents at bedside for duration of stay
  - **No** additional family or friends permitted into NICU
  - Daily screenings occur
    - If temperature or any symptoms of COVID-19 displayed, must leave until symptom free and re-screened for access

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Akron Children's Hospital

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Communication in the NICU

Updated May 22, 2020

- 24/7 Live stream
- Video only; no audio
- Password protected
- Link provided to family to share with whomever they choose
- Privacy mode available for times of hands-on care

Marybeth Fry, M.Ed.
NICU Family Care Coordinator – Akron Children's Hospital Medical Center
Lead Family Partner - VON NICQ/iNICQ Collaboratives

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Cameras Used

105

Logins

30058

Marybeth Fry, M.Ed.
NICU Family Care Coordinator – Akron Children's Hospital Medical Center
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Contact information for today's presenters

Updated May 22, 2020

- Dr. Heather Kaplan: Heather.Kaplan@cchmc.org
- Dr. David Harper: David.HarperMD@ProMedica.org
- Dr. Molly Carey: careymy@ucmail.uc.edu
- Dr. Emily DeFranco: defranee@ucmail.uc.edu
- Dr. Rachel Umoren: rumoren@uw.edu
- Marybeth Fry: MFry@akronchildrens.org
- Susan Ford: susan.ford@UHhospitals.org
- info@opqc.net

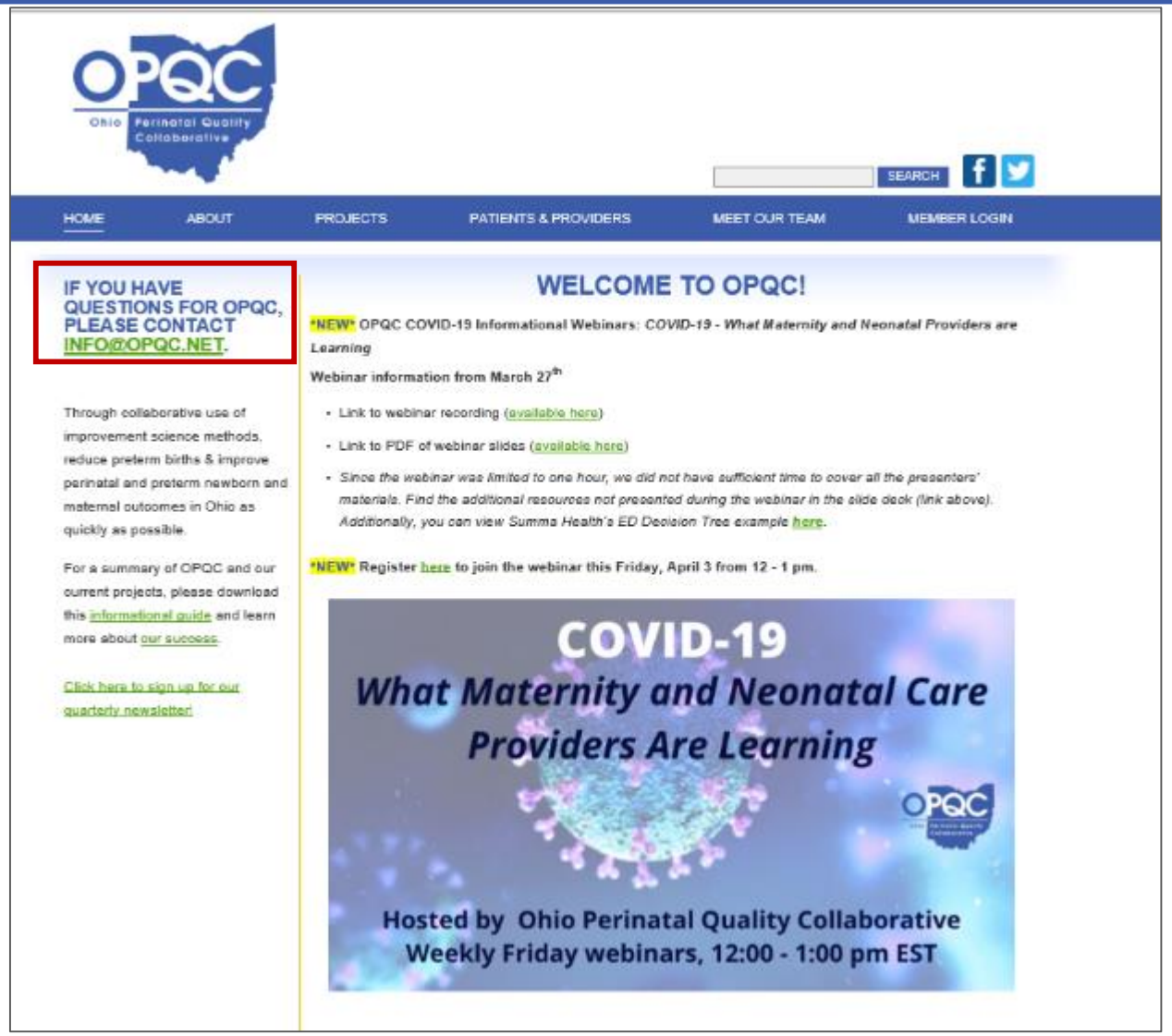
Registry info…

Updated May 22, 2020

- **Vermont Oxford Network (VON) Audit**
  - https://public.vtoxford.org/covid-19/
- **AAP Section on Neonatal Perinatal Medicine (SONPM) Registry**
  - https://services.aap.org/en/community/aap-sections/sonpm/
- **PRIORITY (Pregnancy Coronavirus Outcomes Registry)**
  - https://priority.ucsf.edu/

Updated Resources on OPQC Website

Updated May 22, 2020



The OPQC website has a list of information and resources that will be updated regularly: https://opqc.net/

Contact us: info@opqc.net

THANK YOU from OPQC!!

Take care out there

It takes a village…

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