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Thank you for joining today's webinar. We will begin promptly at 2:00 p.m. Central.

Rural Maternal Health Series: Obstetric Readiness in Rural Facilities Without Birth Units

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Rural Maternal Health Series: Obstetric Readiness in Rural Facilities Without Birth Units

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Housekeeping

- Slides are available at www.ruralhealthinfo.org/webinars/facilities-without-birthing-units
- Technical difficulties please visit the Zoom Help Center at support.zoom.us

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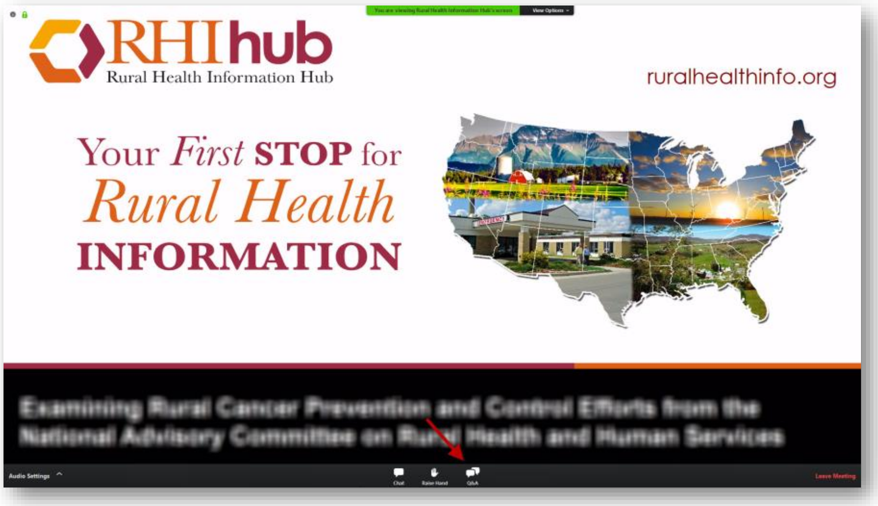
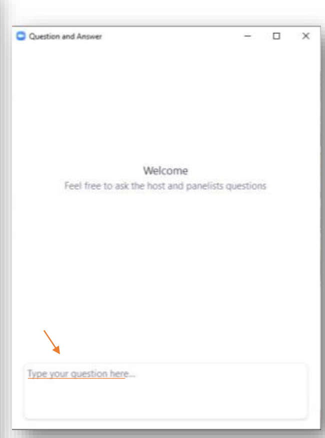
If you have questions…





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Rural Maternal Health Learning Series
Welcome and Introductions

Dr. Kristen Dillon, MD, FAAFP, Chief Medical Officer
Federal Office of Rural Health Policy (FORHP)
Health Resources and Services Administration, U.S. Department of Health and Human Services

Vision: Healthy Communities, Healthy People

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Featured Speakers

Dr. Lisa Hollier, Senior Medical Advisor on the Maternal Mortality Prevention Team in the Division of Reproductive Health, Centers for Disease Control and Prevention (CDC)

Christie Allen, Senior Director of Quality Improvement and Programs, American College of Obstetricians and Gynecologists (ACOG)

CDR Tina Pattara-Lau, M.D., FACOG, Maternal and Child Health Consultant, Office of Clinical and Preventive Services (OCPS), Indian Health Service (IHS)

Katherine Craemer, MPH, Senior Research Specialist, Center for Research on Women and Gender at the University of Illinois at Chicago

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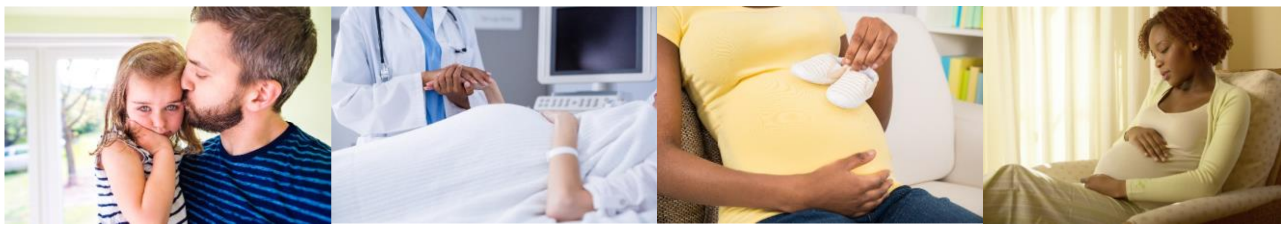
Centers for Disease Control and Prevention

Pregnancy-related Mortality in the United States

Maternal Mortality Prevention Team
CDC Division of Reproductive Health



Disclosure

- I have no potential conflicts of interest to disclose
- The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the U.S. Centers for Disease Control and Prevention (CDC).

CDC Division of Reproductive Health Pregnancy-related Mortality Surveillance Programs: PMSS and MMRCs

	Pregnancy Mortality Surveillance System (PMSS)	State and Local Maternal Mortality Review Committees (MMRCs)
Data Source	Death records, and death records linked birth or fetal death records, additional information as available	Death records, and death records linked birth or fetal death records**, medical records, social service records, autopsy, informant interviews, etc**.
Time Frame	During pregnancy – 1 year	During pregnancy – 1 year
Source of Classification	Medical epidemiologists	**Multidisciplinary committees**
Terms	Pregnancy-associated, (Associated and) Pregnancy-related, (Associated but) Not pregnancy-related	Pregnancy associated, (Associated and) Pregnancy-related, (Associated but) Not pregnancy-related
Measure	Pregnancy-Related Mortality Ratio - # of Pregnancy Related Deaths per 100,000 live births	Pregnancy Related Mortality Ratio - # of Pregnancy Related Deaths per 100,000 live births
Purpose	Analyze clinical factors associated with deaths, publish national information that supports interpretation and uptake of information among clinical & public health practitioners.	**Understand medical and non-medical contributors to deaths, inform prioritization of interventions that effectively reduce pregnancy-related deaths**

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Pregnancy Mortality Surveillance System, 2017-2019

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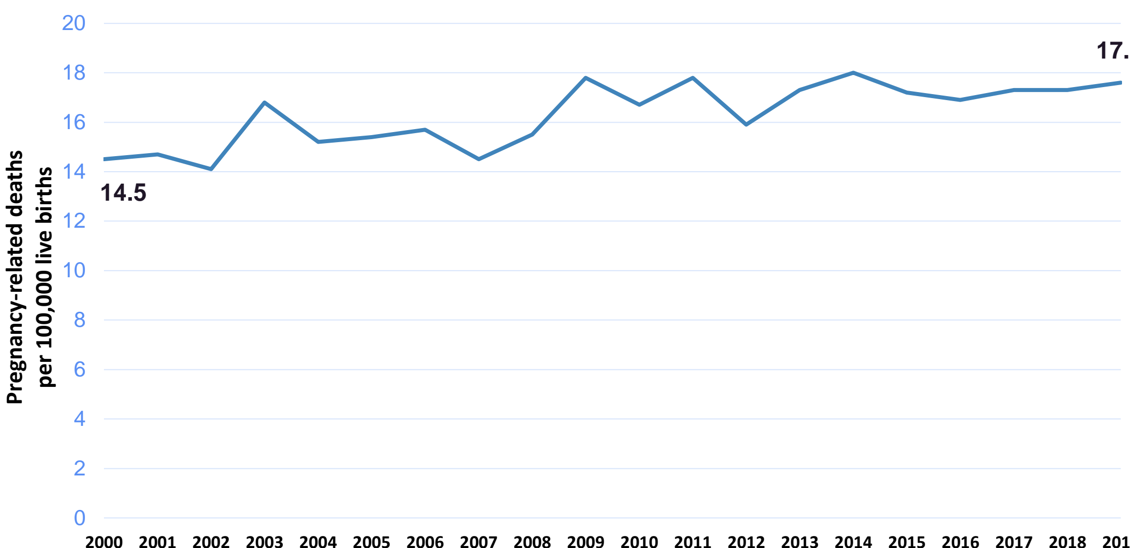
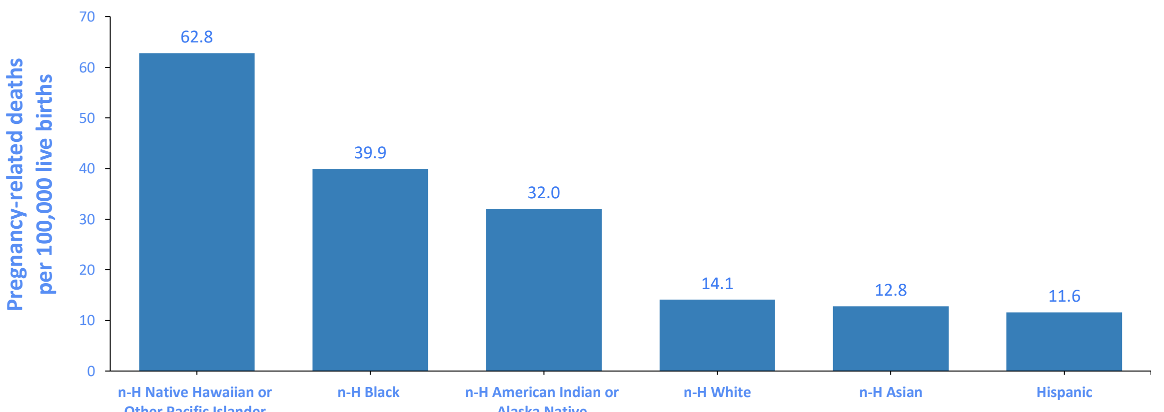
Pregnancy-related Mortality Ratio by Year: 2000-2019, PMSS*



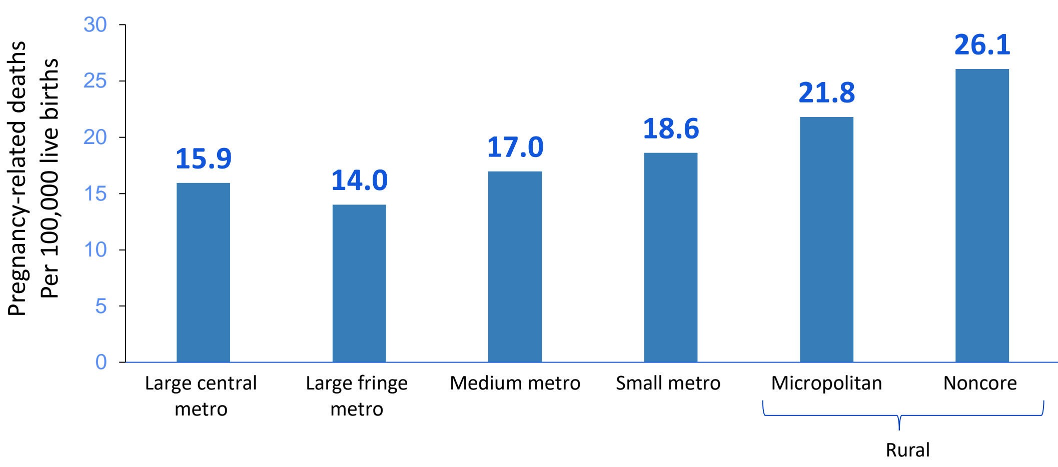
*CDC Pregnancy Mortality Surveillance System. https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm

Pregnancy-related Mortality Ratio by Race-ethnicity: 2017-2019, PMSS*



Multiracial PRMR for 2018-2019 = 7.1 pregnancy-related deaths per 100,000 live births.
Race or ethnicity was missing for 1.4% of pregnancy-related deaths in 2017-2019; PRMRs for non-Hispanic Other Race were not calculated due to small numbers.
*CDC Pregnancy Mortality Surveillance System. https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm

Pregnancy-related Mortality Ratio by Urban-Rural Classification: 2017-2019, PMSS*



Urban-rural classification was missing or unknown for 2.4% of pregnancy-related deaths in 2017-2019.
*CDC Pregnancy Mortality Surveillance System. https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm

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Pregnancy-Related Deaths: Data from Maternal Mortality Review Committees in 36 US States, 2017–2019

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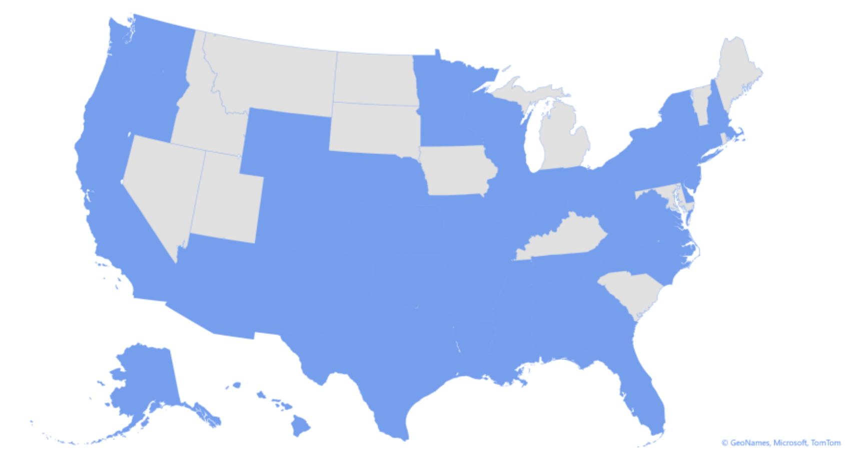
MMRCs in 36 states contributed data on 1,018 pregnancy-related deaths among their residents



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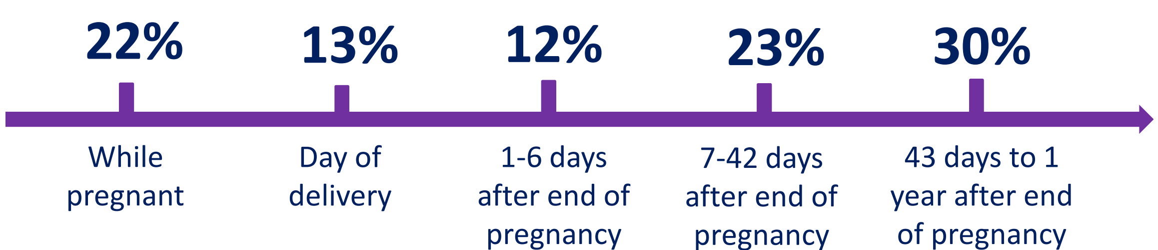
Timing of Pregnancy-related Deaths



Timing was missing (n=2) or unknown (n=14) for 16 (1.6%) pregnancy-related deaths.

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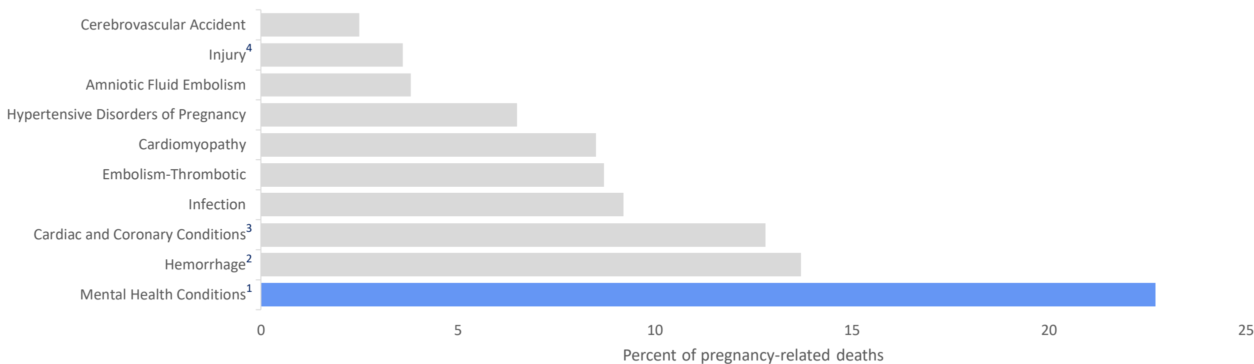
Most Frequent Underlying Causes of Pregnancy-related Deaths*



[1] Mental health conditions include deaths to suicide, unintentional or unknown intent overdose/poisoning related to substance use disorder, and other deaths determined by the MMRC to be related to a mental health condition, including substance use disorder
[2] Excludes aneurysms or cerebrovascular accident (CVA)
[3] Cardiac and coronary conditions include deaths to coronary artery disease, pulmonary hypertension, acquired and congenital valvular heart disease, vascular aneurysm, hypertensive cardiovascular disease, Marfan Syndrome, conduction defects, vascular malformations, and other cardiovascular disease; and excludes cardiomyopathy and hypertensive disorders of pregnancy.
[4] Injury includes intentional injury (homicide), unintentional injury, including overdose/poisoning deaths not related to substance use disorder, and injury of unknown intent or not otherwise specified.

*Only 10 most frequent underlying causes of death are shown; underlying cause of death was missing (n=10) or unknown (n=21) for 31 (3.0%) pregnancy-related deaths

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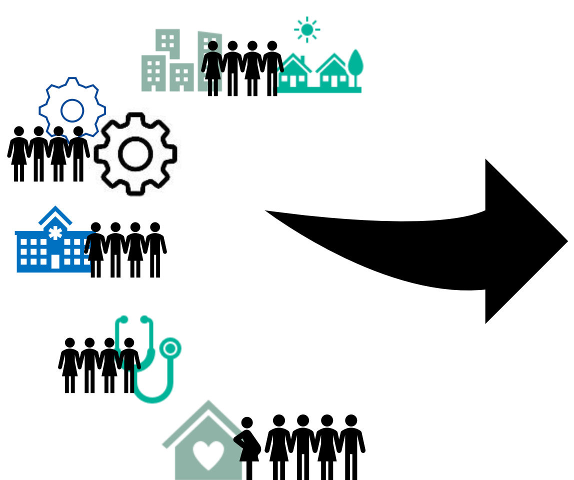
MMRCs Determined:



84% of pregnancy-related deaths were determined to be preventable

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Severe Maternal Morbidity

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Obstetric Volume and Severe Maternal Morbidity

JAMA Health Forum

Original Investigation

Obstetric Volume and Severe Maternal Morbidity Among Low-Risk and Higher-Risk Patients Giving Birth at Rural and Urban US Hospitals

Katy Backes Kozhimannil, PhD, MPA; Stephanie A. Leonard, PhD, MS; Sara C. Handley, MD, MSCE; Molly Passarella, MS; Elliott K. Main, MD; Scott A. Lorch, MD, MSCE; Ciaran S. Phibbs, PhD

- **Objective: assess associations between obstetric volume and SMM**
- **Linked vital statistics and discharge data: CA, MI, PA, SC 2004-2020**
- **Exposure: rural and urban birth volumes**
- **Outcome: SMM without transfusion**

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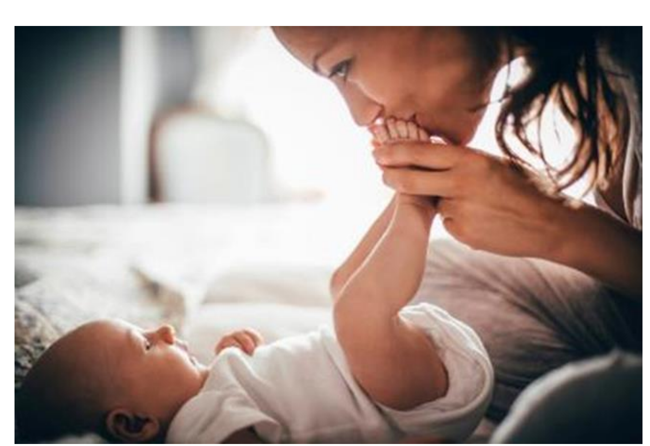
Obstetric Volume and Severe Maternal Morbidity

Table 4. Association Between Birth Volume Category and Severe Maternal Morbidity for Higher-risk and Low-risk Obstetric Patients at Hospitals in Rural Counties

Annual birth volume	Risk ratio (95% CI)			
	Higher-risk patients		Low-risk patients	
	Unadjusted	Adjusted	Unadjusted	Adjusted
Low (10-110 births)	1.29 (0.87-1.90)	1.49 (1.01-2.20)	2.37 (1.31-4.30)	2.32 (1.32-4.07)
Medium (111-240 births)	1.09 (0.84-1.41)	1.30 (1.03-1.65)	1.60 (1.15-2.22)	1.66 (1.20-2.28)
Medium-high (241-460 births)	1.05 (0.85-1.29)	1.16 (0.95-1.43)	1.54 (1.13-2.10)	1.68 (1.29-2.18)
High (>460 births)	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]

JAMA Health Forum. 2023;4(6):e232110. doi:10.1001/jamahealthforum.2023.2110

Thank you!



For more information, visit www.cdc.gov/erasemm or contact: erasemm@cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

Obstetric Emergency Readiness Resource Kit (OBERRK)

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Functions of the AIM TA Center

Technical Assistance

Provide technical assistance to state teams on bundle implementation and guidance to help state teams achieve program objectives.

Engagement Opportunities

Facilitate opportunities for collaboration, learning and information sharing amongst state teams. Offerings include TAP Webinars, Communities of Learning, AIM Message Board and AIM Resource Library.

Data Strategy

Support state teams with development of data collection strategy that meets the local needs of the state. Provide resources to enable ongoing collection and reporting of hospital-level data.

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AIM Patient Safety Bundles

- Structured way of improving the processes of care and patient outcomes.
- Descriptive, not prescriptive
- Collections of evidence-informed best practices, developed by multidisciplinary experts, which address clinically specific conditions in pregnant and postpartum people.

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AIM Core Patient Safety Bundles

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Identified Need-

- Frequent asks for an “Emergency Room Bundle” to address perinatal emergencies in settings without obstetric care

- Primary asks include:
  - Trainings
  - Resources
  - Basic grounding in obstetrics
  - Obstetric emergencies

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No “One-Size” Solution

- Limitations of patient safety bundles to address identified needs:
  - Needs extend into areas without obstetric quality improvement support
  - Not limited to one clinical condition
  - Need for development of infrastructure that outstrips a typical bundle

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AIM Resource Kits

- Curated collections of best practices, resources, and planning materials for use by teams across settings of care.
- Constructed with multidisciplinary subject matter experts.
- Intended to support and augment PSB implementation
  - Targeted efforts in response to reported needs
  - For specific populations
  - Settings not fully addressed by PSBs

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AIM Tools

Patient Safety Bundles

- Clinical condition specific or finite period
- Primarily implemented in inpatient maternity care settings
- Associated metric and measurement strategy

Resource Kits

- Structures and processes to broadly promote safety in maternity care
- Implemented across a variety of care settings
- Currently do not have associated measurements

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Current AIM Resource Kits

- Obstetric Emergency Readiness Resource Kit (OBERRK)
  - For teams in healthcare settings that may not typically provide obstetric services or **manage obstetric emergencies** to support readiness efforts in advance of an obstetric emergency. Currently available
- Community Birth Transfer Resource Kit (CBTRK)
  - Current best practices and resources for improving **community birth to hospital transfers**. Information on training, protocols, and programs to facilitate teamwork and support timely, safe, and smooth transfers. Expected May 2024
- Maternal Early Warning System Implementation Resource Kit (MEWSIRK)
  - For teams in birthing facility and settings where pregnant and postpartum people receive care to **alert care providers** of potentially impending critical illness and early recognition of vital signs and clinical conditions for escalation and prompt evaluation. Expected May 2024

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AIM Resource Kits and PSBs

AIM Resource Kits complement a variety of PSB implementation, specifically:

- Community Birth Transfer
- Maternal Warning System
- OB Emergencies

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THE 5 R's OF

PATIENT SAFETY BUNDLES

- Readiness
- Recognition & Prevention
- Response
- Reporting & Systems Learning
- Respecful, Equitable, & Supportive Care

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Obstetric Emergency Readiness Resource Kit (OBERRK)

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Goals of the Resource Kit

- Support planning and establishment of readiness for obstetric emergencies in non obstetric settings
- Not intended as a response manual
- Follows "5 R" framework with response sections for primary clinical cause of severe maternal morbidity and mortality

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OBERRK

- Free and available at www.saferbirth.org
- Can be downloaded in its entirety, by section, or condition specific

OB Readiness

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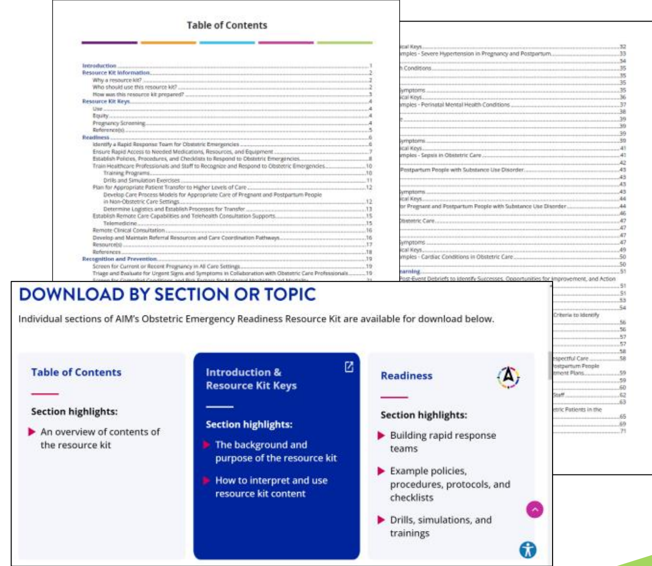
OBERRK

- Intro and keys
- "5 R" framework
- Appendices with supply lists, flowsheets, direct links to algorithms



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OBERRK

Resources:

- Immediate tool or item for use in implementation
- Both AIM and non-AIM developed

Resource—Obstetric In-Situ Drill Program Manual

Supported by AIM, the OB In-Situ Drill Program Manual is a guide to support best practices in implementing a simulation program. The manual is accompanied by a **simulations preparation checklist**, sample case scenarios, team review and debriefing forms, team-based communication training recommendation, **protocol change form**, **implementation action plan**, and model explanatory presentations for **staff** and **leadership**.

Resource—Bringing Back OB Sim in the Midst of COVID-19 (webinar recording)

In September 2022, AIM hosted a webinar that discussed the purpose of effectively running obstetric drills and simulations despite COVID-19 restrictions and staff turnover. Information on virtual simulation curriculum for postpartum hemorrhage and hypertension were presented, along with a train-the-trainer curriculum.

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OBERRK

Examples:

- Tools and sample items to support development of facility or regional specific policies, teaching guides, or other needs

Example—Comprehensive Drills and Simulation Guide

The Perinatal Quality Collaborative of Vermont with support from the Vermont Child Health Improvement Program and the University of Vermont Medical Center compiled a resource guide for obstetrical drills and simulation. These include a comprehensive binder of resources with AIM tools integrated throughout, a flip book for postpartum hemorrhage drills, and a flipbook for severe hypertension drills:

- Resource Binder
- Postpartum Hemorrhage Flipbook
- Severe Hypertension Flipbook

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OBERRK- Clinical Condition Specific Readiness

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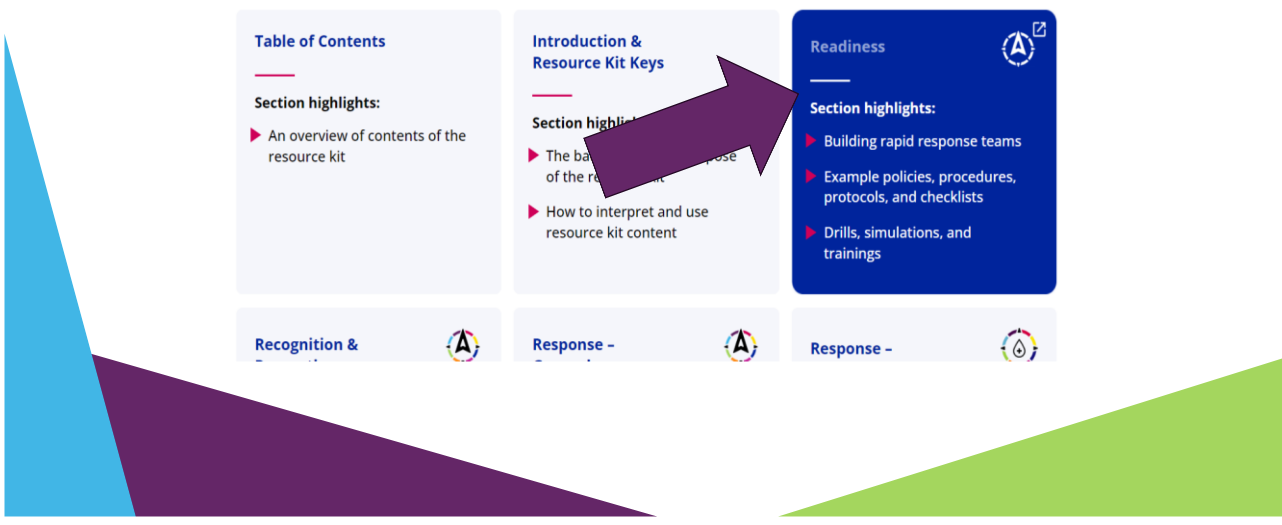
OBERRK-Readiness



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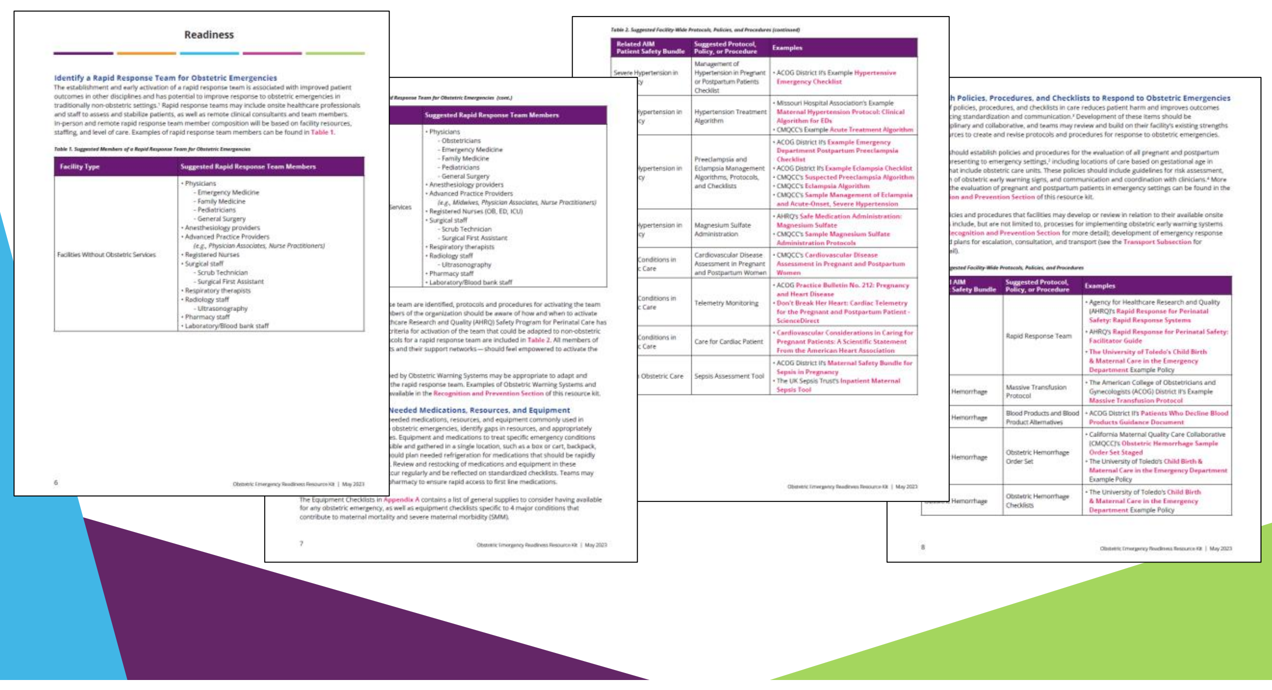

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OBERRK-Response

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Perinatal Mental Health Conditions

Clinical Takeaways

- All pregnant and postpartum patients should be provided with education and materials on mental health warning signs and symptoms, as well as crisis resources, due to the prevalence of mental health conditions in the perinatal period.
- As a patient screens positive from a screening tool or as healthcare professionals determine the need, procedures should be initiated to address suicide risk and assess a patient's risk of psychosis and harm to self or others.

Background

- Perinatal mood disorders are estimated to affect up to 20% of pregnant and postpartum people in the United States.[1]
- Mental health conditions, including substance use disorder, have been identified as major drivers of maternal mortality.[2] Specifically, suicide and overdose have been recognized as leading causes of preventable deaths.[1]
- Maternal suicide occurs most frequently in the late postpartum period between 43 days through 1 year after the end of pregnancy.[3]
- While the majority of pregnancy-related deaths by suicide occur among non-Hispanic white people,[2] racial inequities in care for perinatal mental health conditions have been identified.
- Black and Latina people have lower rates of receiving treatment for postpartum depression in comparison to whites.[4]
- People residing in rural areas also face barriers accessing perinatal mental health services related to geography and provider availability.[5]

Definition

In the context of the AIM Perinatal Mental Health Conditions (PMHC) patient safety bundle (PSB), perinatal mental health conditions refer to mood, anxiety, and anxiety-related disorders that occur during pregnancy or within one year of delivery and are inclusive of mental health conditions with onset that predates pregnancy. These conditions include and are not limited to depression, anxiety and anxiety-related disorders like posttraumatic stress disorder and obsessive-compulsive disorder, bipolar disorder, and postpartum psychosis.

Critical Signs and Symptoms

Perinatal mental health conditions may present with a variety of overt and discrete symptoms. As patients present for care, healthcare professionals and staff may begin to assess for perinatal mental health conditions by inquiring about a patient's personal and family mental health history at intake.[6]

Consideration should be given to asking, "During the past month, have you been bothered by feeling down, depressed, or hopeless," and, "During the past month, have you been bothered by having little

35 Obstetric Emergency Readiness Resource Kit | May 2023

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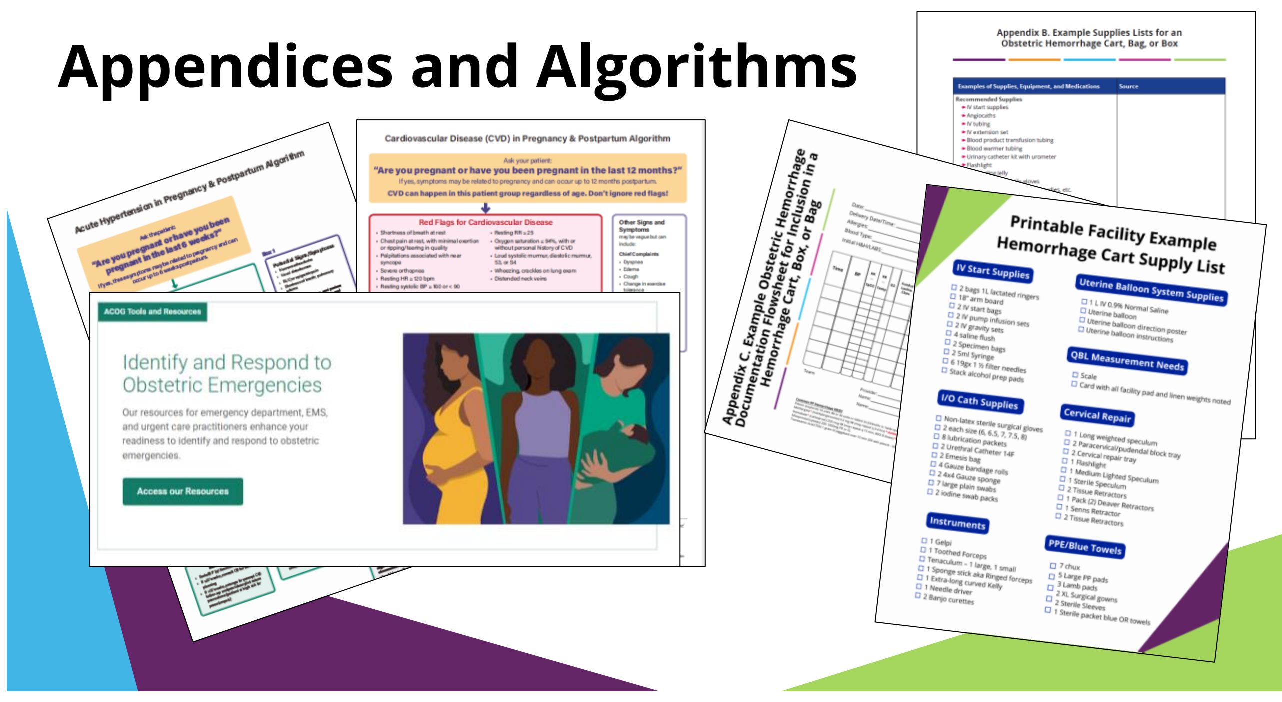
Appendices and Algorithms



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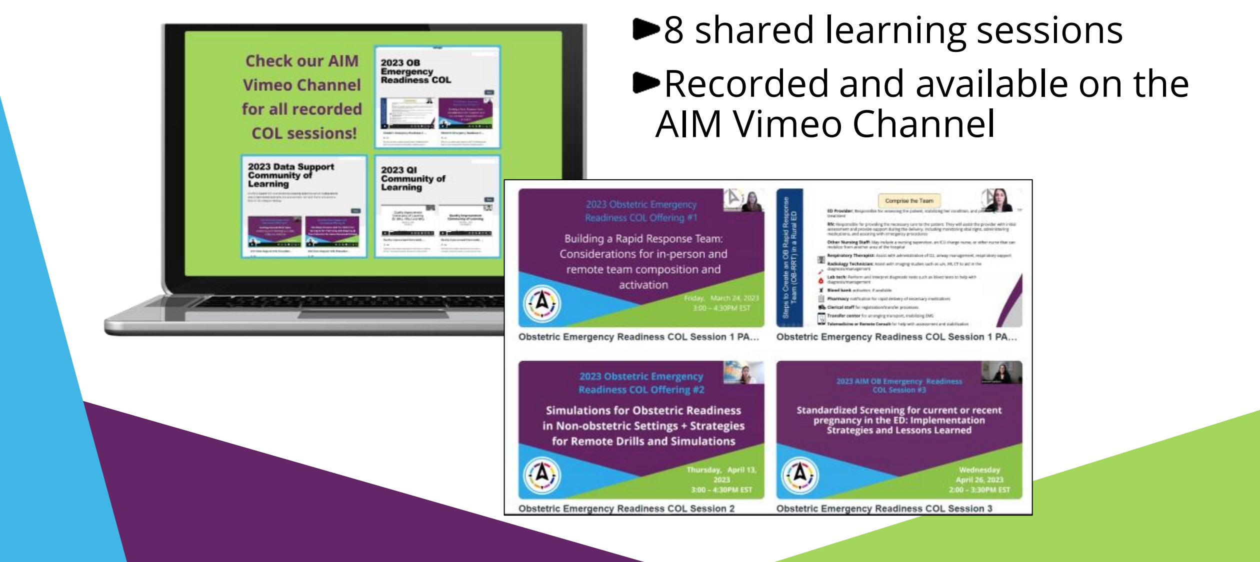
Community of Learning

- 8 shared learning sessions
- Recorded and available on the AIM Vimeo Channel



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Simulations & Drills Manual

Simulation Manual

- Currently hemorrhage and hypertension scenarios and other supports

COMING SOON:

Emergency Department and OB Readiness drills and simulation scenarios in development

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Technical Assistance Presentations

- "TAP" Webinars
- On subtopics that relate to quality improvement
- 60 minutes, live webinars
- Opt in format and free
- Recorded and on Vimeo channel

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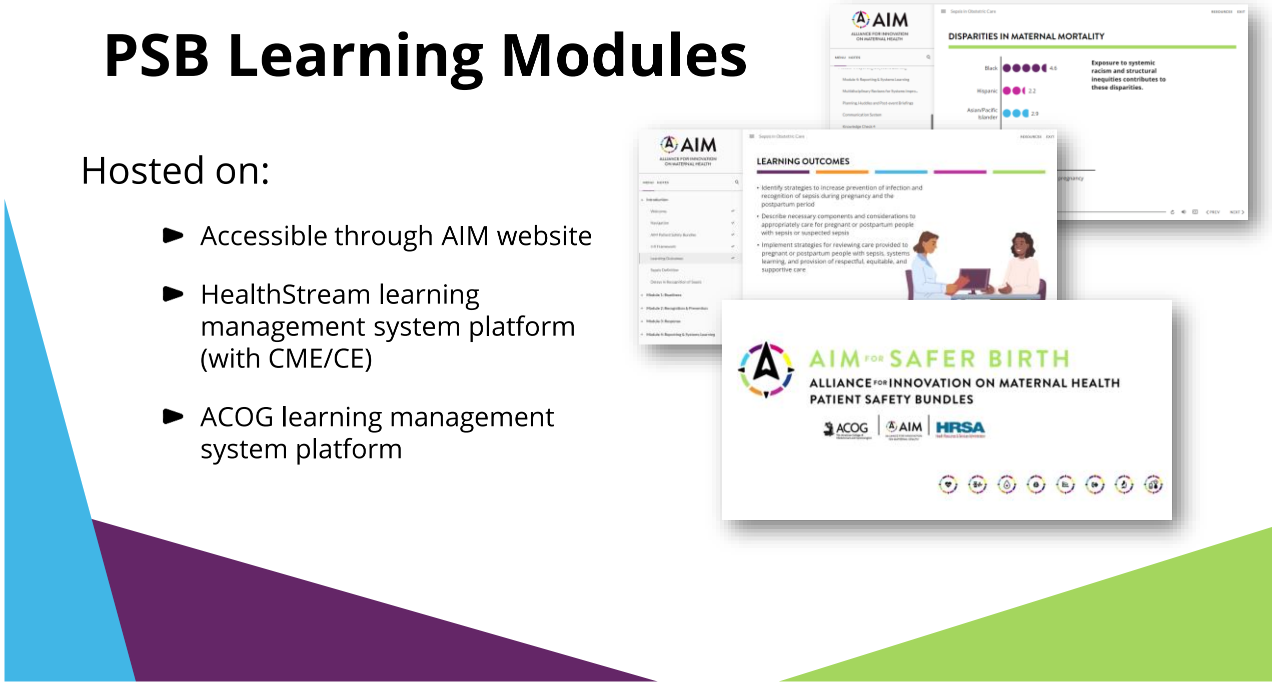
PSB Learning Modules



Hosted on:

- Accessible through AIM website
- HealthStream learning management system platform (with CME/CE)
- ACOG learning management system platform

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Maternal Health Data Concept Videos

Brief animated videos on AIM data concepts:

- Introduction to Severe Maternal morbidity
- Introduction to NTSV Cesarean Birth Rates
- Introduction to Maternal Mortality Data

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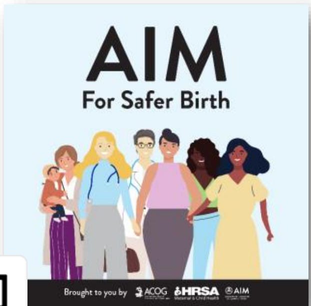
AIM for Safer Birth Podcast

- Season 1:
  - Focused on integration of quality and equity in maternal health care
  - Hosted by:
    - Christie Allen
    - Veronica Gillispie-Bell MD, MS, FACOG
- Season 2: Coming Soon



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Urgent Maternal Warning Signs

- Patient facing materials
- Available in 39+ languages
- Badge buddies to allow download as a tile on personal devices

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ALLIANCE FOR INNOVATION ON MATERNAL HEALTH

TECHNICAL ASSISTANCE CENTER

www.saferbirth.org

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Indian Health Service

Innovative Care Models in Maternity Care Deserts

Maternal Child Health Program

CDR TINA PATTARA-LAU, MD, FACOG
MATERNAL CHILD HEALTH CONSULTANT
APRIL 23, 2024

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Background

- **93% of pregnancy related American Indian/Alaska Native (AI/AN) deaths were determined to be preventable**. Mental health conditions* and hemorrhage were the leading causes. Majority of deaths (64%) occurred postpartum. (*CDC 2022)* *Mental health conditions included death by suicide and overdose

- **12.8% of AI/AN women who gave birth in 2020 lived in maternity care deserts**. 24.2% of AI/AN women do not receive adequate prenatal care and 26.7% of AI/AN babies were born in areas of limited or no access to maternity care. (*March of Dimes 2022*)

- **36% of US counties are considered maternity care deserts.** About 300 birthing units have closed in the US since 2018, including about 70 losses in the past year. (*March of Dimes 2023)*

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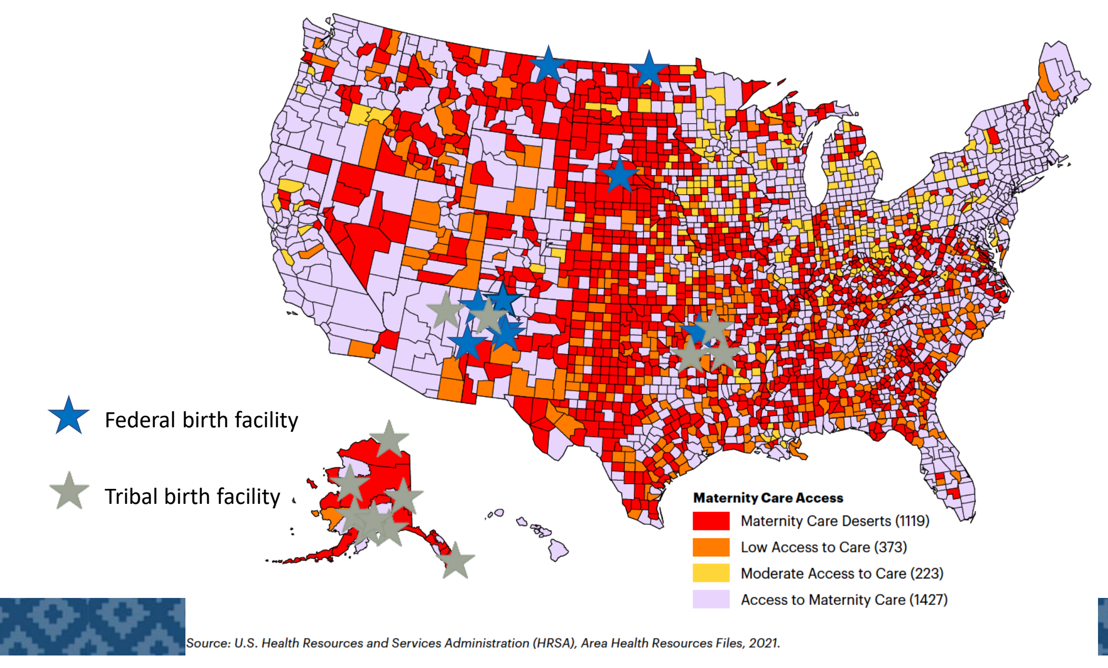

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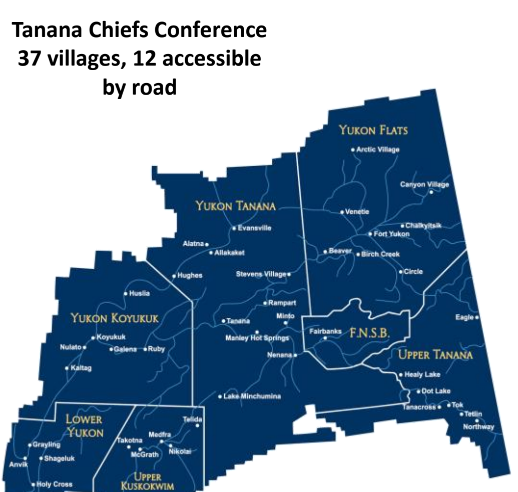

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First Nations Health Authority March 2016

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Obstetric Readiness in the Emergency Department (ObRED)

Purpose	Objectives	Deliverables
Ensure sites in maternity care deserts without obstetric services have the tools and support to **safely triage, stabilize, and transfer pregnant and postpartum patients and newborns** in the emergency setting	• **ObRED Manual** to provide readiness checklists, quick reference protocols, training curriculum, and technical support • **ObRED Simulation Training** to practice management of precipitous delivery, hemorrhage and hypertension	• Draft ObRED Manual reviewed by 24 IHS sites • ObRED on site training for 225+ staff in Great Plains, Navajo, Phoenix Areas **Next step: Training and support in Bemidji, Billings, and Navajo Areas**

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Supplies & Readiness Checklists

Obstetric Emergency Readiness Checklist

This checklist is intended for use by Emergency Departments within IHS who do not have an on-site Labor and Delivery unit. Its goal is to outline the supplies and systems necessary for providing essential obstetric care. This list does not include basic supplies for the treatment of non-pregnant adult patients, which may also be necessary. ***For sites that are not designated as "Peds ED Ready", utilize the Neonatal Emergency Readiness Checklist.***

Infrastructure

- ☐ Dedicated OB area. *There is a dedicated room or area of the ED set aside for care of obstetric patients, containing all necessary supplies and treatment protocols.*

Personnel

- ☐ Dedicated ObRED Champion. *Individual or individuals (RN or MD) tasked with ensuring appropriate infrastructure, supplies, medications, systems/protocols, and education for OB.*

Systems and Protocols

- ☐ OB Emergency Treatment protocols are accessible in the dedicated OB area and have been updated to fit the site
- ☐ Transfer protocols are in use and have been updated to fit the site
- ☐ Ob/Gyn consultation protocols are in place
- ☐ Data collection protocols exist for OB patients. *May be a component of overall ED's quality improvement data collection.*
- ☐ Pharmacy agreement exists regarding where and how OB emergency medications will be stored (see Medications)

Education

- ☐ Regularly scheduled education and simulation activities exist for management of obstetric emergencies.
- ☐ ObRED curriculum has been made available to all ED staff

Medications *Readily available in the ED. Communicate with pharmacy leadership to provide at least initial dose (possibly more) in ED at all times. Recommend keeping kits with grouped medications for PPH or for HTN in a single box or category. Initial doses below:*

HTN medications:

- ☐ Nifedipine *10mg PO (IR)*
- ☐ Hydralazine *5-10mg IV*
- ☐ Labetalol *20mg IV*
- ☐ Magnesium sulfate
  IV: 4-6g 10% in 100ml over 20m, followed by 1-2g/hr continuous infusion
  IM: 10g of 50% solution (5g in each buttock)
- ☐ Calcium gluconate *10mL 10% solution IV*

PPH medications:

- Oxytocin *10U IM or 10-40U/1000mL IV*
- Methergine *0.2mg IM*
- Hemabate *0.25mg IM*
- Misoprostol *1000mcg PR*
- TXA *1g IV*

Fetal distress:

- ☐ Terbutaline *0.25 mg SQ*

Blood Products *Availability will vary by institution.*

- ☐ 2U uncrossmatched O- PRBCs available for emergencies if blood type unknown
- ☐ Ability to type and cross for further PRBCs
- ☐ Institutional massive transfusion protocol exists OR protocol for obtaining additional blood products outside of hospital exists

Equipment *Stored in dedicated OB area or cart and routinely checked for expiration and integrity. Some supplies may be inside a premade sterile precipitous delivery kit.*

- ☐ Fetal monitoring equipment. *Fetal heart rate (doppler) and/or contraction monitors with ability to record continuously*
- ☐ Obstetric ultrasound. *With curvilinear probe and OB setting*
- ☐ Foley catheter
- ☐ Straight catheter
- ☐ Sterile gloves in multiple sizes
- ☐ Vaginal packing
- ☐ Balloon tamponade. *Bakri or other similar intrauterine tamponade system for PPH*
- ☐ Sterile scissors. *For cutting umbilical cord*
- ☐ Sterile scalpel. *For cutting umbilical cord or perimortem CS; this should be separate from precipitous delivery kit and easily accessible (ie taped to wall)*
- ☐ Sterile umbilical cord clamps x2. *For clamping umbilical cord*

Obstetric Readiness in the Emergency Department (ObRED) Manual - *Draft for Internal IHS Use only. Do not distribute - Updated Sep 2023* 6

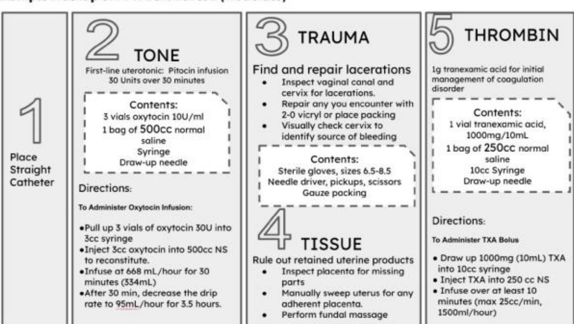
Obstetric Emergency Cart Example

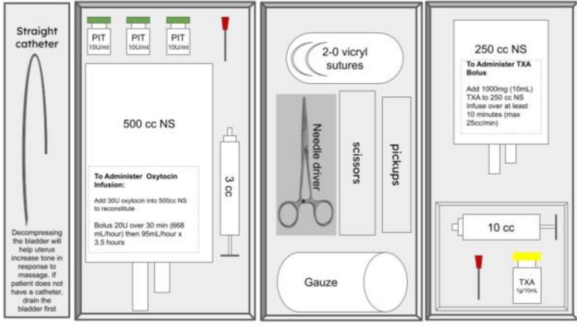
Utilize for monthly supply checks and staff orientation.

OB Triage Drawer		
DESCRIPTION	Quantity	Initials
1000ml NS or LR	2	
IV start kit and tubing	2	
Lavender, pink, gold blood tubes	1 each	
Surgilube packs	10	
Vaginal speculum (2 sizes)	2	
Sterile gloves, different sizes	4	
Single sterile gloves	4	
Non-sterile gloves	1 box	
Foley catheter and leg bag	1	
Straight catheter	1	

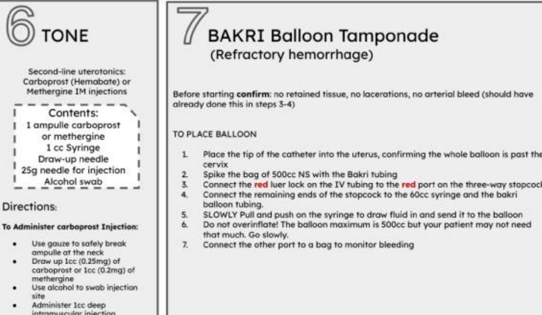
OB Delivery Drawer		
DESCRIPTION	Quantity	Initials
L&D pack *or:*	1	
Sterile scissors	1	
Sterile umbilical cord clamps	2	
Sterile scalpel (#10)	1	
Sterile gown	1	
Sterile towels	4	
Sterile lap sponges	10	
Sterile basin	1	
Shoe covers	1	
Peri-pad	1	
Bulb syringe	1	
0-Vicryl CT or CTX suture	2	
Needle driver	1	
Suture scissors	1	
Mask with shield	1	

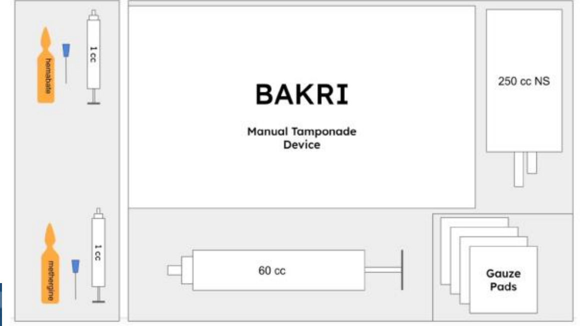
Example Mockup of PPH Box: Level 1 (Moderate)





Example of Hemorrhage Kit: Level 2 (Severe)





Obstetric Readiness in the Emergency Department (ObRED)

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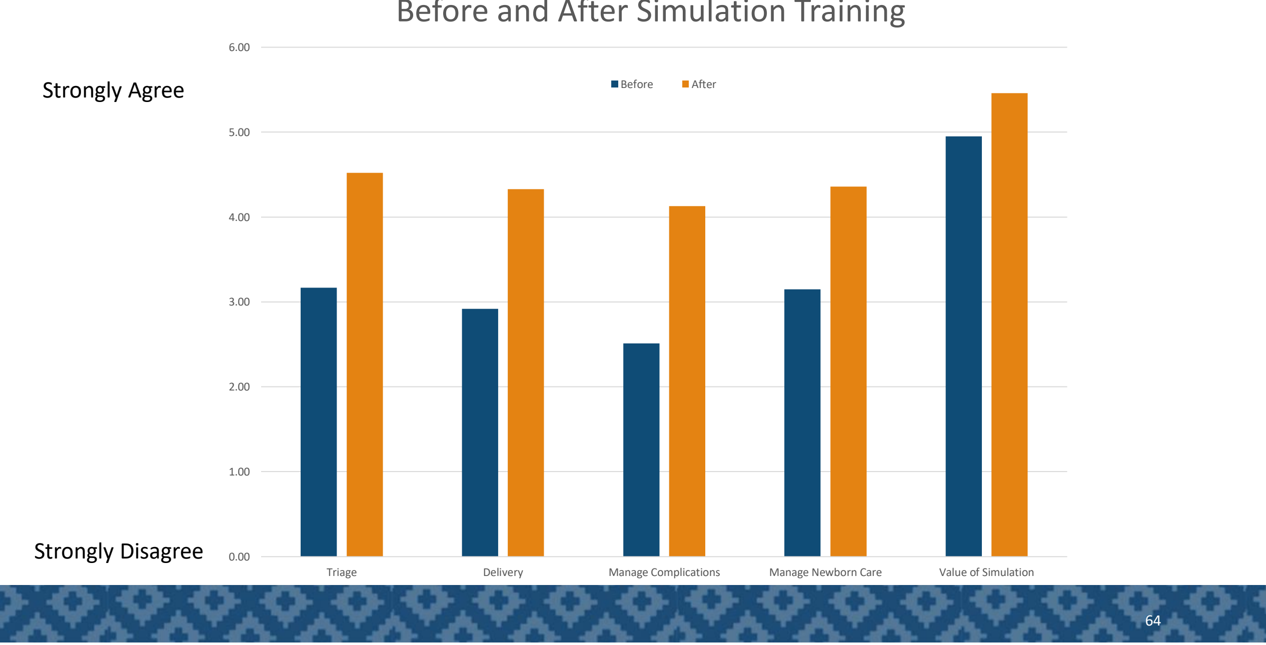

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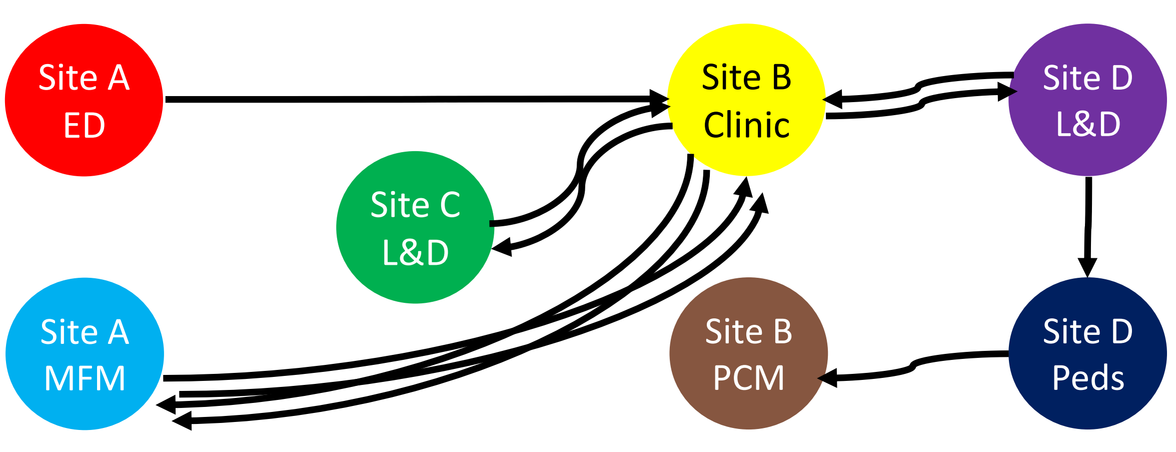
Lived Experience



Effective VHA Maternity Care Coordination is associated with:

- Greater Veteran satisfaction
- Decreased costs
- Reduced medical errors
- Positive impact on outcomes
- Promotes evidence-based practice

Sources:

- Baldor, R., Casares, J., Gerber, M. R., Kuzdeba, J., Lombardini, L., Mattocks, KM. (2017). Implementing and Evaluating a Telephone-Based Centralized Maternity Care Coordination Program for Pregnant Veterans in the Department of Veterans Affairs. Women's Health Issues, 27 (5), 579- . 585. doi: http://dx.doi.org/10.1016/j.whi.2017.05.005
- Blair, M.J., Carrasquillo, 0., Krein, S.L., Rubenstein, L.V., Yano, E.M. (2014). Patient Aligned Care Teams (PACT): VA's Journey to Implement Patient-Centered Medical Homes. Journal of General Internal Medicine, 29 {Suppl 2), : 547-549. doi: httos://doi.org/10.1007/s11606-014-2835-8
- Crawford, S.L., Kroll-Desrosiers, A., Mattocks, K.M., Moore Simas, T.A., Rosen, AK. (2015). Improving Pregnancy Outcomes through maternity Care Coordination: A systematic Review. Women's Health Issues, 26 (1), 87-99. doi: http://dx.doi.org/10.1016/j. whi.2015.10.003

OFFICE OF WOMEN'S HEALTH

Maternity Care Coordinator (MCC)

Purpose	Objectives	Deliverables
Improve access to culturally safe care coordination in the community for AI/AN pregnant and postpartum persons	• **MCCs** to provide telehealth and home visiting support and increase screening, education, and intervention during pregnancy and postpartum • **Partnership** with Public Health Nursing (PHN) and Community Health Aid (CHAP) programs	• **MCH Funding Opportunity** for six IHS sites **Next step: Award sites in May 2024**

Indian Country ECHO
Care and Access for Pregnant People

- Previously Recorded
  - Responding to the Rise of **Congenital Syphilis** in Indigenous Communities
  - Prenatal and Postpartum Care for People Experiencing **Substance Use** Disorder
  - Elevating **Indigenous Birthing Practices**: Holding space for midwifery care
  - Prenatal Care Outside the Paradigm: How to promote **cultural safety and humility**
  - STI screening in pregnancy: How to use **field testing and treatment for syphilis**
- Upcoming Curriculum
  - Indigenous Family Health programs
  - Maternal mental health
  - Contraception and access
  - Diabetes and first foods
  - Stillbirth and pregnancy loss
  - Positive Indian Parenting
  - Preventive screening and vaccines
  - Dental care
  - Heart health and Strong Hearts study
  - Pediatric partnerships

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Maternal Health Emergency Department Toolkit

Kate Craemer, MPH (she/her)

Senior Research Specialist

University of Illinois Chicago

Center for Research on Women and Gender

HRSA Rural Maternal Health Series | April 23, 2024

Maternity Care Readiness for Hospitals without Birth Units

This project was partially funded by the Illinois Department of Public Health (IDPH) Title V MCH Services Block Grant Program

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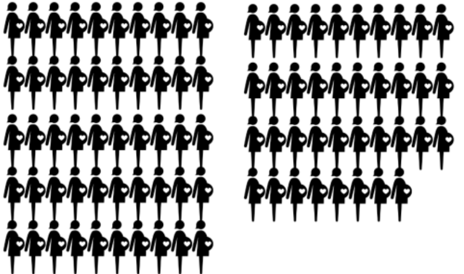
Illinois Pregnant and Postpartum People are Visiting Emergency Departments (ED)



Average of **88** people per year died while pregnant or within one year of pregnancy during 2018-2020 (1)

Of the pregnancy-related deaths...

66% **visited the ED at least once** during pregnancy or postpartum (1)

90% of **rural residents visited the ED at least once** during pregnancy or postpartum (1)

1. Illinois Department of Public Health (2023). Illinois Maternal Morbidity and Mortality Report, October 2023.

Gaps in Emergency Department Maternal Health Education

National Education

Review of national trainings including AIM Bundles, New ACOG algorithms for ED audience, etc.

Illinois Education

Assessed education provided by the 10 regional IL Perinatal Centers

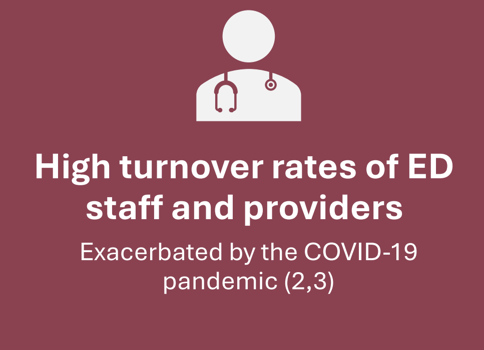
Illinois Gaps

- Education focused on the OB department
- Birthing hospitals had more education

National and Illinois Gaps

- Focused on physiological emergent OB conditions
- Missing screening and treatment for SUD and mental health conditions
- Missing referrals and discharge
- Missing care coordination

Challenges in Training EDs about Maternal Health



Continual closures of birthing hospitals and care facilities in IL and across the US (4)

2. Nguyen et al. (2021). Impacts and challenges of the COVID-19 pandemic on emergency medicine physicians in the United States.

3. NSI Nursing Solutions Inc. (2023). *2023 NSI National Health Care Retention & RN Staffing Report.*

4. March of Dimes. (2023). *Where You Live Matters: Maternity Care Deserts and the Crisis of Access and Equity.*

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Maternal Health Emergency Department Toolkit

Rooted in **IL MMRCs' data findings and recommendations** to address gaps in ED education

Developed by **33 statewide experts**

Pilot: 6 hospitals - 2 rural, 2 without OB units (non-birthing)

Evaluation: EMR data, interviews with hospital champions and staff, surveys to assess self-reported knowledge and behavior change

Module A: Introduction to Maternal Morbidity: How EDs Can Help

Module B: Acuity Assessment and Management of Perinatal Emergencies

Includes 5 case studies on obstetric emergent conditions

Module C: Screening for Perinatal Mental Health and Behavioral Health Issues

Module D: Trauma and Resuscitation in Pregnancy

Module E: Best Practices for Pregnant and Postpartum Patients being Discharged from the Emergency Department

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Impact of Toolkit

EMR Preliminary Findings

Completion as of April 2024

- Overall: 248 (61%)
- Rural: 30 (42%)
- Non-birthing: 37 (47%)

ED sign (0% to 100%) asking patients to self-report pregnancy or postpartum status

Table 1. Sample of Electronic Medical Record (EMR) Data, Aggregate, n=6 hospitals

	Base	4th
Female patients of reproductive age		
Asked if pregnant/postpartum	57%	80%
Referred or transferred to a higher level of care	43%	66%
Pregnant and postpartum patients		
Referred or transferred to an obstetrician (OB)	81%	92%
ED staff communicated with an OB prior to discharge	30%	51%
Documented pregnant/postpartum status as "no"	15%	47%
Stable pregnant and postpartum patients		
Received mental health and/or substance use disorder screening	*52%	66%

*Data collection started in 2nd EMR extraction

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Challenges to Implementation

Additional Challenges for Rural and Non-Birthing

ALL HOSPITALS

- Establishing buy-in with ED leadership
- Staff turnover

- Challenges with education methods

- Training not required

- Insufficient time to complete trainings or conflicting trainings

RURAL and NON-BIRTHING

- Leadership and resources less available to encourage and support engagement
- LMS not as common in outside of Chicago and nearby suburbs (20% vs 66.2%)
- Contract workers float between hospitals
- Completion lowest at rural non-birthing hospital (36% vs 63% other hospitals)

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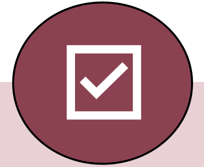
Lessons Learned for Statewide Implementation

Incentivize Toolkit completion, especially for contract employees

Establish ED **leadership buy-in**

Incorporate into hospital **learning management system** (LMS)



Require completion of education

Next Steps for Statewide Program

IL has 187 hospitals with EDs, 96 (51%) are non-birthing

- ☑ Establishing relationships with ED leaders and perinatal centers
- ☑ IL Critical Access Hospital Network (ICAHN) leadership on board
- ☑ Content available in multiple formats (LMS, webinar, in person)

Thank You

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2. Nguyen, J., Liu, A., McKenney, M., Liu, H., Ang, D., & Elkbuli, A. (2021). Impacts and challenges of the COVID-19 pandemic on emergency medicine physicians in the United States. *The American Journal of Emergency Medicine, 48*, 38-47.
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4. March of Dimes. (2023). *Where You Live Matters: Maternity Care Deserts and the Crisis of Access and Equity.* Retrieved from https://marchofdimes.org/peristats/reports/united-states/maternity-care-deserts

Questions?

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Thank you!

- Contact us at ruralhealthinfo.org with any questions
- Please complete webinar survey
- Recording and transcript will be available on RHIhub website

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