

OB Skill  
Development for  
Non-birthing  
Critical Access  
Hospitals and  
EMS agencies



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Center for Rural Health

# Introductions

- Jill Bullock
- Associate Director, Arizona Center for Rural Health
- Arizona Rural Hospital Flexibility Program (Az-Flex) Coordinator



- Erin McMahan EdD, CNM
- Associate Clinical Professor, University of Arizona
- Nurse-Midwifery Program Director



# Disclosure

*“Neither I, nor any member of my immediate family, have a significant financial interest in or affiliation with any commercial supporter of this educational activity and/or with the manufacturer(s) of commercial products and/or providers of any commercial services discussed in this educational activity.”*

# Land Acknowledgement

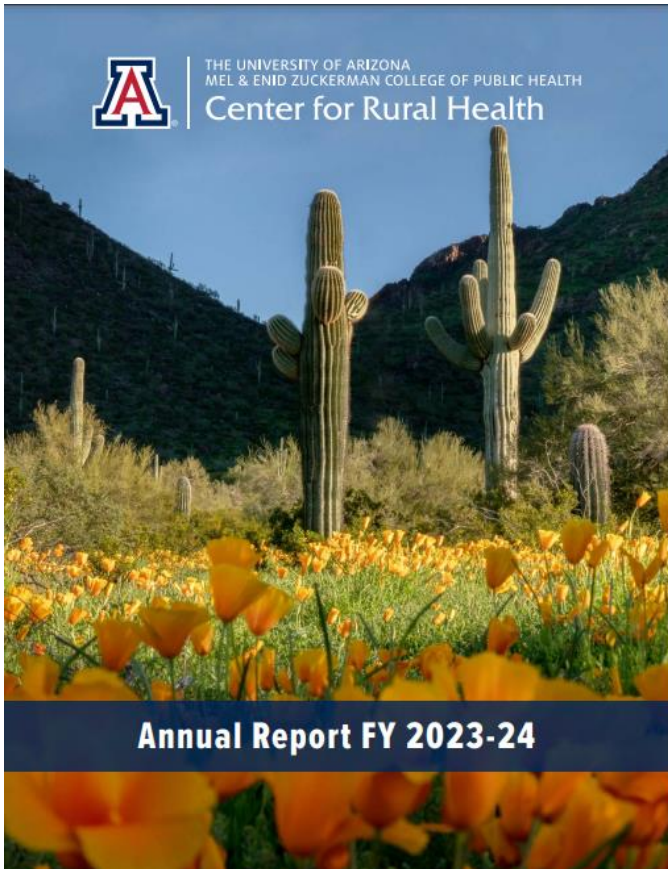
*"We respectfully acknowledge the University of Arizona is on the land and territories of Indigenous peoples. Today, Arizona is home to 22 federally recognized tribes, with Tucson being home to the O'odham and the Yaqui. Committed to diversity and inclusion, the University strives to build sustainable relationships with sovereign Native Nations and Indigenous communities through education offerings, partnerships, and community service."*

*"Northern Arizona University sits at the base of the San Francisco Peaks, on homelands sacred to Native Americans throughout the region. We honor their past, present, and future generations, who have lived here for millennia and will forever call this place home."*

# AzCRH Mission



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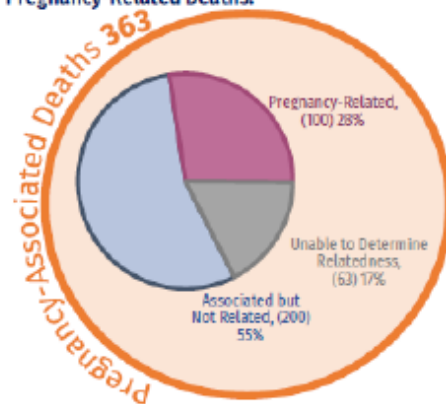
*Since 1980 AzCRH serves Arizona through its core mission to improve the health and wellness of Arizona's rural and underserved populations.*

<https://crh.arizona.edu/publications/annual-reports>

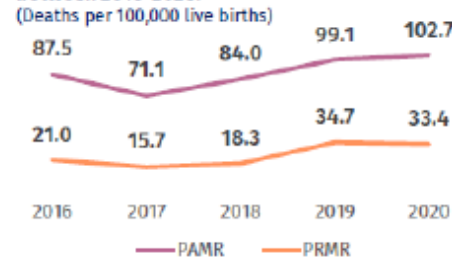
# Maternal Mortality in Arizona, 2016-2020

MMRC Reviewed Deaths in Arizona of Women 15-49 Years of Age with a Pregnancy in the Previous 365 Days

Almost three (3) out of every 10 deaths of women within 365 days of pregnancy were determined to be Pregnancy-Related Deaths.



The PRMR and PAMR in Arizona increased between 2016-2020.



\*Data includes maternal deaths ages 15-49 years.

**85%** of Pregnancy-Related deaths were considered **PREVENTABLE**

## Definitions

### Preventability:

A death is considered preventable if the committee determines that there was at least some chance of the death being averted by one or more reasonable changes to patient, community, provider, facility, and/or systems factors.

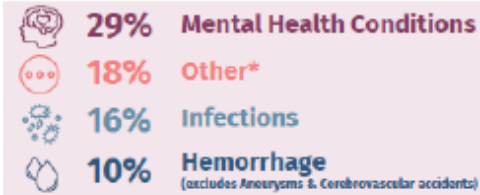
### Pregnancy-Associated:

The death of a woman during pregnancy or within one year of the end of pregnancy, regardless of the cause.

### Pregnancy-Associated Mortality Ratio (PAMR):

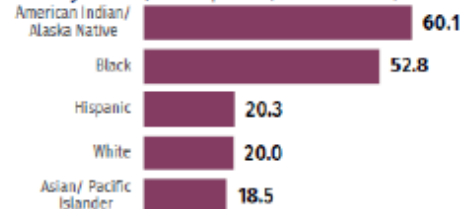
The number of pregnancy-associated deaths per 100,000 live births. It is a ratio, rather than a rate, because the denominator contains only live births and not all pregnant women who are at risk of maternal death.

The most common primary underlying cause of death among Pregnancy-Related cases was mental health conditions.



\*Includes Embolism - Thrombotic (Non-Cerebral), Cardiomyopathy, Metabolic/Endocrine, Anatomic/Neurovascular Conditions (Including CVA), Coagulation Abnormalities/Arteriovenous Malformations, Constrictive (in situ or Pregnancy), Hematologic/Prenatal Conditions (includes Aortic Aneurysms, and unknown cause of death)

American Indian/Alaska Native and Black women experienced the highest Pregnancy-Related Mortality Ratio. (Deaths per 100,000 live births)



(Misclassification bias may be present for cases &/or live births with multiple racial/ethnic identities. Please interpret data with caution.)

The Pregnancy-Related Mortality Ratio in the Central Region of Arizona was the highest in the state. (Deaths per 100,000 live births)



\*PRMR for Western Region is suppressed (count < 6)

### Pregnancy-Related:

The death of a woman during pregnancy or within one year of the end of pregnancy, from a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy.

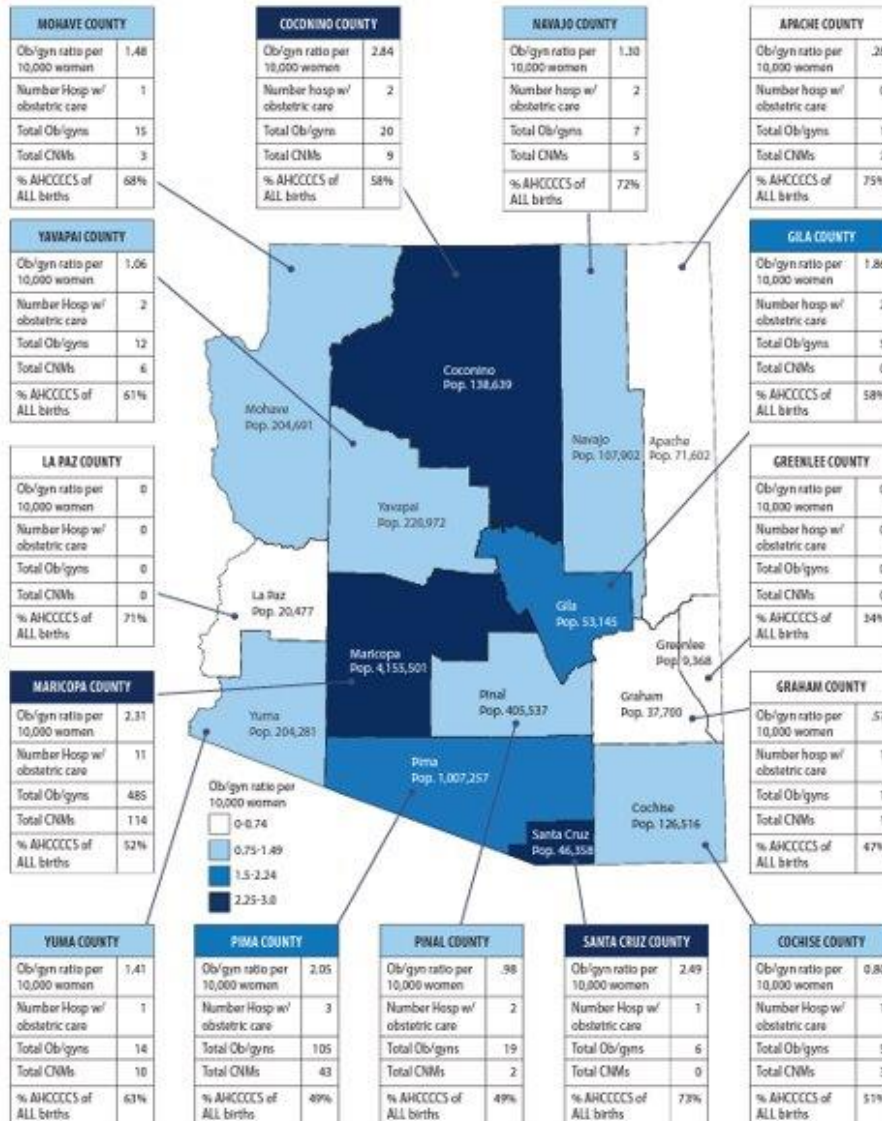
### Pregnancy-Related Mortality Ratio (PRMR):

The number of pregnancy-related deaths per 100,000 live births. It is a ratio, rather than a rate, because the denominator contains only live births and not all pregnant women who are at risk of maternal death.



## OB-GYN PHYSICIANS AND CERTIFIED NURSE MIDWIVES BY COUNTY

ARIZONA EST. POP. 7.1 MILLION | 695 OB-GYN PHYSICIANS | 203 CNMS | 2.03 OB-GYNS PER 10,000 WOMEN



# Arizona has 12 "Non-birthing" CAHs

### Maricopa County

- 486 OBGYNs
- 114 CNMs

### Graham County

- 1 OBGYN
- 1CNM

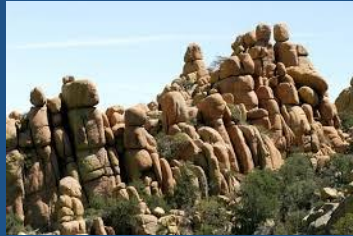
### Greenlee, La Paz

- 0 OBGYN
- 0 CNMs

### Apache, Greenlee, La Paz

- 40-58 miles to the nearest OB hospital

Ob-gyn physicians by county rely on Arizona licensure data. CNM data is from the federal National Plan and Provider Enumeration System. Hospitals with obstetrics care is from the Health Resources and Services Administration (HRSA) Area Health Resource File (AHRF). Obstetric care is measured as an affirmative response to the American Hospital Association Facility Survey item about obstetrics beds. There are some cases (e.g., Apache county) where the AHRF lists zero hospitals with obstetrics care. However, vital statistics from the Arizona Department of Health Services show hospitals reporting births in 2018. Data limitations: does not include, family physicians who provide prenatal, obstetric, and post-partum care or NPs and PAs.



## Purpose



- Rural community hospitals deliver nearly **1 in 10** babies in the U.S.
- **Nearly half** of all rural community hospitals can not offer obstetric services. (2020)
- More than **2.2 million women** of childbearing age live in maternity care deserts that have no hospital offering obstetric care, no birth center, and no obstetric provider (AHA, 2022).
- The **need for simulation training** for obstetric procedures and skills was documented in a survey of rural hospitals. (Gilbertson et al, 2020). These include **precipitate delivery training**, postpartum hemorrhage management, and neonatal resuscitation training.



# Jill's Great Idea



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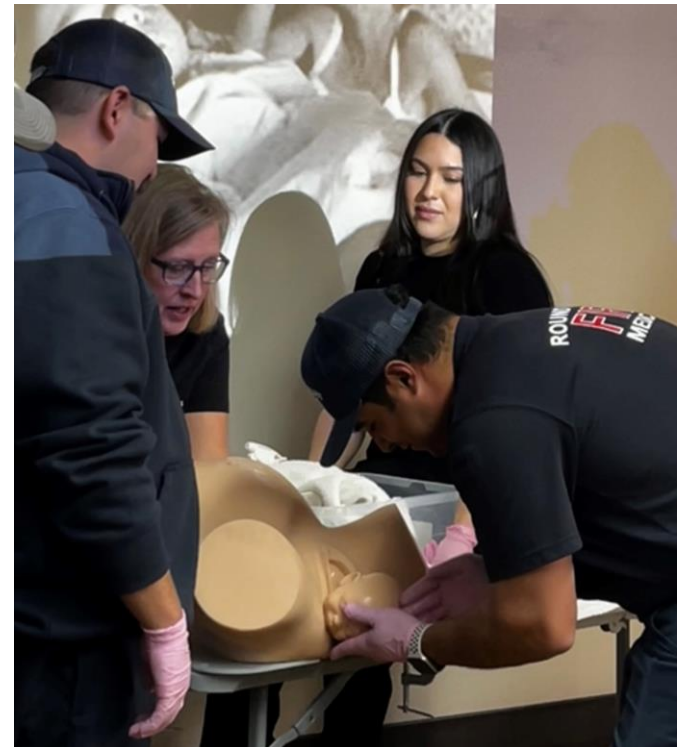


# OB Simulation Training



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- AzFlex partnered with the new U of A Midwifery Program Director to bring OB simulation training to non-birthing hospitals
- Focus on precipitous birth



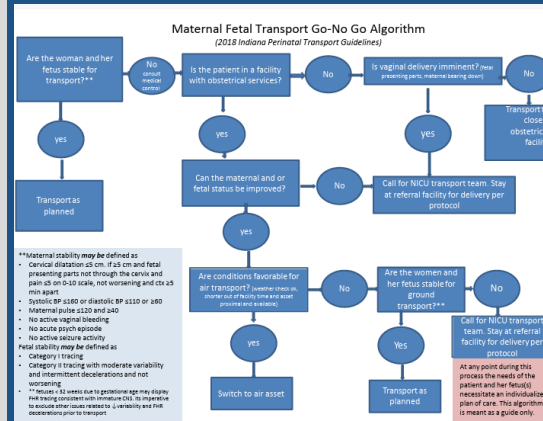


# AIM Bundle OB Emergencies Resource Kit



## AIM OB Emergency Bundles Readiness

- Identify a rapid response team for obstetric emergencies.
- Ensure rapid access to needed medications, resources and equipment.
- Establish policies, procedures, and checklists to respond to obstetric emergencies.
- Train healthcare professionals and staff to recognize and respond to obstetric emergencies.
- Plan for appropriate patient transfer to higher levels of care.
- Establish remote care capabilities and telehealth consultation supports.
  - Remote clinical consultation.
  - Develop and maintain referral resources and care coordination pathways.



WDHN, Hartford, Alabama

<b>Name of Policy:</b>	<b>Management of Obstetric Emergencies</b>	
<b>Policy Number:</b>	1364-100-53-20	
<b>Department:</b>	Hospital Administration Medical Staff	
<b>Approving Officer:</b>	Chief Executive Officer - UTMC Chief of Staff	
<b>Responsible Agent:</b>	Medical Director, Emergency Department	
<b>Scope:</b>	The University of Toledo Medical Center and its	<b>Effective Date:</b> 11/01/2021 <b>Initial Effective Date:</b> 3/11/1999
<input type="checkbox"/> New policy proposal	<input checked="" type="checkbox"/> Minor technical revisions of existing policy	
<input type="checkbox"/> Major revision of existing policy	<input type="checkbox"/> Reaffirmation of existing policy	

### (A) Policy Statement

Obstetric patients at University of Toledo Medical Center ("UTMC"), including those who present to the Emergency Center, shall be managed using approved protocols.

### (B) Purpose of Policy

To provide a mechanism for rendering the most appropriate and effective care and management of obstetrical patients at UTMC who present with or develop potential obstetric emergencies.

### (C) Procedure

1. If the patient, based upon initial or follow up assessment of the image or primary nurse and/or medical screening by the physician is found to have a potential obstetrical emergency, i.e., vaginal bleeding, premature labor, premature rupture of membranes, ectopic pregnancy, or acute abdominal pain, patient management should be based as follows:
  - a. For patients greater than 20 (twenty) weeks gestation, patient should be evaluated and initially stabilized in the Emergency Department at UTMC, and arrange transfer to the facility where the patient's OB practice or the facility with the appropriate level of care as quickly as possible. No further work up or evaluation should be pursued at UTMC due to the lack of readily available equipment and personnel for these obstetrical neonatal emergencies. If delivery appears imminent or the patient is not viable, request the neonatal team from the receiving facility to meet to the Emergency Department to assist in stabilization of the patient prior to transport.
  - b. For patients less than 20 (twenty) weeks gestation, the patient should be evaluated and initially stabilized in the Emergency Department at UTMC. Further evaluation, disposition, management and possible transfer will be decided by the Emergency Department attending physician, in collaboration with the patient's OB attending or the OB attending on call at a facility with the appropriate level of care.
  - c. If the patient has a primary OB physician, this physician must be notified as early as possible of the patient's condition. If the patient is greater than 20 (twenty) weeks gestation and of fetal viability, immediate transfer must be requested. If this transfer is refused by the patient's primary OB physician, this must be documented on the ED record and the OB attending on call at a facility with the appropriate level of care should be notified of this obstetrical emergency and transfer to the receiving hospital should be expedited as rapidly as possible. If gestational date is less than 20 (twenty) weeks (non-viable fetus), disposition and follow up should be arranged through the primary OB attending or the UTMC on call OB/GYN physician.



"You are experts at gathering focused data."

- Focused History
- Basic Supplies
- Hand maneuvers
- Skin to Skin
- Delayed Cord Clamping
- Hemorrhage Risk Assessment & Prevention
- Simulated birth practice
  - Some asked about breech and shoulder dystocia





‘ I don’t want her delivering in my rig, then I have to clean it up.’

Maybe, just maybe we can make this a better experience for everyone involved.



“I would have gone to a different hospital if we had the option, but the closest hospital is over a hundred miles away from other hospitals, so I stayed and delivered here.”

Okechukwu, A., Magrath, P., Alaofe, H., Farland, L. V., Abraham, I., Marrero, D. G., Martin, C., & Ehiri, J. (2024). Optimizing Postpartum Care in Rural Communities: Insights from Women in Arizona and Implications for Policy. *Maternal and Child Health Journal*, 28(7), 1148-1159.

# Locations



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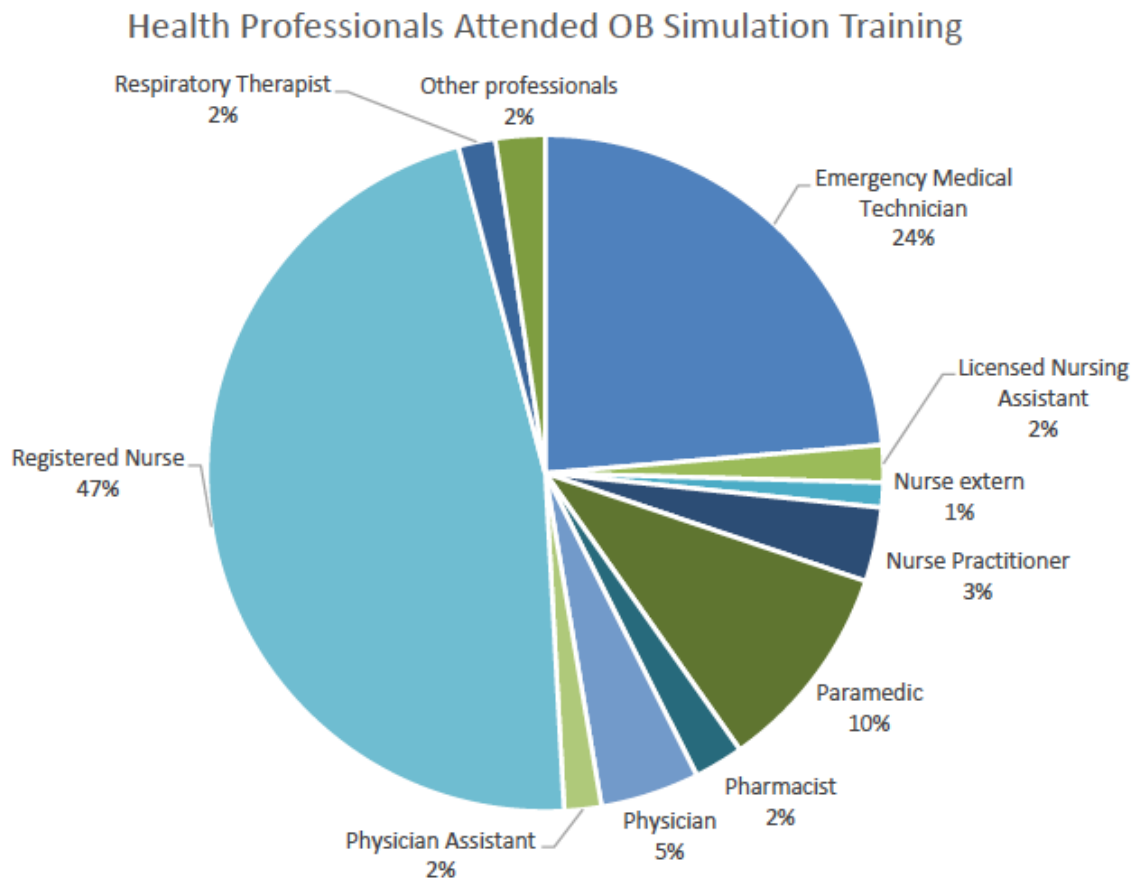
Hospital		Participants
White Mountain Regional MC	Springerville	31
Copper Queen CH & Douglas ED	Bisbee, Douglas	35
Hopi Health Care Center	Polacca	28
La Paz Regional & Parker IHC	Parker	31
Sage Memorial	Ganado	15
Northern Cochise CH	Willcox	23
San Carlos Apache HC	Peridot	11
Benson CH	Benson	26
Wickenburg CH	Wickenburg	19
Elfrida Fire Dept	Elfrida	10
Total		229

# Attendees



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## Professional Discipline of OB Simulation Training Attendees

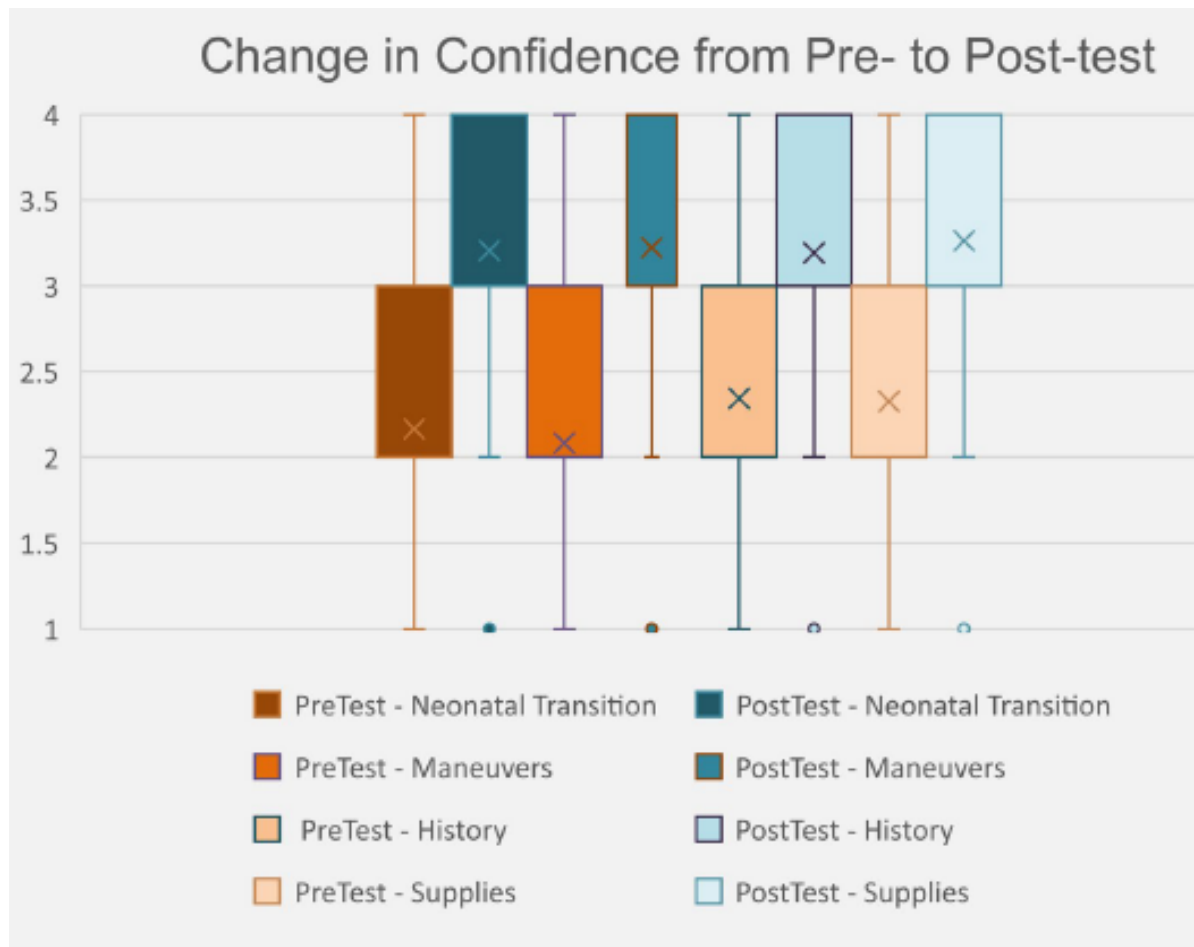








# Confidence

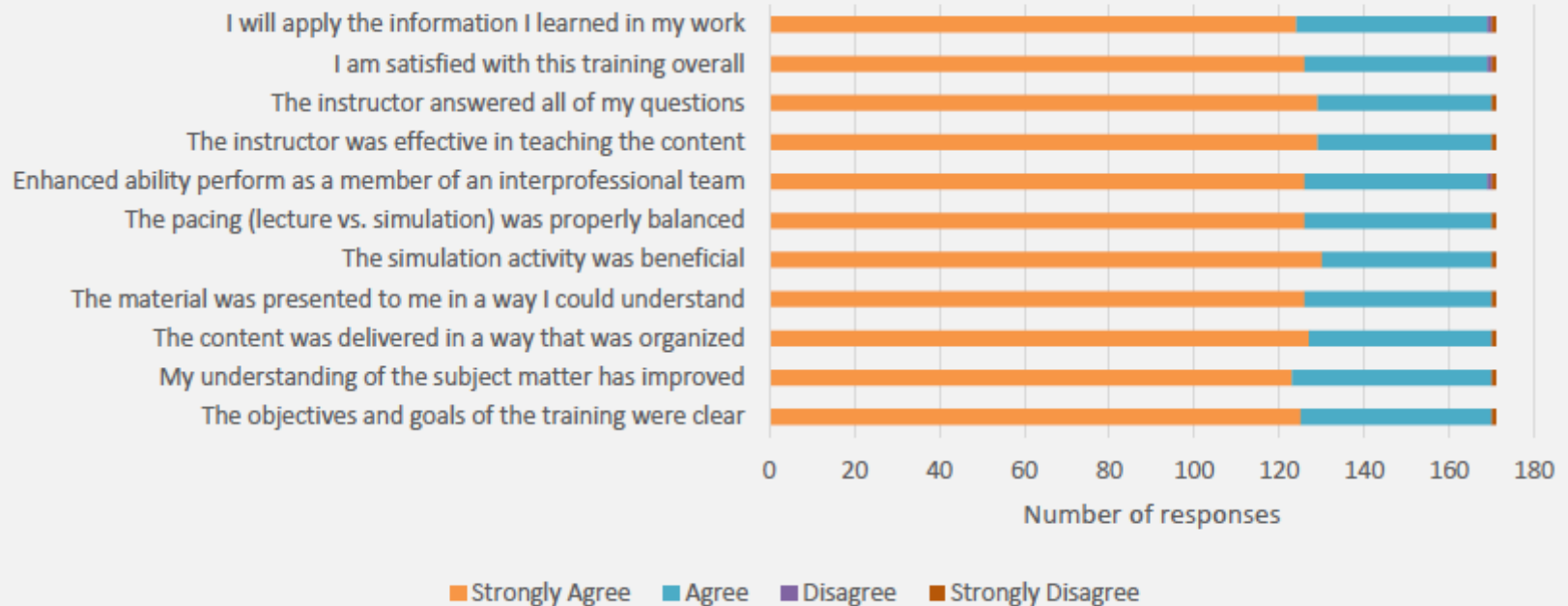


# Summary Feedback



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## Summary of training feedback



# Lessons Learned



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We have great providers  
in Arizona!

Upskilling the current  
workforce is key to  
improving outcomes in  
the short term

Coordinating efforts in  
the state around these  
trainings

There are opportunities  
to provide trainings to  
refresh skills and for  
new employees

In person, hands on  
experiences, and  
observation matter

Include everyone,  
support comes from the  
team

Access to pitocin on all  
ambulance rigs

Access to electronic  
fetal monitoring

# What is the future of OB care in rural communities?

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# OB Units Closing



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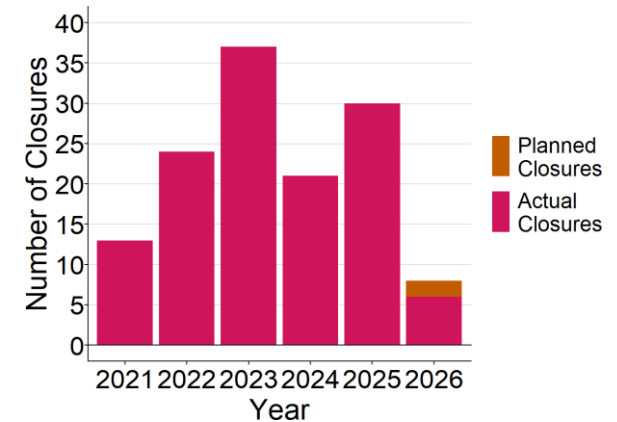
Number of rural hospitals at immediate risk of closure by state



You Can't Be Born Here. You Can Only Die.

JESSICA GROSE

- Report: 8 Arizona hospitals 'at risk'
- Includes Phoenix, Mesa, Tucson
- Medicaid cuts causing financial challenges
- List shows risk, NOT action



# What is a birth center?



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- AABC: American Association of Birth Centers
- AABC promotes and supports freestanding birth centers and midwifery units in all communities to achieve a high-value model of evidence-based care that is equitable, safe, and respectful.
- The birth center is a health care facility for childbirth where care is provided in the midwifery and wellness model. (CNM, MD, CPM)
- Continuous risk assessment through out pregnancy, labor and birth with timely transfer.
- This is not a "drop-in" urgent care or ER.

# Birth Center Outcomes



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## Birth Outcomes in Birth Center Participants and Matched Comparison Group

Outcome	Birth Center Participants	Matched Comparison Group
Preterm birth rate	6.3%	8.5%
Rate of low birth weight infants	5.9%	7.4%
Average gestational age	39 weeks	38.6 weeks
Average birth weight	3342 grams	3262 grams
C-section birth rate	17.5%	29%
Vaginal birth rate for women with a previous c-section	24.2%	12.5%
Weekend birth rate (indicating fewer scheduled inductions or c-sections)	23.7%	19.8%
Infant emergency department visits	0.86	0.99
Hospitalization among infants after birth	0.07	0.08

\* Note that all comparisons were statistically significant at or below the 0.05 level.

Source: CMS Joint Information Bulletin. November 9, 2018. Available at: <https://www.medicaid.gov/federal-policy/guidance/downloads/cibi19018.pdf>

Strong Start Initiative: 211 clinical sites, 47 birth centers, and > 46,000 pregnant people

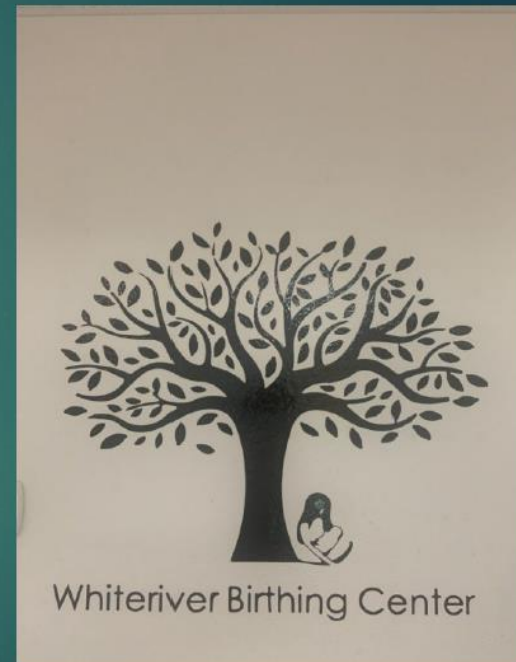
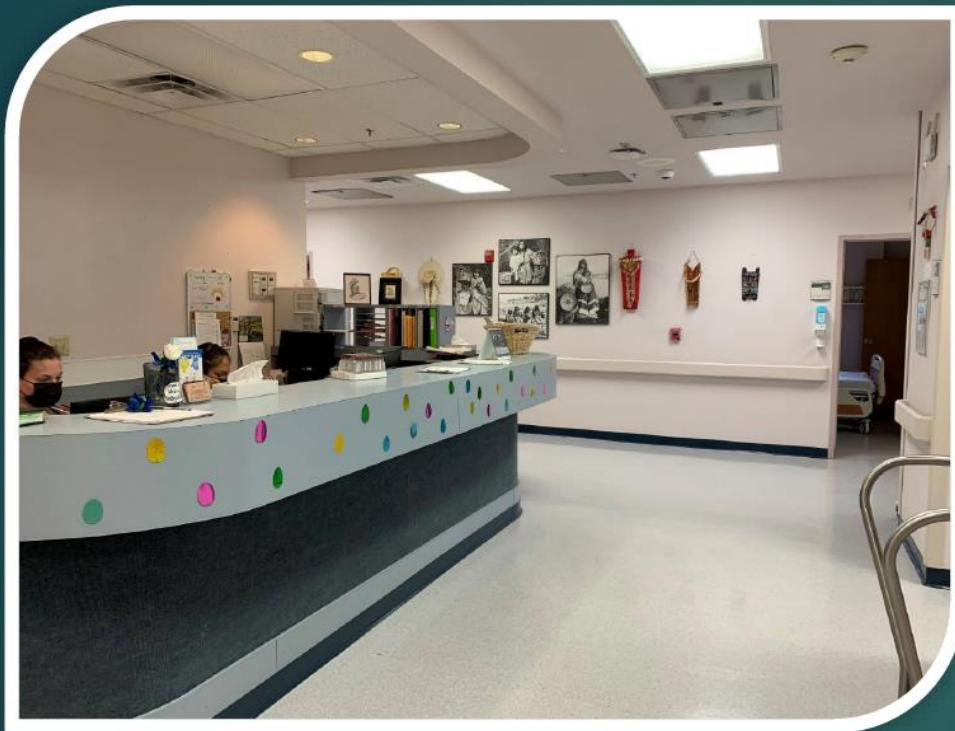
# Holy Family Birth Center



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# Our Birthing Center



<https://itcaonline.com/standardized-prenatal-postpartum-care-at-whiteriver-indian-hospital-birthing-center/>

# Integration of cultural practices



- ▶ Tour of birthing center during pregnancy to get a feel for the space – meet the staff, view the layout / style
- ▶ Natural deliveries with nitrous oxide as indicated
  - ▶ Spinning babies – used by nursing staff in late pregnancy to help promote maternal comfort and get mom and baby ready for labor
- ▶ Baby Friendly hospital designation – rooming in, lactation support (hospital-wide lactation education)
- ▶ We are a Birthing Center, which necessitates transfer of some patients with medical needs
  - ▶ Many of our prenatal patients meet criteria for high risk pregnancies and as such, deliver elsewhere
  - ▶ We maintain connections, facilitate transfers and ensure follow-up at every opportunity
- ▶ Postpartum practices – support practices across traditions – ask questions
  - ▶ Traditional ceremonies
  - ▶ Ex. Cradleboards and the “back to sleep” campaign

# How could this help?



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- Fill gaps in maternity care deserts
  - Prenatal
  - Labor & Birth
  - Postpartum
- Hub and Spoke regional models of care
- Collaboration with rural providers (FM, CNM, CPM)
  - Share burden of call
  - Renting office space
  - Builds a strong, resilient workforce
- **Planned** birth center care improve outcomes & lowers costs
  - Decreased cesarean section rates
  - Lower costs
  - Preserve critical emergency services for those who need it

# Questions & Thank you!



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