



Improving Maternal Health Outcomes in Arizona

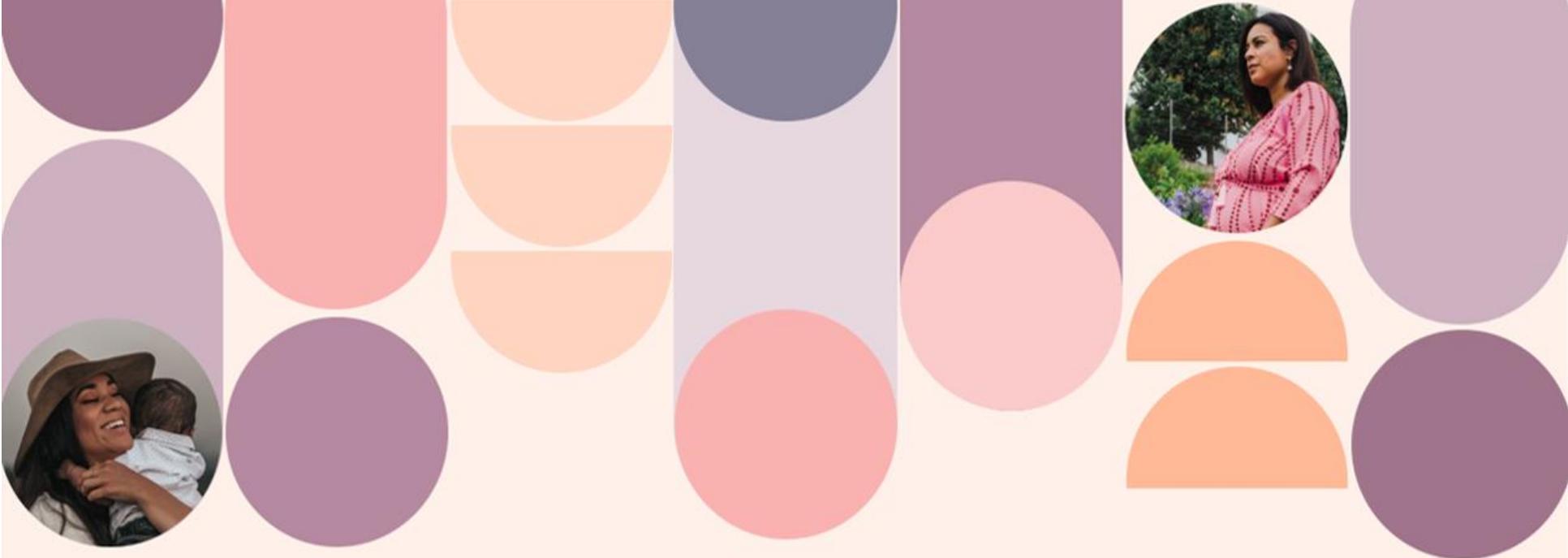
Presentation for the Arizona Rural Women's Health Symposium

June 13-14 2024

Learning Objectives

At the conclusion of this presentation, the audience will be able to:

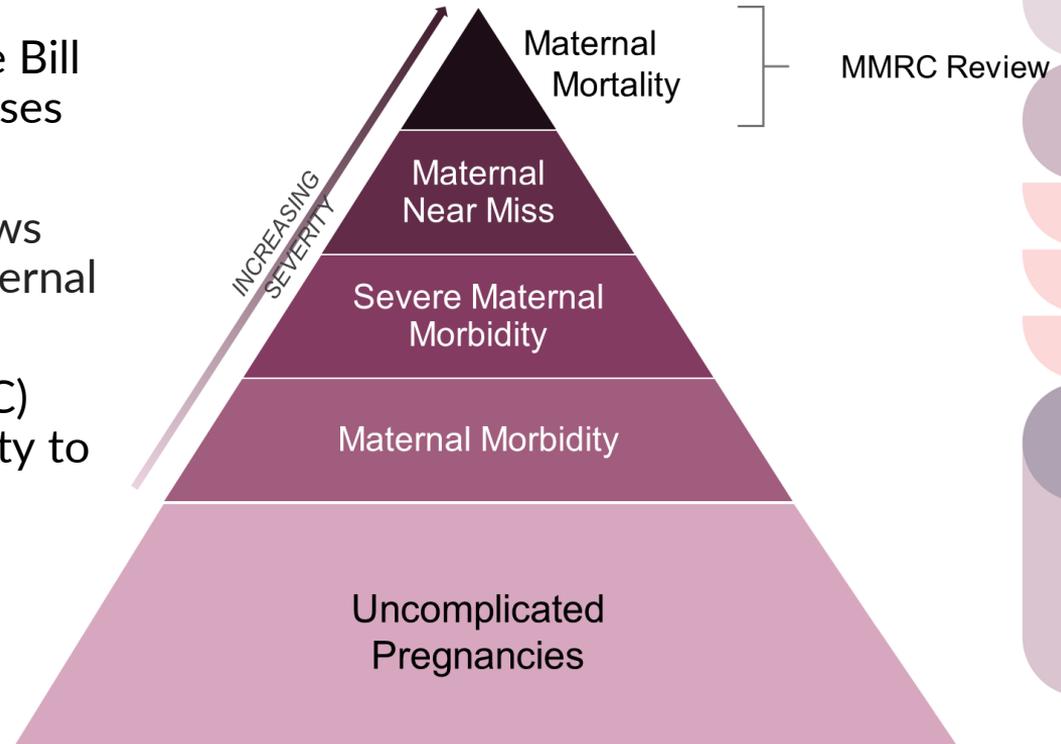
- Have a high-level understanding of Arizona's Maternal Mortality Review Program
- Understand Arizona's maternal mortality data for 2018-2019
- Consider recommendations to improve maternal health outcomes in Arizona
- Know how to get involved and where to go for more information



Overview: Maternal Mortality Review Program

Arizona Maternal Mortality Review Program

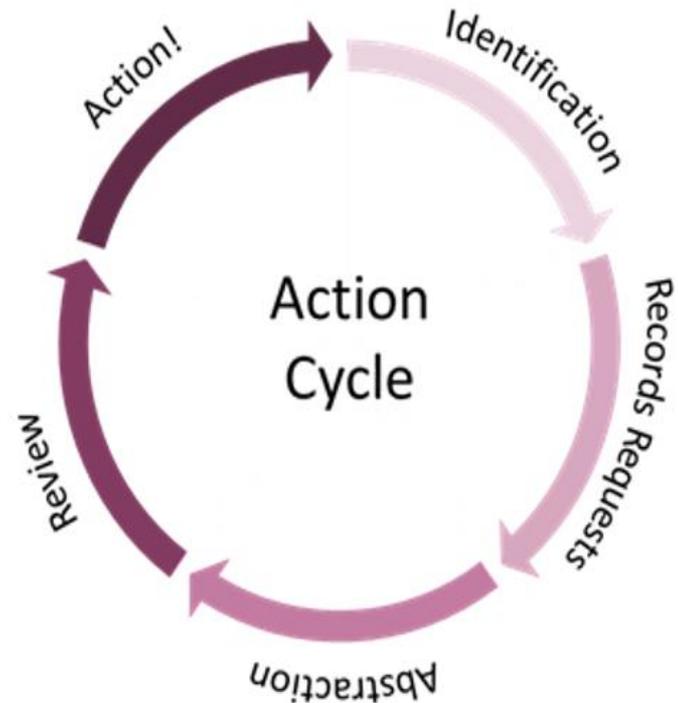
- Established by the Arizona Senate Bill 1121 on April 2011. Review of cases began July 2011.
- Awarded CDC's Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM) in 2019
- Multidisciplinary team (i.e., MMRC) reviews cases of maternal mortality to identify preventative factors and produce recommendations for systems level changes.
- Currently reviewing 2021 deaths



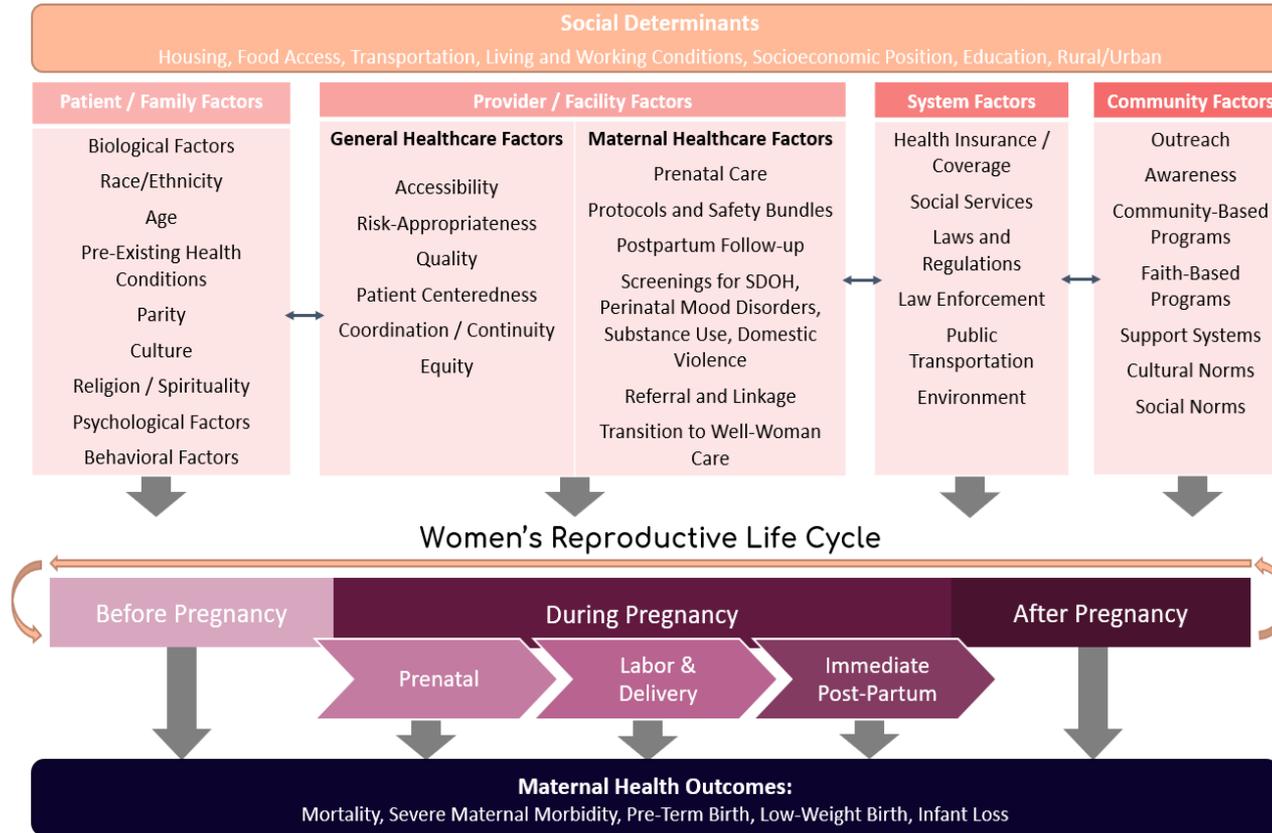
Review to Action Cycle

For every death, the MMRC aims to answer the following questions:

- Was the death pregnancy-related?
- What was the underlying cause of death?
- What are the contributing factors to the death?
- Was the death preventable?
- What specific and feasible actions might have changed the course of events (e.g., recommendations)?



Factors Impacting Maternal Mortality and Morbidity



The Role of the MMRC

	CDC – National Center for Health Statistics (NCHS)	CDC – Pregnancy Mortality Surveillance System (PMSS)
Data Source	Death certificates	Death certificates linked to fetal death and birth certificates
Time Frame	During pregnancy – 42 days	During pregnancy – 365 days
Source of Classification	ICD-10 codes	Medical epidemiologists (PMSS-MM)
Purpose	Show national trends and provide a basis for international comparison	Analyze clinical factors associated with deaths, publish information that may lead to prevention strategies

Maternal Mortality Review Committees

Death certificates linked to **fetal death and birth certificates, medical records, social service records, autopsy, informant interviews...**

During pregnancy – 365 days

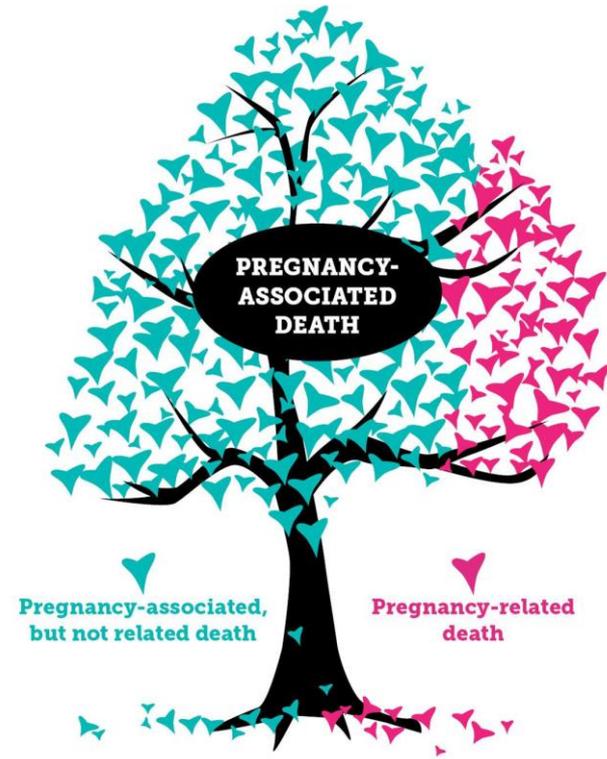
Multidisciplinary committees

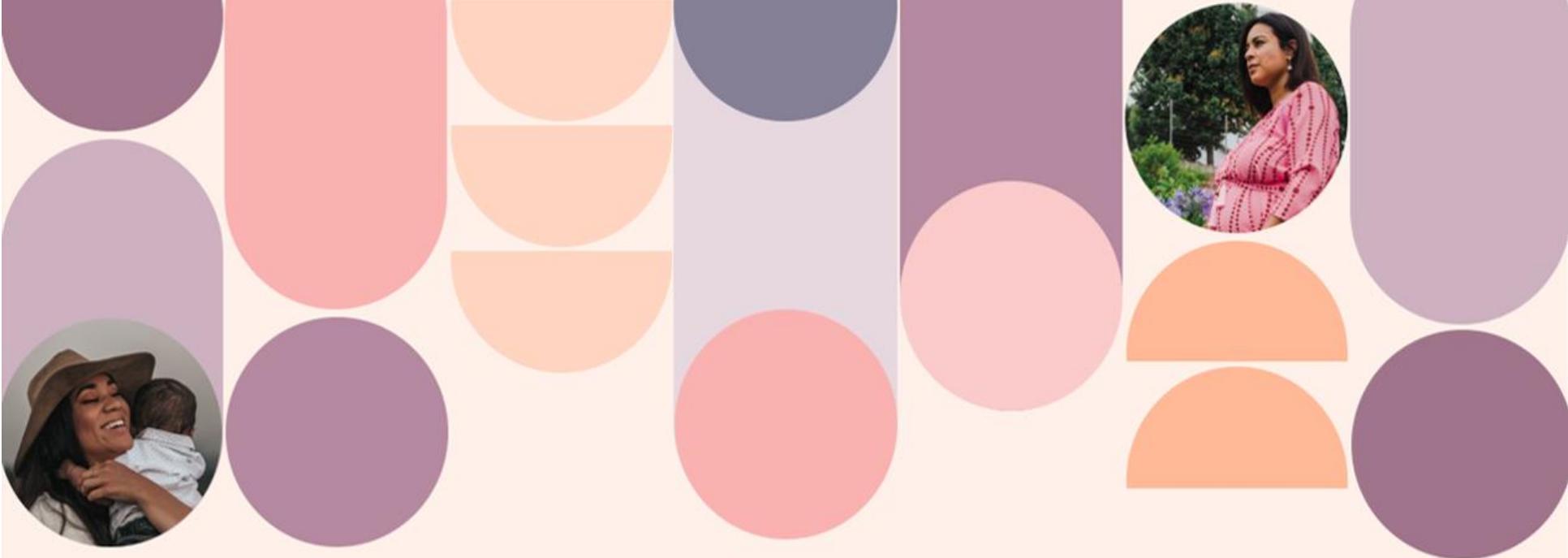
Understand medical and non-medical contributors to deaths, prioritize interventions that effectively reduce maternal deaths



Maternal Mortality Terms

- **Pregnancy-associated death:** A death that occurs during or within one year of pregnancy regardless of the outcome, duration, or site of the pregnancy.
- **Pregnancy-related death:** A death that occurs during or within one year 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-associated but NOT related death:** A death that occurs during or within one year of pregnancy from a cause that is not related to pregnancy.

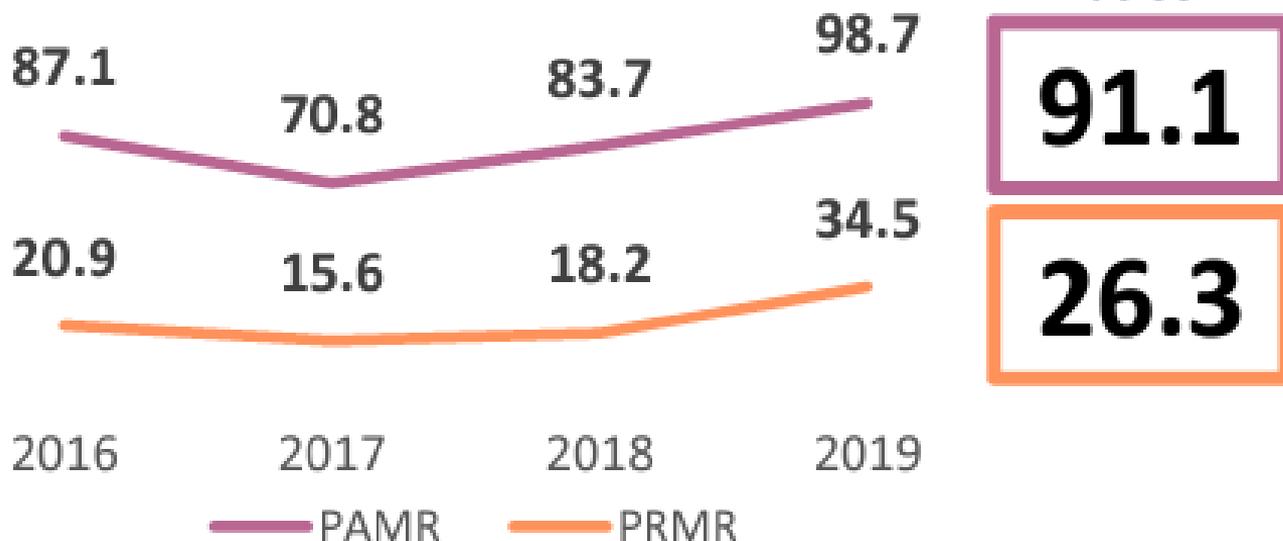




Maternal Mortality (MM) Key Findings 2018-2019

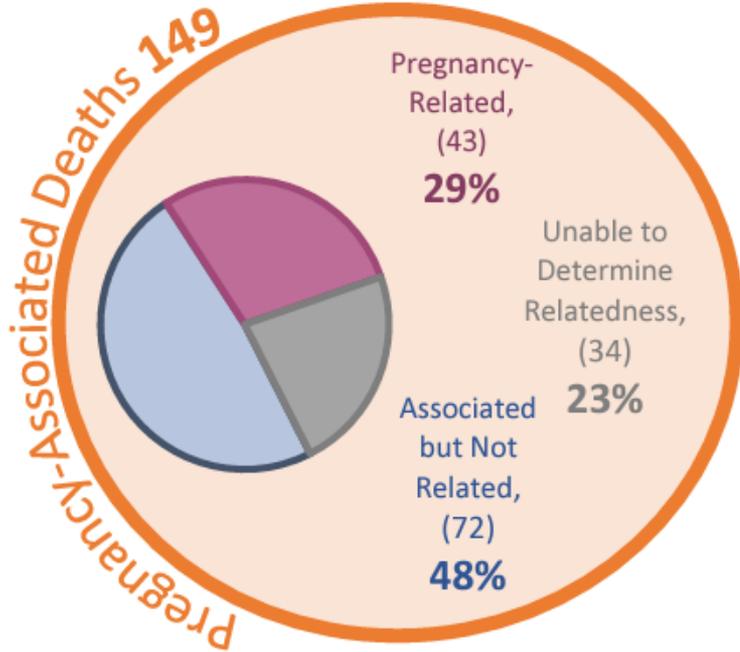
The PRMR and PAMR in Arizona slightly increased overall between 2016-2019.

(Deaths per 100,000 live births)



**2016-2017 data includes maternal deaths ages 15-49 years;
2018-2019 data includes maternal deaths ages 10-60 years.*

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

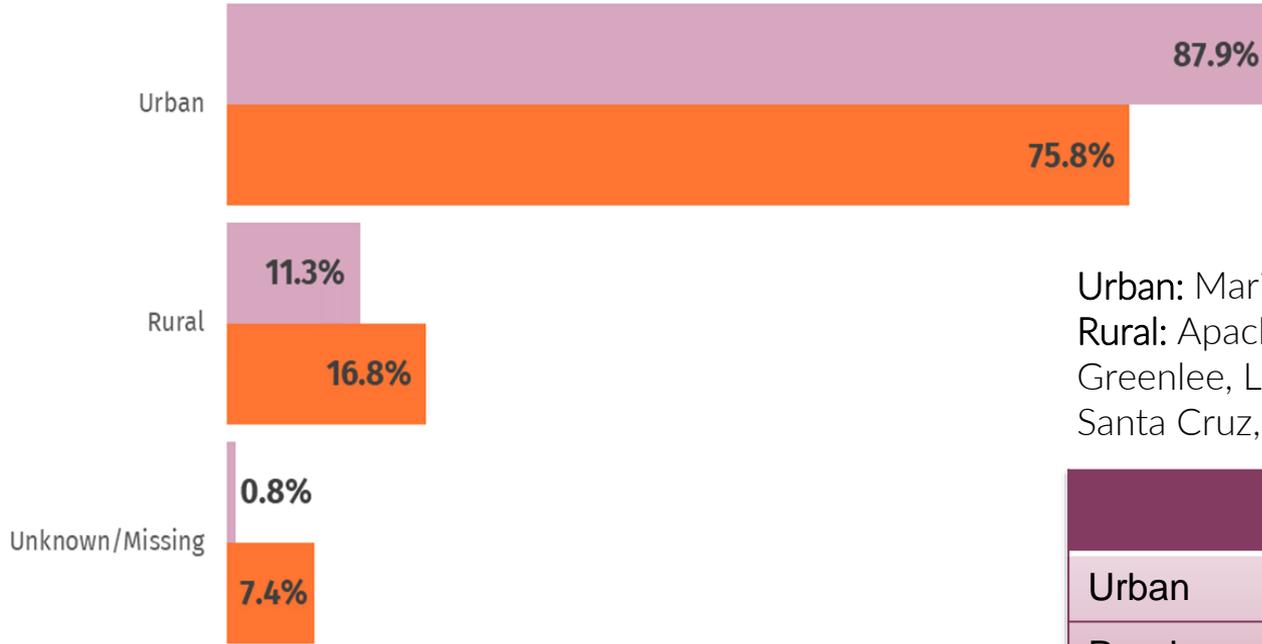


The Pregnancy-Associated Mortality Ratio in the Northern and Western Region of Arizona were the highest in the state. (Deaths per 100,000 live births)



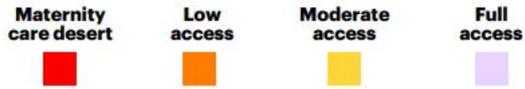
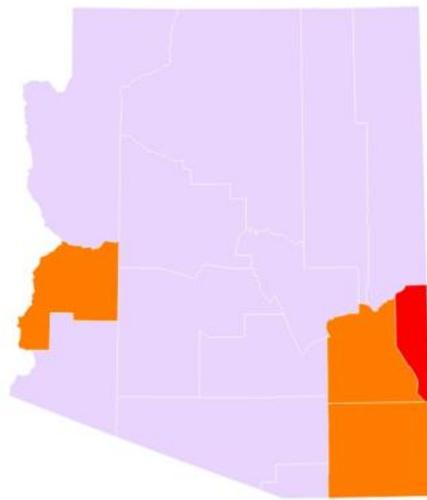
MM by Maternal Residence

■ Percent of Live Births to Women 15-49 Years of Age
 ■ Percent of Pregnancy-Associated Deaths

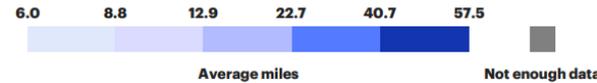
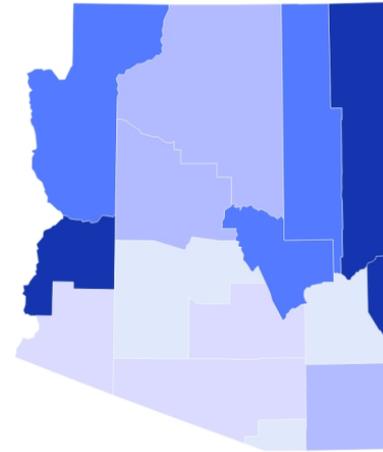


Urban: Maricopa, Pima, Pinal, Yuma
Rural: Apache, Cochise, Gila, Graham, Greenlee, La Paz, Mohave, Navajo, Santa Cruz, Yavapai

	PAMR	PRMR
Urban	81.5	39.0
Rural	149.9	74.9



DISTANCE TO BIRTHING HOSPITAL BY COUNTY

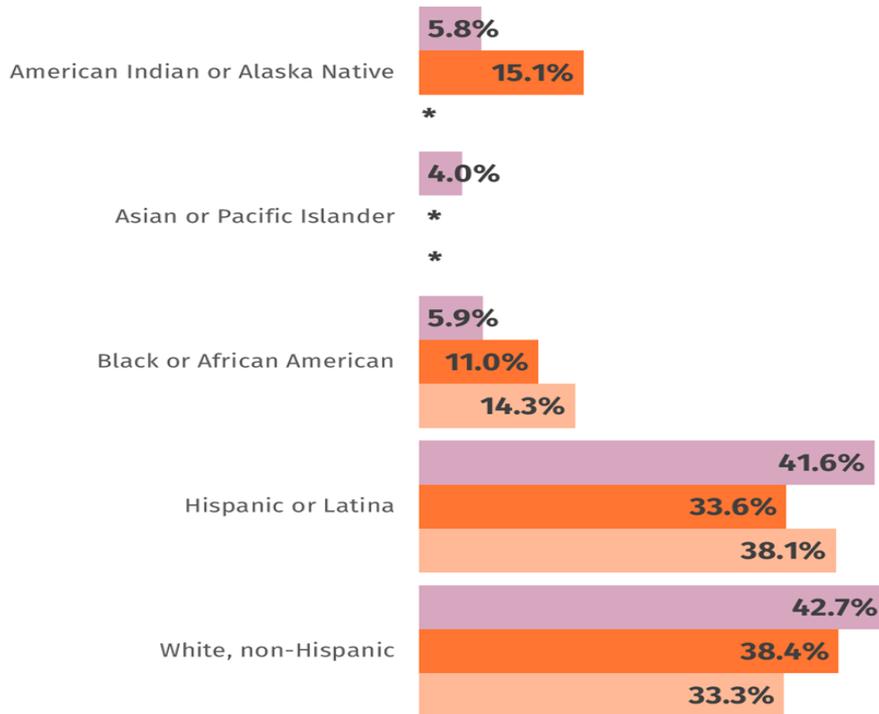


Definitions of maternity care deserts and access to maternity care

Definitions	Maternity care deserts	Low access to maternity care	Moderate access to maternity care	Full access to maternity care*
Hospitals and birth centers offering obstetric care	zero	<2	<2	≥2
Obstetric Providers (obstetrician, family physician†, CNM/CM per 10,000 Births)	zero	<60	<60	≥60
Proportion of women 18-64 without health insurance	any	≥10%	<10%	any

MM by Maternal Race and Ethnicity

- Percent of Live Births to Women, 10-60 Years of Age
- Percent of Pregnancy-Associated Deaths, 10-60 Years of Age
- Percent of Pregnancy-Related Deaths, 10-60 Years of Age

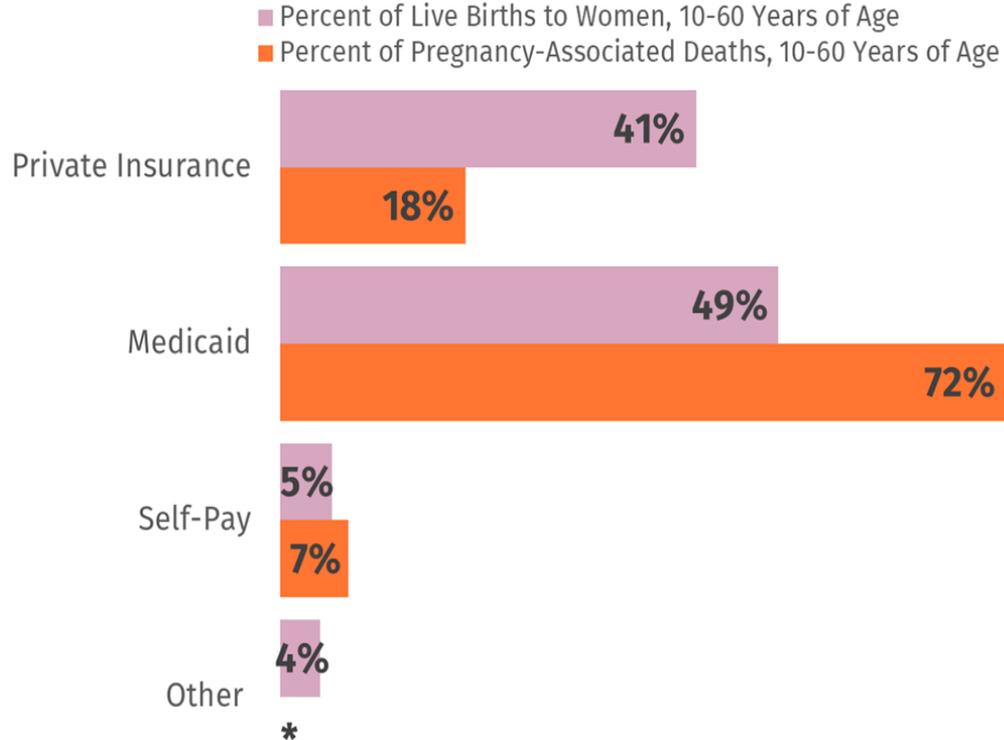


American Indian/Alaska Native women experienced the highest Pregnancy-Associated Mortality Ratio.
(Deaths per 100,000 live births)

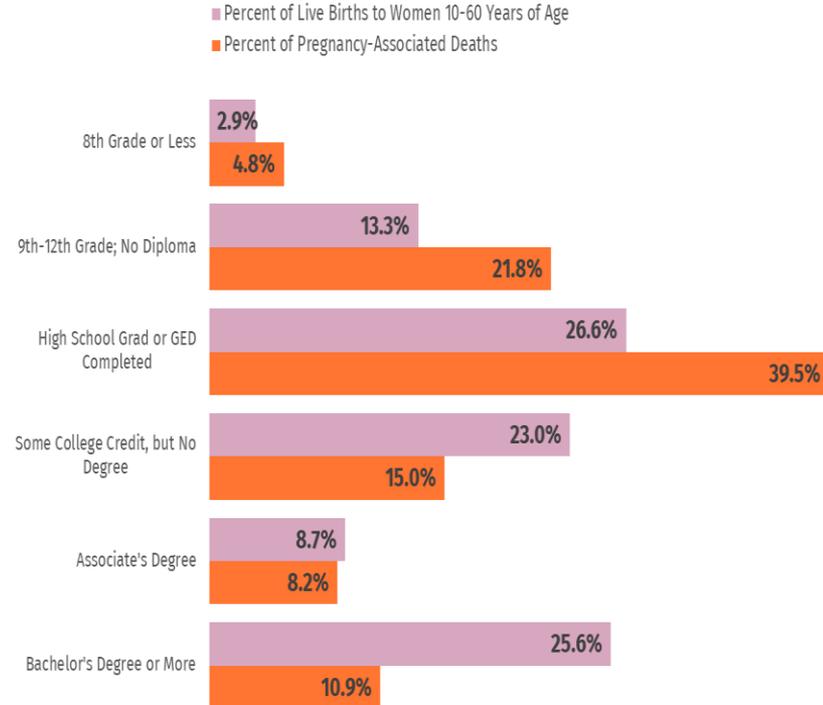
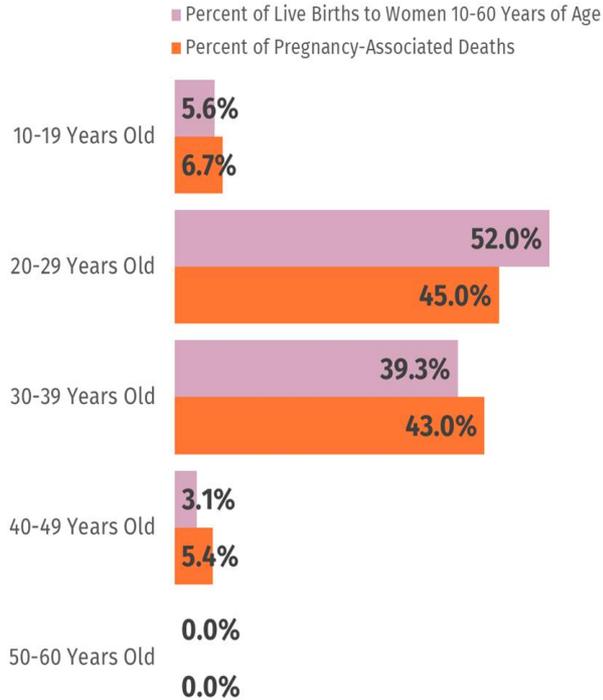


*Suppressed due to figures less than 6.
(Misclassification bias may be present for cases &/or live births with multiple racial/ethnic identities. Please interpret data with caution.)

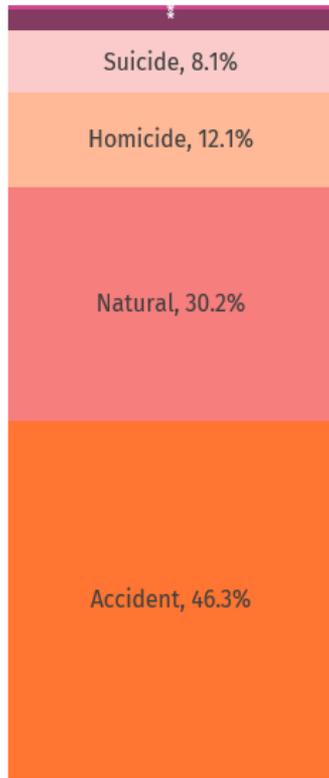
MM by Insurance Type



MM by Maternal Age and Education



MM by Manner of Death



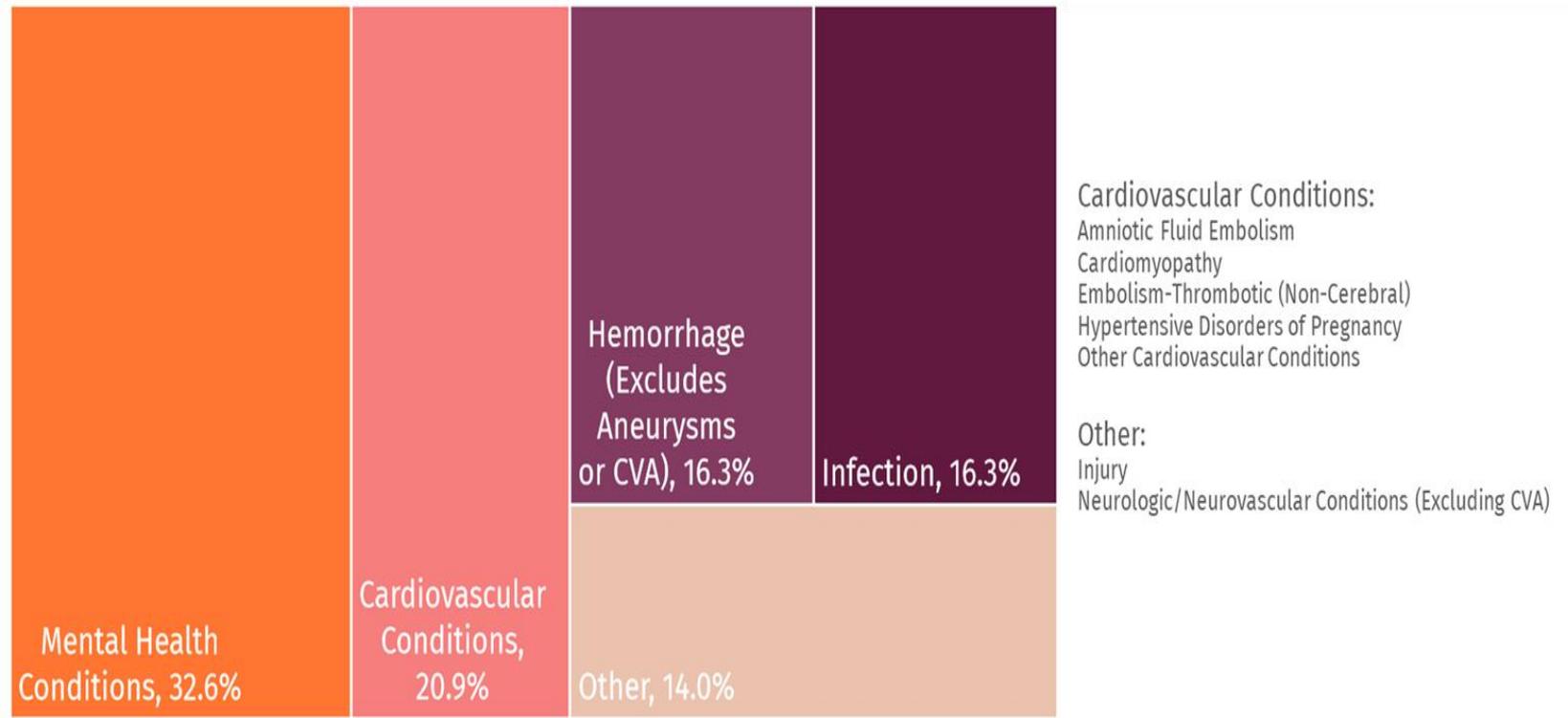
Percent Among All Pregnancy-Associated Deaths



Percent Among All Pregnancy-Related Deaths

- Pending Investigation
- Could Not Be Determined
- Homicide

MM by Primary Underlying Cause of Death



MM by Preventability and Timing of Death

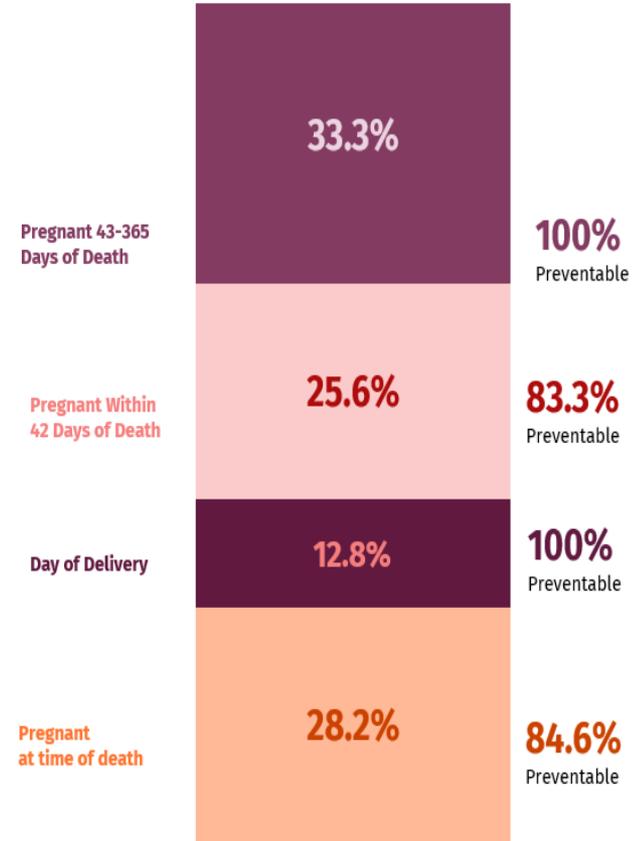
MMRC Reviewed Pregnancy-Related Deaths in Arizona of Persons 10-60 Years Old, 2018-2019 (n=43)

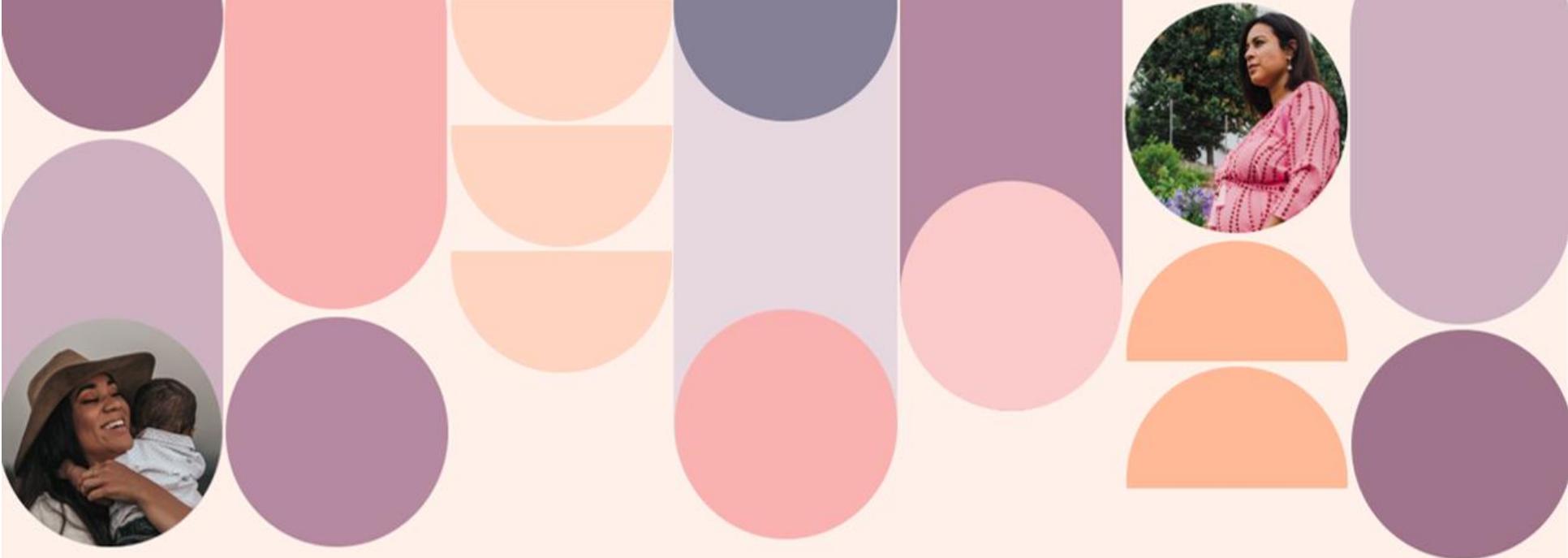
90.7% Of all Pregnancy-Related Deaths were Preventable

Among All **Preventable** Pregnancy-Related Deaths:



* Suppressed value <6
^ Unable to Determine, 4.5%





Recommendations to Improve Maternal Health Outcomes

MMRC's Top Recommendations

1. **Establish continuity of care to ensure timely care coordination between appropriate healthcare providers** (on or offsite) and wraparound services for the family to address social determinants of health.
2. **Increase adoption of trauma- and culturally-informed practices for providers...** includes the appropriate level of support, navigation, counseling and dialogue with patients and their families.
3. **Increase access to high quality mental and behavioral health services** and resources that are affordable, trauma-informed, and supportive of the family unit.
4. **Expand insurance coverage** to provide adequate, timely, and value-based reimbursement mechanisms for the range of maternal health services beyond one year postpartum.

MMRC's Top Recommendations

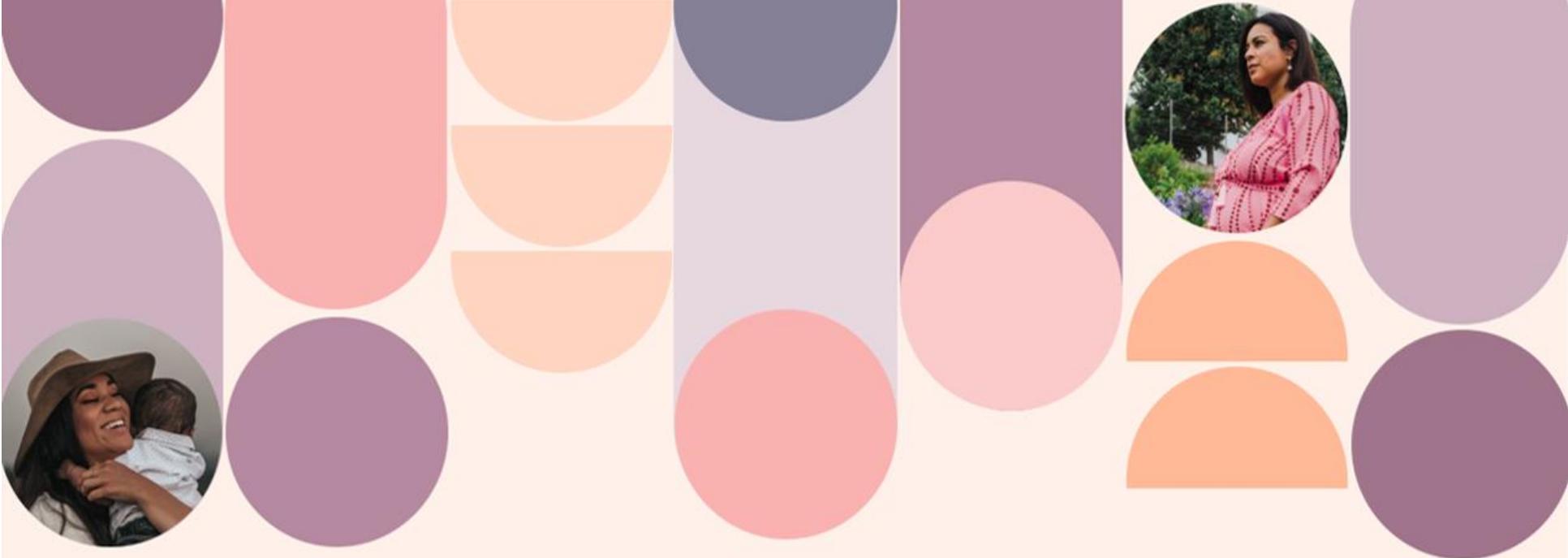
- 5. Ensure providers in all settings are screening pregnant persons and their partners** before, during, and after pregnancy or adoption for Domestic Violence, Mental Illness, Substance Use Disorder, and Adverse Childhood Experiences.
- 6. Increase provider education about the perinatal period...** by securing funding for and requiring or incentivizing participation in continuing education classes.
- 7. Improve access to the full range of reproductive health services** including contraceptives.
- 8. Ensure facilities have adequate infrastructure, protocols, and procedures** to improve readiness, prevention, recognition and response to obstetric emergencies.

Additional MMRC Recommendation

Improve access to healthcare for people of reproductive age including prenatal and postpartum care, mental and behavioral health care, emergency care, specialty care, and Substance Use Disorder treatment.

Strategies to improve access to healthcare:

- Increase the number of culturally-congruent providers in underserved areas
- Ensure the affordability and accessibility of prescription medications
- Expand options for healthcare delivery (e.g., mobile units, group care, telehealth, birth centers)
- Improve broadband and cell phone coverage across the state
- Address underlying barriers through case management



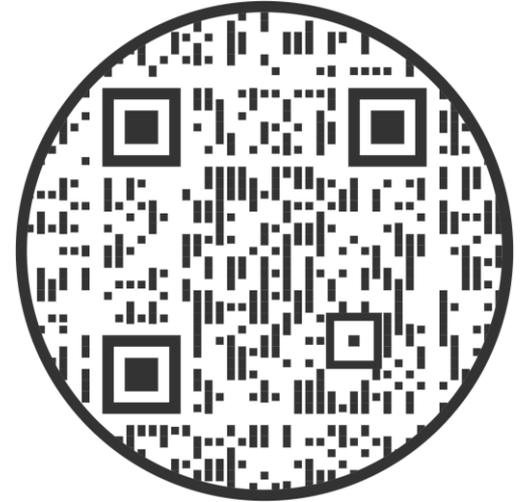
For more information..



ARIZONA DEPARTMENT
OF HEALTH SERVICES

How to get involved in Arizona's MMRC

- Scan QR code to view new member application
- Submit your application by June 26th 2024
- Applicants will be notified by July 1st
- In-person meeting July 25th & 26th
- Virtual monthly meetings:
1st or 2nd Monday of the month 7:45am-11:15am
- Associate member primary role: inform recommendations!



THE ARIZONA MATERNAL AND CHILD HEALTH NEEDS ASSESSMENT

LET US KNOW WHAT
SERVICES YOU AND
YOUR FAMILY NEED



TAKE OUR SURVEY

SCAN THE QR
CODE TO START



OR VISIT
[AZDHS.GOV/MCHSURVEY](https://azdhs.gov/mchssurvey)



ARIZONA DEPARTMENT
OF HEALTH SERVICES
PREVENTION SERVICES

ENGLISH & SPANISH
SURVEYS AVAILABLE
MUST BE 18+ TO PARTICIPATE

Arizona Maternal Mortality Reports and Infographics

- [Maternal Mortality in Arizona, 2018-2019](#)
- [Maternal Mental Health and Substance Use Related Deaths in Arizona, 2016-2018](#)
- [Maternal Mortality and Severe Maternal Morbidity in Arizona, 2016-2019](#)



maternalhealth@azdhs.gov
<http://azdhs.gov/maternalhealth>

National MMRC Data

- Pregnancy-Related Deaths: Data from Maternal Mortality Review Committees in 38 U.S. States, 2020 <https://www.cdc.gov/maternal-mortality/php/data-research/2020-mmrc.html>
- Pregnancy-Related Deaths: Data from Maternal Mortality Review Committees in 36 US States, 2017-2019 <https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/data-mmrc.html>
- Pregnancy-Related Deaths Among American Indian or Alaska Native Persons: Data from Maternal Mortality Review Committees in 36 US States, 2017-2019 <https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/data-mmrc-aian.html>
- Circumstances Contributing to Pregnancy-Related Deaths: Data from Maternal Mortality Review Committees in 36 US States, 2017-2019 <https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/data-mmrc-circumstances.html>

Resources

Arizona Perinatal Psychiatry Access Line

APAL is a statewide perinatal psychiatry access line. We assist **medical providers** in caring for their pregnant and postpartum patients with mental health and substance use disorders.

Perinatal psychiatrists are available by phone, **Monday-Friday, from 8:30 a.m.-4:30 p.m.**, to answer provider questions and review treatment options.

Call 888-290-1336

National Maternal Mental Health Hotline

1-833-TLC-MAMA (1-833-852-6262)



Free, confidential hotline: 1-888-688-4222

Hope *heals.*

Resources are available if you're a mother struggling with substance use disorder.



"I feel agitated and on edge all the time."

Know the Signs

Maternal Mental Health Conditions can happen to anyone. If you're not feeling like yourself, reach out to your doctor or call or text the National Maternal Mental Health Hotline:
1-833-9-HELP4MOMS.



psidirectory.com/arizona

CERTIFICATION IN PERINATAL MENTAL HEALTH



Thank you!

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ARIZONA DEPARTMENT
OF HEALTH SERVICES

References

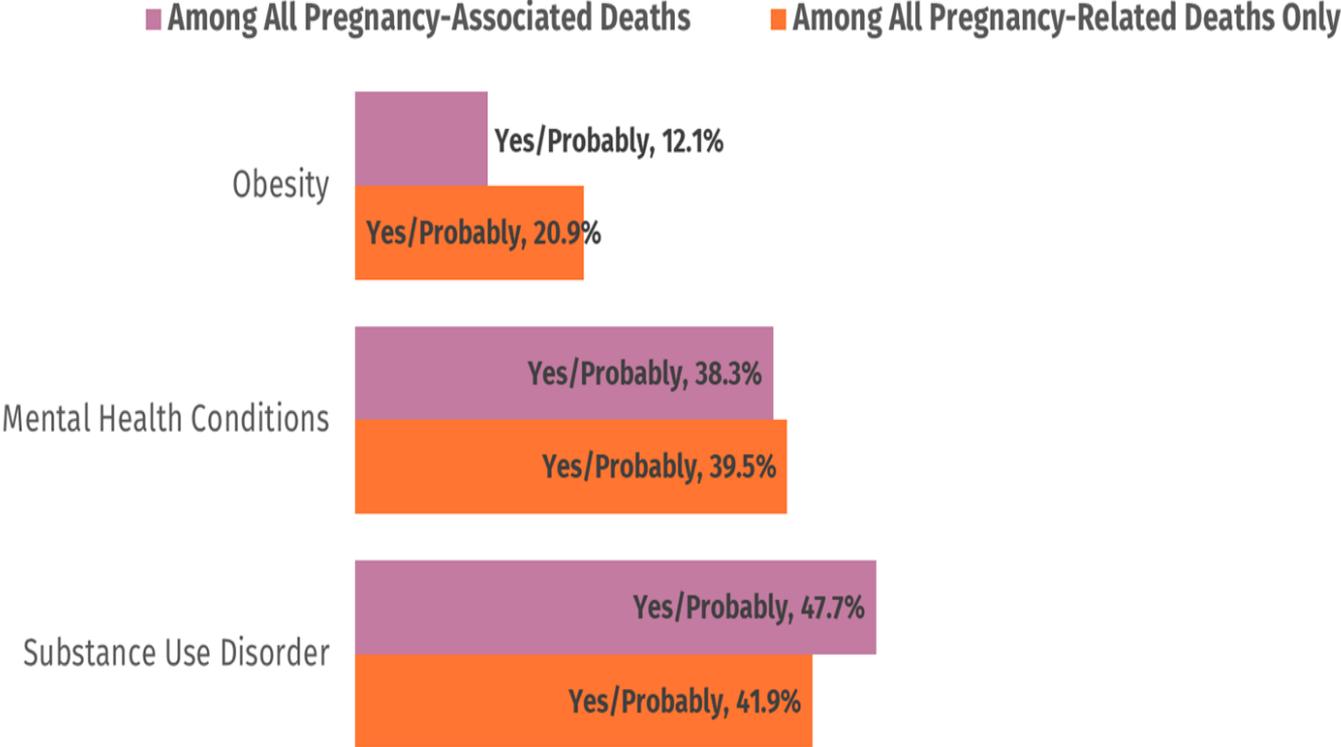
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Ramirez, GM, Davidson, S, Perez, A, Glidden, M, Rubio, V, Rouamba, A, Celaya, M. Maternal Mortality in Arizona, 2018-2019. Phoenix, AZ: Arizona Department of Health Services; 2024.

Trost SL, Busacker A, Leonard M, et al. Pregnancy-Related Deaths: Data from Maternal Mortality Review Committees in 38 U.S. States, 2020. Centers for Disease Control and Prevention, U.S. Department of Health and Human Services; 2024

Trost SL, Beauregard J, Njie F, et al. Pregnancy-Related Deaths: Data from Maternal Mortality Review Committees in 36 US States, 2017-2019. Atlanta, GA: Centers for Disease Control and Prevention, US Department of Health and Human Services; 2022.

MM by Contributing Factors



Arizona MMRC Review Criteria

- Deaths occurring within one year of pregnancy for individuals ages 10 - 60, regardless of outcome or cause.
- Deaths occurring in Arizona, regardless of if the decedent was a resident.
- Deaths of Arizona residents occurring outside of Arizona (though the MMRC has no statutory authority to obtain records if they are not voluntarily provided by the facility or agency).

Arizona's MMRC (48)

- **Advocacy Organizations**
- **Academic Institutions**
- **Physicians (OB/MFM)**
- **Public Health or Social Workers**
- **Registered Nurse or Nurse Practitioners**
- **Community Based Organizations**
- **Lived experience**
- **Midwives**
- **Health Insurance Providers**
- **Mental Health Professionals**
- Case Manager, Community Health Workers, Home Visitor, & Other Outreach Personnel
- Domestic Violence, Sexual Assault, Human Trafficking Specialists
- Lactation Consultants
- Tribal Entities & Tribal Maternal Health Community Advocates
- State Agencies or County Health Departments
- Doulas
- Forensic Pathologist or Toxicologist
- Peer Support Specialists
- Substance Use Treatment Providers and Counselors
- Emergency Medical Services & Law Enforcement Personnel

**36 “Core” members:
19 Clinical & 17 Non-Clinical**