Improving Maternal Health Outcomes in Arizona

Presentation created by Aubri Perez

February 2024

ARIZONA DEPARTMENT OF HEALTH SERVICES

Learning Objectives

At the conclusion of this slide deck, readers will be able to:

Have a high-level understanding of the Maternal Mortality Review Program

Understand Arizona's maternal mortality data for 2018-2019

Consider recommendations to improve maternal health outcomes

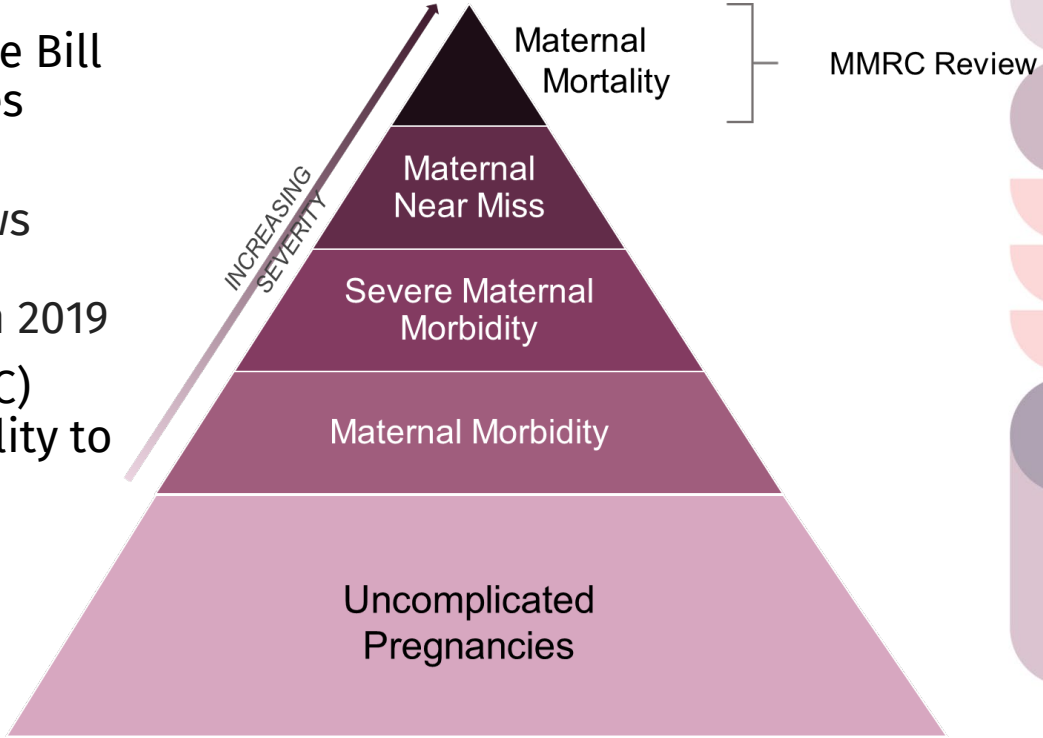
Know where to go for more information

Overview:
Maternal Mortality Review Program

ARIZONA DEPARTMENT
OF HEALTH SERVICES

Arizona Maternal Mortality Review Program

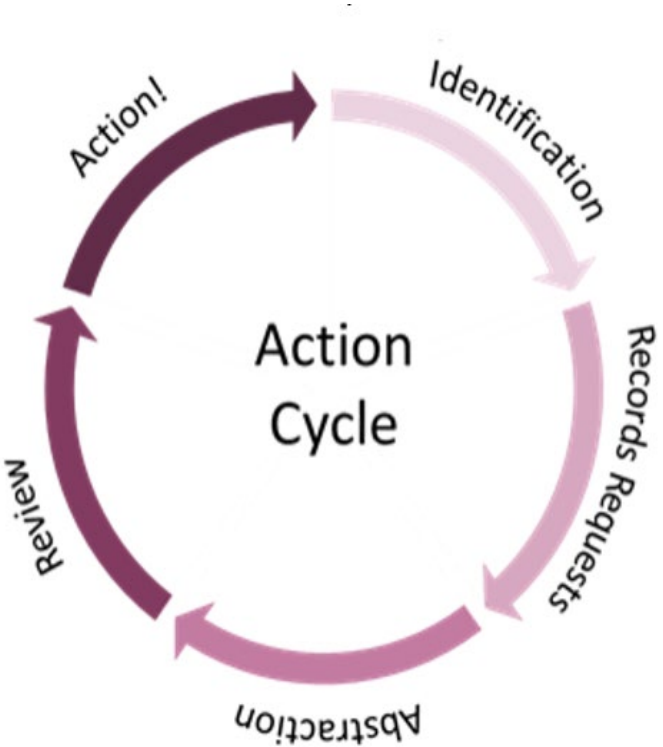
- Established by the Arizona Senate Bill 1121 on April 2011. Review of cases began July 2011.
- Awarded CDC's Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM) in 2019
- Multidisciplinary team (i.e., MMRC) reviews cases of maternal mortality to identify preventative factors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



Review to Action Cycle

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

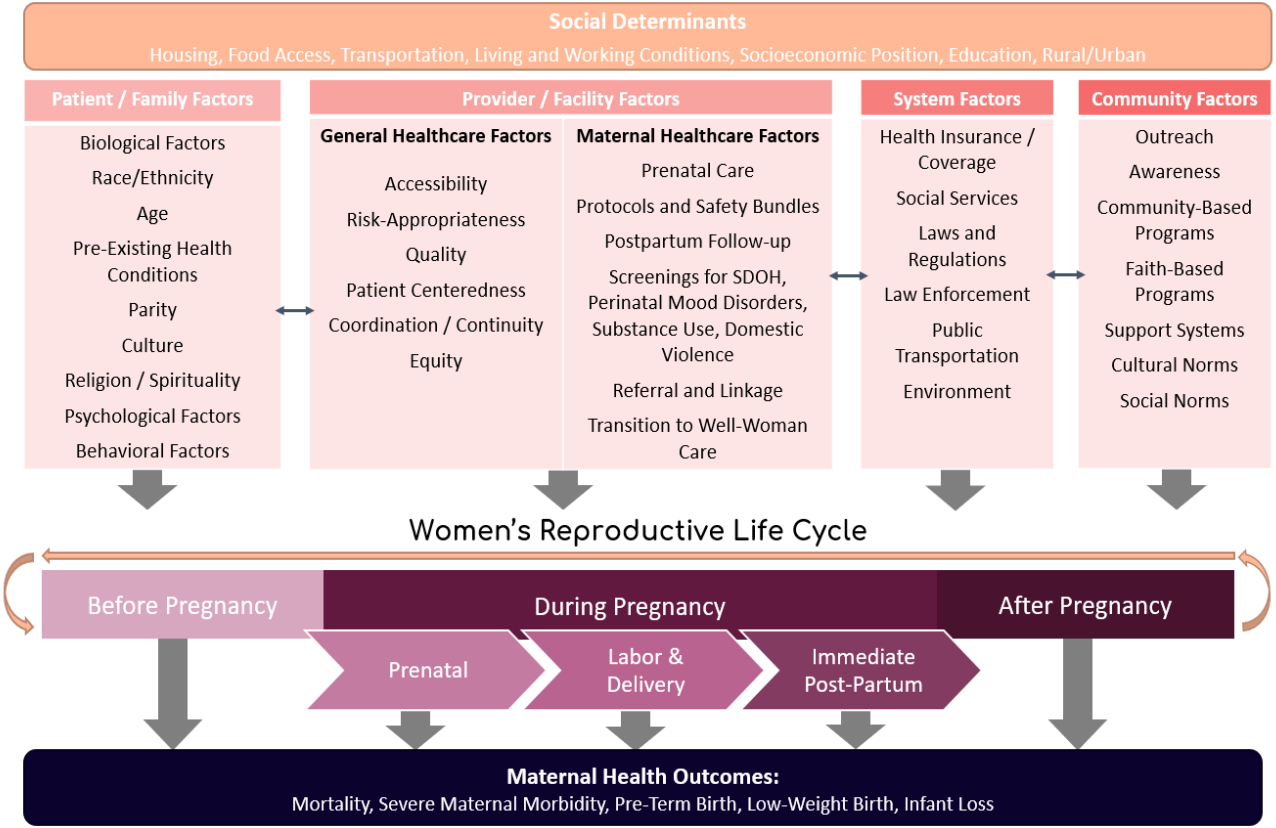
- Was the death pregnancy-related?
- What was the underlying cause of death?
- Was the death preventable?
- What are the contributing factors to the death?
- What specific and feasible actions might have changed the course of events (e.g., recommendations)?



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 MMRP has no statutory authority to obtain records if they are not voluntarily provided by the facility or agency).

Factors Impacting Maternal Mortality and Morbidity



ARIZONA DEPARTMENT OF HEALTH SERVICES

The Role of the MMRC

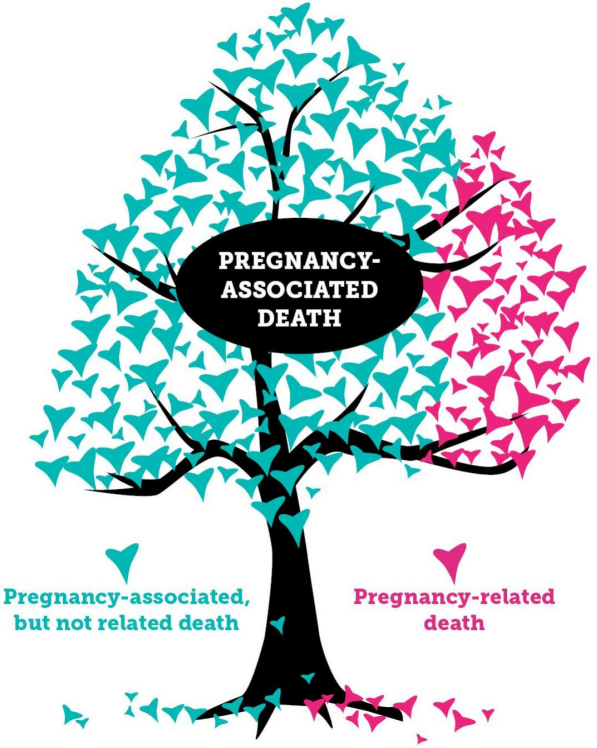
	CDC – National Center for Health Statistics (NCHS)	CDC – Pregnancy Mortality Surveillance System (PMSS)	Maternal Mortality Review Committees
Data Source	Death certificates	Death certificates linked to fetal death and birth certificates	Death certificates linked to **fetal death and birth certificates, medical records, social service records, autopsy, informant interviews…**
Time Frame	During pregnancy – 42 days	During pregnancy – 365 days	During pregnancy – 365 days
Source of Classification	ICD-10 codes	Medical epidemiologists (PMSS-MM)	**Multidisciplinary committees**
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	**Understand medical and non-medical contributors to deaths, prioritize interventions that effectively reduce maternal deaths**

ARIZONA DEPARTMENT OF HEALTH SERVICES

Sourced from: St Pierre A, Zaharatos .J., Goodman D, Callaghan W.M., Challenges and opportunities in identifying, reviewing, and preventing maternal deaths. Obstetrics & Gynecology, 2018. 131(1): p. 138-142.

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 on year of pregnancy from a cause that is not related to pregnancy.



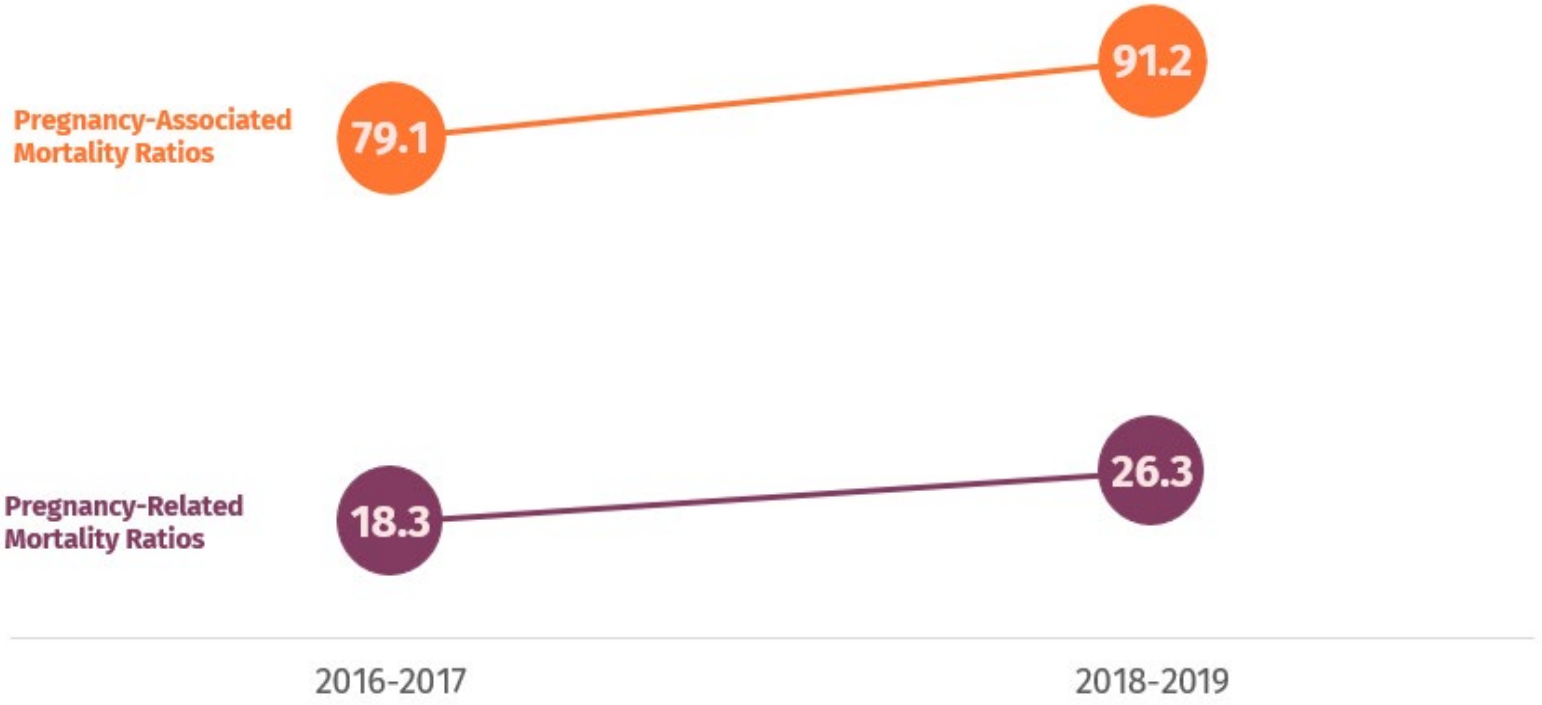
Sourced from: MMRIA Facilitation Guide and Review to Action https://reviewtoaction.org/content/mmria-committee-facilitation-guide
Graphic sourced from: South Dakota DoH https://doh.sd.gov/statistics/maternalmortality.aspx

Maternal Mortality (MM) Key Findings 2018-2019

ARIZONA DEPARTMENT OF HEALTH SERVICES

MM Comparison 2016-2017 vs 2018-2019

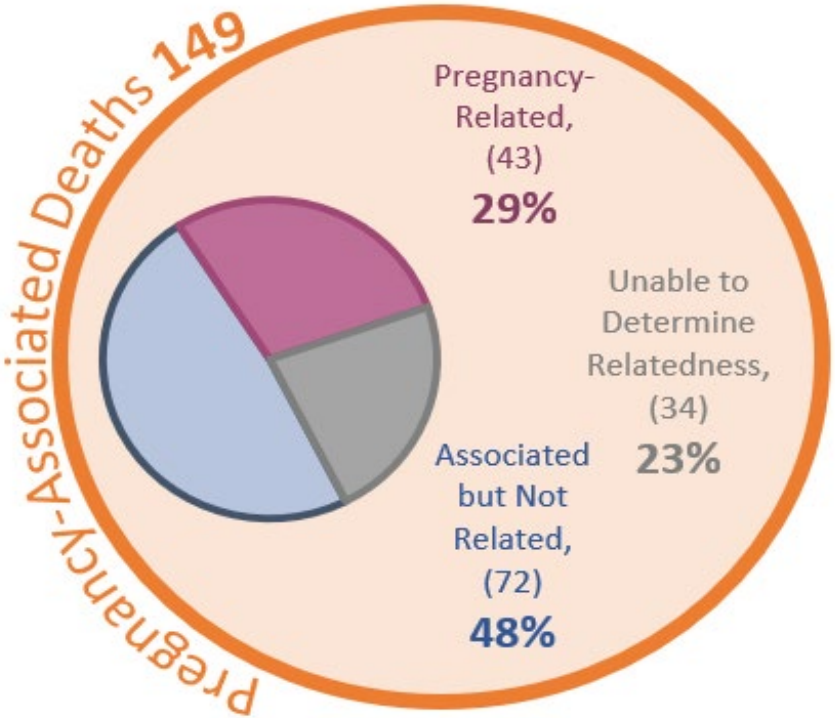
2-year Mortality Ratios per 100,000 live births (15-49 years of age)



ARIZONA DEPARTMENT OF HEALTH SERVICES

(Ramirez et al., 2024)

MM by Pregnancy Relatedness



ARIZONA DEPARTMENT OF HEALTH SERVICES

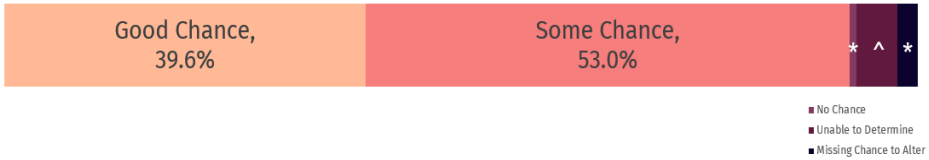
(Ramirez et al., 2024)

MM by Preventability and Timing of Death

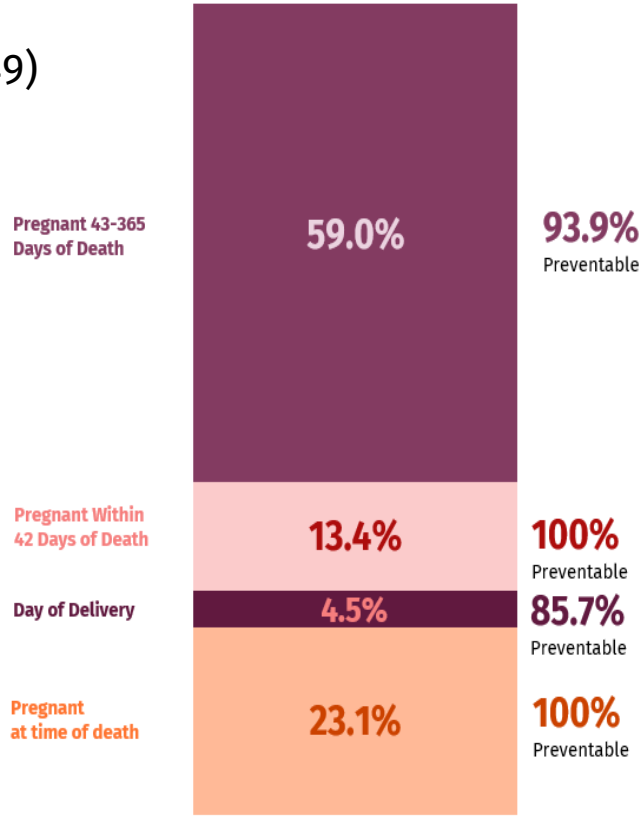
MMRC Reviewed **Pregnancy-Associated** Deaths in Arizona of Persons 10-60 Years Old, 2018-2019 (n=149)

89.9% Of all Pregnancy-Associated Deaths were Preventable

Among All Preventable Pregnancy-Associated Deaths:



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



(Ramirez et al., 2024)

ARIZONA DEPARTMENT OF HEALTH SERVICES

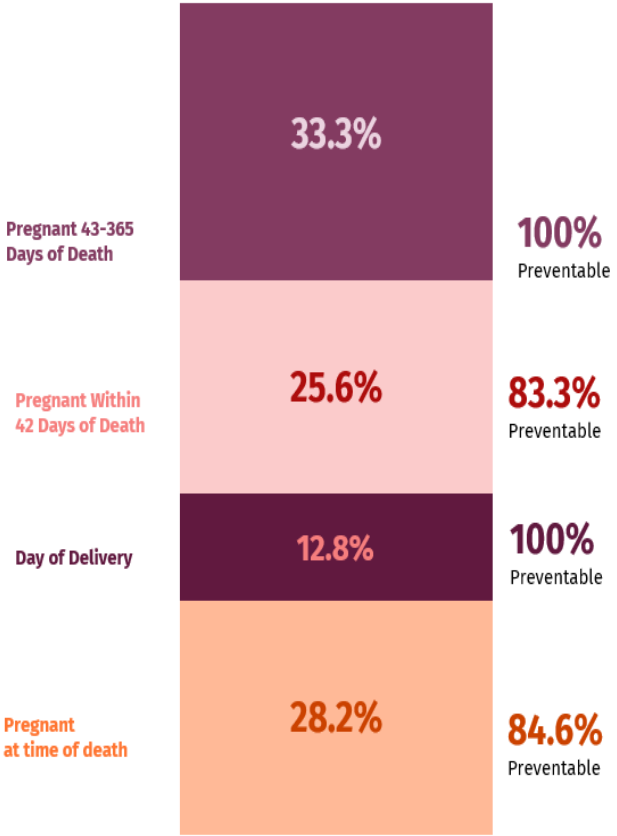
MM by Preventability and Timing of Death

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:

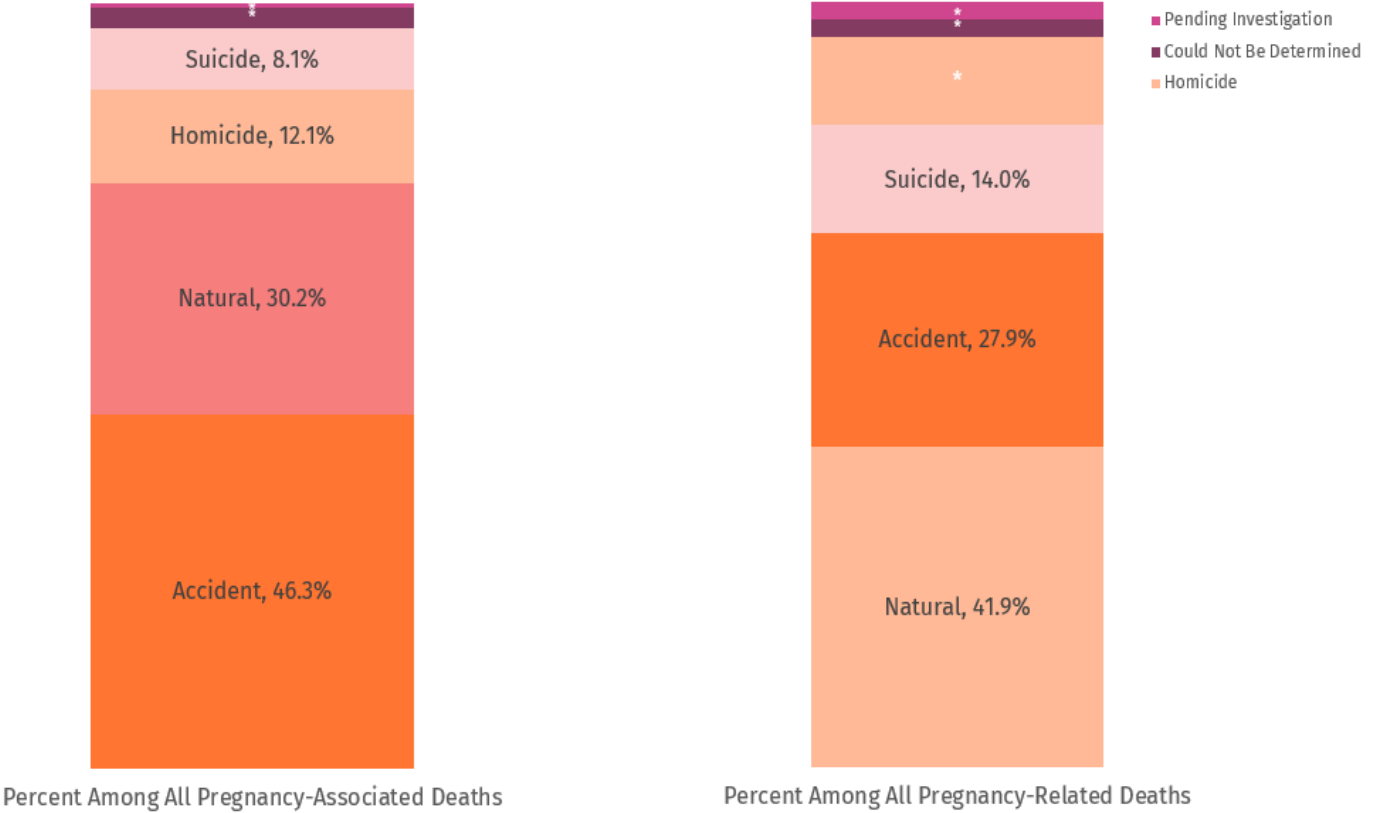
* Suppressed value <6
^ Unable to Determine, 4.5%



ARIZONA DEPARTMENT OF HEALTH SERVICES

(Ramirez et al., 2024)

MM by Manner and Conditions of Death

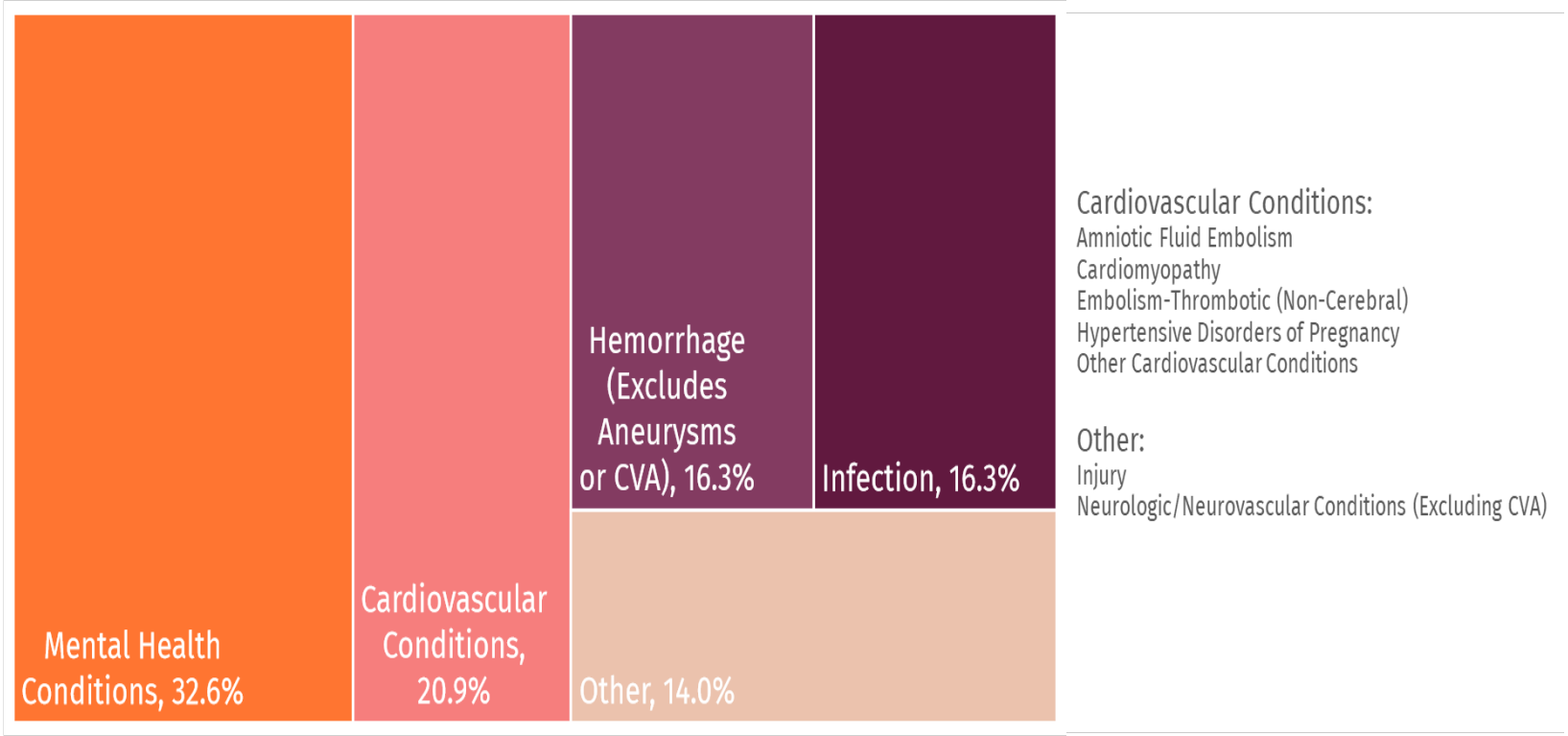


ARIZONA DEPARTMENT OF HEALTH SERVICES

* Suppressed value < 6

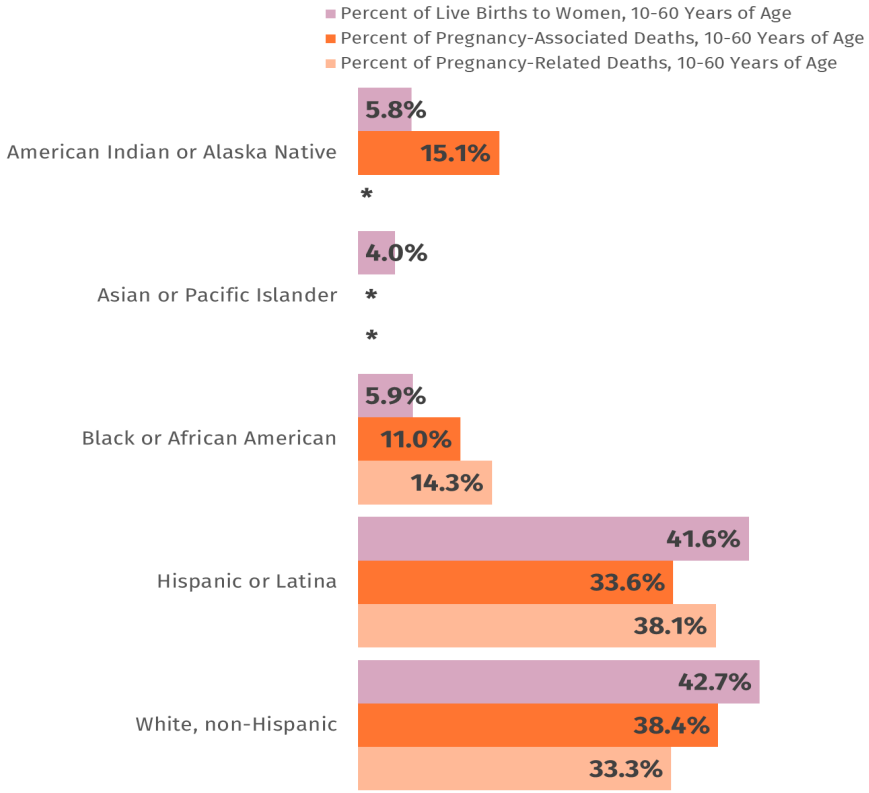
(Ramirez et al., 2024)

MM by Primary Underlying Cause of Death



(Ramirez et al., 2024)

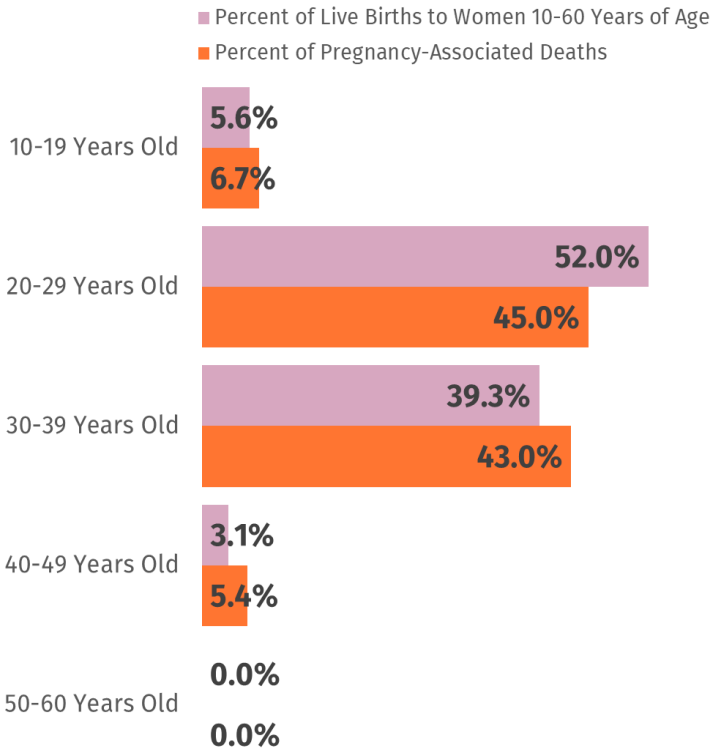
MM by Maternal Race and Ethnicity



* Suppressed value < 6

(Ramirez et al., 2024)

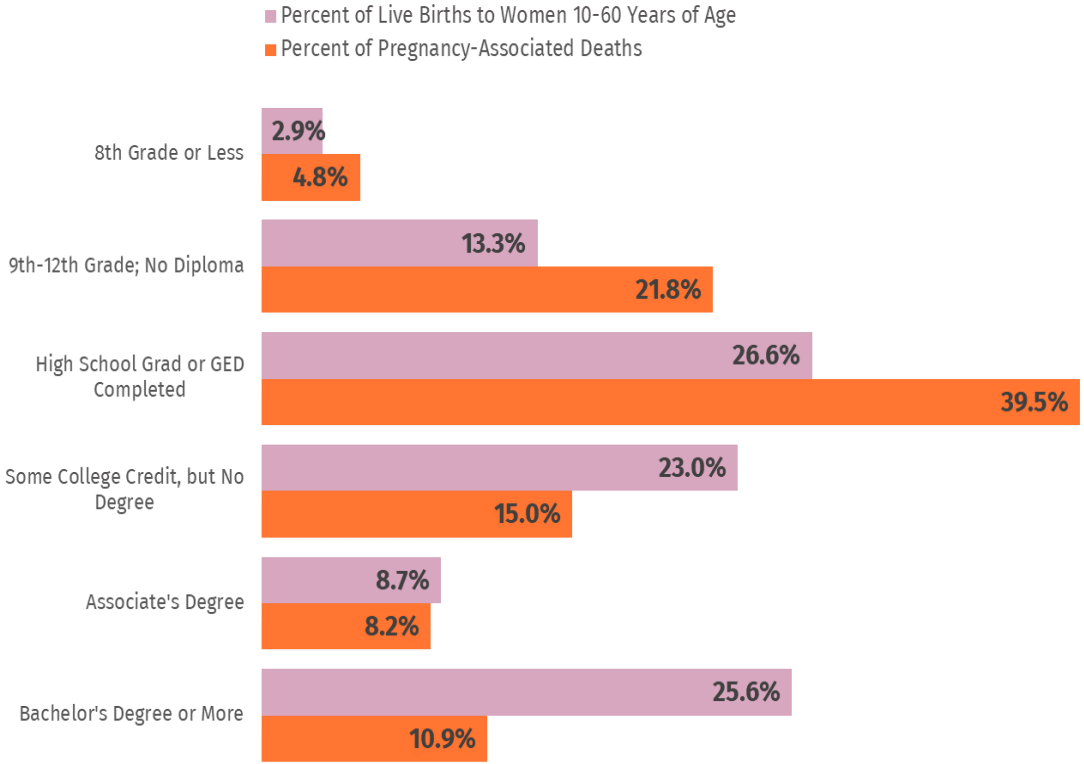
MM by Maternal Age



ARIZONA DEPARTMENT OF HEALTH SERVICES

(Ramirez et al., 2024)

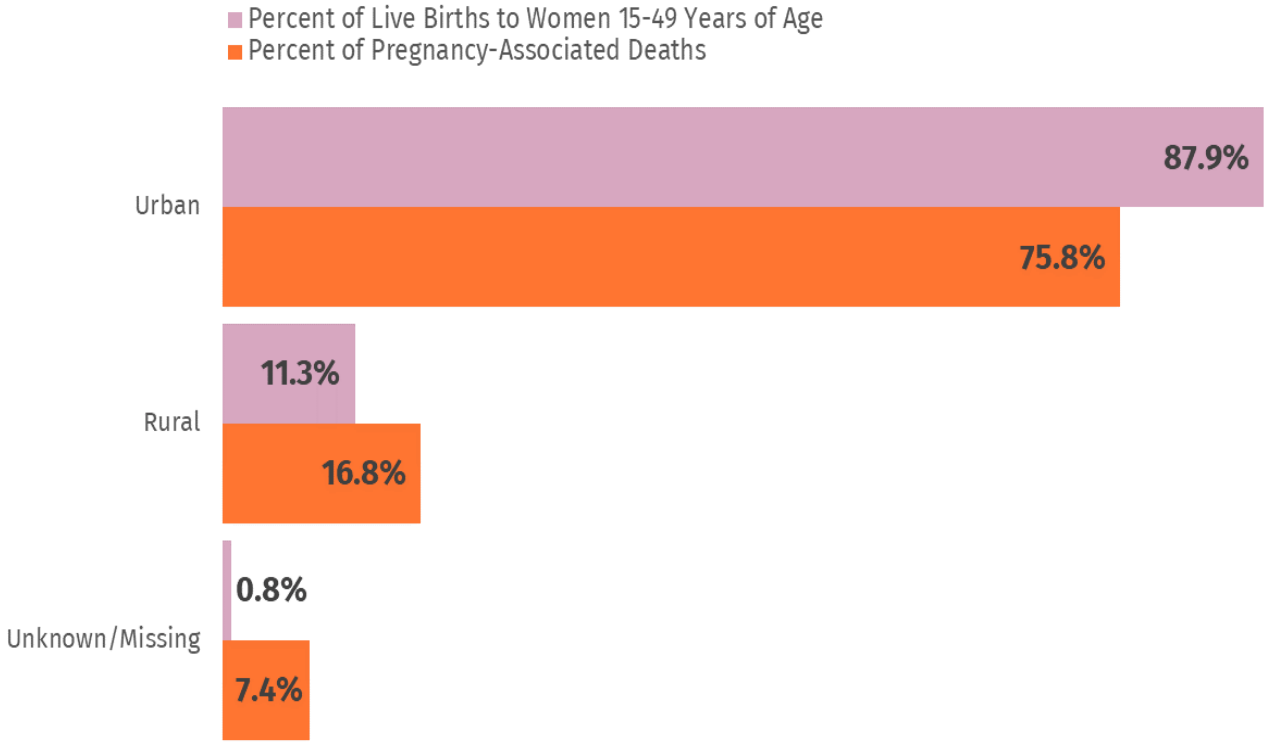
MM by Maternal Education



ARIZONA DEPARTMENT OF HEALTH SERVICES

(Ramirez et al., 2024)

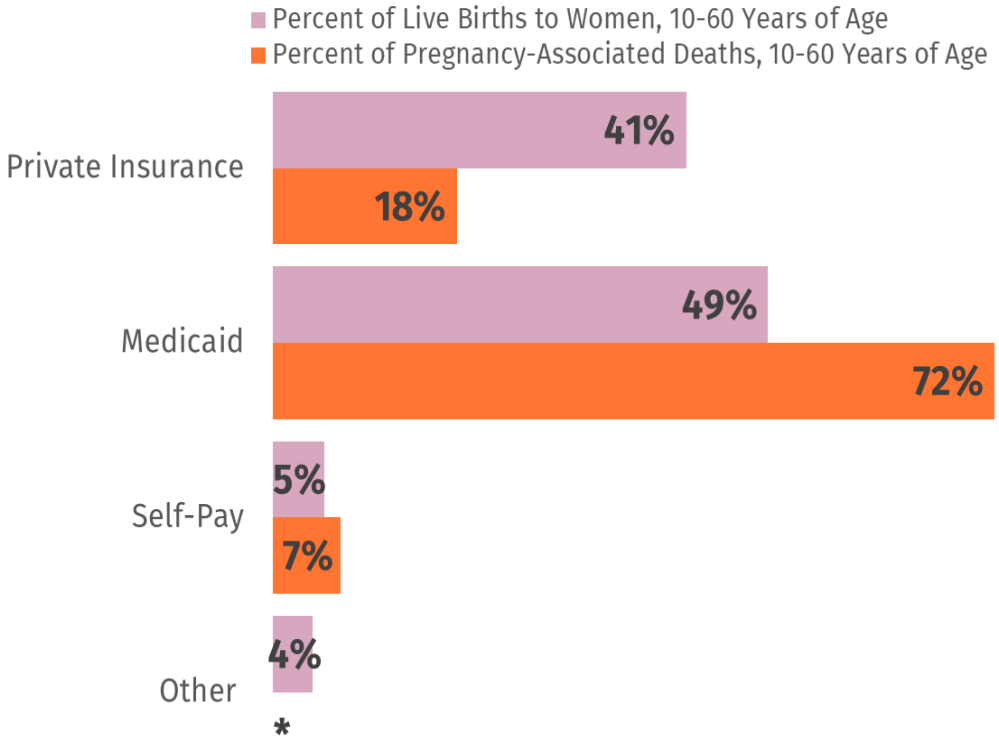
MM by Maternal Residence



ARIZONA DEPARTMENT OF HEALTH SERVICES

(Ramirez et al., 2024)

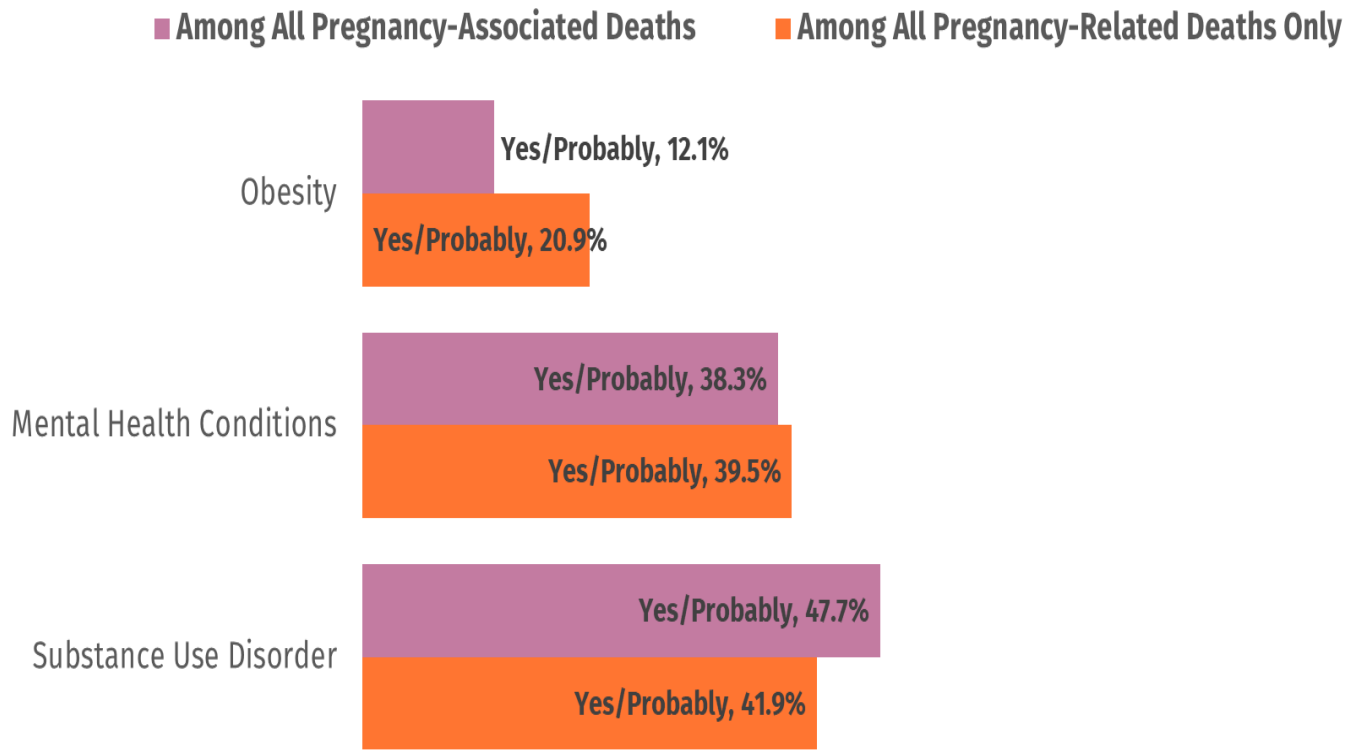
MM by Insurance Type



ARIZONA DEPARTMENT OF HEALTH SERVICES

(Ramirez et al., 2024)

MM by Contributing Factors



(Ramirez et al., 2024)

Recommendations to Improve Maternal Health Outcomes

#1 Prevention Recommendation

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 and barriers to care by utilizing community-based personnel, following existing guidelines, and obtaining grant funding as needed, especially at specific opportunities for those with increased risk factors. Community-based personnel that could potentially facilitate continuity of care includes but is not limited to case managers, patient navigators, social workers, and community-based birth workers.

(Ramirez et al., 2024)

Continuity of care is essential, especially for those with increased risk factors:

Mental and Behavioral Health:

- Substance Use Disorder
- Mental health condition(s)
- Postpartum depression
- History of trauma
- History of suicidal ideation or attempts
- History of self-harm

Reproductive Health:

- Pregnancy loss
- Teen pregnancy
- Surrogacy

Social Determinants of Health:

- Chronic health condition(s)
- Unstable housing
- Uninsured or underinsured
- Lack of established healthcare providers
- Domestic violence
- Loss of custody
- Cognitive or physical disabilities
- Children and Youth with Special Health Needs
- Single-parent household

Continuity of care should be established at specific opportunities:

Mental and Behavioral Healthcare:

- High score on a mental or behavioral health screening
- New mental health diagnosis
- Overdose event
- Suicidal ideation or attempt
- Substance Use Disorder treatment
- Diversion program

Reproductive Health:

- Positive pregnancy test
- Facility or home-based delivery
- Miscarriage or abortion event
- Ongoing postpartum gynecological concerns

Other Healthcare:

- Discharge planning
- Leaving against medical advice
- Admission into the Neonatal Intensive Care Unit
- Post-removal of a breast abscess
- Breakthrough seizures

(Ramirez et al., 2024)

#2 Prevention Recommendation

Increase adoption of trauma- and culturally-informed practices for providers by partnering with universities or organizations to adapt curriculum for providers to be trained in providing patient-centered care, which includes the appropriate level of support, navigation, counseling and dialogue with patients and their families about pertinent healthcare topics while ensuring messaging meets language preferences (i.e. interpreters and translators available in-person, by phone, or by video) and reduces stigma, while empowering families to make informed decisions, advocate for themselves, and improve health literacy and health-seeking behavior.

(Ramirez et al., 2024)

#2 Strategies for Implementation

System

- Become a trauma-informed state
- Focus on social determinants of health
- Build awareness and responsiveness to systemic oppression and intersectionalities

Provider

- Ensure collaborative care plans
- Offer treatment options that consider behavioral and lifestyle factors
- Use gender-affirming language
- Allow patients to complete screenings in private
- Utilize the Child and Adolescent Level of Care Utilization System (CALOCUS) tool to provide whole person care

Facility

- Educate personnel about historical and childhood trauma
- Establish grand rounds about birth equity
- Enact risk reduction protocols to reduce patients leaving against medical advice
- Document gender identity and sexual orientation
- Collect history of discrimination in healthcare settings
- Offer options for childcare that are accessible and affordable
- Collect multiple methods of communication
- Track the presence of advanced directives
- Offer group prenatal care as an alternative option

(Ramirez et al., 2024)

#3 Prevention Recommendation

Increase access to high quality mental and behavioral health services and resources that are affordable, trauma-informed, and supportive of the family unit. Delivering high-quality mental and behavioral health services should look like evidence-based, standardized processes for referral, intake, and care coordination across all settings including but not limited to inpatient care, standard and intensive outpatient care, maternal- and youth-specific care, tribal health clinics, long-term group homes, and clinics offering Medication for Opioid Use Disorder (MOUD). These services should also involve coordination of resources through social work, case management, or peer support services.

(Ramirez et al., 2024)

#3 Strategies for Implementation

Accessibility

- Integrate mental and behavioral health services into perinatal care
  - Revisit laws that prevent healthcare integration
- Improve referral processes
- Ensure timely delivery of services
- Increase funding for mental and behavioral health services
- Increase the number of mental and behavioral health providers
  - Conduct a network adequacy study
  - Streamline licensing and oversight
- Implement telehealth, telephone, and online services

Affordability

- Expand insurance coverage for comprehensive care
- Secure funding for free and low-cost services
  - Prioritize those who are uninsured and underinsured
  - Consider options for non-Arizona residents

Trauma-Informed and Supportive of the Family Unit

- Establish residential treatment allowing children to stay with their families
- Provide options for childcare
- Support adoptive and foster parents
- Implement innovative models like Hushabye Nursery and the MOMS model

(Ramirez et al., 2024)

#4 Prevention Recommendation

Expand insurance coverage to provide adequate, timely, and value-based reimbursement mechanisms for the range of maternal health services beyond one year postpartum and other necessary health services for providers or organizations serving pregnant and postpartum individuals (i.e. regardless of live birth or pregnancy loss) by advancing birth equity and removing barriers, particularly for indigenous peoples, those in foster care system, and those moving between states or otherwise experiencing a gap in coverage.

This recommendation pertains to payers of health services like the Arizona Health Care Cost Containment System (AHCCCS), Indian Health Services (IHS), Federal Emergency Services, and private payers.

(Ramirez et al., 2024)

#5 Prevention Recommendation

Ensure providers in all settings are screening pregnant persons and their partners before, during, and after pregnancy or adoption (e.g. prior to discharge) for domestic violence, mental illness (e.g., Perinatal Mood and Anxiety Disorders, Serious Mental Illness), Substance Use Disorder, and Adverse Childhood Experiences. Settings that interact with pregnant persons and their partners include but are not limited to hospitals, schools, correctional facilities, obstetric and pediatric clinics. One strategy to ensure providers are screening is to establish a state universal screening mandate.

(Ramirez et al., 2024)

#6 Prevention Recommendation

Increase provider education about the perinatal period including signs and symptoms, risk factors, routine screenings, diagnostic criteria, reporting requirements, response protocols, evidence-based medication guidelines, treatment guidelines, and alternative treatment options by securing funding for and requiring or incentivizing participation in continuing education classes.

Providers that would benefit from education regarding the perinatal period include but are not limited to first responders, general providers, obstetric and non-obstetric providers, emergency department providers, physician assistants, mental and behavioral health providers, cardiologists, prescribers, pharmacists, and prenatal massage therapists.

(Ramirez et al., 2024)

#7 Prevention Recommendation

Improve access to the full range of reproductive health services including contraceptives, especially prior to discharge from the birthing facility, and ongoing gynecological care by integrating health services and addressing barriers and social determinants of health by consistently using standardized decision aids when discussing all contraceptive options to avoid coercion.

#8 Prevention Recommendation

Ensure facilities have adequate infrastructure, protocols, and procedures to improve readiness, prevention, recognition and response to obstetric emergencies and expedite coordination of care with a multidisciplinary team of appropriate healthcare providers.

(Ramirez et al., 2024)

#9 Prevention Recommendation

Address access to care barriers for pregnant and postpartum individuals related to income insecurity while prioritizing assistance to those with children, experiencing domestic violence, using substances, and/or lack a support system.

#10 Prevention Recommendation

Increase patient education about substance use and misuse including overdose education, harm reduction strategies, and where to access treatment services. The education is most important for patients and families with a history of substance use as well as community members living in high-risk areas.

(Ramirez et al., 2024)

For more information...

ARIZONA DEPARTMENT
OF HEALTH SERVICES

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

ARIZONA DEPARTMENT OF HEALTH SERVICES

National MMRC Data

- 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