



ARKANSAS MATERNAL MORTALITY
REVIEW COMMITTEE



Legislative Report
December 2021

2018 Arkansas
Maternal Mortality
Case Summary and
Committee
Recommendations

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Arkansas Maternal Mortality Review Committee Members

Pam Brown, RN
Hospital Quality Improvement
Arkansas Hospital Association

Bernard Canzoneri, MD
Maternal Fetal Medicine
Northwest Region

Michael Cope, MD
Obstetrics/Gynecology
American College of Obstetricians &
Gynecologists, Arkansas Section Chair

Nafisa Dajani, MD
Maternal Fetal Medicine
Central Region

Nadir El Sharawi, MD
Obstetric Anesthesia
Arkansas Society of Anesthesiologists

Michael Escue, MD
Obstetrics/Gynecology
Northwest Region

Martha Garrett-Shaver, MD
Family Medicine
Southwest Region

William Greenfield, MD
Obstetrics/Gynecology
Arkansas Department of Health

Ken Lambert, MD
Obstetrics/Gynecology
Southeast Region

Curtis Lowery, MD
Maternal Fetal Medicine
Central Region

Nirvana Manning, MD
Obstetrics/Gynecology
UAMS, Obstetrics and Gynecology, Chair

Shannon McKinney, DNP, APRN
Obstetric/Neonatal Nursing
Public Health Association of Women's
Health, Obstetric and Neonatal Nurses

Jill Mhyre, MD
Obstetric Anesthesia
UAMS, Anesthesiology, Chair

Lauren Nolen, MD
Obstetrics/Gynecology
Central Region

Shona Ray-Griffith, MD
Psychiatry
American Psychiatric Society

Carl Riddell, MD
Obstetrics/Gynecology
Arkansas Board of Health

Chad Rogers, MD
Pediatrics
Arkansas Foundation for Medical Care, CMO

Faith Sharp
Community Education
Non-Profit Organization

Allison Shaw-Devine, MD
Cardiology
American College of Cardiology,
Arkansas Chapter

Bruce Thompson, MD
Obstetrics/Gynecology
Northeast Region

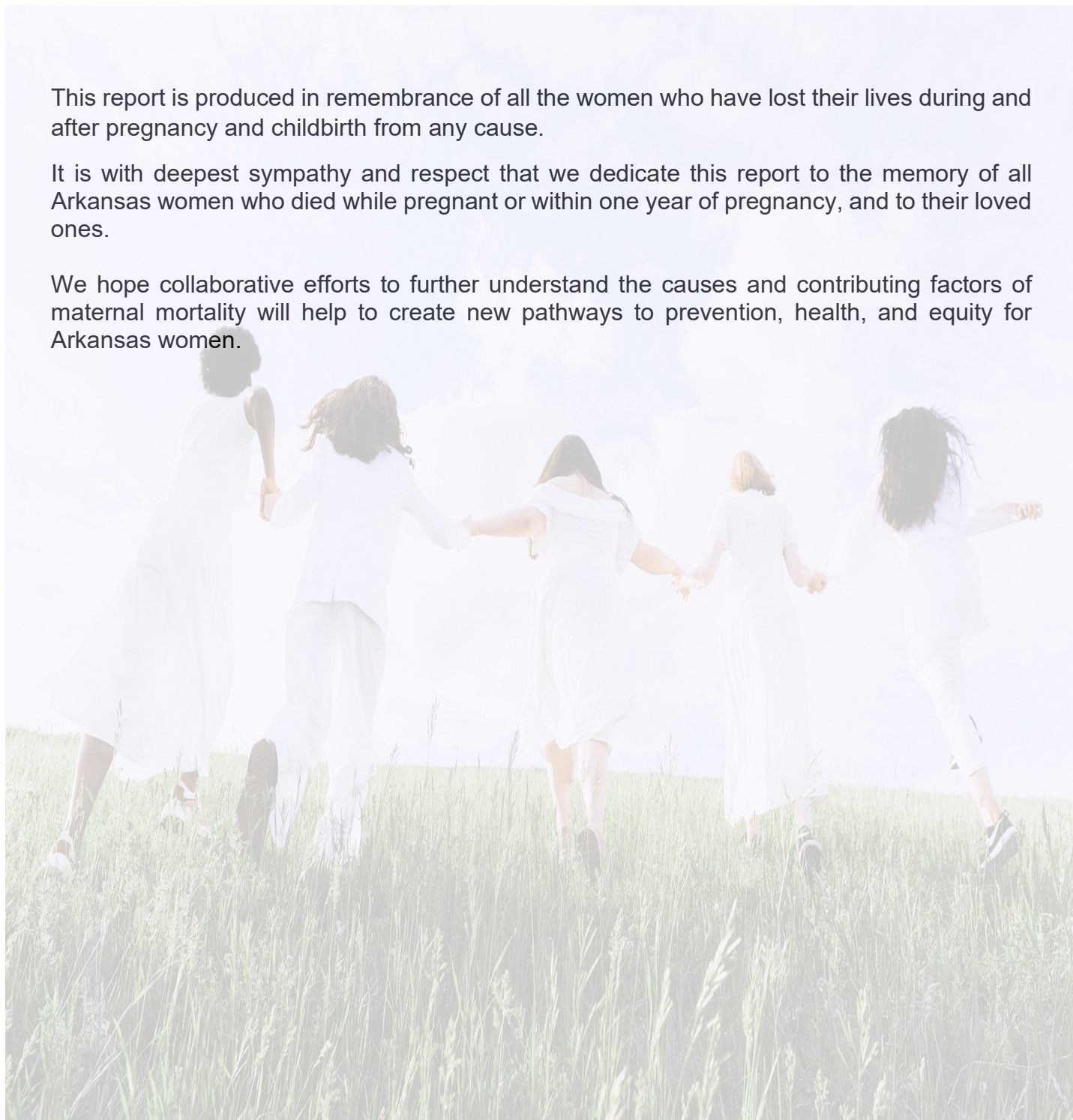
Joni Yarnell, CNM, APRN
Midwifery
American College of Nurse-Midwives,
Arkansas Affiliate

Dedication

This report is produced in remembrance of all the women who have lost their lives during and after pregnancy and childbirth from any cause.

It is with deepest sympathy and respect that we dedicate this report to the memory of all Arkansas women who died while pregnant or within one year of pregnancy, and to their loved ones.

We hope collaborative efforts to further understand the causes and contributing factors of maternal mortality will help to create new pathways to prevention, health, and equity for Arkansas women.



Acknowledgements

This report was made possible through detailed reviews of maternal death cases by the volunteer Arkansas Maternal Mortality Review Committee (hereafter referred to as AMMRC or the Committee). We are deeply grateful to the members of the Committee for their insight, dedication, and generosity. We would like to acknowledge the Arkansas Department of Health – Health Statistics Branch for their collaboration in providing the data used to identify cases of maternal deaths and the Epidemiology Branch for data analysis and technical review. We thank the health systems, healthcare providers, and coroners who provide the records that allow meaningful review to occur.

We appreciate the lead sponsors and co-sponsors of the Bill who recognized the need to preserve the lives of Arkansas mothers.



We also thank our national partners at the Centers for Disease Control and Prevention's Division of Reproductive Health and the Building U.S. Capacity to Review and Prevent Maternal Deaths project for providing technical assistance and support during the development of the AMMRC.

Executive Summary

The Arkansas Maternal Mortality Review Committee reviews maternal deaths that occur during pregnancy or within one year of the end of pregnancy. Through a process of ongoing surveillance, data collection, and comprehensive multidisciplinary review, the information gathered is used to develop evidence-based recommendations that seek to prevent future maternal deaths. This report details the Committee's review and recommendations of maternal deaths of Arkansas residents for the year 2018.

The total number of live births in Arkansas in 2018 was 36,896, with the data linkage process identifying 40 potential pregnancy-associated deaths. Application of exclusion criteria determined by the Committee resulted in removal of 10 cases, with 30 pregnancy-associated deaths undergoing full case abstraction and review and 12 cases determined to be pregnancy related.

The pregnancy-related mortality ratio in 2018 was 33 deaths per 100,000 live births.

Key Findings

- Timing of pregnancy-associated deaths: 10 occurred while pregnant, 6 occurred within 42 days postpartum, 14 occurred between 43 days and one year postpartum
- The leading causes of pregnancy-related deaths are cardiovascular conditions, hemorrhage, and cardiomyopathy
- Black non-Hispanic women comprise 19% of all births and 37% of all pregnancy-associated deaths
- Pregnancy-related death disproportionately affects women ages 30 and older
- 92% of pregnancy-related deaths were considered potentially preventable

Key Recommendations

- Promote clinical excellence through implementation of comprehensive safety bundles and coordinated care
- Extend maternity coverage from 60 days to one year postpartum, as 47% of pregnancy associated deaths occurred 43 days to one year after delivery
- Expand coverage and increase access to diagnosis, care, and treatment for mental health and substance use disorders
- Increase access to long-acting reversible contraception in the immediate postpartum period and tubal ligation to prevent unintended pregnancy

This is the first comprehensive review of maternal deaths of Arkansas residents; consequently, the numbers are small. Caution should be applied when interpreting and comparing data with other jurisdictions as different exclusion and inclusion criteria may have been applied.

Background

In 2019, Arkansas introduced legislation to establish a maternal mortality review committee. Arkansas House Bill 1440 was introduced and passed during the 92nd General Assembly, Regular Session, 2019. Arkansas House Bill 1440 became Act 829 of 2019 (Appendix B) and established the AMMRC which requires the formal review of maternal deaths in Arkansas and secures protection for the confidentiality of the process. The AMMRC was assembled within the ADH Family Health Branch, Women's Health Section. The Committee was developed with guidance from the Centers for Disease Control and Prevention (CDC) Building US Capacity to Review and Prevent Maternal Deaths and is modeled after well-established review committees in the United States.

Within the population of women of reproductive age, maternal mortality is an indicator that is monitored by ADH pursuant to Ark. Code Ann. § 20-15-2301. Maternal mortality is considered a sentinel event that warrants close scrutiny. Maternal mortality review provides insight into the medical and social factors leading to these events and to prevent future occurrences of maternal mortality.

Scope

The scope of cases for Arkansas review is all pregnancy-associated deaths or any deaths of women during pregnancy or up to 365 days after pregnancy ends. At the July 2020 AMMRC meeting, members set forth exclusion criteria for abstraction (i.e., motor vehicle accidents and out-of-state residents).

Purpose

The purpose of the AMMRC is to identify and characterize maternal deaths with the goal of identifying prevention opportunities.

Vision

To protect and improve the health and well-being of all Arkansans by eliminating preventable maternal deaths in Arkansas.

Mission

Optimize health for all Arkansans to achieve maximum personal, economic, and social impact.

Goals

The goals of the AMMRC are to:

- Perform thorough record abstraction in order to obtain details of events and issues leading up to a mother's death.
- Perform a multidisciplinary review of cases to gain a holistic understanding of the issues.
- Determine the annual number of maternal deaths related to pregnancy (pregnancy-related mortality).
- Identify trends and risk factors among pregnancy-related death in Arkansas.
- Recommend improvements to care at the individual, provider, and system levels with the potential for reducing or preventing future events.
- Prioritize findings and recommendations to guide development of effective preventive measures.
- Recommend actionable strategies for prevention and intervention.
- Disseminate the findings and recommendations to a broad array of individuals and organizations.

- Promote the translation of findings and recommendations into quality improvement actions at all levels.

Statutory Authority and Protections

The maternal mortality review is conducted pursuant to Ark. Code Ann. § 20-15-2301 - 2307. See Appendix B for full text of the public health laws that apply.

§ 20-15-2301 provides authority for the AMMRC to review pregnancy-associated deaths or deaths of women with indication of pregnancy up to three hundred sixty-five (365) days after the end of pregnancy.

§ 20-15-2302 provides powers and duties to the AMMRC including identifying maternal death cases, reviewing medical records, contacting family members and other affected or involved persons to collect additional relevant data. All proceedings and activities of the committee are confidential and are not subject to the Freedom of Information Act of 1967.

§ 20-15-2303 provides access to all relevant medical records associated with a case under review by the committee.

Membership

The AMMRC is a multidisciplinary committee whose members represent Arkansas Department of Health's (ADH) five health regions and various specialties, facilities, and systems that interact with and impact maternal health.

Twenty-one inaugural members were appointed by the Arkansas Secretary of Health in late 2019. Membership consists

of specialists in obstetrics and gynecology, maternal fetal medicine, anesthesiology, nursing, psychiatry, mental/behavioral health, nurse midwifery, public health, hospital association, patient advocacy, and more. Recruitment of new AMMRC members may occur annually as needed unless a specific type of expertise is required during the year for a case review (Example: domestic violence).

AMMRC members serve in a volunteer capacity and do not receive compensation for participation in the review process. AMMRC members have a term limit of up to three years for their volunteer stewardship and attend quarterly meetings.

Organizations Represented by Members

- American College of Cardiology, Arkansas Chapter
- American College of Nurse Midwives, Arkansas Affiliate
- American College of Obstetricians & Gynecologists
- Arkansas Department of Health
- University of Arkansas for Medical Sciences
- Arkansas Board of Health
- Arkansas Foundation for Medical Care
- Arkansas Hospital Association
- Arkansas Medical Society
- Arkansas Society of Anesthesiologists
- Arkansas Chapter Association of Women's Health, Obstetric and Neonatal Nurses
- Arkansas Board of Nursing
- Arkansas Psychiatric Society
- March of Dimes

Key Definitions

In order to address maternal mortality or deaths, it is important to first understand the terms used to describe maternal mortality.

Maternal death: The death of a woman *while pregnant or within 42 days of the end of pregnancy*, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes. This definition is based on the death certificate information only and is used for surveillance by the CDC and other organizations.¹



The terms *pregnancy-associated death* and *pregnancy-related death* are used in maternal mortality review systems in which multidisciplinary committees perform comprehensive reviews of deaths among women *during pregnancy or within a year of the end of pregnancy*. Information is gathered from death certificates as well as a wide range of other sources.¹

Pregnancy-associated death: The death of a woman *during pregnancy or within one year of the end of pregnancy*, regardless of the cause.

Pregnancy-related death: 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-associated, but not related death: A death *during or within one year of the end of pregnancy* from a cause that is not related to pregnancy.

Pregnancy-associated mortality ratio: The number of pregnancy-associated deaths per 100,000 live births.

Pregnancy-related mortality ratio: The number of pregnancy-related deaths per 100,000 live births.

1. Review to Action. Definitions. <https://reviewtoaction.org/index.php/learn/definitions>.

Process

Case Identification

Identifying maternal deaths after an occurrence is a complex process. Multiple strategies are employed to identify possible cases of maternal deaths; these strategies are performed concurrently.

The ADH Family Health Branch has established data sharing agreements with the Office of Health Information Technology (OHIT), ADH Health Statistics Branch, ADH Vital Statistics Section, and ADH Hospital Discharge Data System. In addition, an agreement has been established with CDC for data sharing and use of the Maternal Mortality Review Information Application (MMRIA).

Pregnancy-associated deaths of Arkansas female residents of reproductive age are identified through one or more of the following criteria:

- Death certificate for a woman linked with a matching live birth certificate or a fetal death certificate;
- Death certificate for a woman with a cause of death related to pregnancy, childbirth, or postpartum period; or
- Death certificate for a woman with the pregnancy checkbox indicating that the death occurred during pregnancy or within one year of pregnancy.

Abstraction

Information for abstraction is gathered from maternal/neonatal death certificates, neonatal birth certificates, medical records, and autopsy reports. Additional data sources include hospital and emergency department records, obituaries, police reports, social media, media and news reports, certifier confirmation, and more. Records are then abstracted by a trained abstractor who prepares de-identified case narratives for Committee review.

Meeting Structure

The AMMRC reviews and makes decisions about each case based on the case narrative and abstracted data. The Committee examines the cause of death and contributing factors and determines the following:

1. Was the death pregnancy related?
2. What was the underlying cause of death?
3. Was the death preventable?
4. What were the factors that contributed to the death?

5. What are the recommendations and actions that address those contributing factors?
6. What is the anticipated impact of those actions if implemented?

The Committee then formulates findings and recommendations in accordance with CDC's MMRIA.

MMRIA is based on a three-step approach for determining the contributing factors of death. Each factor is identified according to levels of care: patient/family, provider, facility, system, and community. Each factor is then assigned a contributing factor class from a list of options. Lastly, the Committee assigns the factor a concise description.¹



1. Review to Action. Building U.S. Capacity to Review and Prevent Maternal Deaths. Maternal Mortality Review Committee Facilitation Guide. https://reviewtoaction.org/sites/default/files/2021-03/Maternal%20Mortality%20Review%20Committee%20Facilitation%20Guide_V10.pdf.

Findings

The following section presents findings from the Committee’s review of pregnancy-associated deaths and analysis of statewide trends. These findings inform the Committee’s recommendations described later in this report.

Rates based on counts less than 20 are considered unstable and should be interpreted with caution. These numbers, percentages, ratios, and rates may change considerably from one time period to the next. Data presented in this report may not be comparable to pregnancy-associated mortality data from other jurisdictions due to differing case definitions and exclusion criteria.

Overview of 2018 Cases

In 2018, the total number of live births in Arkansas was 36,896. Based on 2018 Arkansas death certificates, 40 potential pregnancy-associated deaths were identified. This number includes all deaths of women during pregnancy and within one year of the end of pregnancy from any cause.

Based on the exclusion criteria set forth by the AMMRC, 10 cases were excluded from the scope of review for Arkansas, and the remaining 30 cases were selected to be abstracted and reviewed. The table below shows reasons for exclusion and the Committee’s final decisions on pregnancy relatedness for the 30 cases that were reviewed.

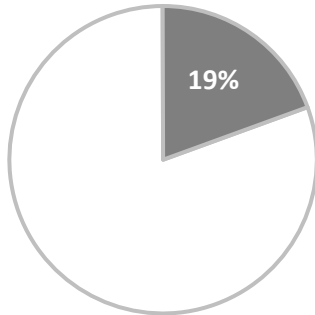
	Total Number
Live births	36,896
Initial pregnancy-associated deaths identified and reviewed by staff	40
Deaths excluded from Committee review	10
Not pregnant at time or within one year of death	4
Not an Arkansas resident	3
Motor vehicle accident	2
Accident/trauma	1
Pregnancy-associated deaths reviewed by the Committee	30
Pregnancy-related deaths	12
Pregnancy-associated, but not related deaths	13
Pregnancy-associated, but unable to determine relatedness	5

In 2018, Arkansas had 30 pregnancy-associated deaths. This represents a pregnancy-associated mortality ratio of 81.3 deaths per 100,000 births.

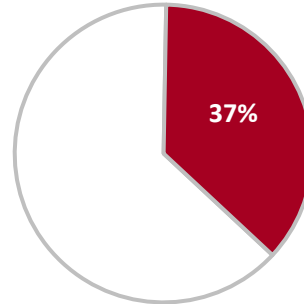
Pregnancy-Associated Deaths

Pregnancy-Associated Deaths by Race/Ethnicity

Pregnancy-associated deaths can happen to women of any race and ethnicity. However, some women are disproportionately affected.



19% of all births in Arkansas in 2018 were to Black non-Hispanic women.



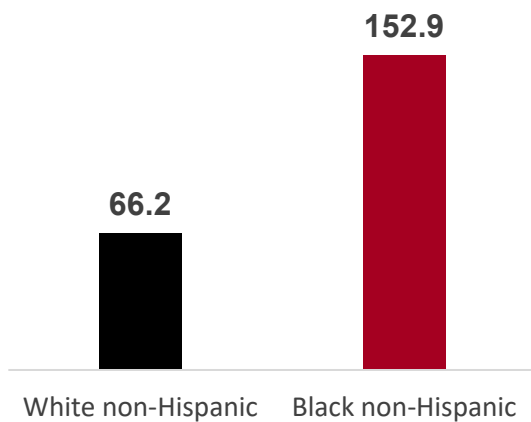
37% of all pregnancy-associated deaths in Arkansas in 2018 were to Black non-Hispanic women.

Breakdown of Pregnancy-Associated Deaths by Race/Ethnicity



For all pregnancy-associated deaths, Black mothers were more than twice as likely to die (2.3 times) as White mothers in Arkansas.

Pregnancy-Associated Mortality Ratio by Race/Ethnicity (per 100,000 births)



More than **2 Black women** in Arkansas died ...



... for every **1 White woman** *

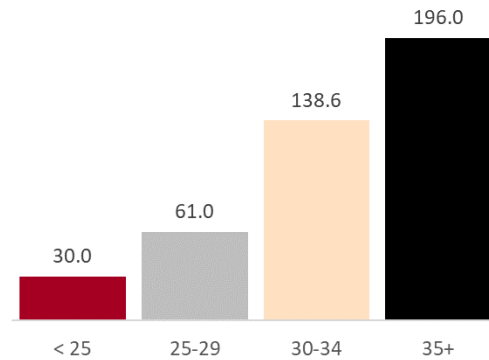


* Other race/ethnic groups had higher pregnancy-associated mortality ratios compared to White non-Hispanic women. These groups were not included in this analysis due to small counts and unstable rates.

Pregnancy-Associated Deaths by Age

The risk of pregnancy-associated death increases with age. Women ages 35 and older have the highest mortality ratio, which was more than six times the mortality ratio of women younger than 25 years old.

Pregnancy-Associated Mortality Ratio by Age (per 100,000 births)



Key Points

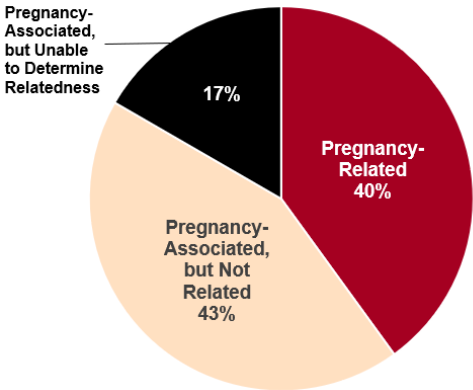
- Pregnancy-associated deaths occur disproportionately among Black non-Hispanic women and older women.
- Mortality is influenced by a wide range of determining factors. Some of those factors are directly related to pregnancy, such as the patient's health status, health behaviors, and access to quality health care. Other factors include social determinants of health such as poverty, family and community support, and racial bias in policies, practices and systems.

Pregnancy-Associated Categories by Relatedness

Breakdown of Pregnancy Association

Of the 30 deaths reviewed, the Committee determined:

- **12** deaths (40%) were determined to be **pregnancy-related**.
- **13** deaths (43%) were determined to be **pregnancy-associated, but not related**.
- **5** deaths (17%) were determined to be **pregnancy-associated, but the Committee was unable to determine relatedness**.

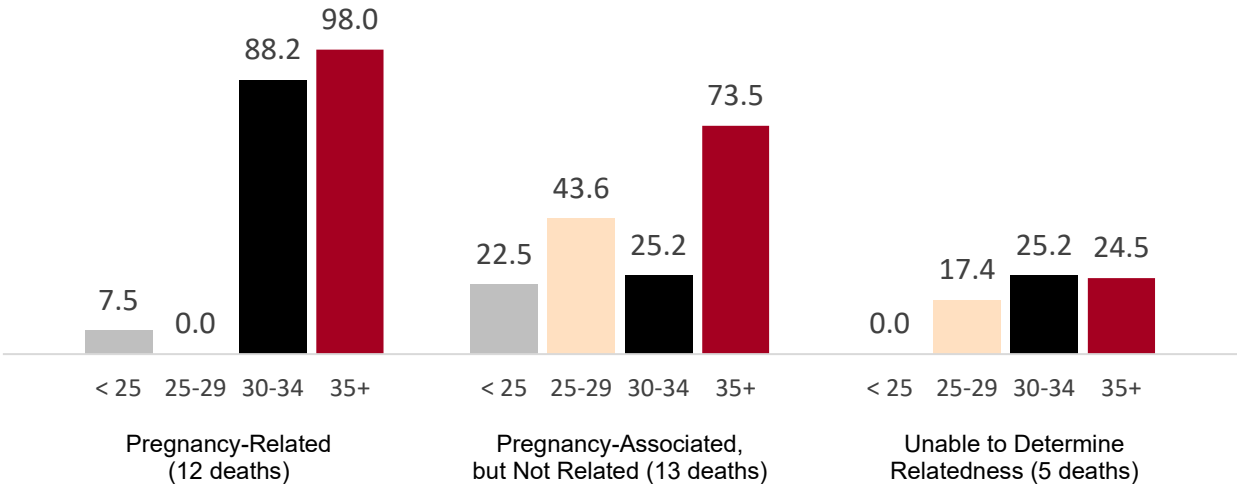


Mortality Ratios by Age

Mortality ratios below are deaths per 100,000 births. The age distribution of women who died is different for pregnancy-related deaths compared to the two other categories of pregnancy-associated deaths.

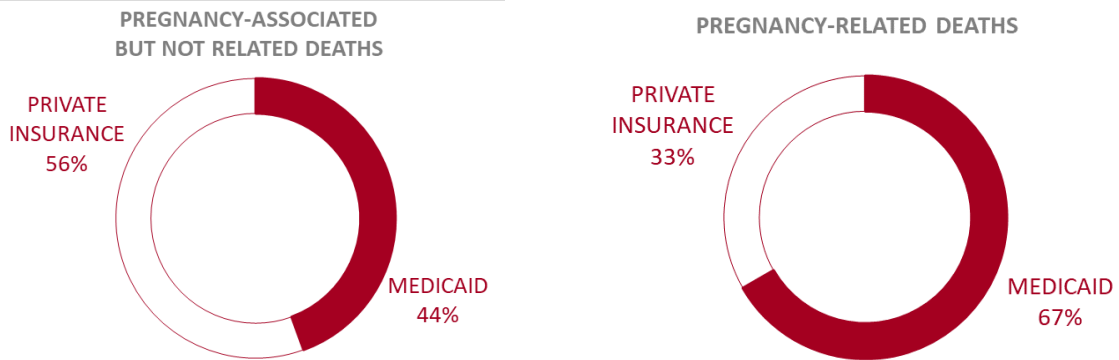
Women ages **30 years and older** were at an increased risk of pregnancy-related death. Women **younger than 30 years of age** were at an increased risk of pregnancy-associated, but not related death and pregnancy-associated, but unable to determine relatedness death.

Pregnancy-Associated Mortality Ratio by Relatedness and Age (per 100,000 births)



Insurance Type

In 2018, **44%** of women who died from pregnancy-associated but not related deaths that occurred after delivery had **Medicaid**, compared to **67%** of women who died from pregnancy-related deaths.



Key Points

- Pregnancy-related deaths disproportionately affect women ages 30 and older.
- Pregnancy-related deaths disproportionately affect women on Medicaid compared to pregnancy-associated but not related deaths.

Timing of Deaths

Timing of pregnancy-related deaths



Timing of pregnancy-associated, but not related deaths



Timing of pregnancy-associated, but unable to determine relatedness deaths



Key Points

- Two out of five (40%) deaths were determined to be pregnancy-related.
- The majority (75%) of pregnancy-related deaths occurred during or within 42 days of pregnancy.
- Almost two-thirds of pregnancy-associated, but not related deaths (61%) and pregnancy-associated, but unable to determine relatedness (60%) occurred 43 days to 1 year after pregnancy ended.

Pregnancy-Related Deaths

In 2018, Arkansas had 12 deaths that were determined to be pregnancy-related (32.5 deaths per 100,000 births).

Pregnancy-Related Mortality by Race/Ethnicity

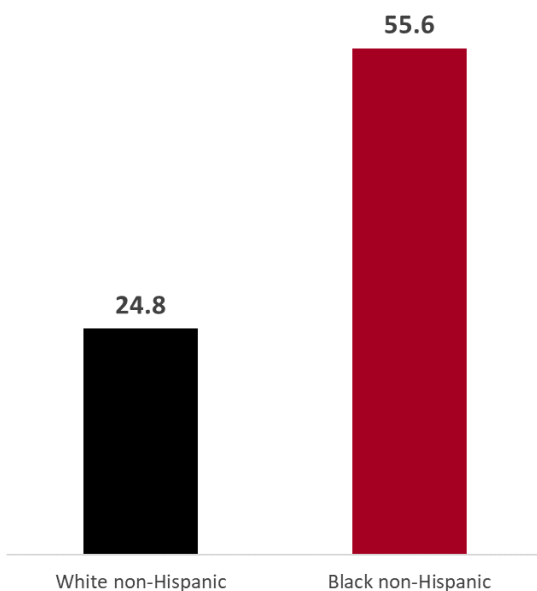
Pregnancy-related deaths occur disproportionately among Black non-Hispanic women.

Breakdown of Pregnancy-Related Deaths by Race/Ethnicity



For pregnancy-related deaths, Black mothers were more than two times as likely to die (2.2 times) as White mothers in Arkansas.

Pregnancy-Related Mortality Ratio by Race/Ethnicity (per 100,000 births)



More than **2 Black women** died...



... for every **1 White woman***

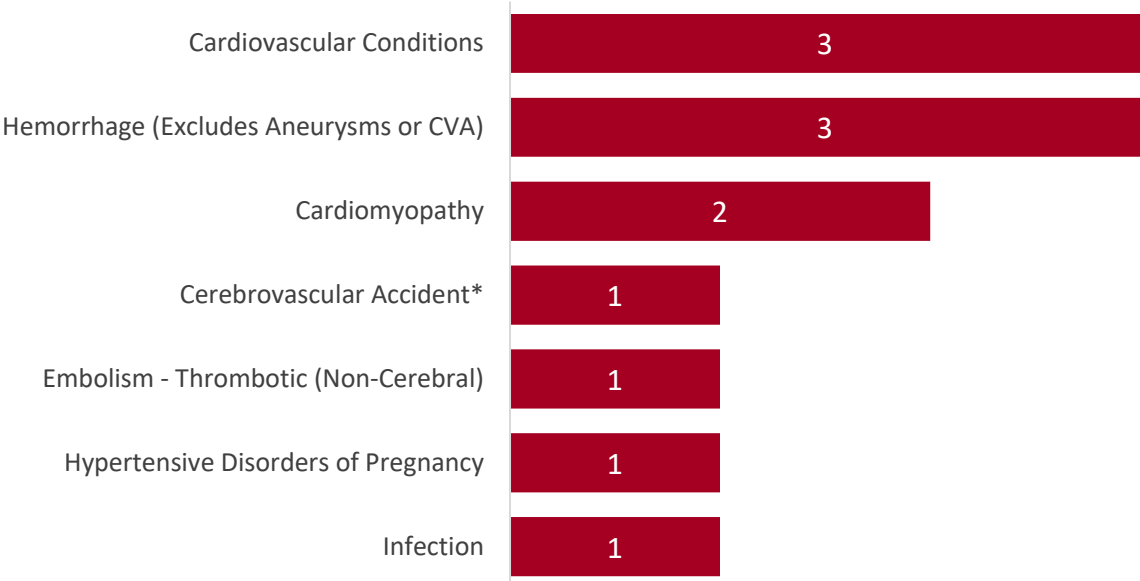


** Other race/ethnic groups had higher pregnancy-related mortality ratios compared to White non-Hispanic women. These groups were not included in this analysis due to small counts and unstable rates.*

Causes of Death

(As determined by the Committee)

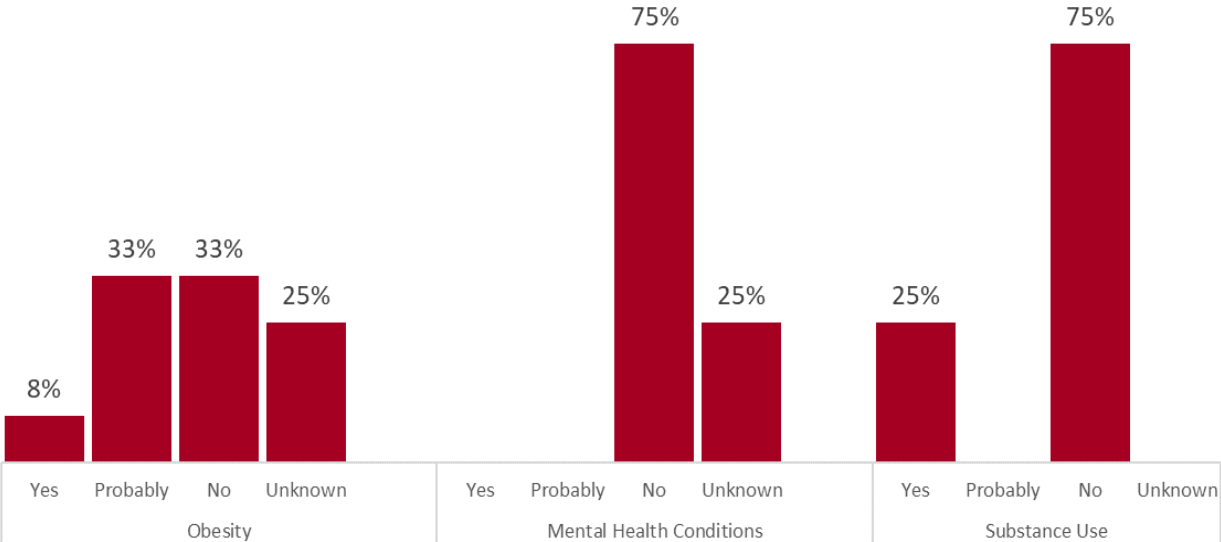
The **top underlying causes** of pregnancy-related deaths were **cardiovascular conditions, hemorrhage, and cardiomyopathy.**



* Cerebrovascular accident not secondary to hypertensive disorders of pregnancy

Obesity, Mental Health Conditions, and Substance Use

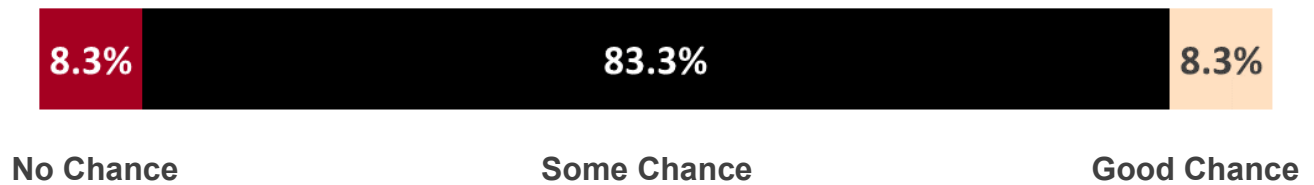
The Committee determined if obesity, mental health conditions, and substance use contributed to each pregnancy-related death.



Preventability and Chance to Alter Outcomes

The Committee reviewed all deaths and used the MMRIA Committee Decisions Form to determine if the death could be considered preventable and if there was at least some chance of the death being averted by one or more reasonable changes to patient, family, provider, facility, system and/or community factors.

92% of pregnancy-related deaths were considered potentially **preventable**.



Key Points

- Preventability assessments help prioritize future areas of intervention and action.
- Determination of preventability is based on consensus achieved by the Committee.
- Findings suggest that deaths due to leading causes are highly preventable.

Understanding Data Sources and Completeness of Records

About 1 in 5 cases were missing at least some records* crucial to case review.

Reviewing and understanding death cases requires information from multiple types of records, including those from medical/health systems, law enforcement, mental and behavioral health providers and systems, and government or social service agencies. Records can be difficult to obtain due to:

- Lack of information or data sharing agreements and processes in place across and within these systems. For example, medical record sharing across health networks is often limited.
- Legal restrictions and policies that regulate what information agencies can share. For example, it is difficult to obtain records related to a death that is part of an ongoing criminal investigation.
- Reluctance to share records obtained from external agencies.
- Staff turnover, which hinders collaboration and information sharing between and across agencies and systems.
- Limited access to records when care is received out of state.

Completeness of Records for Review

Access to complete records is crucial to determine factors that contributed to a death and to determine preventability. Nine of 30 cases (30%) were determined by the Committee to have complete records available for review.

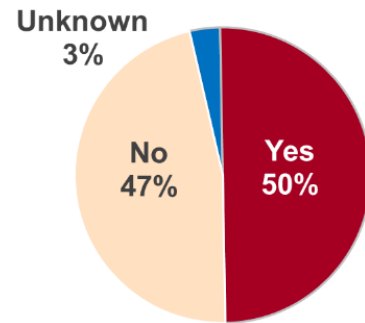


* One-fifth (20%) of cases were identified as having “somewhat complete” records, meaning that information crucial to the review of the case was not available to the Committee. Half (50%) of cases were considered to have all records necessary for adequate review or only minor gaps or information that would have been beneficial but not essential to the review of the case.

Autopsies were performed in half (50%) of cases.

Autopsies

- Autopsies were performed in 50% of deaths.
- Autopsies consist of a thorough examination of the corpse by dissection to determine cause of death. Making autopsies mandatory would help Committees in making future recommendations.



Recommendations

AMMRC members carefully considered each case identified for review and applied their collective knowledge, training, and professional experience to make the following recommendations in accordance with the CDC's MMRIA guidelines.¹

The factors contributing to maternal mortality are complex and simultaneously involve multiple facets of the women's lives. The AMMRC encourages stakeholders to consider how they might strengthen, advance, or improve current conditions in the areas of need identified in these recommendations.

The following recommendations are based on reviews of 2018 cases that were determined to be pregnancy related and are organized by recommended point of intervention:

- Patient/Family
- Quality Improvement (clinical)
- Systems of Care (non-clinical)
- Social Support
- Policy

Recommendation #1: Promote a culture of consistent excellence in maternal health care through education and implementation of best practices.

Quality Improvement

- Facilities should consistently discharge maternal patients with standardized hospital discharge instructions. An example of a set of standardized instructions is the Association of Women's Health, Obstetric and Neonatal Nurses' (AWHONN) recommendations for signs and symptoms and when to seek medical care.²
- Facilities should develop a system to inform health care providers of innovative and emerging therapies.
- Facilities should support coordination between emergency and maternal health services and implement evidence-based, standardized protocols to identify and manage obstetric and postpartum emergencies. Hospitals should disseminate educational materials regarding Modified Early Warning Score (MEWS) and patient safety bundles, including obstetric hemorrhage, hypertension, sepsis, and venous thromboembolism to emergency department staff. These patient safety bundles are available through the Alliance for Innovation on Maternal Health (AIM).³
- Facilities should include telehealth and expansion of simulation training for maternal CPR for obstetric units and emergency and trauma staff.⁴
- Facilities should utilize tele-critical care for patients too unstable for hospital transfer. This would allow for appropriate level of resources to the hospital.

- Facilities should apply thromboembolism guidelines available in AIM Patient Safety Bundles. Examples are available from the Council on Patient Safety in Women's Health Care.³

Systems of Care

- Providers should employ full implementation of patient safety bundles for maternal care. The use of patient safety bundles is a standardized approach for delivering evidence-based practices to be implemented consistently. Principles common to the safety bundles are standardization to improve readiness, recognition, response, and reporting.³ Alliance for Innovation on Maternal Health (AIM) safety bundles are endorsed by the American College of Obstetricians and Gynecologists (ACOG) and include obstetric hemorrhage, severe hypertension in pregnancy, and obstetric care for women with opioid use disorder, among others.³
- Private and public health care insurers should expand coverage of and increase access to diagnosis, care, and treatment of sleep apnea, especially for pregnant women. Providers should have access to an up-to-date list of resources including sleep studies.

Recommendation #2: Promote continuity of care throughout all levels of maternal care.

Patient/Family

- All women should have an annual well-woman visit, especially reproductive-aged women. An annual well-woman visit is an excellent opportunity to identify ways to reduce health risks and make healthy choices.
- Patients and families should actively seek assistance in obtaining health care coverage, including assistance in understanding the changes in coverage brought about by health insurance marketplaces.

Quality Improvement

- Providers should make postpartum care an ongoing process with services to support each woman's needs. ACOG states that a lack of attention to maternal health needs is a concern because more than half of pregnancy-related deaths occur after delivery.⁵
- Providers should develop and implement improved procedures related to communication and coordination between providers for interstate continuity of care. The AMMRC reviewed cases that involved a lack of communication and continuity of care caused by moving across state lines.
- Providers should ensure consultation and transfer management for patients with high-risk obstetric conditions to the appropriate level of maternal obstetric care.

- All providers should provide pre-conception counseling to patients with high-risk conditions, make appropriate referrals, and make sure measures are in place to reconnect postpartum women with their PCP for continuation of medical care beyond the postpartum period for that birth. A well-woman visit for a reproductive-aged woman should include discussion of her reproductive life plan, which can help determine the testing and treatments that may be needed.⁶
- Providers should implement a risk-stratified follow-up schedule for postpartum visits including availability of telemedicine options, and providers should be educated on appropriate follow-up intervals based on risk factors.⁵

Systems of Care

- Agencies should develop a statewide dashboard to route patients to appropriate maternal and neonatal levels of care. EMS should be included, with a dashboard of available locations for patients.

Policy

- The AMMRC recommends extending Arkansas Medicaid maternal coverage from 60 days to one year postpartum. Nearly half (47%) of pregnancy-associated deaths in Arkansas occurred 43 days to one year after delivery. This trend demonstrates the need for extended health care coverage. Arkansas Medicaid currently ends maternal coverage for women at 60 days postpartum, which can leave new mothers without needed follow-up care.⁷ ACOG strongly supports extending Medicaid coverage to at least one year postpartum.⁸ The state of Illinois recently became the first state to expand Medicaid coverage to one year postpartum.⁹
- Policy makers should address identified barriers to continuity of health care and work to reduce barriers. The AMMRC found that the lack of a primary care provider (PCP) and no health care coverage were barriers to continuity of care.
- Private and public health insurers, including Arkansas Medicaid, should reimburse for phone-based care and other telehealth services regardless of patient or provider location. Telehealth gives providers the opportunity to reduce barriers to care by allowing extended health care access beyond normal clinic hours, reducing patients' travel burden, and overcoming clinician shortages, especially in rural areas.¹⁰

Recommendation #3: Address mental health and substance use disorders.

Quality Improvement

- Emergency departments should use a validated verbal screening tool to screen for substance abuse to target subsequent evaluation and testing to facilitate diagnosis

of endocarditis for patients presenting with signs and symptoms of possible infection.

- Maternal care providers should screen all maternal patients for substance use disorder once during each trimester and postpartum. Routine screening for substance use disorder can be accomplished through a validated verbal screening tool. A validated verbal screening tool is superior to drug testing. Routine screening for substance use disorder should be applied equally to all patients regardless of age, race, ethnicity, and socioeconomic status.
- Health care professionals should advise cessation of tobacco products used in any form and provide motivational feedback per ACOG guidelines. Tobacco intervention should include counseling and referral to treatment.

Systems of Care

- Private and public health insurers should expand coverage of and increase access to diagnosis, care, and treatment of mental health and substance use disorders.
- Statewide agencies should expand coverage for mental health services and for prescription medications that are part of treatment for substance use disorder.
- Private and public health insurers should increase access to Narcan (naloxone) to treat emergency opioid overdoses by expanding coverage. Anyone witnessing an opioid overdose can safely administer naloxone to prevent overdose-related injury and death.

Social Support

- Communities should provide primary prevention and education related to childhood trauma. Behavioral health conditions and chronic health conditions are both associated with past traumatic experiences, especially in childhood.¹¹

Recommendation #4: Promote health and healthy behaviors while addressing health and socioeconomic disparities.

Quality Improvement

- Facilities should make the reduction of racial and ethnic disparities in health and health care a priority for all women's health care providers. ACOG states that this priority should include educating patients in a culturally sensitive manner about ways they can prevent disease conditions that are highly prevalent in their racial and ethnic groups.¹²
- Delivering facilities should provide families with education regarding postpartum warning signs prior to hospital discharge. AWHONN offers a standardized approach to helping postpartum women recognize and act on any signs of potentially life-threatening complications.²

- Providers should keep their communication and patient education information in plain language. Universal health literacy precautions are consistently recommended by multiple professional organizations for understandable and accessible information to all patients and their families regardless of health literacy level.¹³

Systems of Care

- Employers and workplace environments should increase opportunities for health care access by allowing for and encouraging telehealth, health screenings, and follow-up.¹⁴
- Statewide agencies should provide resources for healthy food options and funding to support lifestyle and weight loss intervention before, during, and after pregnancy.
- Statewide agencies should provide messaging on the risk of preeclampsia both during pregnancy and in the full year after pregnancy. Targeted education at the appropriate time can be key to the prevention of preeclampsia.

Social Support

- Organizations (churches, schools etc.) should offer and promote Basic Life Support (BLS) courses to all community members.

Recommendation #5: Support needed improvements to Arkansas’s maternal death review process.

Policy

- Policy makers should expand state funding for autopsies for pregnancy associated deaths. Half (50%) of the Arkansas pregnancy associated cases reviewed did not have autopsies performed. For full understanding of the cause of death for pregnancy associated cases, complete postmortem examinations are necessary, including histological and other essential ancillary investigations.
- Hospitals and systems should improve death certificate quality through medical certifier training and support. Medical schools should consider making this education a requirement for completion of medical school. The CDC offers a guide for completion of medical certifications of death.¹⁵
- Policy makers should consider legislative support for the MMRC abstractors to have access to the state’s prescription drug monitoring program. Access to individuals’ prescription drug information would not be needed, but access to general information about the patient would assist the abstractor in identifying providers who cared for the decedent. In many cases, it is difficult to determine where a deceased patient received health care services.

Recommendations From Reviews of Pregnancy Associated but Not Related Cases

The following recommendations are based on reviews of 2018 cases determined to be either pregnancy associated but not related, or pregnancy associated but unable to determine pregnancy relatedness.

Patient/Family

- Patients should comply with hospital (ER and inpatient) follow-up. Patients should adhere to treatment and compliance for mental health issues and substance use disorders prior, during, and after pregnancy.
- Patients and families experiencing intimate partner violence (IPV) should devise a safety plan (e.g., order of protection, relocation).

Quality Improvement

- Facilities should integrate multidisciplinary teams (i.e., case management, social work, care coordinators, other subspecialists) in the care of pregnant women and ensure coordinated care throughout the pregnancy and postpartum.
- Providers should screen all patients for Intimate Partner Violence (IPV) and substance abuse during each trimester and postpartum visit. Provide educational materials, resources, and case management for IPV and/or substance abuse. Facilities should use validated verbal screening tools, which are superior to drug testing.
- Providers should expand knowledge of treatment facilities and substance use disorder programs for women. Providers should refer patients with substance use disorders and/or mental health conditions for appropriate treatment.
- Providers should provide education to patients and families regarding the use of Narcan for opioid overdose and how to request Narcan without a direct prescription.

Systems of Care

- Statewide agencies should increase funding to expand the number of inpatient and outpatient facilities for treatment of substance use disorder and mental health conditions in pregnant and postpartum women. Decriminalize perinatal substance use to promote substance use treatment and adequate prenatal care.
- State and federal agencies should expand coverage to include tobacco cessation programs, including nicotine replacement therapy products.

Policy

- Policy makers should propose to eliminate Garrett's Law in Arkansas. Garrett's Law expands the definition of child neglect to include the presence of illegal

substances in bodily fluids, which can result in the infant being removed from the home. Since Garrett's Law was enacted in 2005, instances of babies born with drugs in their systems have continued to rise. According to Arkansas Money & Politics, from 2012 to 2017, reported cases increased by an average of 14 percent per year. A repercussion of the law is women intentionally avoiding all prenatal care out of fear of being tested for drug use.¹⁶

- Policy makers should remove barriers and increase access to immediate postpartum LARC (long-acting reversible contraception). ACOG supports immediate postpartum LARC insertion as a best practice, recognizing its role in preventing rapid repeat pregnancy and unintended pregnancy.¹⁷ In Arkansas, LARC is currently bundled into the delivery payment which is a financial barrier to facilities. As of June 2020, 21 states have removed postpartum LARC from the bundled delivery payment.¹⁸
- Policy makers should review Arkansas's current Medicaid policy on consent for tubal ligation. The current policy limiting this procedure to less than 60 days and more than 30 days inhibits access. Reduction of the 30-day requirement would expand access.

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ARKANSAS 2018

MATERNAL MORTALITY

The Arkansas Maternal Mortality Review Committee (AMMRC) reviews maternal deaths that occur during pregnancy or within one year of the end of a pregnancy to determine causes of death, contributing factors, and to recommend interventions for preventing maternal deaths in Arkansas.

SUMMARY

(Year 2018)

81

PREGNANCY-ASSOCIATED DEATHS PER 100,000 LIVE BIRTHS

33

PREGNANCY-RELATED DEATHS PER 100,000 LIVE BIRTHS

92%



OF PREGNANCY-RELATED DEATHS WERE PREVENTABLE

BLACK/AFRICAN AMERICAN WOMEN WERE

2.2x

AS LIKELY TO DIE FROM PREGNANCY-RELATED CAUSES THAN WHITE NON-HISPANIC WOMEN

PREGNANCY-ASSOCIATED:

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

PREGNANCY-RELATED:

The death of a woman while pregnant or within one year of the end of pregnancy from any cause related to or aggravated by pregnancy or its management.

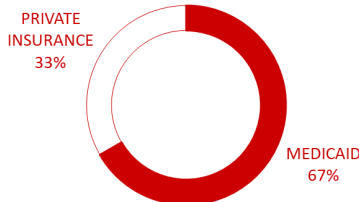
LEADING CAUSES OF PREGNANCY-RELATED DEATHS IN 2018

- Cardiovascular conditions
- Hemorrhage (excludes aneurysms or cerebrovascular accidents)
- Cardiomyopathy

PREGNANCY-ASSOCIATED DEATHS BY RELATEDNESS AND TIMING OF DEATH IN RELATION TO PREGNANCY



PREGNANCY-RELATED DEATHS



PREGNANCY-ASSOCIATED, BUT NOT RELATED DEATHS



Appendix B

Stricken language would be deleted from and underlined language would be added to present law.
Act 829 of the Regular Session

1 State of Arkansas *As Engrossed: H2/18/19 H2/20/19*

2 92nd General Assembly

A Bill

3 Regular Session, 2019

HOUSE BILL 1440

4

5 By: Representatives D. Ferguson, Bentley, Barker, Brown, Burch, Capp, Cavanaugh, Clowney, Crawford,
6 Dalby, C. Fite, V. Flowers, D. Garner, Godfrey, M. Gray, Lundstrum, McCullough, Petty, Rushing, Scott,
7 Speaks, Vaught, Della Rosa, *Eaves*

8 By: Senators Irvin, Bledsoe, J. English, Elliott, L. Chesterfield

9

10

For An Act To Be Entitled

11

AN ACT TO ESTABLISH THE MATERNAL MORTALITY REVIEW
12 COMMITTEE; AND FOR OTHER PURPOSES.

13

14

15

Subtitle

16

TO ESTABLISH THE MATERNAL MORTALITY
17 REVIEW COMMITTEE.

18

19

20 BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

21

22 SECTION 1. DO NOT CODIFY. Legislative findings and intent.

23 (a) The General Assembly finds that:

24 (1) Arkansas ranks forty-fourth in maternal mortality compared

25 with other states according to the 2018 United Health Foundation report on
26 the Health of Women and Children;

27 (2) Arkansas currently has thirty-five (35) maternal deaths per
28 one hundred thousand (100,000) live births, compared with the national
29 average of twenty (20) deaths per one hundred thousand (100,000) live births,
30 according to the Centers for Disease Control and Prevention;

31 (3) Thirty-five (35) states in the nation either conduct or are
32 preparing to conduct organized maternal mortality reviews that help prevent
33 maternal death through data collection, data analysis, and implementation of
34 recommendations; and

35 (4) With roughly half of pregnancy-related deaths being
36 preventable, state maternal mortality review committees are vital to



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1 understanding why women are dying during pregnancy, childbirth, and the year
2 postpartum, and to achieving goals of improving maternal health and
3 preventing future deaths.

4 (b) It is the intent of the General Assembly to establish a maternal
5 mortality review committee in the State of Arkansas and to decrease the
6 amount of maternal deaths in the state.

7
8 SECTION 2. Arkansas Code Title 20, Chapter 15, is amended to add an
9 additional subchapter to read as follows:

10 Subchapter 23 – Maternal Mortality Review Committee

11
12 20-15-2301. Maternal Mortality Review Committee.

13 (a)(1) The Department of Health shall establish the Maternal Mortality
14 Review Committee to review maternal deaths and to develop strategies for the
15 prevention of maternal deaths.

16 (2) The committee shall be multidisciplinary and composed of
17 members as deemed appropriate by the department.

18 (b) The department may contract with an external organization to
19 assist in collecting, analyzing, and disseminating maternal mortality
20 information, organizing and convening meetings of the committee, and other
21 tasks as may be incident to these activities, including providing the
22 necessary data, information, and resources to ensure successful completion of
23 the ongoing review required by this section.

24
25 20-15-2302. Powers and duties.

26 The Maternal Mortality Review Committee shall:

27 (1) Review pregnancy-associated deaths or deaths of women with
28 indication of pregnancy up to three hundred sixty-five (365) days after the
29 end of pregnancy, regardless of cause, to identify the factors contributing
30 to these deaths;

31 (2) Identify maternal death cases;

32 (3) Review medical records and other relevant data;

33 (4) Contact family members and other affected or involved
34 persons to collect additional relevant data;

35 (5) Consult with relevant experts to evaluate the records and
36 data;

1 (6) Make determinations regarding the preventability of maternal
2 deaths;

3 (7) Develop recommendations for the prevention of maternal
4 deaths, including public health and clinical interventions that may reduce
5 these deaths and improve systems of care; and

6 (8) Disseminate findings and recommendations to policy makers,
7 healthcare providers, healthcare facilities, and the general public.

8

9 20-15-2303. Access to records.

10 (a) Healthcare providers, healthcare facilities, and pharmacies shall
11 provide reasonable access to the Maternal Mortality Review Committee to all
12 relevant medical records associated with a case under review by the
13 committee.

14 (b) A healthcare provider, healthcare facility, or pharmacy providing
15 access to medical records as described by subdivision (a) of this section is
16 not liable for civil damages or subject to any criminal or disciplinary
17 action for good faith efforts in providing such records.

18

19 20-15-2304. Confidentiality.

20 (a)(1) Information, records, reports, statements, notes, memoranda, or
21 other data collected under this subchapter are not admissible as evidence in
22 any action of any kind in any court or before any other tribunal, board,
23 agency, or person.

24 (2) Information, records, reports, statements, notes, memoranda,
25 or other data collected under this subchapter shall not be exhibited or
26 disclosed in any way, in whole or in part, by any officer or representative
27 of the Department of Health or any other person, except as necessary for the
28 purpose of furthering the review of the Maternal Mortality Review Committee
29 of the case to which they relate.

30 (3) A person participating in a review shall not disclose, in
31 any manner, the information so obtained except in strict conformity with such
32 review project.

33 (b) All information, records of interviews, written reports,
34 statements, notes, memoranda, or other data obtained by the department, the
35 committee, and other persons, agencies, or organizations so authorized by the
36 department under this subchapter are confidential.

1 (c)(1) All proceedings and activities of the committee under this
2 subchapter, opinions of members of the committee formed as a result of such
3 proceedings and activities, and records obtained, created, or maintained
4 pursuant to this subchapter, including records of interviews, written
5 reports, and statements procured by the department or any other person,
6 agency, or organization acting jointly or under contract with the department
7 in connection with the requirements of this subchapter, are confidential and
8 are not subject to the Freedom of Information Act of 1967, §§ 25-19-101 et
9 seq., relating to open meetings, subject to subpoena, discovery, or
10 introduction into evidence in any civil or criminal proceeding.

11 (2) However, this subchapter does not limit or restrict the
12 right to discover or use in any civil or criminal proceeding anything that is
13 available from another source and entirely independent of the committee's
14 proceedings.

15 (d)(1) Members of the committee shall not be questioned in any civil
16 or criminal proceeding regarding the information presented in or opinions
17 formed as a result of a meeting or communication of the committee.

18 (2) This subchapter does not prevent a member of the committee
19 from testifying to information obtained independently of the committee or
20 which is public information.

21

22 20-15-2305. Disclosure.

23 Disclosure of protected health information is allowed for public
24 health, safety, and law enforcement purposes, and providing case information
25 on maternal deaths for review by the Maternal Mortality Review Committee is
26 not a violation of the Health Insurance Portability and Accountability Act of
27 1996.

28

29 20-15-2306. Immunity from liability.

30 State, local, or regional committee members are immune from civil and
31 criminal liability in connection with their good-faith participation in the
32 maternal death review and all activities related to a review with the
33 Maternal Mortality Review Committee.

34

35 20-15-2307. Reporting.

36 (a) Beginning in 2020, the Maternal Mortality Review Committee shall

1 file a written report on the number and causes of maternal deaths and its
2 recommendations on or before December 31 of each year to:
3 (1) The Senate Committee on Public Health, Welfare, and Labor;
4 (2) The House Committee on Public Health, Welfare, and Labor;
5 and
6 (3) The Legislative Council.
7 (b) The report shall include:
8 (1) The findings and recommendations of the committee; and
9 (2) An analysis of factual information obtained from the review
10 of the maternal death investigation reports and any local or regional review
11 panels that do not violate the confidentiality provisions under this
12 subchapter.
13 (c) The report shall include only aggregate data and shall not
14 identify a particular facility or provider.

15
16 /s/D. Ferguson
17

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19 APPROVED: 4/9/19
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