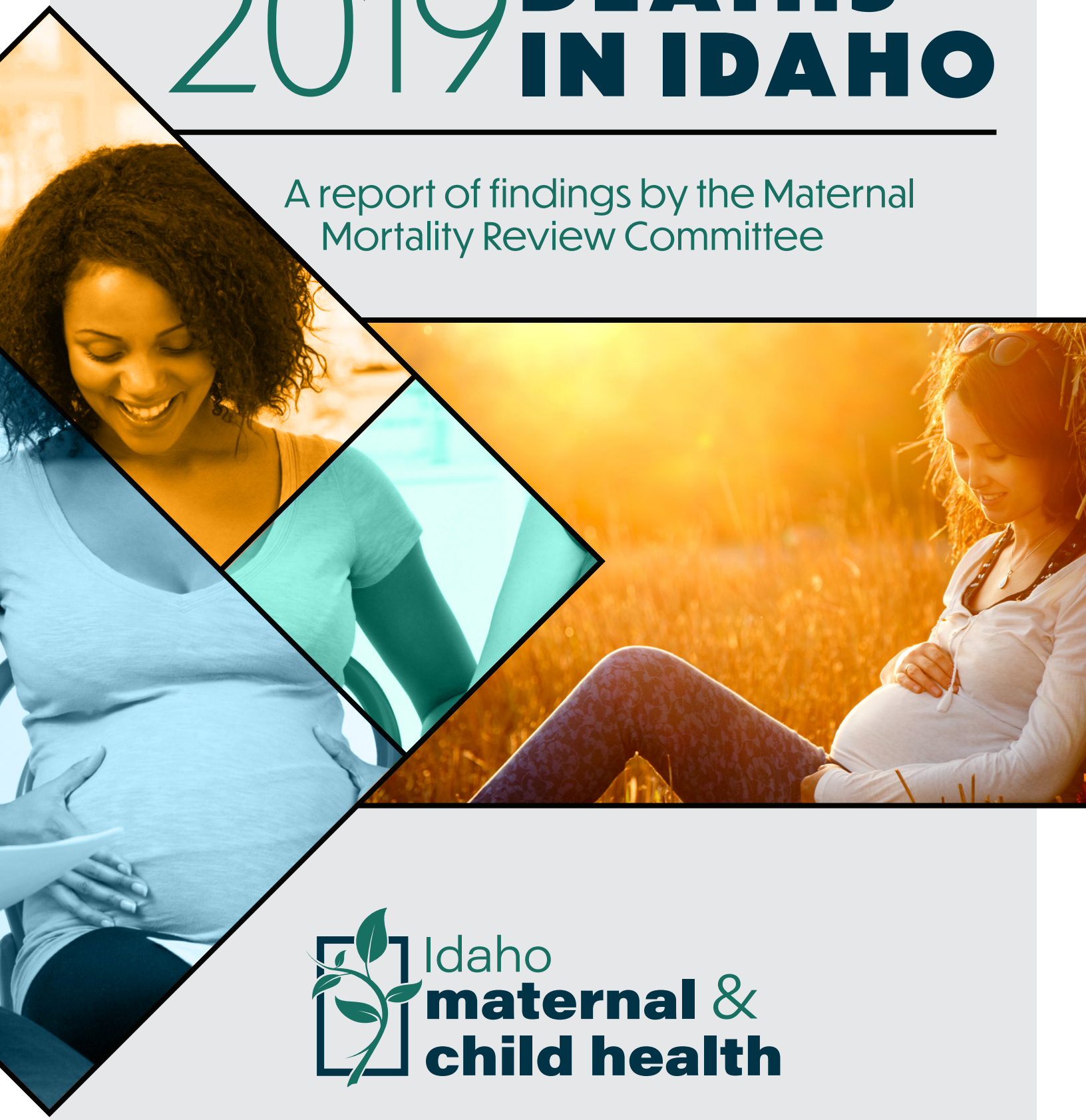
MATERNAL DEATHS IN IDAHO 2019

A report of findings by the Maternal Mortality Review Committee



Idaho maternal & child health

THIS REPORT WAS PREPARED BY:

Idaho Department of Health and Welfare
Division of Public Health
Maternal Mortality Review Program

Xenya Poole, MPH, MPA, Program Manager, Maternal Mortality Review Program

Stephanie Walters, RN, BSN, PHN, Nurse Abstractor, Maternal Mortality Review Program

Ward Ballard, MCH Research Analyst, Bureau of Vital Records and Health Statistics

Pam Harder, Research Analyst Supervisor, Bureau of Vital Records and Health Statistics

Katherine Humphrey, MS, CHES, Section Manager, Maternal and Child Health Section

Kara Stevens, Bureau Chief, Bureau of Clinical and Preventive Services

---

We would like to acknowledge the members of the Idaho Maternal Mortality Review Committee for donating their time and expertise to reduce the morbidity and mortality of women in Idaho.

Lucky Bourn, D-ABMDI, Pres. ISACC, Coroner

Krysta Freed, LM, CPM, Licensed Midwife

Caitlin Gustafson, MD, Physician with Specialty in Family Medicine with a Practice that Includes Maternity Care and Delivery

Frances Harris, CNM, WHNP, Advanced Practice Professional Nurse Midwife

JJ Hartwell, EMT, RN, Licensed Emergency Medical Services Provider

Megan Hearn, Public Health Representative - Suicide and Overdose Expertise

Lisa Hollett, RN, Licensed Registered Nurse

Katherine Humphrey, MS, CHES, Public Health Representative - Maternal & Child Health Expertise

Amelia Huntsberger, MD, FACOG, Physician with Specialty in Family Medicine, OBGYN, or Emergency Medicine that Includes Maternity Care and Delivery in a Rural Setting

Julie Meltzer, MD, Physician with Specialty in Obstetrics and Gynecology

Ian Phillips, FP-C, Licensed Emergency Medical Services Provider (Ad-hoc)

Stacy T. Seyb, MD, Physician with Specialty in Maternal Fetal Medicine

Brynn Shireman, LMSW, C-SWHC, Licensed Master Social Worker

Garth Warren, MD, Medical Examiner

Idaho maternal & child health

IDAHO DEPARTMENT OF HEALTH & WELFARE
DIVISION OF PUBLIC HEALTH

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Idaho Code Title 39, Chapter 96, gives the Department of Health and Welfare the authority to coordinate the activities of the Maternal Mortality Review Committee (MMRC). This interdisciplinary group from across the state reviews every maternal death (as defined by Code) and makes recommendations to improve the care for women and to reduce or eliminate preventable deaths. This report includes information about the Idaho pregnancy-associated deaths that occurred in 2019. Findings comparing 2018 and 2019 deaths are included in Appendix A.

Key Findings

- Five women in Idaho died while pregnant or within one year of pregnancy.
- All five of the deaths were preventable.
- Three of the five deaths were determined to be pregnancy-related.
- Substance use disorder was a contributing factor in three of the five deaths.
- Mental health disorder was a contributing factor in two of the deaths and was a probable factor in another two deaths.
- The most common contributing factors in these five women's deaths were: lack of access, lack of continuity of care, tobacco use, and substance use disorder (see Appendix B for definitions).
- In Idaho, the pregnancy-related mortality ratio (PRMR) was 13.6 pregnancy-related deaths per 100,000 live births. In the United States, the most recent PRMR (2017) was 17.3 deaths per 100,000 live births.

Key Recommendations

- Providers should utilize the Maternal, Infant, and Early Childhood Home Visiting Program for pregnant and postpartum women when applicable.
- Providers should follow up with women after a pregnancy loss, especially in women with known mental health or mood disorders.
- Providers should implement the American College of Obstetricians and Gynecologists standard of care that postpartum visits should occur 2-3 weeks after delivery, especially in high-risk mothers.

- Facilities should institute communication channels between providers, especially if potential high-risk scenarios have been identified in the prenatal, labor and delivery, and postpartum periods. This includes communication with outside facilities or providers.
- Facilities should screen for substance use disorders when a patient seeks reproductive care and provide a referral when substance use is identified, preferably a warm handoff or call to the facility to schedule the first appointment while the patient is present.
- Facilities should provide or have access to social work or case management services in facilities that provide prenatal, labor and delivery, and/or postnatal care to women.
- State funds should be allocated to the Division of Public Health to develop a statewide Perinatal Quality Collaborative.
- The State of Idaho should increase access to medical care, especially for pregnant and postpartum women.
- The State of Idaho should increase access to forensic pathologists and/or medical examiners in Idaho.
- Idaho Medicaid should expand coverage for pregnant women to 12 months postpartum, regardless of pregnancy outcome.

DEFINITIONS

The following definitions will be used throughout this report.

Maternal Morbidity: unexpected outcomes of labor and delivery that result in short- or long-term consequences to a woman's health.

Pregnancy-associated death (or maternal death*): is the death of a woman from any cause during pregnancy or within one (1) year following the end of the pregnancy.[1]

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.

*For this report, a maternal death is defined as listed in this report and in Idaho Code. This definition does not follow the World Health Organization's definition of a maternal death.

MATERNAL MORTALITY REVIEW PROCESS

As established in 2019, the Idaho Maternal Mortality Review (MMR) Program adopted a specific process for each year of review. This process was adopted from Review to Action, a resource developed by the Association of Maternal and Child Health Programs (AMCHP) along with the Centers for Disease Control and Prevention (CDC) Foundation and the CDC Division of Reproductive Health. The review process is shown in Figure 1.

Figure 1 - Review to Action, Adapted from Berg, C.J. (2012). From Identification and review to action-maternal mortality review in the United States. Seminars in Perinatology, 36(1), 7-13.

Case Identification

The MMR Program works with the Bureau of Vital Records and Health Statistics (BVRHS) to identify deaths for review. The Maternal and Child Health Research Analyst, in BVRHS, notifies the MMR Program Manager when a death record is received and the pregnancy checkbox on the death certificate has been marked (see Figure 2). The research analyst also notifies the MMR Program if the cause of death listed on the death certificate includes a code that is related to obstetrics, but the pregnancy checkbox is not marked. These codes could include, but are not limited to, conditions such as eclampsia, postpartum hemorrhage, or amniotic fluid embolism.

30. IF FEMALE (Aged 10-54):

- ☐ Not pregnant within a year
- ☐ Pregnant at time of death
- ☐ Not pregnant, but pregnant within 42 days of death
- ☐ Not pregnant, but pregnant 43 days to 1 year before death
- ☐ Unknown if pregnant within the past year

Figure 2 - Example Pregnancy Checkbox on Idaho Death Certificate

After collecting a list of deaths that occurred within the review timeframe, the research analyst matches the death certificates with birth certificates or stillbirth certificates. These records are kept strictly confidential between the BVRHS and the MMR Program. Members of the committee do not have access to personally identifiable information.

Case Selection

Because Idaho is a less populous state, the MMRC has the capability to review all pregnancy-associated deaths for each year – which is the best practice in maternal mortality surveillance.

The MMRC scope is all pregnancy-associated deaths or any deaths of women in Idaho with indication of pregnancy up to 1 year, regardless of cause (i.e. motor vehicle accidents during pregnancy, motor vehicle accidents postpartum, suicide, homicide).

Case Abstraction

Once death certificates have been received, the MMR Program Manager reviews them and contacts a variety of stakeholders for records. Records are collected for each death and are then abstracted into case narratives by the MMR Program Manager and the Maternal and Child Health (MCH) Registered Nurse (RN). Case narratives are summaries of the events that occurred leading up to a woman's death with all personally identifiable information, locations, and names redacted. These case narratives are provided to the committee members so they can review each death with an objective, unbiased perspective on the facts of the death.

It is important to remember that the purpose of the Maternal Mortality Review is not:

- A mechanism to assign blame or responsibility for any death,
- A research study,
- Peer review,
- An institutional review, or
- A substitute for existing mortality and morbidity inquiries or reviews.[2]

Maternal mortality reviews are:

- Ongoing anonymous and confidential processes of data collection, analysis, interpretation, and action;
- Systematic processes guided by Idaho Code and policies; and
- Intended to move from data collection to prevention activities.[2]

Case Review

For the review process, committee members convene for an in-person meeting and review the case narratives. Due to the COVID-19 pandemic, the 2019 meeting was held in a secure, virtual meeting. Using the multi-disciplinary positions on the committee, the members can make recommendations at the patient, provider, facility, system, and community levels. These recommendations are made to address factors the committee identifies as "contributing factors" to a woman's death. A full list of contributing factors and their definitions can be found in Appendix B.

2019 MATERNAL MORTALITY DEATH REVIEW

The committee reviews each death using the CDC's standardized MMRC Committee Decision Form to answer the following questions:

1. Was the death pregnancy-related?
2. What was the cause of death?
3. Was the death preventable?
4. What were the factors that contributed to this death?
5. What are the recommendations and actions that address these contributing factors?
6. What is the anticipated impact of these actions if implemented?

Findings

Six deaths were identified using the pregnancy checkbox. One death was not an Idaho resident and was not reviewed or included in Idaho's MMR data. A total of five pregnancy-associated deaths were identified and brought forward to the committee for review. Two of the deaths could be linked to a birth or stillbirth certificate.

Demographics

Table 1 describes the demographics of all the pregnancy-associated deaths that occurred in 2019.

Demographics, 2019 Pregnancy-Associated Deaths, n=5	
Age (5-year age groups)	
15 to 19 years	0
20 to 24 years	1
25 to 29 years	2
30 to 34 years	2
35 to 39 years	0
40 to 44 years	0
45 to 49 years	0

Race/Ethnicity	
Non-Hispanic, White	4
Non-Hispanic, Black	0
Hispanic	0
American Indian/Alaska Native	1
Pacific Islander	0
Bi-racial	0
Marital Status	
Married	0
Married, but Separated	0
Widowed	0
Divorced	1
Never Married	4
Unknown/Not specified	0
Education	
8th Grade or Less	1
9th-12th Grade; No Diploma	1
High School Grad or GED Completed	1
Some College; No Degree	2
Associate's Degree	0
Bachelor's Degree	0
Master's Degree	0
Doctorate or Professional Degree	0
Not specified	0

Table 1 – Demographics, 2019
Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

District of Residence

The numbers shown in Table 2 indicate the health district where each woman resided prior to her death. It does not indicate where the woman died. To keep the woman's death confidential, the deaths are displayed by health district and not at the county level. Refer to Figure 3 for a map of Idaho's health districts.

Pregnancy-Associated Deaths District of Residence, 2019	
District of Residence	*Number of Deaths*
Health District 1	0
Health District 2	2
Health District 3	0
Health District 4	0
Health District 5	2
Health District 6	1
Health District 7	0

Table 2 – District of Residence, 2019
Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

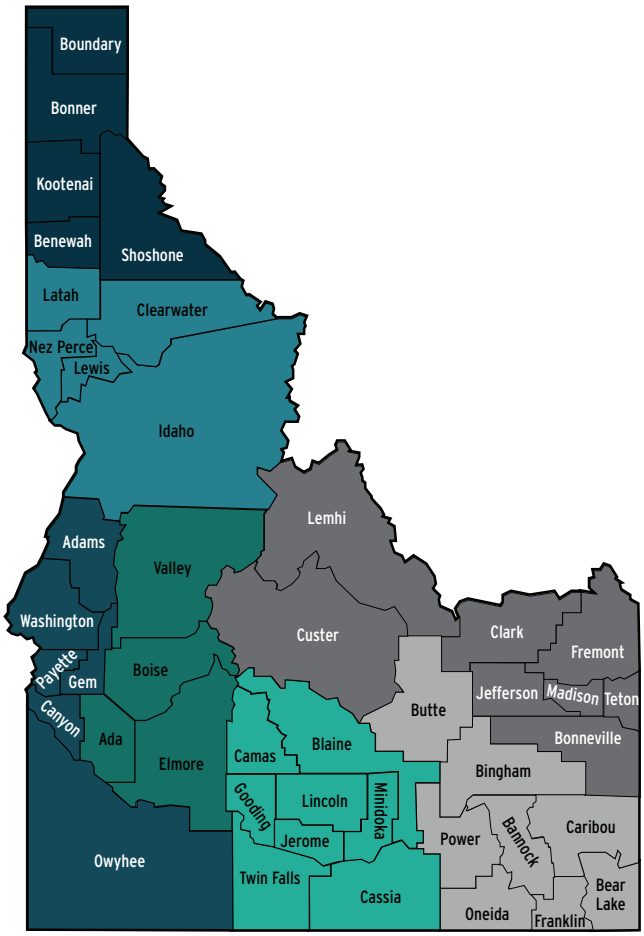


Figure 3 - Idaho Health Districts

Question 1: Was the death pregnancy-related?

Each death is classified into one of three categories: pregnancy-related, pregnancy-associated, or pregnancy-associated but unable to determine pregnancy-relatedness. After reviewing the deaths, the MMRC members determined that 3 of the 5 deaths were pregnancy-related.

Pregnancy-Relatedness Status, 2019	Number of Deaths
Pregnancy-Related	3
Pregnancy-Associated, but NOT -Related	1
Pregnancy-Associated but Unable to Determine Pregnancy-Relatedness	1

Table 3 - Pregnancy-Relatedness Status, 2019
Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

The pregnancy-related mortality ratio or PRMR for 2019 was 13.6 deaths per 100,000 live births, down from 18.7 in 2018. The formula for calculating the PRMR is shown here:

$$\frac{\text{\# of pregnancy-related deaths}}{\text{\# of live births}} \times 100{,}000$$

The PRMR is a calculation that tells us the number of pregnancy-related deaths per 100,000 live births and allows for direct comparison to the national PRMR or other states. The most recent Idaho and US PRMRs are shown in Figure 5. Due to the timing of when the Idaho MMRC was established and when the US data was available, we have been unable to compare PRMRs directly. With continued annual MMRC reviews, we will have the ability to analyze our PRMR more in depth and compare our PRMR to the US PRMR. A PRMR can also be calculated based on race/ethnicity, education, age, or other

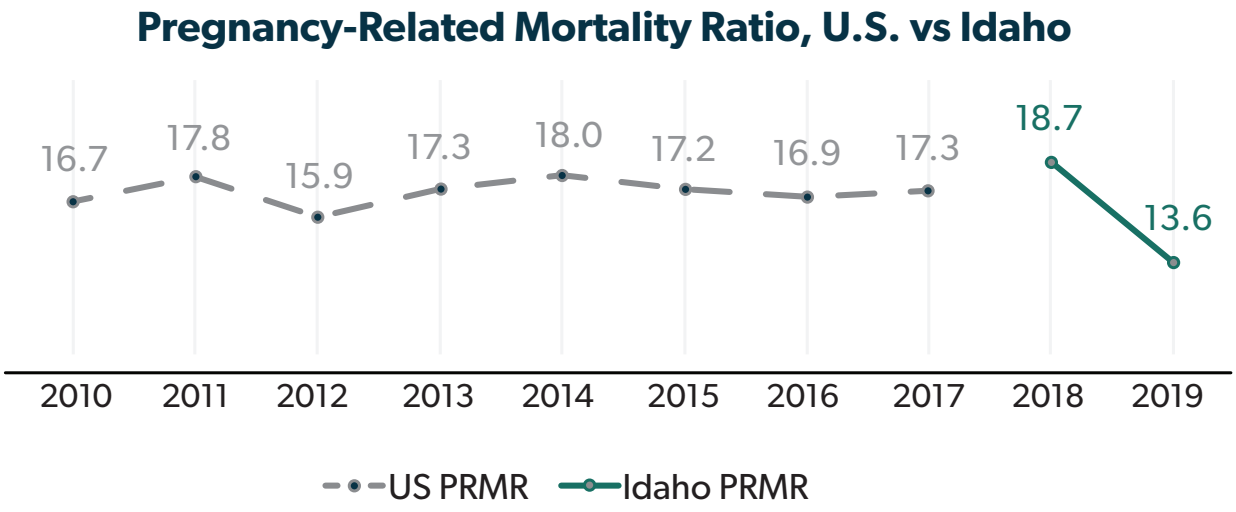


Figure 4 - Pregnancy-Related Mortality Ratio, U.S. vs Idaho
Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

demographics to compare populations and to analyze factors that make individuals more likely to die from pregnancy-related events. Nationally, we know there are large racial disparities when it comes to pregnancy-associated deaths and that American Indian/Alaska Native and Black women are 2-3 times more likely to die from a pregnancy-related cause than white women.[3]

When looking at timing of death, in two of the five deaths the woman was pregnant, in another two of the five deaths the woman was pregnant within 42 days of death, and in one of the five deaths the woman was pregnant 43 to 365 days before her death (Figure 5).

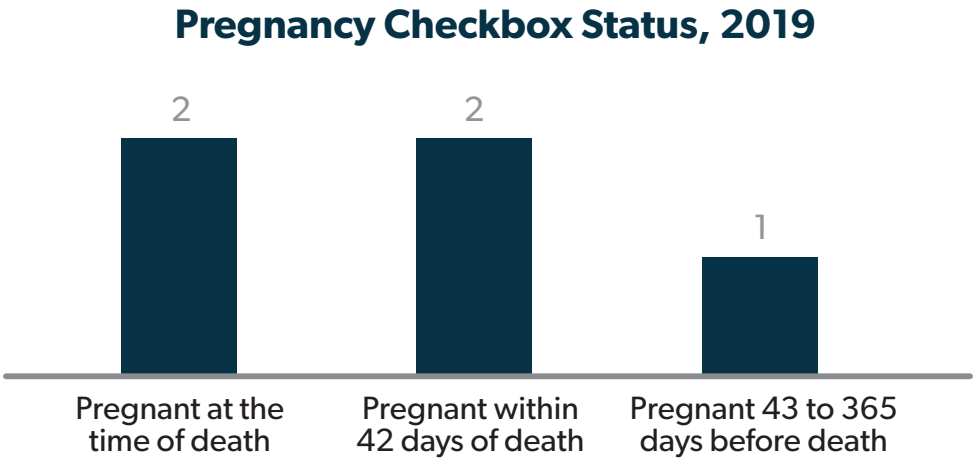


Figure 5 - Pregnancy Checkbox Status, 2019
Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

Question 2: What was the cause of death?

As part of the review, the MMRC decides whether they agree with the cause of death listed on the death certificate. In four of the deaths, the committee did agree with the cause of death listed, in one of the deaths, they did not. This does not necessarily mean the causes of death listed were incorrect; however, MMRC's often have more information available to them than the person who filled out the death certificate.

The committee-identified underlying causes of death for 2019 are shown in Figure 6. The underlying cause of death refers to the disease or injury which initiated the chain of events leading to death or the circumstances of the accident or violence which produced the fatal injury.[4] The deaths are placed into ten categories determined by the CDC to report pregnancy-related deaths. Because Idaho reviews all pregnancy-associated deaths, an additional category, traumatic injuries, was added to accurately report those deaths. Occasionally, the cause of death is unknown and will be labeled as such.

Categories:

- Amniotic fluid embolism
- Anesthesia complications
- Cardiomyopathy
- Cardiovascular conditions*
- Cerebrovascular accidents
- Hemorrhage
- Hypertensive disorders of pregnancy**
- Mental Health Conditions***
- Infection or sepsis
- Other noncardiovascular medical conditions****
- Thrombotic pulmonary or other embolism
- Traumatic Injuries
- Unknown

* Cardiovascular conditions include deaths due to coronary artery disease, pulmonary hypertension, acquired and congenital valvular heart disease, vascular aneurysm, hypertensive cardiovascular disease, Marfan Syndrome, Conduction defects, vascular malformations, and other cardiovascular disease; and excludes cardiomyopathy and preeclampsia, eclampsia, and chronic hypertension with superimposed preeclampsia which are categorized separately.

** Hypertensive disorders of pregnancy include preeclampsia and eclampsia.

*** Mental health conditions include deaths to suicide, overdose/poisoning, and unintentional injuries determined by the MMRC to be related to a mental health condition.

**** Other noncardiovascular medical conditions include endocrine, hematologic, immunologic and renal conditions.

Committee-Identified Underlying Causes of Death in 2019:

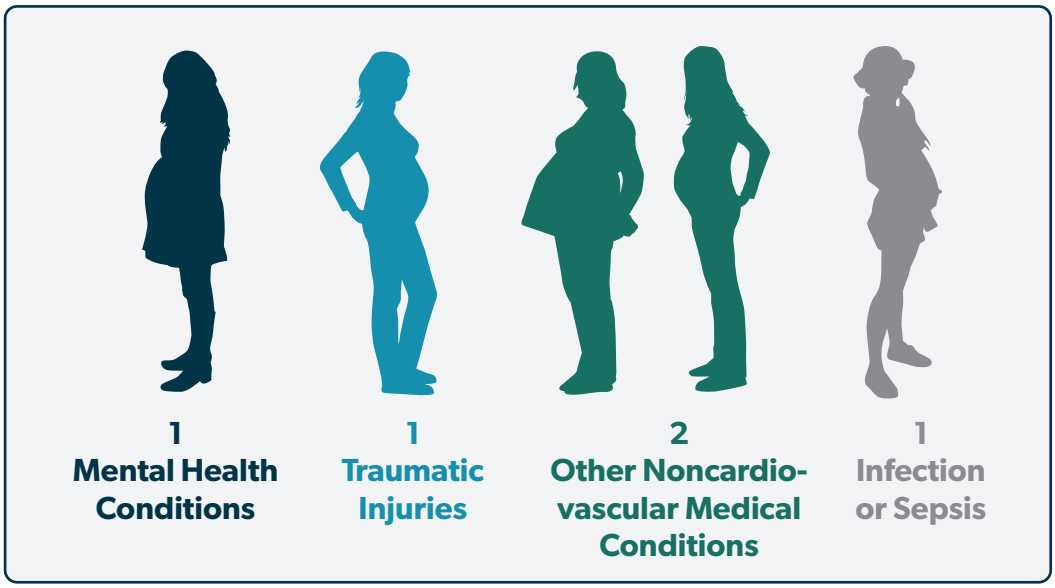
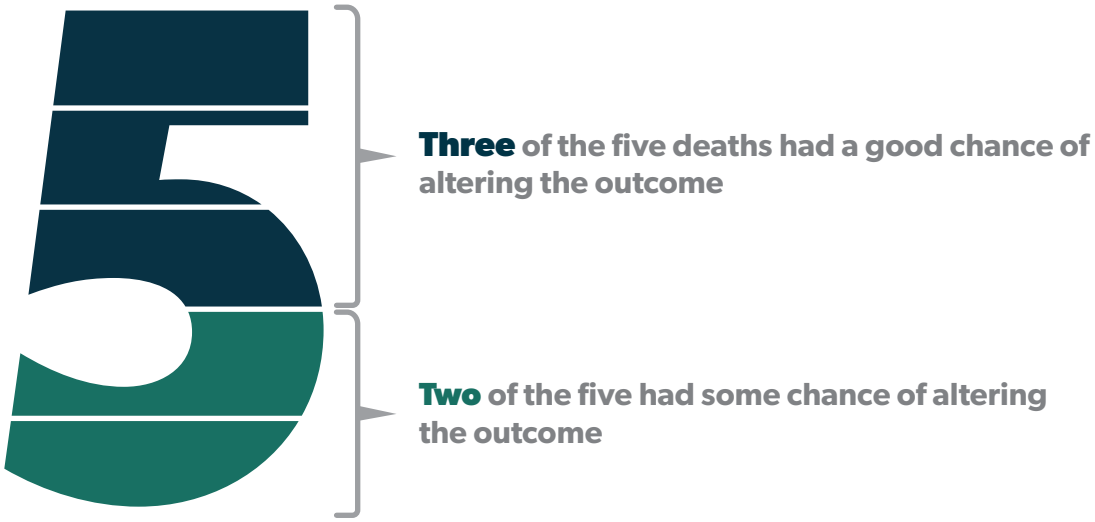


Figure 6 – Committee-identified Underlying Cause of Death for all Pregnancy-associated Deaths, 2019
Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

Question 3: Was the death preventable?

The MMRC members determine if a death was preventable by answering a yes/no question: was the death preventable? Per the CDC MMRC decision form, a death is considered preventable if the committee determines that there was at least some chance of the death being averted by one or more reasonable changes to patient, family, provider, facility, system, and/or community factors.[4] The committee then decides the chance of being able to alter the outcomes: good chance, some chance, no chance, or unable to determine.

In 2019, the committee determined that all **5 deaths** could have been prevented.



Question 4: What were the factors that contributed to this death?

Throughout the review of each death, factors that contributed to the death are identified. Each factor is categorized into the following levels: patient/family, provider, facility, systems of care, or community and form the basis for the MMRC's recommendations.

The following were contributing factors identified during the review and the number of cases in which each contributing factor appeared. The definitions for these factors can be found in Appendix B:

- Environmental factors (1)
- Lack of access/financial issues (3)
- Lack of continuity of care (3)
- Lack of referral or consultation (2)
- Failure to screen/Inadequate assessment of risk (2)
- Poor communication/Lack of case coordination or management (2)
- Tobacco use (3)
- Substance use disorder (3)
- Mental health conditions (2)
- Inadequate community outreach/resources (1)
- Clinical skill/quality of care (1)
- Chronic disease (2)

The committee answers questions whether mental health conditions, obesity, or substance use disorder contributed to the death. Contributing factors are significant conditions contributing to the death, but not resulting in the underlying cause of death. It is important to note that the committee uses "probably" when there is not specific proof of each condition, which is especially difficult when determining if mental health conditions contributed to the death.

Question 5: What are the recommendations and actions that address these contributing factors?

The MMRC members develop recommendations to prevent future deaths from occurring. The CDC suggests using the following question to help MMRCs find case-specific recommendations:

If there was at least some chance that the death could have been averted, what were the specific and feasible actions, if implemented or altered that might have changed the course of events?

Recommendations are aimed at specific levels: patient/family, provider, facility, system, and community. The MMRC also strives to ensure that recommendations are effective and that they address who should do what and when.

All the 2019 deaths had at least one recommendation. Below is a list of all 40 recommendations made during the 2019 Death Review.

2019 MMRC Recommendations

Patient/Family

None

Providers

- Assist patients in accessing and utilizing services (i.e. Medicaid, drug treatment)
- Establish follow-up plans for women that are incarcerated during their pregnancy or postpartum period.
- Utilize the Maternal, Infant, and Early Childhood Home Visiting Program for pregnant and postpartum women when applicable.
- Consult with Maternal Fetal Medicine physicians if potentially high-risk pregnant or postpartum patients are identified.
- Educate pregnant and postpartum women on the importance of medication adherence.
- Identify barriers that pregnant and postpartum women may have in adhering to their medications.
- Draw labs on pregnant and postpartum women when they present to the emergency room with abnormal signs and symptoms.

- Educate pregnant women on smoking cessation by providing education materials and referrals.
- Follow-up with women after a pregnancy loss, especially in women with known mental health or mood disorders.
- Provide follow-up when pain medications are prescribed to pregnant or post-partum women.
- Implement the American College of Obstetricians and Gynecologists standard of care that postpartum visits should occur 2-3 weeks after delivery, especially in high-risk mothers.

Facility

- Ensure there are high-risk follow-up systems in place to assure pregnant and postpartum patients, with certain diagnoses, are connected to appropriate outpatient care.
- Institute communication channels between providers, especially if potential high-risk scenarios have been identified in the prenatal, intrapartum, and postpartum periods. This includes communication with outside facilities or providers.
- Screen for substance use disorders when a patient seeks reproductive care and provide a referral when substance use is identified, preferably a warm handoff or call to the facility to schedule the first appointment while the patient is present.
- Develop relationships between facilities with different levels of care and maternal and fetal specialists who can provide consultation and/or referrals for higher level of care in high-risk cases. Be familiar with interdisciplinary referrals for substance use, mental health, family planning, doulas, home visiting, and social services.
- Notify coroners in the events of pregnancy-associated deaths, especially when the death involves substance use disorder or is suspected a suicide.
- Establish peer review for pregnancy-associated deaths or include pregnancy-associated deaths in their current peer review processes.
- Implement the Alliance for Innovation on Maternal Health's Patient Safety Bundles.

- Participate in the Levels of Maternal Care Verification Program from The American College of Obstetricians and Gynecologists.
- Provide or have access to social work or case management services in facilities that provide prenatal, intrapartum, and/or postnatal care to women.
- Educate providers on utilizing validated screening tools for depression, mood disorders, substance use disorders, and postpartum depression as a standard part of prenatal, intrapartum, and postpartum care. Providers should then make appropriate referrals, preferably warm handoffs or make the appointment with the patient present. Screening should always be done privately with the patient.

System

- The State of Idaho should increase access to medical care, especially for pregnant and postpartum women.
- The Idaho State Legislature should pass the Helping Medicaid Offer Maternity Services (MOMS) Act of 2020.
- The State of Idaho should increase access to forensic pathologists and/or medical examiners in Idaho.
- Behavioral health treatment centers should prioritize pregnant women with substance use disorders.
- State funds should be allocated for the Division of Public Health to develop a statewide Perinatal Quality Collaborative.
- Once established, the Idaho Perinatal Quality Collaborative should analyze where access to perinatal care is lacking within Idaho.
- The State of Idaho should create a safety net for incarcerated pregnant women that includes follow-up care coordination and transportation assistance.
- Idaho Medicaid should expand coverage for pregnant women to 12 months postpartum, regardless of pregnancy outcome.
- The State of Idaho should implement the American College of Obstetricians and Gynecologists (ACOG) Levels of Maternal Care throughout Idaho.

- The State of Idaho should increase access to substance use treatment, especially for pregnant and postpartum women that keeps mother and child(ren) together.
- Coroners should send decedents for an autopsy and/or toxicology if the individual is less than 50 years of age and the decedent does not appear to have sustained trauma.
- Maternal health experts should educate the community and encourage them to contact their senators to pass the Maternal Care Access and Reducing Emergencies (CARE) Act.
- The Idaho State Legislature should pass the Maternal CARE Act.
- The State of Idaho should address legislation regarding autopsies for pregnant and postpartum women.
- Coroners should establish a standardized, consistent policy for pregnancy-associated deaths.
- The State of Idaho should increase funding for autopsies.

Community

- Actively stand against drunk driving.
- Advocate for the passing of the Maternal CARE Act.
- Advocate for more pregnancy-loss support groups.

Question 6: What is the anticipated impact of these actions if implemented?

Each recommendation made by the committee is assigned a level of prevention: primary, secondary, or tertiary.

- Primary prevention are actions that prevent the contributing factor before it occurs.
- Secondary prevention are actions that reduce the impact of a contributing factor once it has occurred.
- Tertiary prevention are actions that reduce the impact or progression of what has become an ongoing contributing factor.[5]

Next, each specific committee recommendation is assigned an expected level of impact if the recommendation is implemented, ranging from small to giant. Expected impact levels are adapted from the Health Impact Pyramid (Figure 7). Recommendations that are "giant" or aimed at the bottom of the pyramid, have the greatest potential for population-level impact. Actions that are "small" or are aimed at the top of the pyramid, make an impact at the individual-level. MMRCs should have a variety of recommendations that are aimed at all levels of impact.

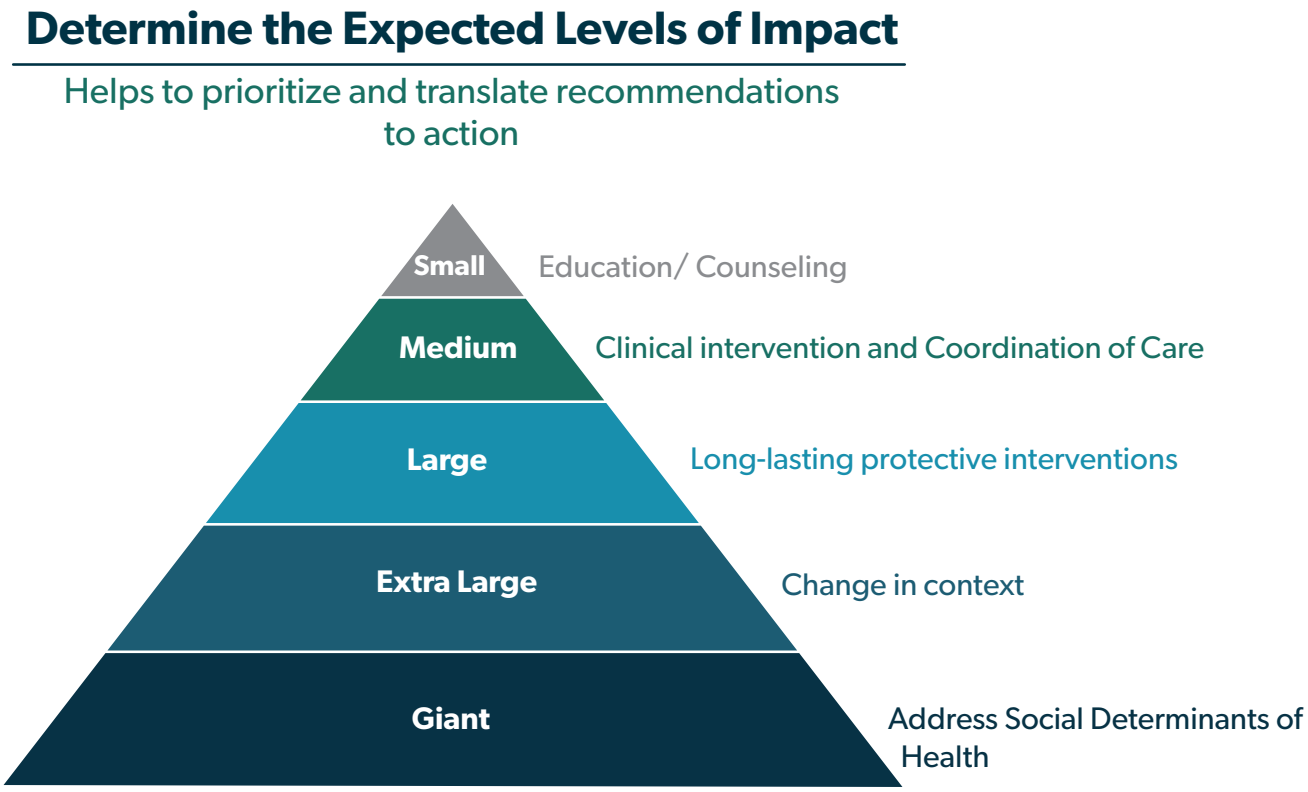


Figure 7 - Expected Level of Impact if Recommendation is Implemented
Building U.S. Capacity to Review and Prevent Pregnancy-associated Deaths (2018). Report from nine maternal mortality review committees. Retrieved from http://reviewtoaction.org/Report_from_Nine_MMRCs

In Figures 8 and 9, the recommendations are sorted by their level of impact and level of prevention. Of the 40 recommendations made in 2019, 7 have a small level of impact and 2 have a giant level of impact. Most recommendations have a medium level of impact.

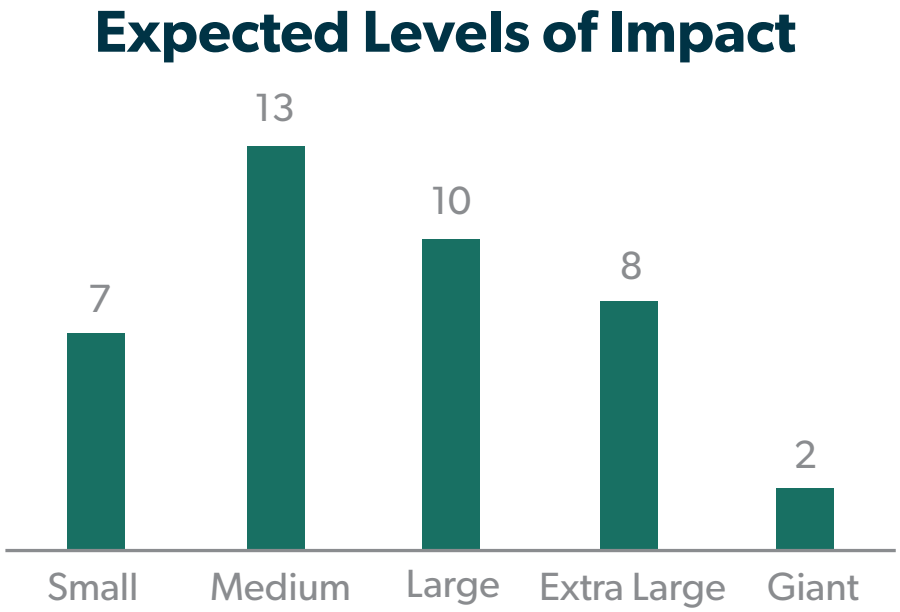


Figure 8 - Expected Impact Level, 2019
Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

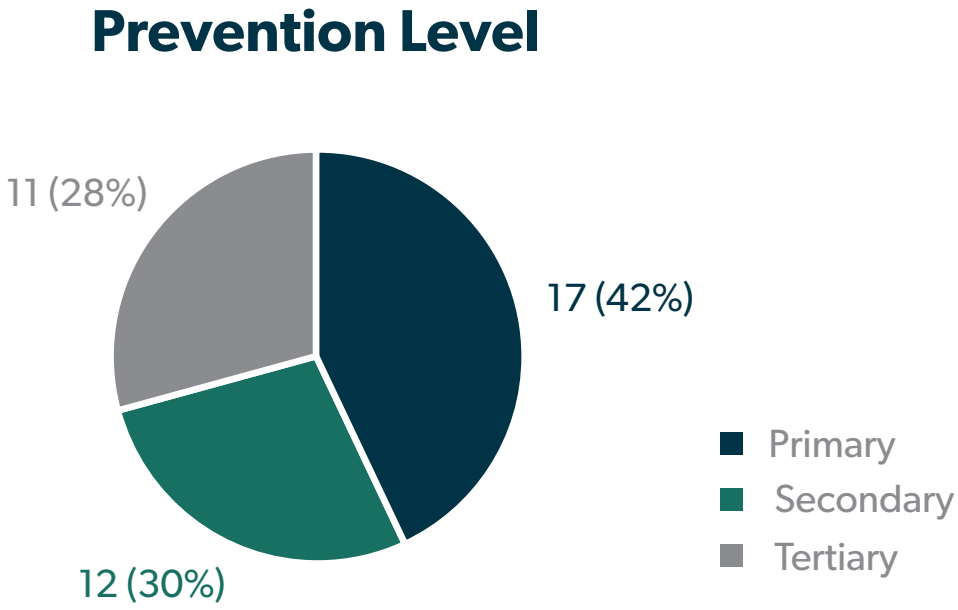


Figure 9 - Prevention Level, 2019
Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

If we look at all the expected impact levels for each recommendation and the level at which the recommendation was made, we see that all "giant" recommendations and most "extra large" recommendations are at the system level. Most "small" recommendations were made at the provider level and most "large" recommendations were made at the "facility" level.

Expected Levels of Impact Based on Level of Recommendation, 2019

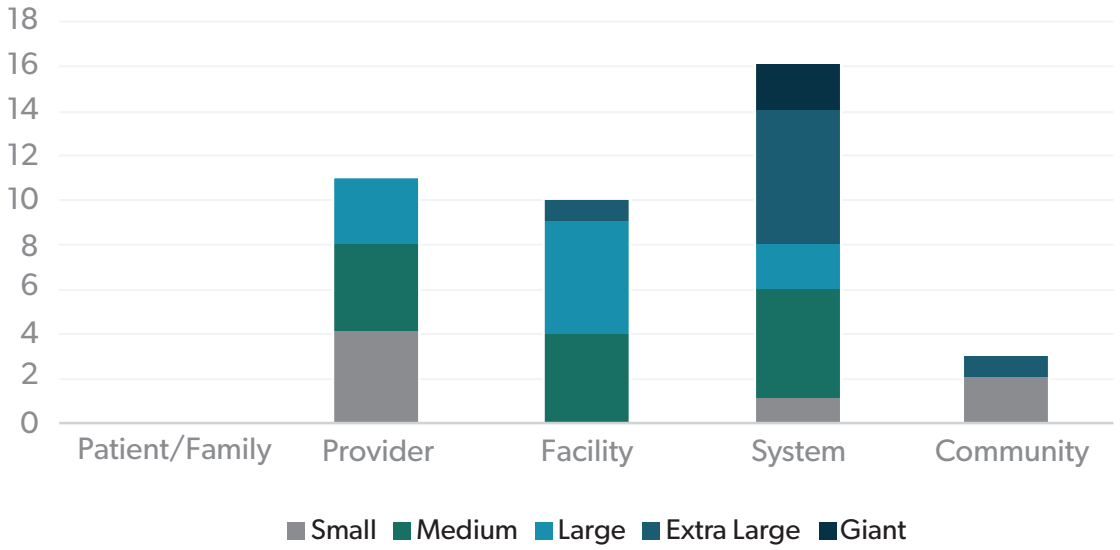
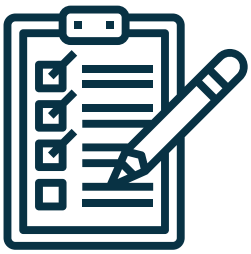


Figure 10 - Expected Impact Level Based on Level of Recommendation, 2019
Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

MMR PROGRAM UPDATES



Improve identification and documentation of contributing factors: The MMR Program is working to consistently capture contributing factors during the MMRC meetings. This will help the program better identify trends and analyze which contributing factors lead to pregnancy-related deaths. As a result, the findings from 2019 include all contributing factors (Appendix B) that were identified during the meeting. The same list was used in

the 2018 meeting to help the committee identify factors and make recommendations based on those factors but were not documented in the way they were in 2019. For this reason, the report in 2018 only included three specific contributing factors.

Record Collection: During the committee meeting, the members estimate the degree of relevant information (or records) available for each death. They choose from "not complete," "somewhat complete," "mostly complete," or "complete." This is a direct reflection of the record request process. The MMR Program aims to have all deaths categorized as "mostly complete" or "complete." Mostly complete indicates that there are minor gaps in the records, gaps that would have been beneficial to have filled but were not essential to the review of the case. Figure 11 shows the baseline completeness for each record. In future reviews, the committee will implement a checklist to determine completeness and help the MMR Program identify areas where information is missing.

Record Completeness, 2018-2019

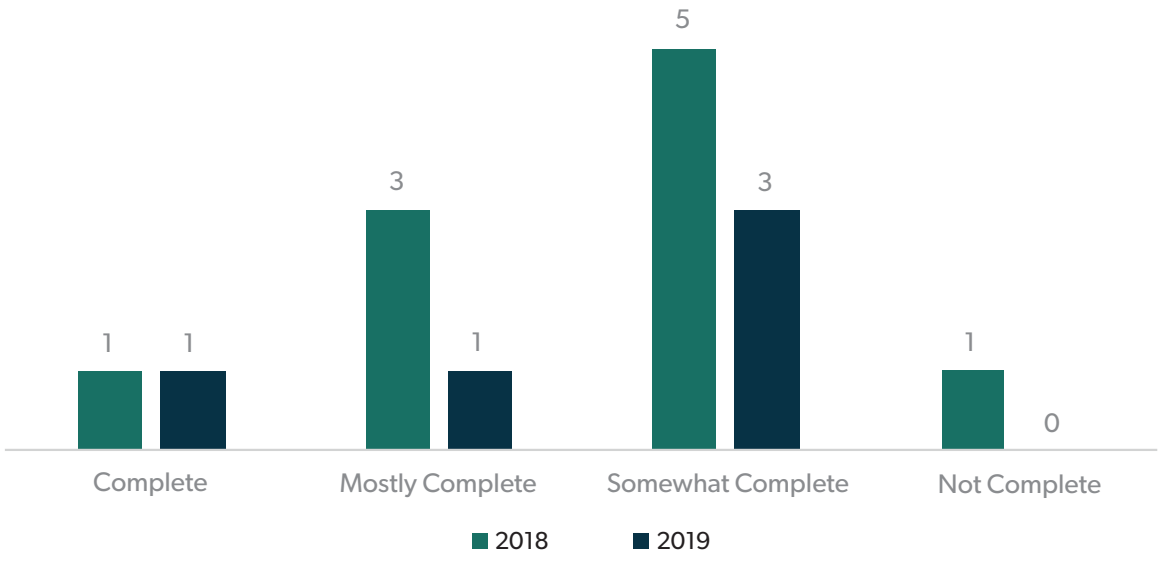


Figure 11 – Record Completeness, 2018-2019
Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

Record Request Completion: To assist those who send records to the MMR program, we tracked the number of record requests sent and records received in anticipation of there being difficulty due to COVID-19. However, we found that for the 2019 review, a total of 29 record requests were sent to a variety of entities and 28 (96.55%) records were received by the MMR Program.

Discrimination as a Contributing Factor: In 2019, new contributing factors were added to the CDC's standardized decision form to be used by MMRCs including: structural racism, interpersonal racism, and discrimination. The MMR Program identified several challenges with implementing the new decision form: lack of expertise identifying racism or discrimination in medical records, addressing staff and members' biases, and ensuring the response to the new contributing factor is addressed in an effective way. For these reasons, the MMR Program decided to wait to implement the new decision form. The MMR Program is exploring options for addressing the form in a way that will be effective and actionable.

RECOMMENDATIONS IN ACTION

Idaho Medicaid should expand coverage for pregnant women to 12 months postpartum, regardless of pregnancy outcome [2018 recommendation].

While Medicaid still only covers women for 60 days after their pregnancy, the pregnancy coverage is now inclusive of all services and not just pregnancy-related services. The committee still recommends comprehensive coverage for 12 months after the end of pregnancy.

Providers will assess client's reproductive health plan in accordance with the CDC's recommendations [2018 recommendation]:

All persons capable of having a child should be asked the following questions:

- Do you have any children now?

- Do you want to have (more) children?
- How many (more) children would you like to have and when?

In the state of Idaho, Idaho Family Planning Program (Title X) clinics utilize One Key Question® to assess a client's reproductive health plan. The Idaho Family Planning Program (IFPP) is comprised of four of the seven local public health districts (PHDs) and two federally-qualified health centers (FQHCs). These six entities have service sites in over 72% of Idaho counties and served 13,397 family planning clients for the 2019 calendar year (IFPP, 2019). Family planning services focus on assisting individuals to achieve or prevent pregnancy. Assessing clients' reproductive health plans enables providers to offer resources and tools to clients to prevent unintended pregnancies, promote preconception health, and encourage early prenatal care.

The MMR Program will focus on creating Idaho's first Perinatal Quality Collaborative (PQC) to provide a venue to implement and measure the effect of recommendations made by the MMRC [2019 recommendation].

While it was not a recommendation made during the 2018 MMRC review, the MCH Program recognizes the importance of establishing a PQC and is currently in the research and planning phases. Through collaboration with the MMRC, Idaho can reduce maternal mortality and morbidity.

SUMMARY

The MMRC continues to meet annually and review the prior years' deaths. Findings and recommendations will continue to be published in an annual report through June 30, 2023, when the current statute is set to expire. Reports will be provided to the legislature and made available for the public.

If you are interested in being on the list-serv to receive the annual MMRC report, please email IdahoMCH@dhw.idaho.gov.

REFERENCES

1. legislature.idaho.gov/wp-content/uploads/statutesrules/idstat/Title39/T39CH96.pdf
2. reviewtoaction.org/rsc-ra/term/80
3. www.cdc.gov/reproductivehealth/maternal-mortality/disparities-pregnancy-related-deaths/infographic.html
4. Maternal Mortality Review Committee Decision Form - reviewtoaction.org/rsc-ra/term/68
5. Building U.S. Capacity to Review and Prevent Maternal Deaths. (2018). Report from nine maternal mortality review committees. Retrieved from reviewtoaction.org/Report_from_Nine_MMRCs

APPENDIX A – COMBINED FINDINGS FROM 2018-2019 PREGNANCY-ASSOCIATED DEATHS

Below are the findings from the 15 pregnancy-associated deaths that occurred between 2018 and 2019. With continued reviews, the MMR Program will have the ability to analyze trends regarding maternal deaths in Idaho.

Demographics

Demographics, 2018-2019			
Demographics	Number of Deaths (n)		Percentage of Deaths (%)
	2018	2019	2018-2019
Age (5-year age groups)			
15 to 19 years	0	0	-
20 to 24 years	4	1	33%
25 to 29 years	0	2	13%
30 to 34 years	2	2	27%
35 to 39 years	4	0	27%
40 to 44 years	0	0	-
45 to 49 years	0	0	-
Race/Ethnicity			
Non-Hispanic, White	4	4	53%
Non-Hispanic, Black	0	0	-
Hispanic	2	0	13%
American Indian/Alaska Native	1	1	13%
Pacific Islander	1	0	7%
Bi-racial	2	0	13%
Marital Status			
Married	5	0	33%
Married, but Separated	0	0	-
Widowed	0	0	-
Divorced	0	1	7%
Never Married	5	4	60%

Unknown/Not Specified	0	0	-
Education			
8th Grade or Less	1	1	13%
9th-12th Grade; No Diploma	1	1	13%
High School Grad or GED Completed	5	1	40%
Some College; No Degree	0	2	13%
Associate's Degree	2	0	13%
Bachelor's Degree	1	0	7%
Master's Degree	0	0	-
Doctorate or Professional Degree	0	0	-
Not specified	0	0	-

Table 4 - Demographics, 2018-2019
Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

District of Residence

District of Residence, 2018-2019		
	Number of Deaths by Year	
District of Residence	2018	2019
Health District 1	2	0
Health District 2	0	2
Health District 3	3	0
Health District 4	0	0
Health District 5	1	2
Health District 6	0	1
Health District 7	4	0

Table 5 - District of Residence, 2018-2019
Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

The Idaho MMRC reviewed a total of 15 pregnancy-associated deaths occurring in 2018 and 2019. Of these, seven (47%) were related to or aggravated by pregnancy or its management (pregnancy-related deaths) and two (13%) were due to a cause unrelated to pregnancy (pregnancy-associated, but NOT -related deaths). The other six (40%) were determined to be pregnancy-associated, but the committee was unable to determine pregnancy-relatedness.

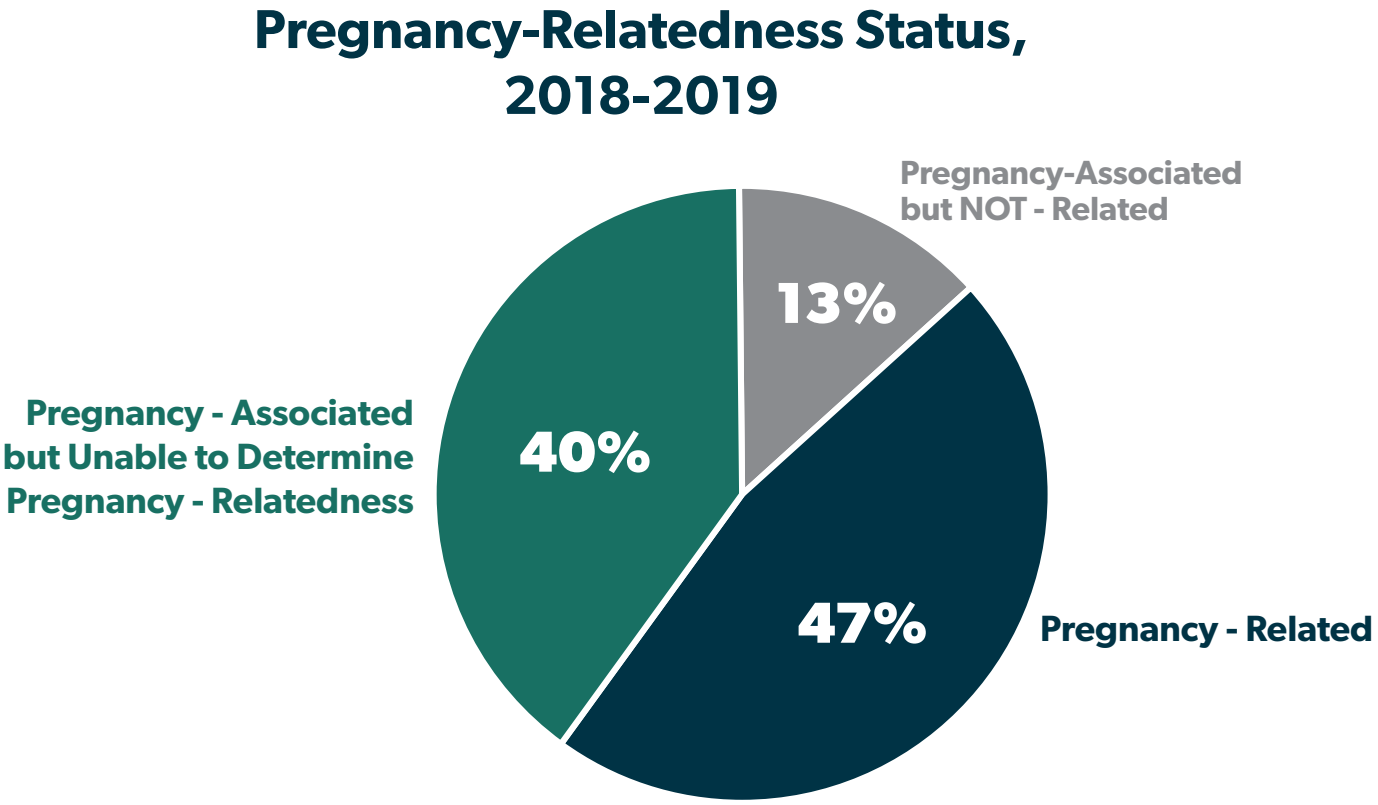


Figure 12 - Pregnancy-Relatedness Status, 2018 and 2019
Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

Between 2018-2019, the PRMR for a Non-Hispanic, White woman was 5.9 deaths per 100,000 live births, but for a Hispanic woman, its more than 4.5 times higher at 27.6 deaths per 100,000 live births. With continued annual death reviews, we will have the ability to analyze the racial disparities further and make actionable recommendations for change and improve health equity in Idaho.

In 2018-2019, women between the ages of 35 and 39 years had the highest PRMR at 57.2 deaths per 100,000 live births, compared to all age groups with a PRMR of 16.1 deaths per 100,000 live births.* Women who are not married also have a higher PRMR (42.6 deaths per 100,000 live births) compared to all marital status combined (16.1 deaths per 100,000 live births).**

When combining all 2018 and 2019 deaths, 40% occurred while the woman was pregnant.

When looking at all pregnancy-associated deaths between 2018-2019 in Figure 13, 33% of deaths occurred to women between the ages of 20 and 24 years.

Pregnancy Checkbox Status, 2018 and 2019

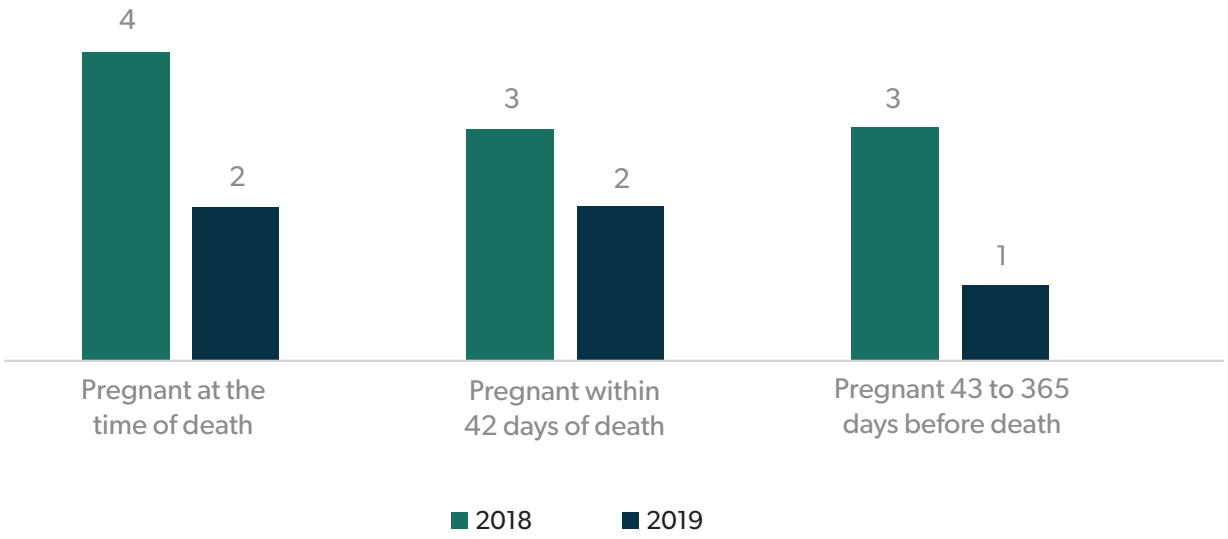


Figure 13 - Pregnancy Checkbox Status, 2018 and 2019

Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

* MMRIA age groups normally start at age 15 and end at age 49. The Bureau of Vital Records and Health Statistics birth certificate records used for this report include mothers of ages 12 to 61. The youngest and oldest age groups were adjusted to accommodate the ages appearing in the birth certificate data.

** The coding available for marital status on the Bureau of Vital Records and Health Statistics birth certificate data only include "yes," "no," and "unknown." The MMRIA marital status codes (married, married, but separated, widowed, divorced, never married, and unknown) were collapsed to match the birth certificate values.

Between 2018-2019 deaths, 43% of pregnancy-related deaths in Idaho happened while the woman was pregnant and another 43% happened in the first 42 days after a pregnancy as seen in Figure 14.

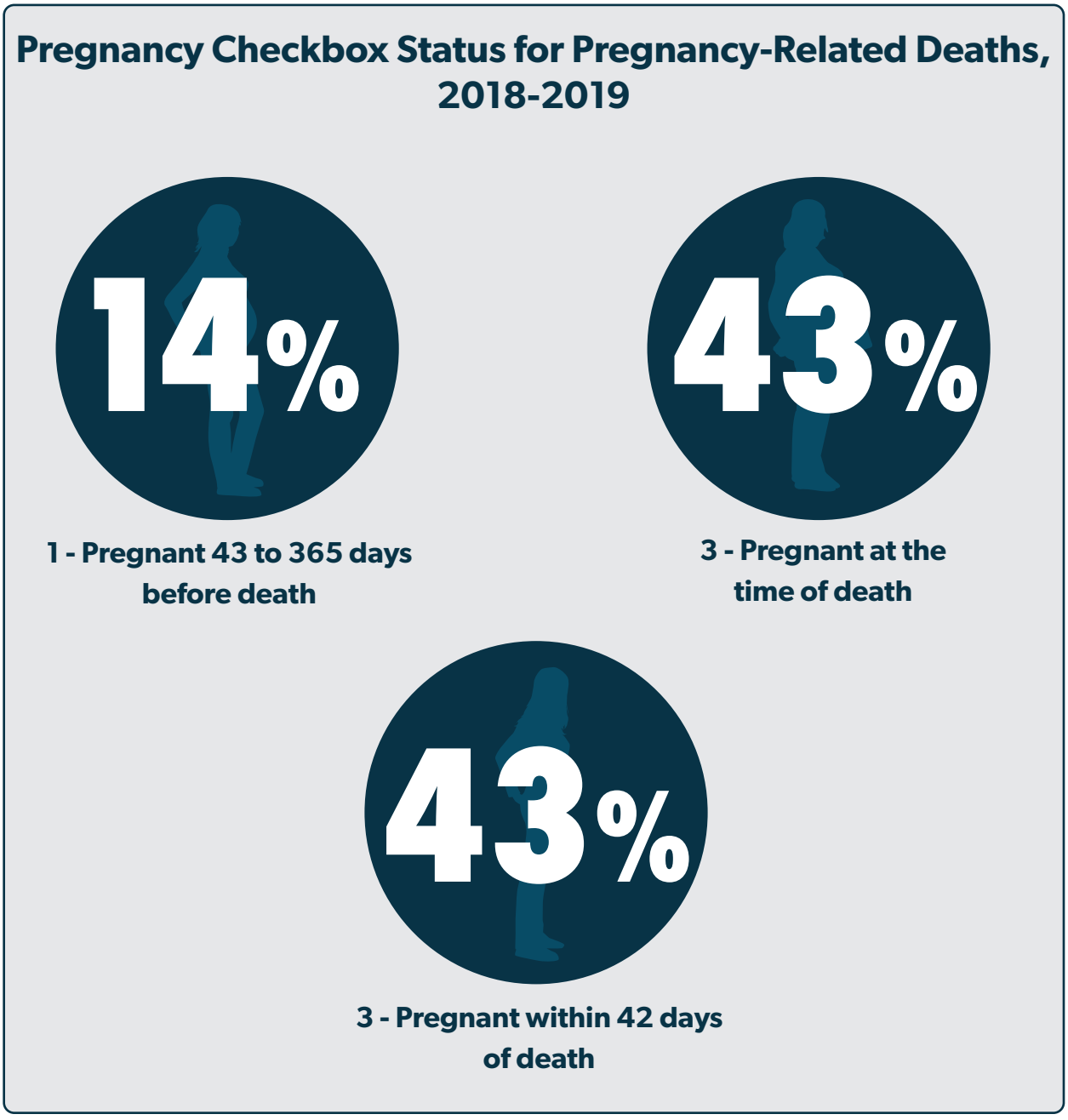


Figure 14 – Pregnancy Checkbox Status for Pregnancy-Related Deaths, 2018-2019

Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

Between 2018-2019, 33% of pregnancy-associated deaths occurred in women ages 20-24.

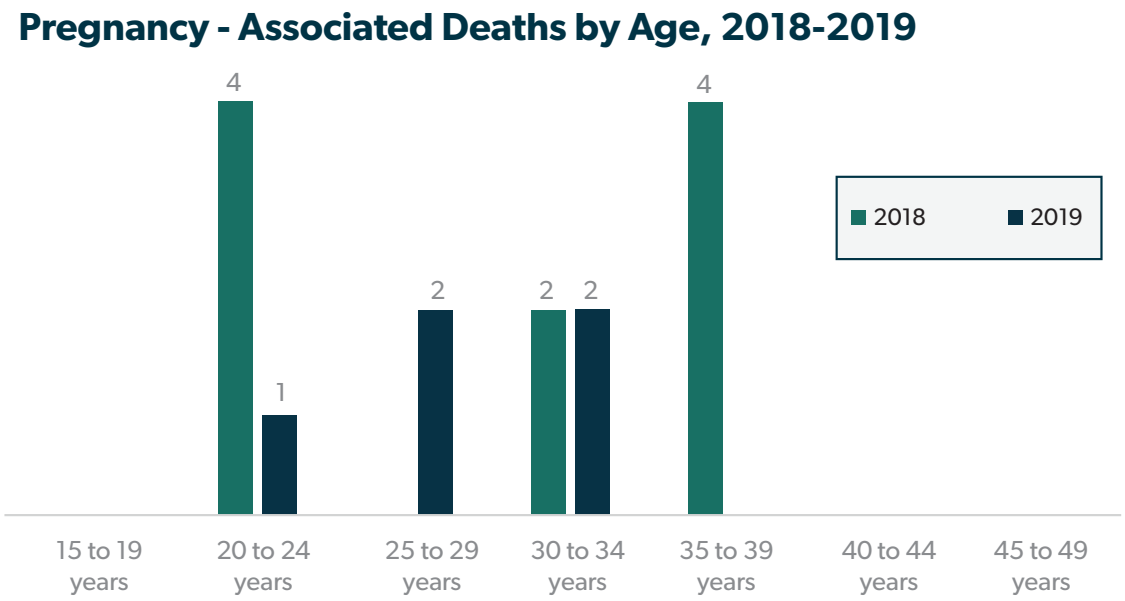


Figure 15 – Pregnancy - Associated Deaths by Age, 2018-2019

Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

In looking at all the deaths from 2018-2019, the committee has identified the underlying causes of death listed in Figure 16.

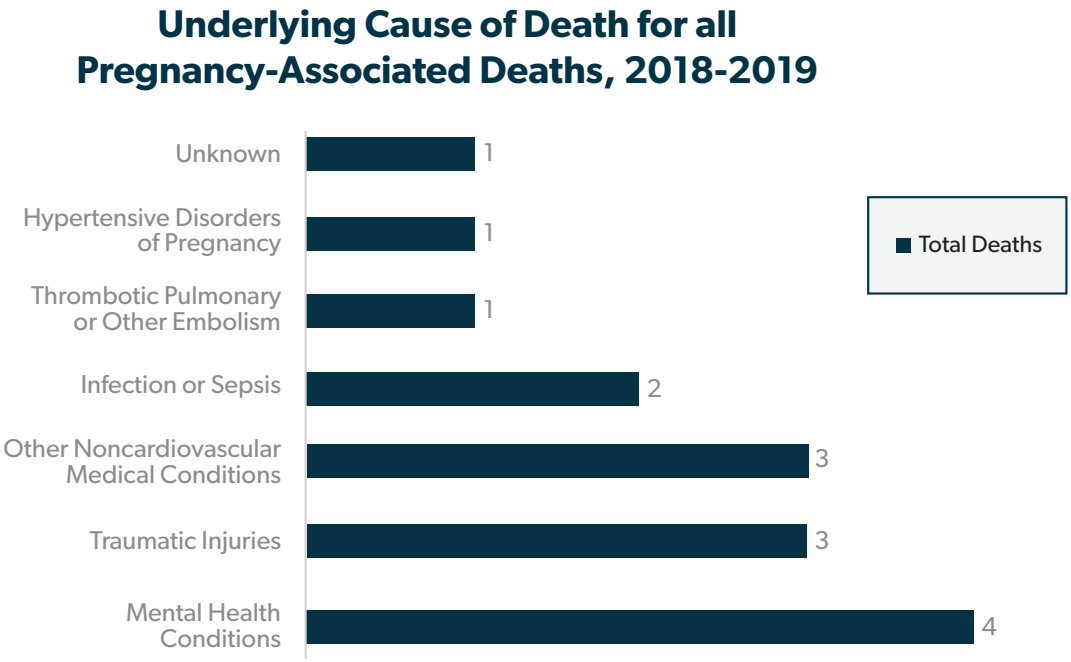


Figure 16 - Underlying Cause of Death for all Pregnancy-associated Deaths, 2018-2019

Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

In looking at all pregnancy-associated deaths between 2018-2019, 13% had mental health conditions as a contributing factor, 34% probably had mental health conditions as a contributing factor, 13% had obesity as a contributing factor, and 47% had substance use disorder as a contributing factor. It is important to note that the committee uses "probably" when there is not specific proof of each condition, which is especially difficult when determining if mental health conditions contributed to the death.

Did mental health conditions other than substance use disorder contribute to the death?

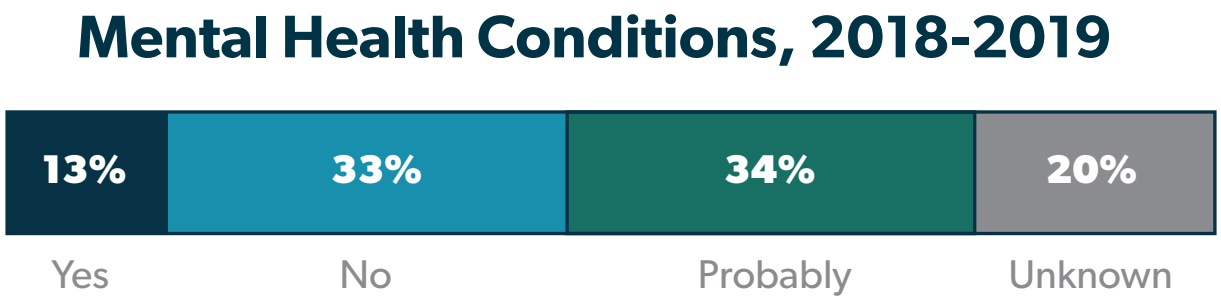


Figure 17 - Mental Health Conditions (other than SUD), Contributing Factor, 2018-2019

Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

Did obesity disorder contribute to the death?

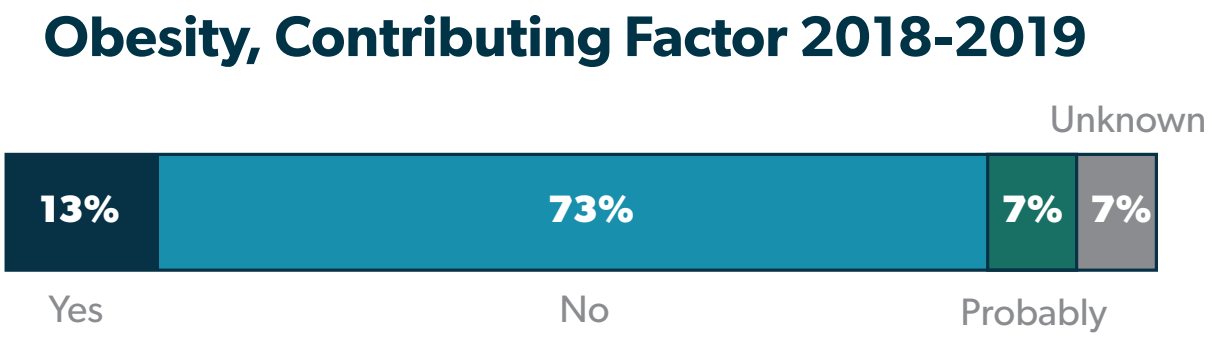


Figure 18 - Obesity, Contributing Factor, 2018-2019

Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

Did substance use disorder contribute to the death?

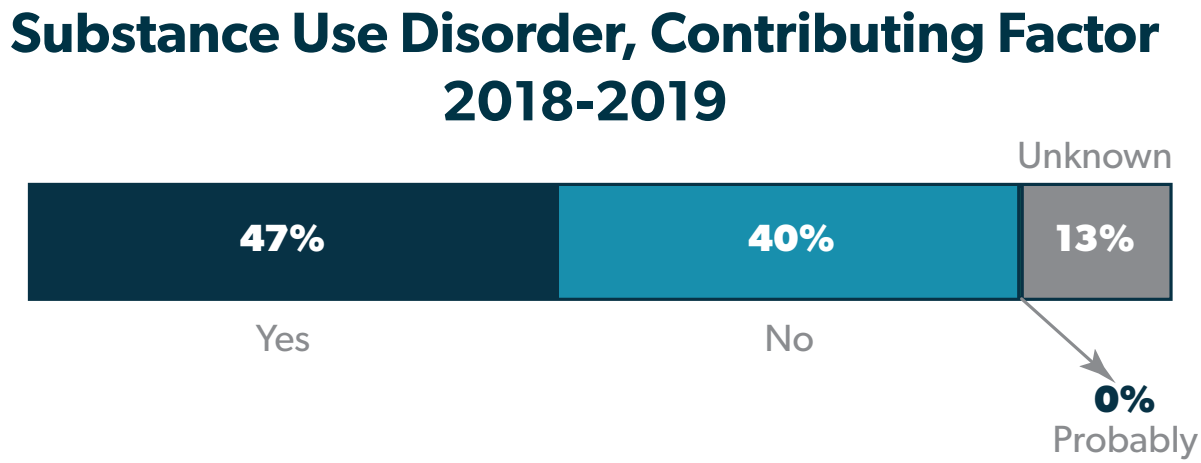


Figure 19 - Substance Use Disorder, Contributing Factor 2018-2019

Data Source: Idaho Department of Health and Welfare, Division of Public Health, Bureau of Clinical and Preventive Services, Maternal Mortality Review Program

APPENDIX B – MMRIA CONTRIBUTING FACTOR DESCRIPTIONS

CONTRIBUTING FACTOR DESCRIPTIONS

LACK OF **ACCESS/FINANCIAL** RESOURCES
System issues, e.g. lack or loss of healthcare insurance or other financial duress, as opposed to woman's noncompliance, impacted woman's ability to care for herself (e.g. did not seek services because unable to miss work or afford postpartum visits after insurance expired). Other barriers to accessing care: insurance non-eligibility, provider shortage in woman's geographical area, and lack of public transportation.

ADHERENCE TO MEDICAL RECOMMENDATIONS
The provider or patient did not follow protocol or failed to comply with standard procedures (i.e. non adherence to prescribed medications).

FAILURE TO SCREEN/INADEQUATE **ASSESSMENT** OF RISK
Factors placing the woman at risk for a poor clinical outcome recognized, and the woman was not transferred/transported to a provider able to give a higher level of care.

CHILDHOOD SEXUAL ABUSE/TRAUMA
The patient experienced rape, molestation, or one or more of the following: sexual exploitation during childhood plus persuasion, inducement, or coercion of a child to engage in sexually explicit conduct; physical or emotional abuse or violence other than that related to sexual abuse during childhood.

CHRONIC DISEASE
Occurrence of one or more significant pre-existing medical conditions (e.g. obesity, cardiovascular disease, or diabetes).

CLINICAL SKILL/QUALITY OF CARE (PROVIDER OR FACILITY PERSPECTIVE)
Personnel were not appropriately skilled for the situation or did not exercise clinical judgment consistent with current standards of care (e.g. error in the preparation or administration of medication or unavailability of translation services).

POOR **COMMUNICATION/**LACK OF CASE COORDINATION OR MANAGEMENT/ LACK OF CONTINUITY OF CARE (SYSTEM PERSPECTIVE)
Care was fragmented (i.e. uncoordinated or not comprehensive) among or between healthcare facilities or units, (e.g. records not available between inpatient and outpatient or among units within the hospital, such as Emergency Department and Labor and Delivery).

LACK OF **CONTINUITY OF CARE** (PROVIDER OR FACILITY PERSPECTIVE)
Care providers did not have access to woman's complete records or did not communicate woman's status sufficiently. Lack of continuity can be between prenatal, labor and delivery, and postpartum providers.

CULTURAL/RELIGIOUS, OR LANGUAGE FACTORS Demonstration that any of these factors was either a barrier to care due to lack of understanding or led to refusal of therapy due to beliefs (or belief systems).

DELAY
The provider or patient was delayed in referring or accessing care, treatment, or follow-up care/action.

DISCRIMINATION
Treating someone less or more favorably based on the group, class or category they belong to resulting from biases, prejudices, and stereotyping. It can manifest as differences in care, clinical communication and shared decision-making. (Smedley et al, 2003 and Dr. Rachel Hardeman)

ENVIRONMENTAL FACTORS
Factors related to weather or social environment.

INADEQUATE OR UNAVAILABLE **EQUIPMENT/TECHNOLOGY**
Equipment was missing, unavailable, or not functional, (e.g. absence of blood tubing connector).

INTERPERSONAL RACISM
Discriminatory interactions between individuals based on differential assumptions about the abilities, motives, and intentions of others and resulting in differential actions toward others based on their race. It can be conscious as well as unconscious, and it includes acts of commission and acts of omission. It manifests as lack of respect, suspicion, devaluation, scapegoating, and dehumanization. (Jones, CP, 2000 and Dr. Cornelia Graves).

KNOWLEDGE - LACK OF KNOWLEDGE REGARDING IMPORTANCE OF EVENT OR OF TREATMENT OR FOLLOW-UP
The provider or patient did not receive adequate education or lacked knowledge or understanding regarding the significance of a health event (e.g. shortness of breath as a trigger to seek immediate care) or lacked understanding about the need for treatment/follow-up after evaluation for a health event (e.g. needed to keep appointment for psychiatric referral after an ED visit for exacerbation of depression).

INADEQUATE **LAW ENFORCEMENT** RESPONSE
Law enforcement response was not in a timely manner or was not appropriate or thorough in scope.

LEGAL
Legal considerations that impacted outcome.

MENTAL HEALTH CONDITIONS
The patient carried a diagnosis of a psychiatric disorder. This includes postpartum depression.

INADEQUATE COMMUNITY **OUTREACH**/RESOURCES
Lack of coordination between healthcare system and other outside agencies/organizations in the geographic/cultural area that work with maternal health issues.

LACK OF STANDARDIZED **POLICIES/PROCEDURES**
The facility lacked basic policies or infrastructure germane to the woman's needs (e.g. response to high blood pressure, or a lack of or outdated policy or protocol).

LACK OF **REFERRAL** OR CONSULTATION
Specialists were not consulted or did not provide care; referrals to specialists were not made.

STRUCTURAL RACISM
The systems of power based on historical injustices and contemporary social factors that systematically disadvantage people of color and advantage white people through inequities in housing, education, employment, earnings, benefits, credit, media, health care, criminal justice, etc. – (Adapted from Bailey ZD. Lancet. 2017 and Dr. Carla Ortique)

SOCIAL SUPPORT/ISOLATION - LACK OF FAMILY/ FRIEND OR SUPPORT SYSTEM
Social support from family, partner, or friends was lacking, inadequate, and/or dysfunctional.

SUBSTANCE USE DISORDER – ALCOHOL, ILLICIT/ PRESCRIPTION DRUGS
Substance use disorder is characterized by recurrent use of alcohol and/or drugs causing clinically and functionally significant impairment, such as health problems or disability. The committee may determine that substance use disorder contributed to the death when the disorder directly compromised a woman's health status (e.g. acute methamphetamine intoxication exacerbated pregnancy-induced hypertension, or woman was more vulnerable to infections or medical conditions).

TOBACCO USE
The patient's use of tobacco directly compromised the patient's health status (e.g. long-term smoking led to underlying chronic lung disease).

UNSTABLE HOUSING
Woman lived "on the street," in a homeless shelter, or in transitional or temporary circumstances with family or friends.

VIOLENCE AND INTIMATE PARTNER VIOLENCE (IPV)
Physical or emotional abuse perpetrated by current or former intimate partner, family member, or stranger.

OTHER
Contributing factor not otherwise mentioned. Please provide description.

IDAHO DEPARTMENT OF
HEALTH & WELFARE
DIVISION OF PUBLIC HEALTH

December 2021