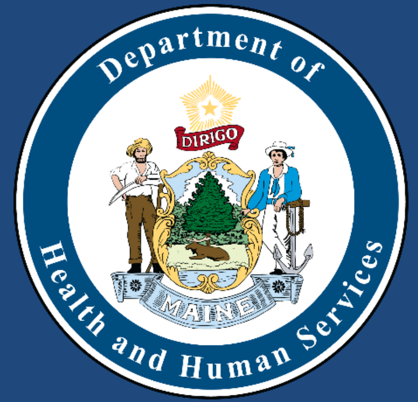

Maine's Maternal, Fetal, and Infant Mortality Review Panel

2025 Annual Report

1/1/2025 to 12/31/2025

Required by:

22 MRS § 261; PL 2017, c. 203

Submitted by: Department of Health and Human Services
Maine Center for Disease Control and Prevention
Maternal and Child Health Program

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Messages from the Panel Co-Chairs

Co-Chair, Alan P. Picarillo, MD:
“Every mother and every child deserve a healthy beginning. Yet far too many families experience the heartbreak of maternal, fetal, or infant loss—often due to preventable causes. Our Panel exists to change that. We are driven by a shared commitment to equity, compassion, and science, working together to ensure that every pregnancy, every birth, and every newborn life is met with the highest standard of care and support.

We recognize that the disparities in maternal and infant health are not merely statistics—they are stories of lives interrupted, families forever changed, and systemic barriers that must be dismantled. The Panel brings together health professionals, policymakers, community leaders, and families across Maine to drive comprehensive solutions that address both medical and social determinants of health. From expanding access to prenatal care to advocating for culturally competent support systems, our work is rooted in justice and humanity.

Hope is not a passive word—it is a call to action. By focusing on evidence-based strategies, community engagement, and bold policy change, we believe a future is possible where no woman fears for her life during childbirth, and no family grieves the loss of a baby due to preventable causes. This is more than a public health initiative—it is a moral imperative.

Together, we can build a society where every birth is safe, every life is valued, and every family has the chance to thrive. The work is urgent, but with unity, compassion, and courage, we can move from loss to life, and from crisis to hope.”

Co-Chair Amanda Taisey:
"It has been an honor to collaborate with the dedicated community members and professionals of the MFIMR Panel as we continue to examine the complex conditions and factors contributing to maternal, fetal, and infant mortality in Maine. The Panel members have shown deep consideration for the profound impact of these losses on Maine families, and we remain committed to ensuring that Mainers will benefit from the insights and recommendations of the MFIMR panel.”

Panel Membership

Co-Chairs:
Alan Picarillo
Amanda Taisey

Panel Coordinator and Nurse Abstractor:
Meghan Henshall

ERASE-MM Grant Project Manager and Nurse Abstractor:
Mariah Pfeiffer

Family Interviewer:
Katy Finch (past)
Ellen Landrum (current)

Consultants:
Liz Winterbauer
Kelley Bowden

Members
Amy Belisle
Ann Boomer
Jenny Boone
Kaitlin Callahan
Adrienne Carmack
Lindsey Chasteen
Kristina Day
Tiffany Eaton
Dara Fruchter
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Abigail Masterman
Denise Merrill
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Jay Naliboff
Alane O'Connor
Maureen Perdue
Courtney Pladsen
Ginger Roberts-Scott
Erin Schwarz
Zakiya Sheikh
Stacey Slate
Puthiery Va
Cait Vaughan
Melissa Wakefield
Emily Watson
Sally Weiss
Tamara Wilson

Executive Summary

As required by 22 M.R.S. § 261(5), Maine Center for Disease Control and Prevention's Maternal, Fetal and Infant Mortality Review (MFIMR) Panel presents this 2025 annual report which highlights the status of maternal, fetal and infant mortality in Maine and the activities that the MFIMR Panel has performed in the form of case reviews and recommendations.

The report is structured in two separate parts – an *Epidemiology Brief* and a *Report of Panel Activities*. The first part is a high-level data analysis; the other is an explanation of the Panel's work grappling with complex individual stories to craft recommendations for prevention. The MFIMR Panel reviews pregnancy-associated deaths within two years of the date of death when the data can be considered final. This report includes 2022 and 2023 finalized data as well as provisional 2024 data and summarizes activities occurring during calendar year (CY) 2025.

Over the last 12 months of reviews, trends remain similar to previous reports. The quality of recommendations from the Panel has improved with additional staff assigned to MFIMR. For this report, the Panel highlights 12 recommendations in the topic areas of substance use, mental health, child/family services, and social determinants of health which the Panel set as priority areas. Additionally, the Panel expands upon its recommendation around stigma that was highlighted in last year's report. Looking ahead to 2026, the MFIMR Panel will continue to build on its experience and work on constructing strong, actionable recommendations, supporting ongoing efforts aimed at improving maternal and child health, building trust with communities, and improving Panel processes.

Introduction

The Maine Center for Disease Control and Prevention's (Maine CDC) MFIMR Panel is a multidisciplinary group of health care and social service providers, public health officials, and other people with professional expertise in maternal, fetal and infant health and mortality. MFIMR Panel members are authorized to review de-identified summary information relevant to maternal, fetal and infant death case reviews. The Panel's purpose is to gain an understanding of the factors associated with these deaths to expand the State's capacity to direct prevention efforts and be able to take actions to promote the health and wellbeing of Maine's families. (22 M.R.S. § 261.) Using a public health approach, the overarching goal is to strengthen community resources and enhance systems and policies affecting growing families to improve health outcomes in this population and prevent maternal and infant mortality and morbidity. This report summarizes the MFIMR Panel's activities over the 2025 calendar year (January – December 2025). It outlines recommendations, relevant data contributing to perinatal outcomes, and ongoing plans for the MFIMR Panel in 2026.

Background and History

In 2004, a group of 40-50 concerned public health officials, clinicians, and community members came together because they were seeing women and babies dying and wanted to understand what was happening. At the time, Maine was one of two states without any formal maternal or infant review panel in place. This group decided to follow the lead of other states' and encouraged the legislature to establish a panel or committee that would work to prevent deaths during pregnancy, postpartum, and infancy. Pursuant to PL 2005, chapter 467, the Department of Health and Human Services (DHHS) established a maternal and infant death review panel to review

data presented on cases of maternal and infant deaths. The data initially included all cases of women who died during pregnancy or within 42 days of giving birth and the majority of deaths of infants under one year of age. The panel was charged with presenting an annual report of findings related to factors contributing to maternal and infant death in the State and recommendations to decrease the rate of maternal and infant death. A panel coordinator was written into the statute, but no funding was allocated for the role.

After four years, it became clear that there was a fine line between early neonatal deaths (those occurring from only moments after birth to one week of life) and those born still. As a result, the 124th Maine Legislature enacted emergency legislation (PL 2009, chapter 531) amending the statute to authorize the Maternal and Infant Death Review Panel to review late fetal deaths (deaths occurring after 28 weeks gestation). With this change, the Panel was referred to as the Maternal, Fetal and Infant Mortality Review (MFIMR) Panel, formally changed in statute in 2017. Additionally, the sunset provision was repealed effectively in 2010, allowing the Panel to continue its work beyond the original end date of January 1, 2011.

Between the establishment of the Panel in 2005 and 2016, no cases were reviewed. In 2017 with the support of a part-time Panel Coordinator at Maine CDC MCH program, three cases were reviewed but the barriers to do more included access to health care records. PL 2017, chapter 203 effectively repealed 22 MRS § 261, sub-§ 4, the provision requiring the Panel Coordinator to obtain permission from the family prior to accessing health care records of a woman who died during pregnancy or within 42 days of giving birth, an infant who died within one year of birth, and fetal deaths after 28 weeks of gestation. Following this statutory change, between 2018 and 2019, an additional 10 cases were reviewed.

In its 2019 annual report, the Panel recommended statutory changes to include access by the Panel Coordinator to health care information for maternal deaths up to one year following the end of a pregnancy, in accordance with the guidance of the United States (US) CDC Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM) program.[1] This change was approved by the 129th Maine Legislature and reviews expanded the following year. (PL 2019 chapter 671.)

In 2021, the Maine Medical Association Center for Quality Improvement (MMA-CQI), in cooperation with Maine CDC, applied for US CDC grant funding under the ERASE MM program. MMA-CQI was awarded this 2-year grant beginning September 30, 2022, allowing for the expansion of capacity to review all maternal deaths in Maine. MMA-CQI was awarded an additional 5-year grant beginning September 30, 2024. The principal goals of the first year of this 5-year grant were to increase the availability, quality and timeliness of MFIMR data, to improve the multi-disciplinary, population-level review of pregnancy-related deaths and documentation of recommendations for prevention, and to improve the dissemination, access to and use of quality maternal death data to drive opportunities for prevention. The second year of the grant aims to continue all the work from the first year as well as to analyze deaths related to substance use to

[1] Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM) program provides federal funding that supports maternal mortality review committees (MMRCs) to identify, review, and characterize pregnancy-related deaths; and identify prevention opportunities. https://www.cdc.gov/maternal-mortality/php/erase-mm/index.html

bolster statewide understanding of the impact of perinatal substance use on maternal mortality. Additionally, the second year of funding will give staff capacity to share MFIMR data with communities most impacted by perinatal mortality. Federal funding has been appropriated by Congress for the entire 5-year grant cycle, and the Panel remains hopeful it will be fulfilled in its entirety.

Epidemiology Brief

In support of the MFIMR Panel, funding is provided for epidemiologic analyses of maternal, fetal, and infant mortality through the Maternal and Child Health Block Grant (MCHBG) and the CDC ERASE-MM grant to help the Panel understand patterns and trends associated with maternal, fetal, and infant deaths. Over the last 12 months, MCH epidemiologists provided quarterly analyses of provisional infant death data and annual analyses of fetal death data and pregnancy-associated death data collected by Maine CDC - Data, Research, and Vital Statistics (DRVS). This workflow ensures periodic and consistent surveillance of the infant and fetal death data in Maine and the opportunity to detect emerging or differing trends to alert other State agencies as needed. As seen below, these trends over the past year are not necessarily new, but important to highlight areas that are statistically significant.

This section of the report includes three parts: 1) “Fetal Death Summary”, 2) “Infant Death Summary” and 3) “Pregnancy-Associated Mortality Summary”. The “Fetal Death Summary” and the “Infant Death Summary” explain Maine’s finalized 2024 death data. These data are finalized by DRVS and reviewed by the MCH epidemiology team as of December 2025. The MFIMR Panel uses this data to inform case selection of fetal and infant deaths for reviews in CY 2026. In contrast, MFIMR is required by statute to review all pregnancy-associated deaths. The goal, based on national guidance, is to review cases within two years of death. Prior to ERASE-MM grant funding, there had been only eight pregnancy-associated deaths reviewed since 2017. In July 2022 with the grant, the Panel acknowledged a backlog of cases to review and began with 2021 deaths. Over the last year, the Panel has finalized the 2022 and 2023 pregnancy-associated death data and begun review of the deaths that occurred in 2024. Data is considered final for pregnancy-associated deaths after the MFIMR Panel has reviewed each case and determined the preventability, pregnancy-relatedness, and specific contributing factors. This report’s “Pregnancy-Associated Mortality Summary” includes 2022 and 2023 finalized data and the provisional count of 2024 deaths. A one-page infographic summarizing 2022 deaths is available on the MFIMR Website and in Appendix A.

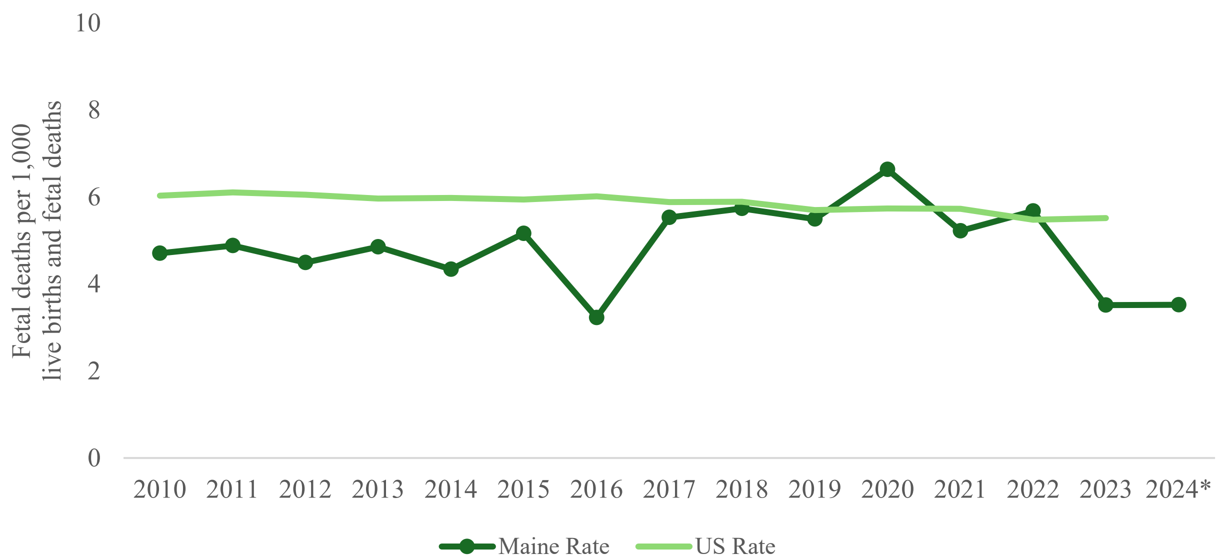
Data from DRVS that includes linked birth and death certificate data for fetal and infant deaths, are not finalized until late fall of the following calendar year. For example, the 2024 infant death data was finalized in October 2025, and the fetal death data was finalized in November 2025. The below data includes Maine’s finalized fetal and infant death data from 2024, and the Panel uses this epidemiologic information to better inform infant and fetal death case selection for reviews in 2026 as a cohort with the full analytic support of the MCH epidemiologists. For the past year (CY 2025), the 2023 finalized infant and fetal data sets were used for sampling for Panel case review. The Panel’s case review timetable keeps within the national guidance of no more than two years from the date of death and ensures families have the opportunity to participate voluntarily in family interviews.

Fetal Death Summary

A fetal death is the spontaneous death of a fetus in utero that occurs at 20 weeks of gestation or later. Early fetal deaths are those occurring between 20-27 weeks gestation; late fetal deaths are those occurring at 28 or later weeks gestation. In Maine, healthcare providers are required to complete a fetal death certificate and register any fetal death occurring at 20 weeks or later. While the following summary includes all 2024 fetal deaths registered with DRVS, the MFIMR Panel reviews only *late fetal* deaths.

The State's 2024 fetal mortality rate was 3.5 fetal deaths per 1,000 live births plus fetal deaths to Maine residents, the same as the State's 2023 fetal mortality rate. Maine's 2024 early fetal mortality rate was 1.4 per 1,000 live births plus fetal deaths, and the late fetal mortality rate was 2.0 per 1,000 live births plus fetal deaths.[2]

Figure 1. Fetal mortality rate, Maine and US, 2010 – 2024

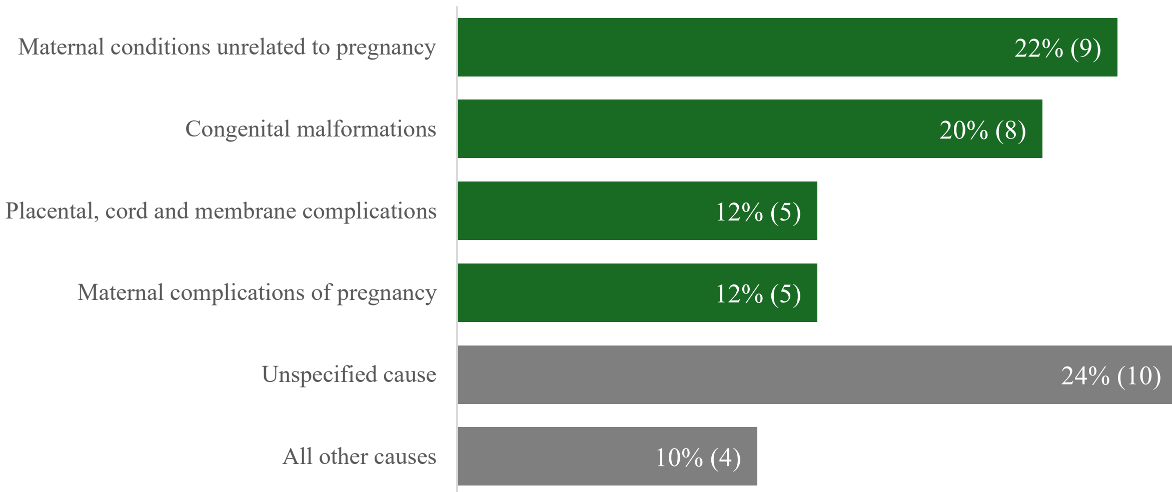


Source(s): US: Birth and Fetal Death Records, CDC WONDER; ME: Maine Fetal Death and Birth certificates, DRVS.
**The 2024 US fetal death rate is not yet available.*

Major causes of fetal death in the US include complications of the placenta or umbilical cord, complications of pregnancy, and congenital anomalies. Across the U.S., a large proportion of fetal death certificates are registered with an unspecified cause (about 31 percent).[3] In 2024, 24 percent of Maine fetal deaths were due to an unspecified cause; 22 percent were due to maternal conditions unrelated to pregnancy; and 20 percent were due to congenital malformations.

[2] Fetal deaths for which gestational age was unknown were excluded from both the numerator and denominator when calculating early and late fetal mortality rates.
[3] Gregory ECW, Valenzuela CP, Hoyert DL. Fetal mortality: United States, 2021. National Vital Statistics Reports; vol 72 no 8. Hyattsville, MD: National Center for Health Statistics. 2023.

Figure 2. Initiating causes of fetal deaths (ICD-10), Maine, 2024

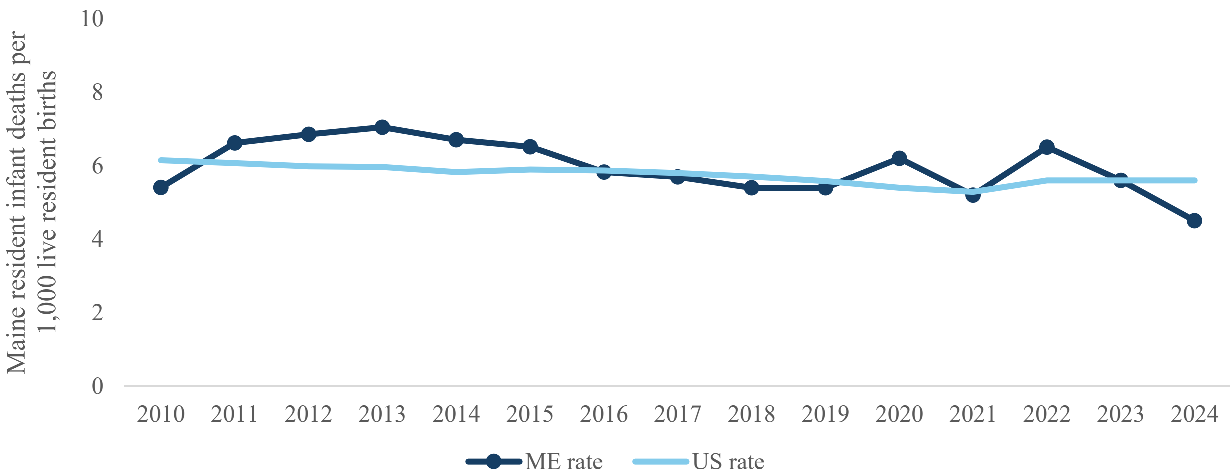


Source: Maine Fetal Death Certificates, DRVS

Infant Death Summary

Infant death is defined as any death to a live born infant prior to their first birthday. After declining between 2020 and 2021, Maine's infant mortality rate increased in 2022 to the highest it has been since 2015. In 2024, there were 52 deaths among Maine resident infants, and the State's infant mortality rate decreased to 4.5 deaths per 1,000 live births to Maine residents (Figure 3), which is the lowest rate the state has seen since 2002. The Maine 2024 infant mortality rate was lower than the US 2024 provisional infant mortality rate of 5.6 deaths per 1,000 live births.

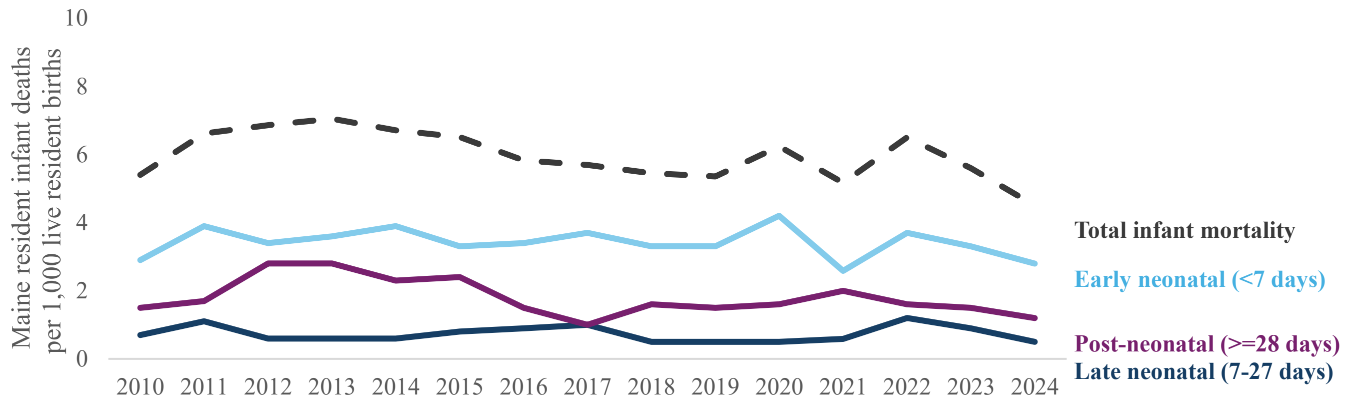
Figure 3. Infant mortality rate, Maine and US, 2010-2024



Source(s): US: Linked Birth / Infant Death Records, CDC WONDER; Maine: Death and Birth certificates, DRVS. The 2024 US rate is provisional and subject to change.

A majority of Maine's infant deaths occur in the early neonatal period (i.e. between 0-6 days of life). In 2024, 61.5 percent of Maine infant deaths occurred during the early neonatal period. Maine experienced a decreased infant mortality rate within all age groups (early neonatal, late neonatal, and post-neonatal) between 2023 and 2024 (Figure 4).

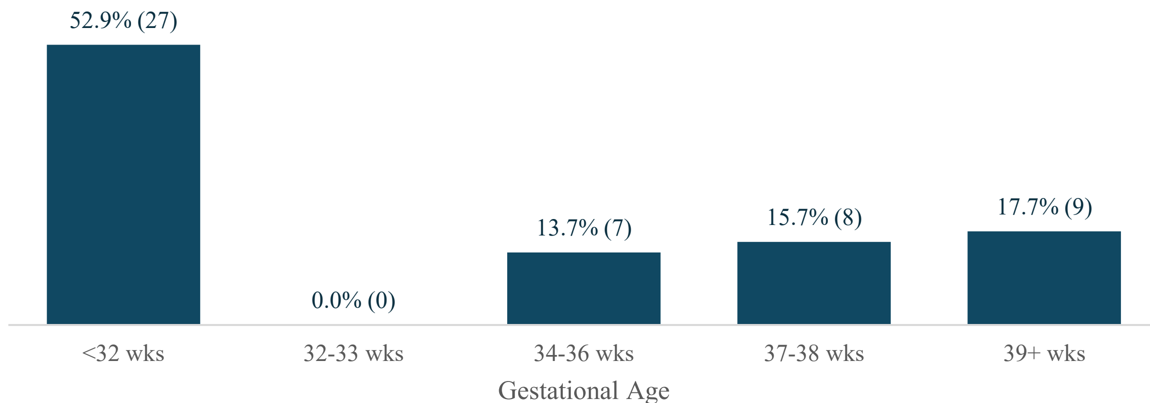
Figure 4. Infant mortality rate by age group, Maine, 2010-2024



Source: Maine CDC Death and Birth certificates

Preterm and low birthweight infants are at increased risk of morbidity and mortality compared to their term and normal birthweight peers.[4] In 2024, more than one in two infant deaths occurred among infants born before 32 weeks gestation (Figure 5). Around half of infant deaths occurring in 2024 were among infants weighing less than 1,500 grams(g) at birth (Figure 6).

Figure 5. Proportion and count of infant deaths by gestational age at birth, Maine, 2024*

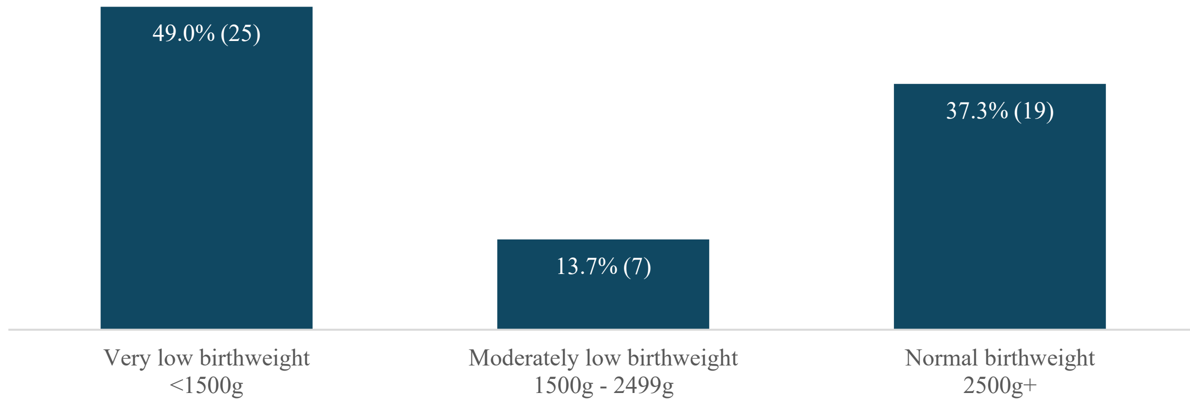


*Infant deaths for which gestational age was unknown were excluded from both the numerator and denominator of proportion calculations.

Source: Linked Birth-Death Certificates, DRVS

[4] Behrman RE and Butler AS, eds. Preterm Birth: Causes, Consequences and Prevention, National Academies Press: Washington, DC; 2007.

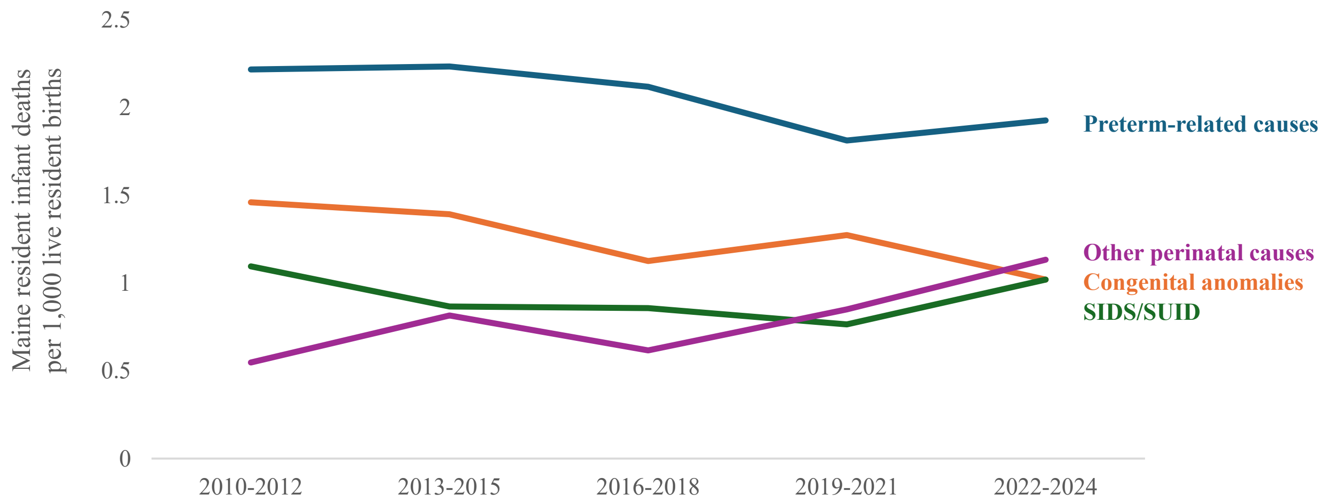
*Figure 6. Proportion and count** of infant deaths by weight at birth, Maine, 2024*



**Infant deaths for which birthweight was unknown were excluded from both the numerator and denominator of proportion calculations.
Source: Linked Birth-Death Certificates, DRVS

The most common causes of infant deaths in Maine are preterm-related. These are deaths to infants born at less than 37 weeks of gestation in which the cause of death was a direct consequence of preterm birth. In 2024, 47 percent of deaths among infants born before 37 weeks gestation were due to a preterm-related cause. Congenital anomalies (i.e., birth defects) and Sudden Infant Death Syndrome (SIDS)/Sudden Unexpected Infant Deaths (SUID) have historically been the second and third most common cause of infant death in Maine. In 2020, the SIDS/SUID mortality rate in Maine dropped to its lowest level since 2008. However, in 2022, the SIDS/SUID rate increased to 1.4 infant deaths per 1,000 live births. The SIDS/SUID rate in 2024 decreased to 0.8 infant deaths per 1,000 live births.

Figure 7. Leading causes of infant mortality, Maine, 2010-2024



Source: Linked Birth-Death Certificates, DRVS

Infant mortality risk varies by demographic, geographic, socioeconomic, and maternal health factors. Smoking during pregnancy is associated with both preterm birth and low birthweight, as well as other poor birth outcomes and SIDS/SUID.[5] In 2020-2024, the mortality rate among infants born to Maine birthing persons who smoked during the last trimester of pregnancy was 11.9 deaths per 1,000 live births compared to the mortality rate among infants born to non-smoking birthing persons of 4.9 deaths per 1,000 live births.

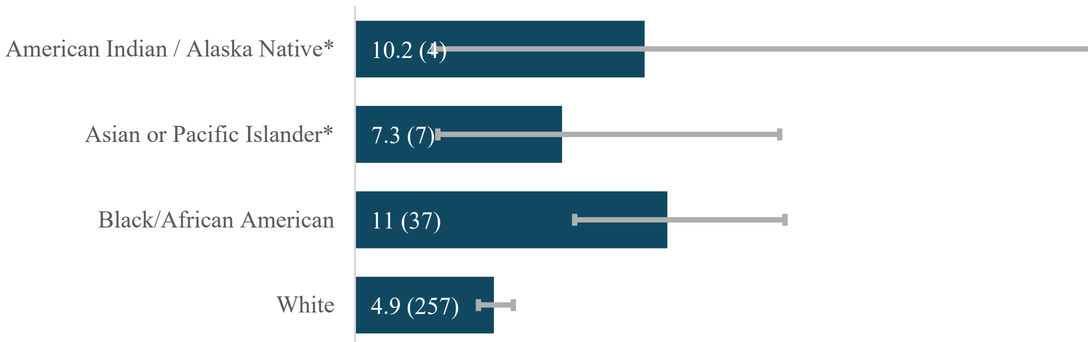
In Maine, some population groups experience a disproportionately high rate of infant mortality. In 2020-2024, infants born to birthing persons with a high school diploma/GED or less education died at more than two times the rate of infants born to birthing persons with at least some college education (8.4 deaths per 1,000 births versus 4.0 deaths per 1,000 births, respectively). Infants whose births were covered by MaineCare (Medicaid) also experience a significantly higher mortality rate compared to infants whose births were covered by other payer types. Pregnant Maine residents are eligible for MaineCare coverage at incomes at or below 214 percent of the Federal Poverty Level. MaineCare coverage for a birth may be an indication that a birthing person had a low income in the prenatal period. In 2020-2024, the mortality rate among infants whose births were covered by MaineCare was 7.2 deaths per 1,000 births compared to infants whose births were covered by other payer types at 4.3 deaths per 1,000 births.

Like the rest of the United States, infants born to Black/African American and Indigenous/American Indian/Alaska Native birthing persons in Maine experience a higher mortality rate compared to White infants. Disparities in infant mortality by race in Maine and the US are due to complex and interrelated factors, including inequitable access to resources (e.g., healthcare, education, employment, housing) and other impacts of discrimination, structural racism, and colonialism.[6] In 2020-2024, the mortality rate among infants born to Maine resident Black/African American birthing persons was 11.0 per 1,000 live births; among infants born to Indigenous birthing persons it was 10.2 per 1,000 live births; among infants born to White birthing persons it was 4.9 per 1,000 live births; and among infants born to Asian birthing persons it was 7.3 per 1,000 live births (Figure 8).

[5] U.S. Department of Health and Human Services. The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. Printed with corrections, January 2014.

[6] Artiga S, Pham O, Orgera K, Ranji U. Racial Disparities in Maternal and Infant Health: An Overview: Issue Brief, Kiser Family Foundation. https://www.kff.org/report-section/racial-disparities-in-maternal-and-infant-health-an-overview-issue-brief/. November 2020.

Figure 8. Infant mortality rates per 1,000 live births and counts by birthing person race, Maine, 2020-2024



*Interpret with caution: rates calculated with fewer than 20 individuals in the numerator.
Note: Error bars represent 95% confidence interval.
Source: Linked Birth-Death Certificates, DRVS

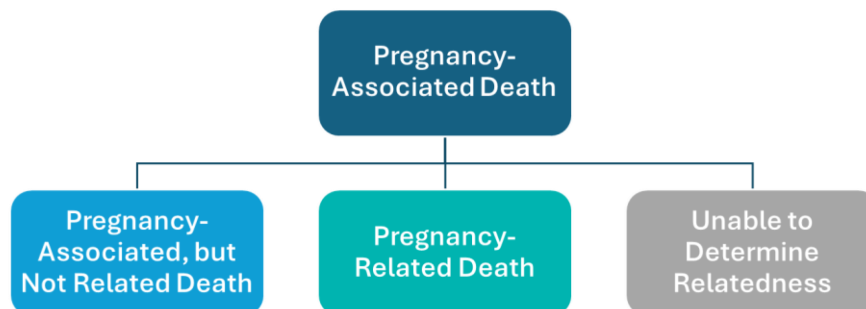
Additional data on the prevalence of select risk factors for infant mortality among Maine residents, and additional infant mortality data stratified by demographic, maternal health status, and geographic factors are included in Appendix B.

Pregnancy-Associated Mortality Summary

There are several related terms that describe different categories of deaths to birthing persons during or soon after the end of pregnancy. For the purposes of MFIMR, these are:

- Pregnancy-Associated Death: any death to a birthing person while pregnant or within one year of the end of pregnancy, regardless of cause.
- Pregnancy-Related Death (ERASE-MM definition): a death during or within one year of pregnancy, from a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy.
- Pregnancy-Associated, but Not Related Death: a death during or within one year of pregnancy, from a cause that is not related to pregnancy.

Figure 1. Key Terms in Pregnancy-Associated Mortality Review



Additionally, *maternal mortality* is a term used by the World Health Organization (WHO) and the US CDC National Center for Health Statistics (NCHS) to describe a subgroup of pregnancy-associated deaths that occur to individuals within 42 days of delivery or termination and are due to "any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes."[7] Deaths that fall within the WHO/NCHS definition of maternal mortality are identified by NCHS using information from death certificates and are very rare in Maine.

Pregnancy-Associated Deaths in 2022 and 2023

The panel reviews several factors associated with pregnancy-associated deaths, including type and preventability, timing, cause, circumstances, and demographics of the decedent.

Type and Preventability of Death. In 2025, the MFIMR Panel completed review of all Pregnancy-Associated Deaths occurring in 2022 (n=8) and all but one of those occurring in 2023 (a total of 18 deaths over two years). Special circumstances required postponing review of one death occurring in 2023, and this death is excluded from the following sections.

The MFIMR Panel determined seven of the 17 deaths reviewed were Pregnancy-Related and 10 were Pregnancy-Associated, but Not Related. The Panel determined that 14 of the 17 deaths reviewed met the ERASE-MM definition of preventable, i.e. 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."[8]

Timing of Death. Six of the 17 Pregnancy-Associated deaths in 2022-2023 occurred while the decedent was pregnant, and four deaths occurred within 42 days of the end of pregnancy, and 7 occurred between 43 days and one year after the end of the decedent's pregnancy.

Cause of Death. The MFIMR Panel identifies the underlying cause of death for Pregnancy-Related Deaths based on all available information, including cause of death information recorded on the decedent's death certificate, as well as information from medical records, family interviews, medical examiner findings, and other sources. The underlying cause of death for Pregnancy-Associated, but Not Related Deaths and deaths with undetermined pregnancy-relatedness is obtained from Maine Death Certificates only. The US CDC Pregnancy Mortality Surveillance System (PMSS) classification system is used to categorize Pregnancy-Related Deaths (Table 1).

[7] US CDC National Center for Health Statistics, "How NCHS Measures Maternal Deaths". Retrieved from https://www.cdc.gov/nchs/maternal-mortality/faq.htm on 11/25/2024.
[8] US CDC Division of Reproductive Health, Maternal Mortality Review Committee Decisions Form V23

Table 1. Causes of 2022-2023 Pregnancy-Associated Deaths

Cause category	Pregnancy-Related Deaths	Pregnancy-Associated, but Not Related Deaths	Total
Amniotic fluid embolism	0	1	1
Cardiovascular conditions	0	1	1
Cerebrovascular Accident	0	1	1
Congenital malformations of the circulatory system	1	0	1
Injury/accident (non-motor vehicle)	1	0	1
Mental health condition/suicide	1	0	1
Motor vehicle accident	1	0	1
Overdose (Substance Use Disorder)	6	2	8
Thrombotic pulmonary or other embolisms	0	2	2
Total	10	7	17

Circumstances Surrounding Death. As part of the review process for Pregnancy-Associated Deaths, the MFIMR Panel considers whether discrimination, obesity, mental health, and/or substance use disorder contributed to a death, and whether a death was a homicide or suicide. The Panel's determinations for Pregnancy-Associated Deaths occurring in 2022 and 2023 are outlined below (Table 2).

Table 2. MFIMR Panel Determinations on Circumstances Surrounding 2022-2023 Pregnancy-Associated Deaths

Committee determinations	Yes	Probably	No	Unknown
Did obesity contribute to the death?	0	0	17	0
Did discrimination contribute to the death?	0	11	6	0
Did mental health conditions contribute to the death?	4	6	6	1
Did substance use disorder contribute to the death?	10	1	6	0
Was this death a suicide?	1	1	12	3
Was this death a homicide?	0	0	17	0

Decedent Demographics. All 17 Pregnancy-Associated Deaths in 2022-2023 were to White decedents, and 15 of 17 decedents were living in a rural area at the time of their deaths. Additional demographic information is detailed below (Table 3).

Table 3. Demographic Characteristics of 2022-2023 Pregnancy-Associated Deaths

Demographic Characteristic	Count
Age	
< 20	0
20-24	2
25-29	3
30-34	3
35-39	4
40-44	5
45+	0
Total	17
Delivery payer	
Private Insurance	2
Medicaid/MaineCare	8
Not applicable (death occurred during pregnancy)	7
Total	17
Education	
High school diploma / equivalent or less	8
Completed some college	3
Associate or bachelor's degree	1
Completed advanced degree	4
Unknown	1
Total	17
Ethnicity	
Hispanic	0
Non-Hispanic	17
Total	17
Race	
American Indian or Alaska Native	0
Asian	0
Black or African American	0
More than one race	0
Native Hawaiian or Pacific Islander	0
Other Race	0
White	17
Total	17
Rural residence at death	
Rural	15
Urban	2
Total	17

Pregnancy-Associated Deaths in 2024: Provisional Data

Pregnancy-Associated Deaths are identified using vital records data maintained by Maine CDC DRVS program. While vital records data are key sources of information about potentially Pregnancy-Associated Deaths, pregnancy-associated mortality data are not considered final until MFIMR has reviewed all Pregnancy-Associated Deaths identified as occurring in a death year. Vital records data indicate that 5 Pregnancy-Associated Deaths occurred in 2024.

The MFIMR Panel aims to review all Pregnancy-Associated Deaths within two years of the date of death. Detailed data on 2024 Pregnancy-Associated Deaths will be included in the 2026 MFIMR Panel Annual Report.

Panel Activities, Calendar Year 2025

During 2025, the MFIMR Panel reviewed a selection of fetal and infant deaths occurring in 2023 and pregnancy-associated deaths from 2022, 2023 and 2024. Per statute, MFIMR reviews all pregnancy-associated deaths and a majority of late fetal and infant deaths. As noted in the Epidemiology Report above, the Panel completed review of the remaining 2022 Pregnancy-Associated Deaths, all but one of those occurring in 2023, and started reviewing those occurring in 2024. Special circumstances required postponing review of one death occurring in 2023.

Based off the 2023 data analyses by the MCH epidemiologists, the MFIMR Panel Leadership Team decided to review a selection of fetal and infant cases based on a number of different risk factors available from birth and death certificate data. This was done in an attempt to more fully understand the underlying risk factors associated with poor infant and fetal outcomes in communities disproportionally impacted. As reflected in the Panel activities and recommendations sections to follow, overturning these inequities means addressing social determinants of health and access issues as well as resource distribution to those disproportionately impacted.

Case Review Meetings

22 M.R.S. § 261 requires the Panel to meet at least twice in a state fiscal year, however, the panel members agree upon meeting at least four times when possible. In 2025, the Panel convened four times for full case reviews, and a subcommittee formed that met over the summer once for a review of the 2024 Sudden Unexpected Infant Deaths (SUID). All Panel meetings included comprehensive case reviews with input from subject matter experts, a provisional report from Maine CDC MCH Epidemiologists on most recent deaths (fetal and maternal deaths provided on an annual basis, infant deaths reported quarterly), and updates from the Panel Coordinator and members.

The meetings were held virtually over Zoom and took place as follows:

- January 28, 2025, 12-4pm
- March 25, 2025, 12-4pm
- May 20, 2025, 12-4pm
- August 19, 2025, 12-1:30pm (SUID Subcommittee)
- October 28, 2025, 12-4pm

Reviews consisted of the following cases:

- Maternal: Two 2022 deaths, nine 2023 deaths and two 2024 deaths
- Fetal: Four 2023 deaths
- Infant: Nine 2023 deaths and eight 2024 SUID cases

Other Panel Activities

Over the last 12 months, the Panel has worked to refine the Panel review process in order to prioritize the Panel recommendations and move more clearly from review to action. The Panel gathered stories heard in Panel reviews, the expertise provided by Panel members based on their personal and professional experience, and the concerns heard from communities around perinatal mortality and distilled these three sources of information through a priority-setting process to define next steps for action. To build that foundation, the majority of MFIMR staff's time and effort focused on gathering stories from the families of the deceased, building trust and connections with communities most impacted, and creating systems for a diverse and well-functioning Panel membership.

In September 2023, MFIMR hired a part-time Family Interviewer funded by the State Maternal Health Innovations grant and later by the ERASE-Maternal Mortality grant through MMA-CQI. This Family Interviewer listened to the stories of those directly impacted by maternal and infant deaths and stillbirths. These interviews are crucial to developing a fuller understanding of the systems of care that influence these fatal outcomes. By weaving family voice into the case narratives alongside medical and social service records, the Panel honors individuals and communities impacted by loss. MFIMR developed a Family Interview Protocol and executed using combined templates from the federal CDC and National Center for Fatality Review and Prevention (NCFRP). Over the last year, staff were successful in completing four family interviews (a total of seven since the Family Interviewer was hired), and a new interviewer was hired following the completion of the initial interviewer contract.

Community Conversations

It is important to the Panel that this work is transparent to communities most impacted by perinatal mortality, and the Panel recognizes that many Mainers are not aware of the Panel or its work. Given this, the Panel extended last year's outreach by holding 17 additional discussions with local and statewide groups. The focus was on groups that represent or serve those disproportionately impacted by perinatal mortality and those who share work in the 2024 MFIMR priority recommendation areas of mental health, substance use, and cultural and linguistic support services. The goals of these discussions were to build understanding of the work of the MFIMR Panel, to hear from these groups about the successes and challenges that they see for families, and to build trust and a foundation for working together to end perinatal mortality. This work was funded by the ERASE-MM grant through MMA-CQI.

MFIMR Annual Meeting

Recognizing that having remote Panel meetings with packed agendas left limited time for creating a strong Panel culture and group bonding, an annual "retreat"/meeting was established as a way to come together in-person to build upon conversations of process, direction and health equity, and to build relationships among panel members. The first annual meeting was held in November 2023 and featured presentations from national partners at the US CDC and NCFRP

and the establishment of a charter to guide MFIMR work. The second annual meeting, held in September 2024, featured a system to identify and rank our prioritized recommendations as a Panel for inclusion in the 2024 annual report. The following year, in 2025, the 3rd annual meeting included a presentation from Dr. Andrea Breau of the YWCA of Central Maine on building a justice-based approach to our work as a Panel as well as honing the prioritized recommendations seen in this report.

Panel Membership

At the time of this report, the Panel is comprised of 38 members representing 12 of Maine's 16 counties and eight of the nine public health districts with ongoing recruitment for specific roles, voices, and geographic areas not already represented. Membership over the last year has remained steady with two members leaving when vacating jobs or moving and a cohort of five new members who filled needed roles joining. The onboarding process for new members was updated this year and involves orientation to the review process and materials, discussion of commitments and expectations, relationship building, and support for reviewing the vicarious trauma that comes with case reviews. MFIMR leadership also invites subject matter experts to join review meetings as needed. Over the last 12 months, two subject matter experts have joined review meetings, with the majority of cases having the expertise already in the (virtual) room. This year leadership and staff continued to track Panel member satisfaction and comfort with voicing perspectives and participating in case discussions during each meeting to monitor whether Panel members feel respected and that their ideas are taken into account. Stipends, paid for through the ERASE-MM grant, were continued for participating members who bring their lived experience in perinatal loss and not representing a professional role or expertise, which continues to be crucial perspective to comprehensive understanding for the Panel as a whole.

Panel Recommendations

Note: these are recommendations discussed by the Panel and are not necessarily supported or endorsed by Maine Center for Disease Control and Prevention or Department of Health and Human Services. They do not reflect policy commitments of the Department and furthermore do not confer support from the Executive Branch for specific legislative initiatives. Policy proposals will be reviewed and commented on as they arise.

Over the past 12 months, the Panel produced a total of 119 recommendations across the 34 cases reviewed. Thematic analysis was done to group these recommendations into 27 topic areas. At the annual meeting the Panel members were given this list as well as a list of all the issues identified within the review meetings. The Panel considered quantitative data (i.e. how often each recommendation topic area was used) and their individual experience and expertise, in order to evaluate and prioritize recommendations. Through a process of ranking, reflection and discussions, the Panel came up with the following four priority areas: Mental Health, Substance Use, Family Separation, and Social Determinants of Health. The following pages include description of why those topics and the prioritized recommendations honed by workgroups during and following the annual meeting. The Panel believes that these recommendations would be most impactful in the work of preventing unnecessary and disproportionate mortality in our state.

Mental Health

In 2025, Maine CDC and MMA-CQI published the Perinatal Mental Health in Maine report[9] in part because of the prevalence of mental health as a contributing factor in MFIMR reviews.

Mental health conditions, including depression and anxiety, are common among pregnant and postpartum people. Mental health conditions can occur at any point in a person's life course, but the perinatal period is a time of heightened risk.[10] If left untreated, mental health conditions can have a profound impact on the overall health and wellbeing of an individual, her children, and her community. Mental health conditions are among the most common complications of childbirth experienced by birthing people in the US. They are also the leading cause of preventable pregnancy-related deaths in the US.[11] Maine's Maternal, Fetal, and Infant Morality Review (MFIMR) panel determined that mental health challenges were contributing circumstances in 6 of the 9 pregnancy associated deaths that occurred in 2021. Addressing perinatal mental health conditions ensures better health outcomes for both birthing parents and children.[12,13]

Over the last year of MFIMR reviews, the same data trends are presenting, and, for this reason, mental health remains one of the Panel's priority areas. Between 2021 and 2023, 16 of 26 pregnancy associated deaths were determined to have had a mental health condition as a contributing factor to the death.[14,15] In fetal and infant death reviews, maternal mental health co-morbidities were prevalent as well, particularly after facing loss. Mental health services were lacking generally, but specifically for those who spoke a primary language other than English. Conversations during MFIMR review focused on the need for integrated mental health services that serve the unique needs of pregnant women, those with young families, and those

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[9] The Perinatal Mental Health in Maine report is a resource that compiles data from multiple sources, including reviews of pregnancy-associated deaths, to help health professionals, policy-makers and the public understand the current landscape of perinatal mental health in Maine.
https://www.maine.gov/dhhs/mecdc/sites/maine.gov.dhhs.mecdc/files/ME%20Perinatal%20Mental%20Health%20Report.pdf

[10] Molenaar NM, Maegbaek ML, Rommel AS, et al. The incidence of depressive episodes is different before, during, and after pregnancy: A population-based study. *J Affect Disord*. 2023;322:273-276. doi:10.1016/j.jad.2022.11.031.

[11] Trost SL, Beauregard J, Njie F, et al. Pregnancy-related deaths: Data from maternal mortality review committees in 36 US states, 2017-2019. Centers for Disease Control and Prevention, US Department of Health and Human Services; 2022.

[12] Stein A, Pearson RM, Goodman SH, et al. Effects of perinatal mental disorders on the fetus and child. *Lancet*. 2014;384(9956):1800-1819. and Grote NK, Bridge JA, Gavin AR, Melville JL, Iyengar S, Katon WJ. A meta-analysis of depression during pregnancy and the risk of preterm birth, low birth weight, and intrauterine growth restriction. *Arch Gen Psychiatry*. 2010;67(10):1012-1024. doi:10.1001/archgenpsychiatry.2010.111.

[13] Maine Center for Disease Control and Prevention. Perinatal mental health in Maine. 2025:1. Retrieved from: https://www.maine.gov/dhhs/mecdc/sites/maine.gov.dhhs.mecdc/files/ME%20Perinatal%20Mental%20Health%20Report.pdf

[14] All deaths between 2021 and 2023 have been fully reviewed by the MFIMR Panel with the exception of one death from 2023 which has yet to be reviewed. MFIMR determines whether a mental health condition contributed to the death, and not just whether the person had a mental health condition. Mental health conditions are defined as present when the individual had a documented diagnosis of a psychiatric disorder. If a formal diagnosis is not available, subject matter experts (e.g., psychiatrist, psychologist, licensed counselor) may determine whether the criteria for a diagnosis of substance use disorder or another mental health condition are met based on the available information.

[15] US CDC, Enhancing Reviews and Surveillance to Eliminate Maternal Mortality, Maternal Mortality Review Committee Decisions Form, version 24. Retrieved from https://www.cdc.gov/maternal-mortality/media/pdfs/2024/05/mmria-form-v24-fillable-508.pdf

experiencing complex loss including child removal. Recommendations from MFIMR highlight the need for increased and culturally appropriate screening and integrated mental health care, cross-sector quality improvement initiatives, and trauma-informed follow-up care. The following recommendations would:

- Encourage early identification of mental health conditions and enable increased referrals, treatment and follow-up;
- Ensure that equity is a priority in improvements in mental health care;
- Encourage sustainably funded initiatives such that improvements are consistent across time and setting and
- Ensure that care for those who have experienced a loss of any kind is trauma informed and prioritized.
- As part of comprehensive prenatal and postpartum care, universal mental health screening using a validated tool (i.e. EPDS and GAD-7)[16] should be paired with education that is culturally and linguistically appropriate, meaningful review of screening results, and productive follow-up with action steps for care.
- State policymakers should look for ways to fund the increasing need for culturally and linguistically appropriate integrated mental health services - including trauma-informed care across perinatal, neonatal, emergency departments, and primary care settings, as well as ensuring universal access to telehealth options, app-based supports, and immediate/urgently available providers for emergencies.
- State policymakers should look for ways to ensure ongoing funding for prenatal and postpartum mental health training for community-based perinatal providers in the Women Infant Children (WIC), Public Health Nursing (PHN), and Maine Families Home Visiting (MFHV) programs. Hospital and community-based providers should be supported to engage with the Perinatal Quality Collaborative for Maine (PQC4ME)[17] and participate in the Alliance for Innovation on Maternal Health (AIM) Perinatal Mental Health Bundle[18].
- Health systems should implement routine trauma-informed postpartum follow-ups focused on grief and emotional well-being, postpartum recovery, and contraception specific to birthing parents who have experienced stillbirth, neonatal loss, or loss of custody of a child.

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[16] Edinburgh Postnatal Depression Scale (EPDS) and Generalized Anxiety Disorder-7 (GAD-7) scale.

[17] The PQC4ME housed in the MMA-CQI mobilizes state networks to implement quality improvement efforts and improve care for mothers, babies and their families through various projects. The mission is to optimize health access, treatment and outcomes in pregnancy and infancy through collaboration and continuous quality improvement. More information can be found at https://pqc4me.org/.

[18] The Alliance for Innovation on Maternal Health (AIM) is a national data-driven perinatal safety and quality improvement initiative based on interdisciplinary practices to improve perinatal safety and outcomes. The program provides implementation and data support for the adoption of evidence-based patient safety recommendations. AIM works through state teams and health systems to align national, state, and hospital level engagement efforts to improve overall perinatal health outcomes. The Perinatal Mental Health Bundle can be found at https://saferbirth.org/psbs/perinatal-mental-health-conditions/.

Substance Use

Between 2021 and 2023, 14 of 26 of pregnancy-associated deaths were determined to have had substance use disorder as a contributing factor to the death.[6,19] If we are to eradicate preventable deaths, it is critical to address the ways in which societal stigma embedded in culture, institutions, and policy increase the risk of death for birthing people with substance use disorder (SUD). Maine has historically had one of the highest rates of perinatal substance use and related conditions such as Neonatal Abstinence Syndrome (NAS) in the U.S.[20] While recent data shows a decline in Maine's rates, they remain elevated compared to many other states and this is likely partially attributed to Maine's rurality and geographic limitations in access to treatment.[21]

During MFIMR discussions of these deaths, it was noted that there was a broad need to reduce substance-use related stigma across healthcare systems. In the 2024 Annual Legislative Report the following recommendation around stigma was highlighted:

> *To combat stigma within the healthcare system – health systems need to take a multifaceted approach: education training for healthcare staff; feedback and reporting mechanisms, establishment of consumer committee/patient advisory councils that include people with lived experience, new policies in Emergency Departments and inpatient units including Labor & Delivery, and a long term cultural shift as part of new and ongoing quality improvement efforts.*

It became clear this year that the stigma the Panel was talking about was mainly around substance use. The recommendations below would:

- Add to this prior recommendation on stigma reduction,
- Build systems to integrate and value the knowledge of people with lived experience with substance use.

The additions to the stigma recommendation include the following:

Education - to be delivered by content area experts ***and*** those with lived expertise - on:

- The importance of person-first language and using terms such as person with a substance use disorder rather than "addict" or "junkie."
- Normalizing discussions around substance use disorder as a treatable chronic medical condition similar to depression or diabetes.
- Encouraging self-reflection and the creation of a self-reflective environment where the implications of stigma can be discussed and addressed.

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[19] All deaths between 2021 and 2023 have been fully reviewed by the MFIMR Panel with the exception of one death from 2023 which has yet to be reviewed. MFIMR determines whether SUD contributed to the death, and not just whether the individual had SUD. SUD is characterized by recurrent use of substances causing clinically and functionally significant impairment, such as health problems or disability. The panel may determine that substance use disorder contributed to the death when the disorder directly compromised their health status.

[20] Maine Center for Disease Control and Prevention. Neonatal abstinence syndrome and prenatal opioid use diagnoses in Maine, 2016–2020. 2022. https://pqc4me.org/wp-content/uploads/2023/05/NAS-MOD-Brief-2016-2020_approved.pdf

[21] Gabrielson SMB, Carwile JL, O'Connor AB, Ahrens KA. Maternal opioid use disorder at delivery hospitalization in a rural state: Maine, 2009-2018. *Public Health*. 2020 Apr;181:171-179. doi: 10.1016/j.puhe.2019.12.014. Epub 2020 Feb 28. Erratum in: Public Health. 2021 Apr;193:153-155. doi: 10.1016/j.puhe.2021.04.005. PMID: 32065884.

- The critical role of persons with lived experience in developing patient centered care models and in identifying and combatting stigma.
- Interacting with respect and compassion with people in every stage of substance use disorder.
- Adopting harm reduction practices that focus on reducing the negative consequences of substance use (rather than requiring abstinence) which improves patient engagement and retention in prenatal services, leading to better health outcomes for both the parent and baby.
- Prioritizing treatment rather than punishment by ensuring that returns to use prompt treatment implementation or adjustment, not punishment or discharge from care.
- The harms that can be caused by overutilization of toxicology testing in determining treatment stability and the safety of the environment for children in the home.
- The importance of including addiction specialists in the interpretation of toxicology screens particularly in high stakes situations like child removals.

Feedback and Reporting Mechanisms:
- Healthcare systems to develop processes for patients to report experiences of discrimination with regard to substance use. These reports to be reviewed by committees made up in large proportion of folks with lived experience with substance use. Whenever possible, restorative justice techniques to be used to address harm or concerns, with opportunities to escalate if harm is continued.[22]

Consumer Committee/Patient Advisory Councils:
- Health and Human Services Policy Making Committee to include at least 2 people with lived experience with substance use and utilize their expertise at each step of the policy making process.

Additional recommendation specific to Substance Use include:
- Hospitals, clinics, offices, and any entity with >25 employees receiving MaineCare reimbursement to employ or contract with Nurse Navigators and Peer Support Specialists who are paid equitably to provide real time supports for patients with a history of substance use disorder, in active use, or in recovery, bridging inpatient and outpatient/community resources. Implementation to ensure ongoing and sustained funding allocated annually.

    - The role of the Nurse Navigator is to connect patients with any and all needed services, facilitate warm handoffs to referral services, work to overcome individual or systems barriers to engaging with these services, and assist the patient in navigating the complexities of their care needs
    - The role of the Peer Support Specialist (PSS) is to provide support, guidance, and advocacy to individuals facing mental health and substance use challenges, drawing on their own lived experiences to foster recovery and empowerment

[22] Three core elements of restorative justice. Restorative Justice Exchange. Published 2025. Accessed November 10, 2025. https://restorativejustice.org/what-is-restorative-justice/three-core-elements-of-restorative-justice/

Family Separation

Many child protective cases in Maine involve substance use as a dominant factor in decisions to separate families and place children—including newborns—in the care of the State.[23] Family separation is shown to cause lifelong harm to children who experience it, and fear of family separation and loss of custody play a large role in the decision-making process of pregnant and parenting Mainers as it relates to accessing prenatal care, mental health services, and substance use disorder treatment. Current mandatory reporting laws and hospital protocols direct healthcare providers to report any substance use and/or withdrawal during pregnancy, regardless of whether the patient is engaging in recommended medication assisted treatment, thus triggering a notification to Office of Child and Family Services (OCFS). While OCFS makes a clear distinction between notification and report, this line is vague, unclear, confusing, and not appreciable to the families who are impacted and their treatment team. As a result of this practice, many pregnant Mainers for whom prenatal care and addiction treatment are most needed will avoid or delay seeking care precisely because of these notification requirements, thereby deterring care engagement leading to poor outcomes and lasting harm to parents and children. To support Maine families in having the greatest chance at healthy pregnancies, postpartum courses, and a healthy start to life for infants, it is critical that Maine law and healthcare policies protect individuals who access health care from consequences in the realm of child protection. If a child is removed by the State due to concerns of abuse or neglect, timely and consistent visits are essential for parents and children - reducing the trauma of having a child removed, enhancing the bond between parent and child, and positively contributing to parental recovery and wellness. The reliability of and consistency of family visitation is lacking and distressing for new parents.[24]

In discussions around cases that included family separation, especially in pregnancy-associated and pregnancy-related (or maternal) cases, the MFIMR Panel noted that the below recommendations would:

- Increase trust between patients and providers,
- Encourage early and consistent engagement in prenatal and postpartum care among a vulnerable population at significant risk of morbidity,
- Value engagement in substance use treatment as a protective factor for pregnant people, rather than an indication of potential parental neglect,
- Ensure that returns to use during pregnancy are used to guide clinical care and not used as "evidence" against the patient in court, and
- Build pathways for families seeking supportive resources without fear of family separation.

Recommendations:

1. DHHS to review and reform policies and organizational culture to decouple healthcare, which includes screening for and disclosure of substance use, and reporting for substance use in perinatal care.

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[23] Sugrue, E. Evidence base for avoiding family separation in child welfare practice. Alia Innovations; 2019. Accessed November 10, 2025. Alia Research Brief 2019 - Adobe cloud storage

[24] Keefe, J. Maine hired contractor to organize timely visits for families in child welfare cases. It delivered 10% of the time. *The Maine Monitor*. 2025. https://themainemonitor.org/community-care-untimely-visitations/#:~:text=Maine%20is%20required%20to%20arrange,and%20child%20necessary%20for%20reunification. Accessed November 10, 2025.

2. DHHS to form a distinct/new entity (outside of OCFS) to provide "deep support" in the form of case management, connection to low-barrier, community resources to address root causes of family instability, such as housing precarity, domestic violence, trauma and PTSD, substance use disorder, and economic insecurity to parents experiencing notification and/or reporting to OCFS, as well as those attempting reunification and closure of OCFS cases.
3. State policymakers to require a legal defense system that provides adequate, timely, consistent, and free representation for parents and children in the civil family court system, and particularly in cases where termination of parental rights (TPR) is at stake. Ideally, consults with defense attorneys would be available during the prenatal period as women with substance use disorders lack legal guidance until after custody has been removed.
4. Mandatory semi-annual training for all OCFS staff on substance use disorder (SUD) as a chronic, treatable medical condition and how to identify and eliminate stigma. This training to be delivered by content area experts ***and*** those with lived expertise. Ideally DHHS to look for ways to embed an SUD specialist or at least have a consultant available for each district office.
5. DHHS to look at completing an audit of existing family visitation infrastructure and work towards implementation of consistent and timely support for all families impacted by family separation.

Cross-Cutting Recommendations - Social Determinants of Health (SDOH)

When the Panel reflected on all the cases and issues that arose over the past year regardless of the type of case (maternal, fetal, or infant) at the Annual Meeting, it became clear that the needs across the state were many and that Social Determinants of Health (SDOH) dictated outcomes for families and communities. The Panel uses the following definition of SDOH: the nonmedical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live, worship, and age. These conditions include a wide set of forces and systems that shape daily life such as economic policies and systems, development agendas, social norms, social policies, and political systems.[25]

The following recommendations were highlighted as cross-cutting and in need of system collaboration to address.

1. Policymakers to look for ways to enact comprehensive policies to ensure fundamental social determinants of health (SDOH) are met for all citizens prioritized through budgeting and policy decisions. These to include but not limited to:
    - Guaranteed minimum income
    - Universal healthcare
    - Comprehensive SUD treatment access (including inpatient, outpatient, medication for opioid use disorder (MOUD), and long-term recovery support)
    - Guaranteed access to safe, affordable, and stable housing (including rapid re-housing programs and subsidized long-term units)
    - Universal access to quality, affordable childcare

[25] Social determinants of health. cdc.gov. Updated May 15, 2024. Accessed November 10, 2025. https://www.cdc.gov/public-health-gateway/php/about/social-determinants-of-health.html

- Substantial investment in public transportation
- Reliable broadband access for telehealth options

2. DHHS to leverage 211 by revamping, re-launching, and heavily promoting this resource as a “warm line” that is remotely accessible service to field calls of requests for parental supports that will not trigger a report to OCFS. This to be accompanied by dedicated State and healthcare system funding to measurably increase the availability of actual resources so that the system provides access to care, not waitlists. Resources to include, but not limited to:

   Childcare and Family Support:
   - Childcare subsidies/vouchers (to eliminate waiting lists)[26]
   - Non-traditional hours childcare (nights and weekends)
   - Pediatric/family navigator services
   - Family preservation and reunification services

   Digital and Communication:
   - Broadband/connectivity subsidies (for telehealth)
   - Device provision (tablets, smartphones)

   Economic and Employment:
   - Livable wage employment programs (job placement/training)
   - Flexible cash assistance (for small, immediate needs)
   - Benefit Enrollment Specialists (for SNAP, TANF, WIC, etc.)

   Housing and Shelter:
   - Emergency shelter beds (low-barrier, pet-friendly)
   - Rapid Re-housing funds (for security deposits, first month's rent)
   - Measurable increase in subsidized housing units (affordable, long-term)
   - Transitional housing
   - Utility and heating assistance

   Legal and Advocacy:
   - Legal aid services (for eviction, custody, expungement of records)
   - Immigration/language services (high-quality, in-person/tele-interpretation)

   Substance Use and Mental Health Treatment:
   - Immediate access treatment slots (detox, residential, IOP, MOUD access)
   - MOUD expansion (universal availability, immediate access in primary care, EDs, and correctional settings)
   - Long-term recovery housing (variety of recovery residences)
   - Co-occurring disorder services (integrated treatment)
   - Trauma-informed counseling
   - Certified Peer Support Specialist funding (for non-hospital settings)
   - Harm reduction supplies (Naloxone/Narcan kits, fentanyl test strips, etc.)
   - Recovery community centers (increased capital/operational funding)

   Transportation[27] and Access:
   - Transportation vouchers/cards (universal, free public transit)
   - On-demand medical transportation (non-emergency medical transportation, ride-share options)

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[26] The 2026 supplemental budget, Public Law 2025, Ch. 650, provided ongoing funding to eliminate the child care affordability (subsidy) program waitlist.

[27] Moving toward solutions: Addressing the transportation challenges of Maine families. John T. Gorman Foundation. Published April 2025. https://www.jtgfoundation.org/3d-flip-book/jtgf-2025-transportation-report/

        - Vehicle repair/maintenance assistance (for rural access)

Status Of 2024 Legislative Report Activities

The panel worked to meet its goals from the previous year in a number of ways, including:

Fostering an Effective Panel

- Continued to support a diverse Panel membership in accordance with federal CDC and NCFRP guidance around membership representation. Recruitment efforts in 2025 focused on adding new voices and perspectives not previously represented. This also includes resources available to Panel members to manage effects of vicarious trauma.
- Onboarded five new members in the disciplines of law enforcement, social work, community health worker, member with lived experience in substance use/recovery, and WIC/rural representation. Training was updated to include the most recent national mortality statistics and updates to Panel processes.
- Continued to work towards data clarity and logic with ongoing quality improvement of facilitation process in review meetings and forming actionable recommendations.
- Sought expanded collaboration on record sharing with groups like local and state law enforcement, substance use disorder treatment clinics, and mental health providers acknowledging that information outside of medical records or hospital settings is incredibly important for a full review of each death.
- Formed a subcommittee to review SIDS/SUID cases and completed review of eight cases in August 2025.
- Continued advocacy for a State line for the full-time Panel Coordinator position. In addition to the full-time Panel Coordinator position, there is a 0.9 FTE position out of MMA-CQI which manages the ERASE-MM MMRC grant project. There continues to be ongoing need for funding and robust leadership for MFIMR to operate successfully.

Building Trust with Communities

- Worked towards listening sessions with communities most affected by perinatal mortality to build trust, share existing publicly available mortality data, invite feedback on community needs, and identify creative collaborations on preventing deaths in Maine. The focus in 2026 will be with the substance use and recovery community as the Panel works towards developing a report centering on substance use related deaths.
- Maintained focus on equity including continuing our previous efforts. MFIMR Leadership partnered with YWCA of Central Maine to build capacity to understand and dismantle discrimination and oppression through education and training for Panel members on a justice-based approach to the work of MFIMR.

Bringing Recommendations to Action

- Developed a recommendation pipeline in collaboration with the Maternal Health Task Force (MHTF) and continued to build and solidify mechanisms to bring recommendations to action. MFIMR staff additionally implemented a brief informal survey at the end of Panel meetings to engage Panel members in the change-making

process by asking “What is one action you will take forward with you after today’s meeting?”

Supporting Other Ongoing Maternal and Child Health Efforts

- Collaborated on the publishing of the “Perinatal Mental Health in Maine” Report in January 2025 that included quantitative and qualitative data from MFIMR case reviews to support the implementation of the AIM Perinatal Mental Health Bundle under the PQC4ME. This report also informed activities at the PQC4ME conference in June 2025.

Improved Reporting and Data Dissemination

- In late 2024, Maine CDC and the Panel Coordinator successfully established a Data Use Agreement to utilize the National Fatality Review-Case Reporting System (NFR-CRS) for Fetal and Infant Case abstraction. Case abstraction into the NFR-CRS began in January 2025 and will continue, informing National data collection efforts on case reviews.

Central Registry of Resources

- Updated the MFIMR website to include a central registry with perinatal bereavement support resources, mental health talk lines, and prevention initiatives from the MCH program that have tied back to MFIMR recommendations. Also created a family support resource document to send to families with the offer for a voluntary family interview.

Plans For Calendar Year 2026

Improving maternal and child health is one of Maine’s public health goals. The Panel is looking forward to continuing to foster an effective Panel that builds trust with communities, works to bring its recommendations to action, and uses its findings to support other ongoing MCH efforts aimed at reducing infant, fetal and maternal morbidity and mortality. The Panel will focus these efforts the following ways:

Panel Activities

- Continue to recruit members to fill vacant roles through an established, transparent process in the Spring.
- Convene a subcommittee to review deaths to indigenous people in collaboration with leadership at Wabanaki Public Health and Wellness.

Working with Communities to Create Meaningful Data

- Complete a qualitative and quantitative analysis of deaths involving substance use with the goal of working with those in recovery and with lived experience of substance use to create data products that are reflective of their experience and useful for advocacy purposes.

Reporting and Data Dissemination

- By the end of 2026, the Panel will have reviewed more than three years' worth of pregnancy-associated deaths, and it may be advantageous to combine these death cohorts into one report for greater ability to analyze trends and themes across time.
- Prior annual reports placed a heavier emphasis on the epidemiology reporting as the activities of the MFIMR Panel were limited due to a number of reasons, but mainly funding and staffing. In future years, it may be advantageous for clarity's sake to submit two separate reports to the legislature the 1) MFIMR Annual Report and 2) Epidemiology Brief on Fetal, Infant and Pregnancy-Associated Mortality.

Supporting Other Ongoing Maternal and Child Health Efforts

- Continue to analyze the ripple effect of MFIMR recommendations by tracking how Panel members are carrying forward the recommendations on an individual basis, as well as which recommendations are part of other ongoing statewide work.
- Continue to develop systems to carry forward MFIMR recommendations into the work of the PQC4ME, MHTF, the Transforming Maternal Health grant (TMaH), and the Perinatal System of Care (PSOC) group.

Acknowledgements

The MFIMR Panel would like to thank the following groups and people who made this past year of work possible:

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- The staff at Maine CDC, including Maryann Harakall, Meghan Henshall, Fleur Hopper, Andrea Lenartz, and Emily Misner, who were vital in the writing of this report and the behind the scenes of MFIMR operations.
- Our partners at the MMA-CQI, including Mariah Pfeiffer, Kelley Bowden, and Liz Winterbauer, and Katy Finch, who contributed to the writing of this report and the running of MFIMR generally.
- The MFIMR Leadership Team, especially the Co-Chairs Alan Picarillo and Amanda Taisey.
- All members of the MFIMR Panel past, present and future for their devotion to objective reviews of the tragedies of our beloved state and ongoing work to recommend prevention efforts.

The MFIMR Panel honors all Mainers who have experienced
a fetal, infant, or maternal loss.

Appendix A: Pregnancy-Associated Deaths Snapshot- 2022

MAINE CENTER FOR DISEASE CONTROL AND PREVENTION

Pregnancy-Associated Deaths, 2022

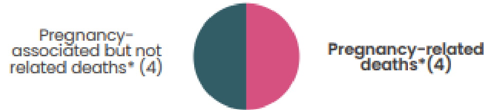
In 2022, eight pregnancy-associated deaths occurred in Maine. These deaths were reviewed by Maine's Maternal, Fetal, and Infant Mortality Review (MFIMR) panel in 2024-2025 to identify contributing circumstances and develop recommendations to prevent future occurrences. Further details on findings and recommendations will be included in the 2025 MFIMR annual report.

Overview of Deaths

Most deaths occurred in the **postpartum period.**

7 of 8 deaths were **preventable.**

4 of 8 deaths were **related to pregnancy.**



Decedent characteristics

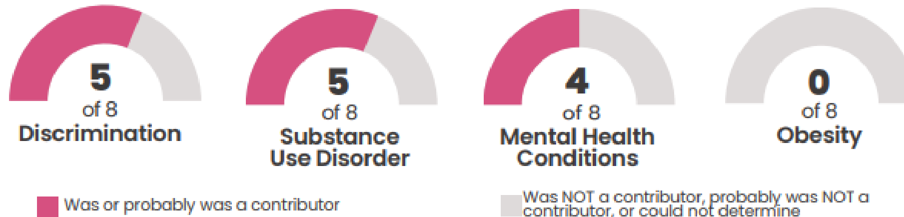
- 8 of 8 decedents were non-Hispanic White.
- Decedents ranged from 20 to 43 years old at the time of death. The median age was 29.
- 7 of 8 decedents were residing in a rural area at the time of their passing.
- 5 of 8 decedents had a high school diploma or less education; 3 had completed at least some college.
- 7 of 8 decedents had documented stressful life experiences, including intimate partner violence, child welfare involvement, substance use disorder, significant barriers to healthcare access, and/or psychiatric hospitalization.

Causes of Death

	Related	Associated but not related
Cerebrovascular Accident	1	
Mental health condition/suicide		1
Motor vehicle accident		1
Overdose	1	2
Thrombotic pulmonary or other embolisms	2	

Contributing Circumstances

The MFIMR panel found the circumstances below were at least **probable contributors** to pregnancy-associated deaths in 2022. Deaths may have more than one contributing circumstance.



Was or probably was a contributor

Was NOT a contributor, probably was NOT a contributor, or could not determine

* See Background and Technical Notes (page 2) for definitions.

Sources: Decedent race, age, education, and rurality: Maine Death Certificates and/or Birth Certificates, MECDC Data, Research and Vital Statistics (DRVS); Cause of death: Maine Death Certificates, DRVS and Maternal Mortality Record and Information Application (MMRIA); Pregnancy relatedness, contributing circumstances, and stressful life events: MMRIA.

Background and Technical Notes

ABOUT MATERNAL MORTALITY REVIEW IN MAINE

Maine's MFIMR is convened and administered by the Maine Center for Disease Control and Prevention (MECDC), with support for the maternal mortality review process from the Maine Medical Association Center for Quality Improvement (MMA-CQI), and made possible by a grant from US Centers for Disease Control and Prevention's Enhancing Reviews and Surveillance to Eliminate Maternal Mortality program (ERASE-MM). Data in this report are drawn from Maine's Maternal Mortality Review and Information Application (MMRIA), and include information obtained from Maine vital records (birth certificates, death certificates, and fetal death certificates), medical and social service records, family interviews, and panel deliberations.

DEFINITIONS: TYPE OF DEATH

Maternal death: A maternal death is defined by the World Health Organization and the US CDC National Vital Statistics System as a death to a birthing person during or within 42 days of the end of pregnancy due to causes directly related to or aggravated by pregnancy, *excluding* accidental or incidental causes (e.g., deaths due to homicide, suicide, drug overdose, motor vehicle accidents, etc.) [1]

Pregnancy-associated death: A pregnancy-associated death is *any* death to a birthing person while pregnant or within one year of the end of pregnancy, regardless of the cause of death. The MFIMR panel began to routinely review all Maine resident occurrent pregnancy-associated deaths in 2023, beginning with 2021 deaths. [2]

Pregnancy-related death: A pregnancy-related death is defined by US CDC ERASE-MM as a death 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. Maine's MFIMR panel uses this definition to determine whether a pregnancy-associated death was also pregnancy-related. [2]

Pregnancy-associated, but not related death: A pregnancy-associated death determined by Maine's MFIMR panel to not be related to pregnancy [2]

Preventable death: Maine's MFIMR panel applies the ERASE-MM definition of preventability when reviewing pregnancy-associated deaths: 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. [2]

DEFINITIONS: CONTRIBUTING CIRCUMSTANCES

Maine's MFIMR panel is tasked with determining if discrimination, obesity, mental health, and/or substance use contributed to a death. The definitions of each circumstance are outlined below.

Discrimination: MFIMR determines whether discrimination contributed to the death using Hardeman's definition of discrimination: treating someone less or more favorably based on the group, class or category they belong to resulting from biases, prejudices, and stereotyping. Discrimination can manifest as differences in care, clinical communication and shared decision-making. [3]

Mental health conditions: MFIMR determines whether a mental health condition contributed to the death, and not just whether the person had a mental health condition. Mental health conditions are defined as present when the individual had a documented diagnosis of a psychiatric disorder. If a formal diagnosis is not available, subject matter experts (e.g., psychiatrist, psychologist, licensed counselor) may determine whether the criteria for a diagnosis of substance use disorder or another mental health condition are met based on the available information. [2]

Obesity: MFIMR determines whether obesity contributed to the death, not just whether the person was obese. The committee may determine that obesity contributed to the death when the condition directly compromised an individual's health or health care. BMI is calculated from weight and height (weight [kg]/ height [m^2]); a BMI of 30 or higher is considered obese. [4]

Substance use disorder (SUD): MFIMR determines whether SUD contributed to the death, and not just whether the individual had SUD. SUD is characterized by recurrent use of substances causing clinically and functionally significant impairment, such as health problems or disability. The panel may determine that substance use disorder contributed to the death when the disorder directly compromised their health status. [2]

FOR MORE INFORMATION

Maine's MFIMR panel: https://www.maine.gov/dhhs/mecdc/population-health/mch/perinatal/maternal-infant/
US CDC ERASE-MM: https://www.cdc.gov/maternal-mortality/index.html

[1] US CDC, National Center for Health Statistics, *How NCHS Measures Maternal Deaths?* Retrieved from https://www.cdc.gov/nchs/maternal-mortality/faq.htm

[2] US CDC, Enhancing Reviews and Surveillance to Eliminate Maternal Mortality, Maternal Mortality Review Committee Decisions Form, version 24. Retrieved from https://www.cdc.gov/maternal-mortality/media/pdfs/2024/05/mmria-form-v24-fillable-508.pdf

[3] Hardeman RR, et al. Developing Tools to Report Racism in Maternal Health for the CDC Maternal Mortality Review Information Application (MMRIA): Findings from the MMRIA Racism & Discrimination Working Group. Matern Child Health J. 2022.

[4] US CDC, Division of Nutrition, Physical Activity, and Obesity, Obesity and Weight Status, Retrieved from https://www.cdc.gov/nccdphp/dnpao/data-trends-maps/help/npao_dtm/definitions.html

Appendix B: Additional Information on Maine's Mortality Data

Table B-1. Prevalence of select risk factors associated with infant mortality, Maine and US

Risk factor	Maine (year)	US (year)
Percent of births to birthing persons who smoked during pregnancy[1]	5.9% (2024)	2.4% (2024)
Percent of births to birthing persons with diabetes[1]		
Pre-pregnancy diabetes	1.3% (2024)	1.3% (2024)
Gestational diabetes	9.4% (2024)	8.5% (2024)
Percent of births to birthing persons with hypertension[1]		
Preexisting hypertension	9.5% (2024)	3.4% (2024)
Gestational hypertension	12.2% (2024)	10.4% (2024)
Percent of birthing persons who received late or no prenatal care[1]	4.3% (2024)	7.0% (2023)
Percent of births to birthing persons with a pre-pregnancy BMI of 30.0+ [1]	34.2% (2024)	32.1% (2024)
Percent of infants born low birthweight (<2,500 grams)[1]	7.6% (2024)	8.5% (2024)
Percent of infants born very low birthweight (<1,500 grams)	1.1% (2024)	1.3% (2024)
Percent of infants born preterm (<37 weeks gestation)[1]	9.7% (2024)	10.4% (2024)
Percent of births to birthing persons with HS diploma/GED or less education[1]	38.7% (2024)	38.4% (2024)
Percent of birthing persons who received WIC during pregnancy[1]	26.1% (2024)	32.1% (2024)
Percent of new birthing parents who experienced postpartum depression[2]	11.2% (2023)	11.9% (2023)
Incidence of neonatal abstinence syndrome (rate per 1,000 birth hospitalizations)[3]	16.1 (2023)	5.4 (2022)
Percent of new birthing parents who report always/often placing infant on back to sleep[2]	81.8% (2023)	69.0% (2023)
Percent of new birthing parents whose prenatal care was covered by Medicaid[2]	40.6% (2023)	35.0% (2022)
Percent of new birthing parents who had no insurance coverage for prenatal care[2]	1.5% (2023)	2.3% (2022)

Sources:
[1]*ME: Maine resident birth certificates, DRVS; US birth certificates, US CDC WONDER*
[2]*ME: Maine Pregnancy Risk Assessment and Monitoring Survey (PRAMS); US: PRAMS, participating US states*
[3]*ME: USDHHS Agency for Healthcare Research and Quality; US: USDHHS Agency for Healthcare Research and Quality*

Table B-2. Maine resident infant deaths by select factors, 2024

Maine 2024 infant deaths	Count*	Percent (%)*
Total infant deaths	**52**	**100%**
Demographics of birthing persons		
Age of birthing person		
Under 25	10	19.2%
25-34	29	55.8%
35 and over	13	25.0%
Education of birthing person		
HS diploma/GED or less	24	48.0%
Some college or higher	26	52.0%
Ethnicity of birthing person		
Non-Hispanic	49	96.1%
Hispanic	2	3.9%
Race of birthing person		
White	39	76.5%
Black/African American	7	13.7%
American Indian/Alaska Native	0	0.0%
Asian	1	2.0%
Native Hawaiian or Other Pacific Islander	0	0.0%
Other race	3	5.9%
Two or more races	1	2.0%
Birthing person's country of birth		
US state or territory	45	86.5%
Elsewhere	7	13.5%
Birthing person received WIC during pregnancy		
Yes	14	29.2%
No	34	70.8%
Birthing person health status and access-to-care factors		
Pre-pregnancy weight (4-level)		
Underweight (<18.5)	0	0.0%
Normal weight (18.5 - <25.0)	12	25.5%
Overweight (25.0 - <30.0)	18	38.3%
Obesity (30.0+)	17	36.2%
Smoked last trimester of pregnancy		
No	43	84.3%

Maine 2024 infant deaths	Count*	Percent (%)*
Yes	8	15.7%
Adequacy of prenatal care		
Adequate and adequate plus	36	75.0%
Inadequate and intermediate	12	25.0%
Principal payer for delivery		
MaineCare/Medicaid	32	62.8%
Other payer	19	37.3%
Infant health factors		
Plurality		
Multiple birth	2	3.9%
Singleton birth	50	96.2%
Birthweight		
<1000 g	22	43.1%
1000-1499 g	3	5.9%
1500-2499 g	7	13.7%
2500+ g	19	37.3%
Gestational age at birth		
<32 weeks	27	52.9%
32-33 weeks	0	0.0%
34-36 weeks	7	13.7%
37-38 weeks	8	15.7%
39+ weeks	9	17.7%
Birth location		
Hospital	50	96.2%
Home	2	3.9%
Other	0	0.0%
Geographic factors		
Urban-rural (2-level) residence at birth		
Urban	23	46.9%
Rural	26	53.1%

Source: Linked Death-Birth certificates, DRVS

*Infant deaths are excluded from counts and percent calculation if stratification characteristic is missing/unknown; counts and percents may not sum to total.

Table B-3. Maine resident infant deaths, counts and rates per 1,000 live births by select factors, 2020-24

Maine 2020-2024 infant deaths	Count[†]	Rate per 1,000 live births	95% CI
Total	330	5.6	5.02 – 6.25
Demographics of birthing persons			
Age of birthing person			
Under 25	81	7.6	6.04 – 9.45
25-34	172	4.8	4.10 – 5.56
35 and over	72	5.9	4.59 – 7.39
Education of birthing person			
HS diploma/GED or less	154	8.4	7.14 – 9.85
Some college or higher	160	4.0	3.38 – 4.64
Ethnicity of birthing person			
Non-Hispanic	316	5.6	5.04 – 6.30
Hispanic*	6	3.8*	1.39 – 8.26*
Race of birthing person			
American Indian/Alaska Native*	4	10.2*	2.77 – 26.06*
Asian*	7	7.3*	2.92 – 14.96*
Black/African American	37	11.0	7.74 – 15.15
Native Hawaiian or Other Pacific Islander	0	0	0
Other race*	7	12.3*	4.96 – 25.44*
Two or more races*	8	6.9*	2.97 – 13.57*
White	257	4.9	4.35 – 5.58
Birthing person’s country of birth			
US state or territory	281	5.3	4.71 – 5.97
Elsewhere	44	7.5	5.42 – 10.01
Birthing person received WIC during pregnancy			
Yes	84	5.9	4.74 – 7.35
No	231	5.2	4.55 – 5.91
Birthing person health status and access-to-care factors			
Pre-pregnancy weight (4-level)			
Underweight (<18.5)*	6	5.9*	2.15 – 12.77*
Normal weight (18.5 - <25.0)	94	4.4	3.55 – 5.38
Overweight (25.0 - <30.0)	81	5.2	4.12 – 6.44
Obesity (30.0+)	111	5.9	4.82 – 7.06
Smoked last trimester			
No	269	4.9	4.37 – 5.57
Yes	52	12.1	9.00 – 15.81

Maine 2020-2024 infant deaths	Count[†]	Rate per 1,000 live births	95% CI
Adequacy of prenatal care			
Adequate and adequate plus	228	4.6	4.06 – 5.29
Inadequate and intermediate	77	8.6	6.78 – 10.73
Principal payer for delivery			
MaineCare	164	7.2	6.18 – 8.45
Other payer	156	4.3	3.69 – 5.08
Infant health factors			
Plurality			
Multiple birth	46	23.6	17.28 – 31.48
Singleton birth	279	4.9	4.35 – 5.52
Birthweight			
<1000 g	155	521.9	442.96 – 610.82
1000-1499 g	21	57.4	35.52 – 87.71
1500-2499 g	43	11.1	8.02 – 14.92
2500+ g	100	1.8	1.50 – 2.24
Gestational age at birth			
<32 weeks	179	232.2	199.40 – 268.78
32-33 weeks*	11	17.6*	8.80 – 31.54*
34-36 weeks	34	8.2	5.69 – 11.48
37-38 weeks	40	2.4	1.74 – 3.32
39+ weeks	59	1.6	1.22 – 2.07
Birth location			
Hospital	314	5.5	4.92 – 6.16
Home*	11	7.0*	3.52 – 12.61*
Other	0	0	0
Geographic Factors			
Urban-rural (2-level) residence at birth			
Urban	121	5.9	4.87 – 7.01
Rural	186	5.1	4.35 – 5.83
Urban-rural (4-level) residence at birth			
Metro	121	5.9	4.87 – 7.01
Large rural	99	4.7	3.81 – 5.71

Maine 2020-2024 infant deaths	Count[†]	Rate per 1,000 live births	95% CI
Small rural	41	5.3	3.38 – 7.24
Isolated rural	46	5.7	4.19 – 7.63
Birthing person’s county of residence			
Androscoggin	40	7.1	5.05 – 9.63
Aroostook*	17	5.7*	3.35 – 9.20*
Cumberland	64	4.6	3.53 – 5.85
Franklin*	9	8.2*	3.73 – 15.48*
Hancock*	7	3.6*	1.44 – 7.35*
Kennebec	37	7.0	4.91 – 9.62
Knox*	6	4.4*	1.61 – 9.54*
Lincoln	DSP	DSP	DSP
Oxford*	16	6.5*	3.69 – 10.49*
Penobscot	43	6.8	4.89 – 9.10
Piscataquis	DSP	DSP	DSP
Sagadahoc	DSP	DSP	DSP
Somerset*	12	5.3*	2.75 – 9.29*
Waldo*	10	6.2*	2.96 – 11.35*
Washington	DSP	DSP	DSP
York	43	4.7	3.41 – 6.35

Source: Linked Death-Birth certificates, DRVS

†Infant deaths excluded from counts if stratification characteristic is missing/unknown; counts may not sum to total

*Interpret with caution; rates calculated with less than 20 individuals in the numerator.

DSP: Data suppressed for privacy