Overview of 2023 Pregnancy-Associated Deaths

Pregnancy-associated death is an "umbrella" term for all deaths during or within one year of pregnancy, regardless of the cause. In 2023, five pregnancy-associated deaths were recorded in New Hampshire as shown in Table 1. Two of the deaths were due to drug overdose (compared to 5 in 2022). Two deaths were due to cardiovascular conditions, and one was due to homicide which is yet to be reviewed as the committee is awaiting approval of release of medical records given by Attorney General's office due to the nature of the death. Two of the deaths occurred during pregnancy and three occurred postpartum.

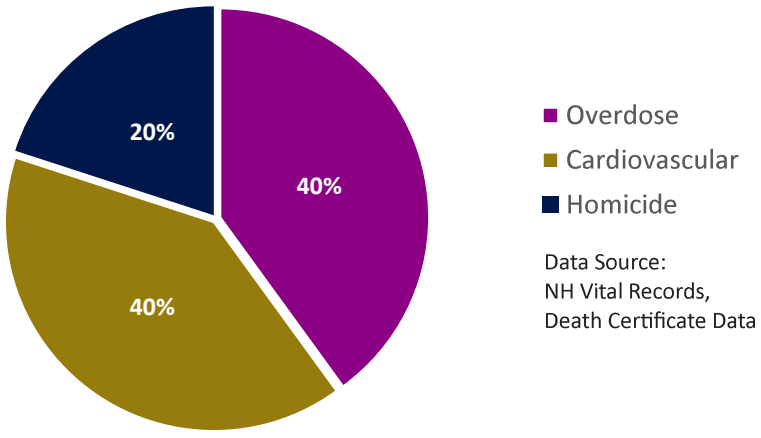


Table 1. 2023 NH Maternal Mortality Cases by Pregnancy Status and Timing of Death

Pregnancy Status	Number
Pregnant	2
Postpartum	3
Timing of 2023 Reviewed and Confirmed Cases	
During pregnancy	2
< 3 months postpartum	2
3-12 months postpartum	1

Data Source: Maternal Mortality Review Information Application

Figure 1. Cause of Death, 2023 Pregnancy-Associated Deaths



Overview of 2019-2023 Pregnancy-Related Deaths



This section includes **pregnancy-related deaths** reviewed by the NH MMRC over the past five years. A pregnancy-related death refers to death while pregnant or up to one year from the end of pregnancy, from any cause related to or aggravated by the pregnancy or its management. These deaths are categorized differently than pregnancy-associated deaths, which refer to all deaths during pregnancy or within 1 year of pregnancy, regardless of the cause. The Appendices contain the full dataset on all pregnancy-associated deaths.

The majority of pregnancy-related deaths in New Hampshire were among non-Hispanic White women (83.2%) followed by Black and African American women (12.5%) and women of Hispanic ethnicity (4.2%). Mental health conditions were the most prevalent underlying cause of death (58.3%), as determined by the MMRC. The committee also determined that mental health conditions and Substance Use Disorder (SUD) were the leading circumstance surrounding death, as shown in Table 4. The top five socio-stressors present in pregnancy-related deaths were the woman's history of substance use and treatment, psychiatric hospitalization or treatment, history of childhood trauma, history of child protective services involvement, and unemployment.

Fifteen out of 24 (62.5%) pregnancy-related deaths were mothers enrolled in Medicaid. The majority (73.3%, 11) died from drug overdose as compared to those enrolled in private insurance as highlighted on Figure 5.

The NH MMRC determined that 24 of the 35 (68.5%) pregnancy-associated deaths that occurred between 2019 and 2023 were pregnancy-related, as shown on Table 2 below.

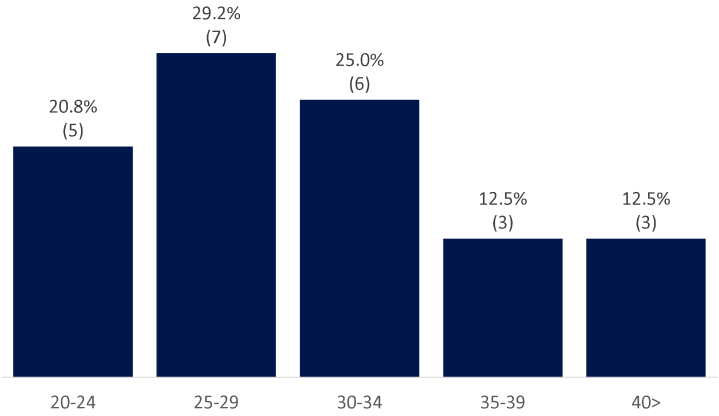
Table 2. NH MMRC Decision on Pregnancy-Relatedness, 2019-2023 NH Resident Deaths

Number of deaths by pregnancy-relatedness	Number of deaths	Percent
Pregnancy-related	24	68.5%
Pregnancy-associated but not -related	8	22.9%
Pregnancy-associated but unable to determine pregnancy-relatedness	3	8.6%
Total	35	100.0%

Data Source: Maternal Mortality Review Information Application

Overview of 2019-2023 Pregnancy-Related Deaths (continued)

Figure 2. Pregnancy-Related Deaths by Mother's Age, 2019-2023 NH Resident Deaths



Data Source: Maternal Mortality Review Information Application

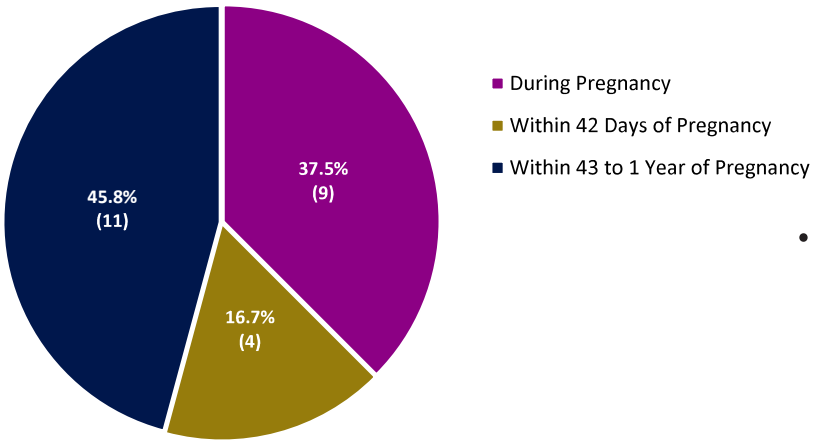
- Most deaths occurred among women aged 25-34 years old (Figure 2).
- The majority of pregnancy-related deaths occurred among pregnant and postpartum women who had attained high school education or less as compared to women who had more than a high school education, Table 3.

Table 3. Pregnancy-Related Deaths by Mother's Education Level, 2019-2023

Education Level	Number of Deaths	Percent
High school diploma equivalent or less	17	62.5%
Completed some college	2	8.3%
Associate, bachelor's or advanced degree	5	20.8%
Total	24	100.0%

Data Source: Maternal Mortality Review Information Application

Figure 3. Deaths by Timing of Death in Relation to Pregnancy, 2019-2023

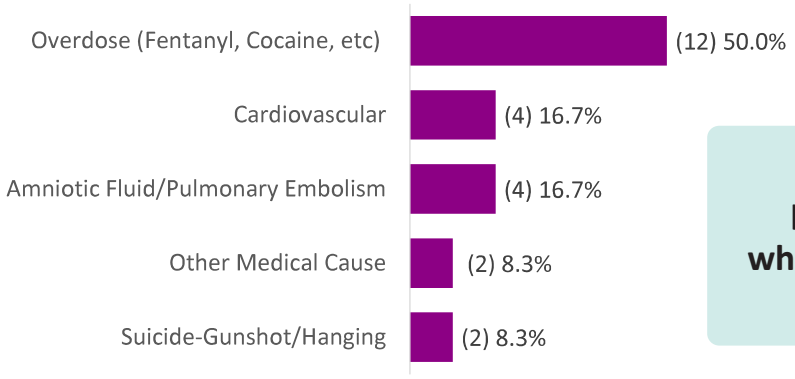


- The majority (62.3%) of the pregnancy-related deaths occurred during the postpartum period. Eight (66.7%) of the 12 overdose deaths which were pregnancy-related occurred between 43 days to 1 year postpartum.

Data Source: Maternal Mortality Review Information Application

Overview of 2019-2023 Pregnancy-Related Deaths (continued)

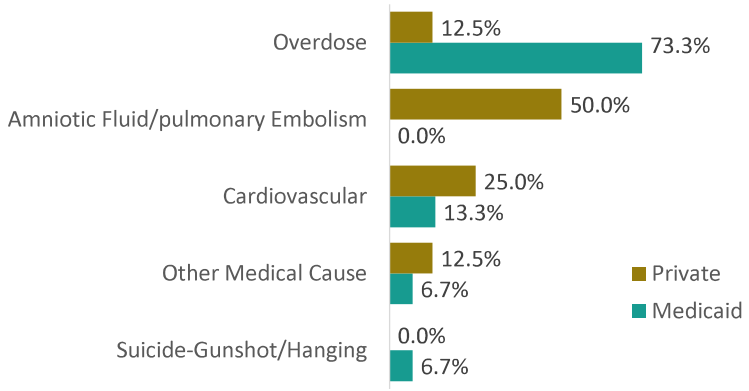
Figure 4. Causes of Pregnancy-Related Deaths, 2019-2023



Drug overdose (50.0%) was the leading cause of death (Figure 4) which is a 2.5% decrease as compared to 2018-2022 aggregate data.

Data Source: Maternal Mortality Review Information Application

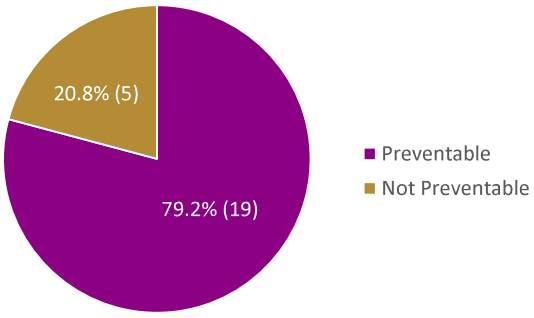
Figure 5. Causes of Pregnancy-Related Deaths by Principal Payor During Delivery, 2019-2023



- Fifteen out of 24 (62.5%) of the pregnancy-related deaths were people enrolled in Medicaid, and the majority (11; 73.3%) died from drug overdose as compared to those enrolled in private insurance as highlighted on Figure 5.

Data source: NH Vital Records Death Certificate Data

Figure 6. NH MMRC Decision on Death Preventability of Pregnancy-Related Deaths, 2019-2023

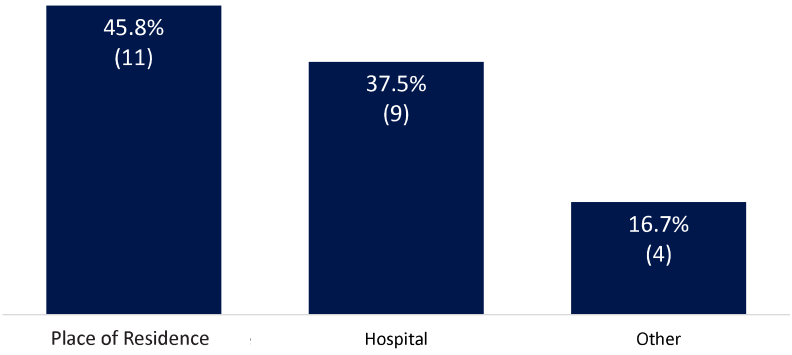


- The Committee determined that 19 (79.1%) of the pregnancy-related deaths were preventable (Figure 6).
- Most deaths occurred at the woman's residence, mainly due to overdose or suicide.

Data Source: Maternal Mortality Review Information Application

Overview of 2019-2023 Pregnancy-Related Deaths (continued)

Figure 7. Location of Death, 2019-2023 Pregnancy-Related Deaths



Data Source: Maternal Mortality Review Information Application

6 (50%) out of the 12 overdose deaths had documentation that finances and transportation were barriers to health care access.

Table 4. Committee Determinations on Circumstances Surrounding Pregnancy-Related Deaths, 2019-2023

Committee determinations	Yes	No	Probably	Unknown
Did obesity contribute to the death?	4	19	0	1
Did mental health conditions contribute to the death?	11	11	2	0
Did substance use disorder contribute to the death?	11	11	2	0
Was this death a suicide?	2	17	0	5

Data Source: Maternal Mortality Review Information Application

History of Social and Emotional Stressors for 2019-2023 Reviewed Cases



The following are descriptions of the identified social and emotional stressors and their impact on maternal mortality in New Hampshire:

- **Substance Use and Addiction**: Substance Use Disorder characterized by recurrent use of alcohol and/or drugs causing clinically and functionally significant health and psychosocial issues, and the need for care coordination, harm reduction, and trauma-informed services.
- **Mental Health Conditions**: History of psychiatric hospitalizations, prior suicide attempts, and ongoing mental health treatment, or lack of access to diagnostic and treatment services for mental health conditions.
- **Child Protective Services Involvement**: Removal of children during the postpartum period, and the need for peer support and reunification support if applicable**.**
- **Cycle of Trauma**: The pattern of ongoing childhood and adult trauma, including domestic violence, sexual violence, and recent trauma were recorded, including the intergenerational impact of childhood adverse experiences and the long-term sequelae of trauma.
- **Socioeconomic Struggles**: Unemployment is a persistent issue, highlighting economic instability and related stressors like loss of health insurance or financial hardship**.** These factors, rather than noncompliance, affected women's ability to care for themselves. For example, some did not seek medical services because they could not afford postpartum visits after their insurance expired or could not miss work. Additional challenges included insurance non-eligibility, provider shortages, and lack of public transportation.
- **Reproductive Health**: Stressors associated with the management of pregnancy, including unplanned pregnancies, amidst numerous psychosocial and economic stressors.
- **Sequelae of Intimate Partner Violence, Domestic Violence, and Sexual Assault**: The health, mental health, and psychosocial stressors of physical or emotional abuse perpetrated by current or former intimate partner, family member, friend, acquaintance, or stranger are particularly significant during the pregnancy and postpartum periods.

Figure 8. Woman's Treatment History for Mental Health Conditions, 2019-2023 Pregnancy-Related Deaths

