

Maternal Mortality Review

Cases reviewed in 2018

The high U.S. maternal mortality rate has fittingly garnered concern both in the public and political eye. Senator Tom Carper convened a meeting to discuss Delaware's approach to reducing maternal mortality in August 2018. With the support of Senator Carper and others, the Preventing Maternal Deaths Act (H.R. 1318) was passed on December 21, 2018 to fund Maternal Mortality Review (MMR) Committees and standardize data collection across the country.

Five maternal death cases were reviewed in 2018 involving three White women and two Black women ranging in age from 29 to 42 years old. Two cases were identified by the pregnancy checkbox question on the death certificate, and three more cases were identified by vital statistics linkage of maternal identifiers on fetal death or birth certificates and death certificates, underscoring the importance of the linkage process to more accurate case ascertainment. An additional three cases identified did not go on for full panel review. Two of these cases initially picked up by the pregnancy checkbox turned out to be false positives: in one case the woman was not in fact pregnant, and in the other case the mother died over one year after delivery—beyond the defined timeframe to be considered a maternal death. Another case identified by the vital statistics linkage was beyond the two year policy time frame after the occurrence of the death and so the case did not go on for review.

All five maternal deaths occurred postpartum: one case within 42 days postpartum, and the other four cases between 42 and 365 days after delivery. Four cases were pregnancy-associated, meaning the underlying cause of death was not linked to pregnancy or its complications; and one case was pregnancy-related, meaning the death was causally linked to the woman's pregnancy or a complication thereof. In four cases, the MMR Committee determined the death may have been preventable. In four of the five cases, the mother had a mental health issue, and three cases involved a current substance use issue.

For each case deliberated, the MMR Committee identifies factors that contributed to the outcome and assigns them a level: patient/family, provider, facility, systems of care or community. Figure 6 presents the contributing factors identified by level and the number of relevant cases with each finding. Each case had an average of 7 contributing factors identified.

Figure 6: Contributing factors identified in 2018 maternal death cases (number of relevant cases)

<u>Patient/Family Factors:</u>
Chronic disease (4)
Substance use disorder (3)
Tobacco use (3)
Lack of social support/isolation (2)
Lack of adherence to medical recommendations (2)
Mental health issue (2)
Delay in seeking care (2)
Lack of knowledge (2)
Childhood trauma (2)
Intimate partner violence (1)
Unstable housing (1)
Incarceration (1)
<u>Provider Factors:</u>
Lack of quality care (2)
Lack of continuity of care (1)
<u>Facility Factors:</u>
Lack of quality care (1)
Lack of continuity of care (1)
Inadequate community outreach/services (1)
<u>Systems of Care Factors:</u>
Lack of access to care (1)
Lack of care coordination (1) - limited options for inpatient drug addiction treatment
<u>Community Factor:</u>
Environment (1) - availability of drugs in community



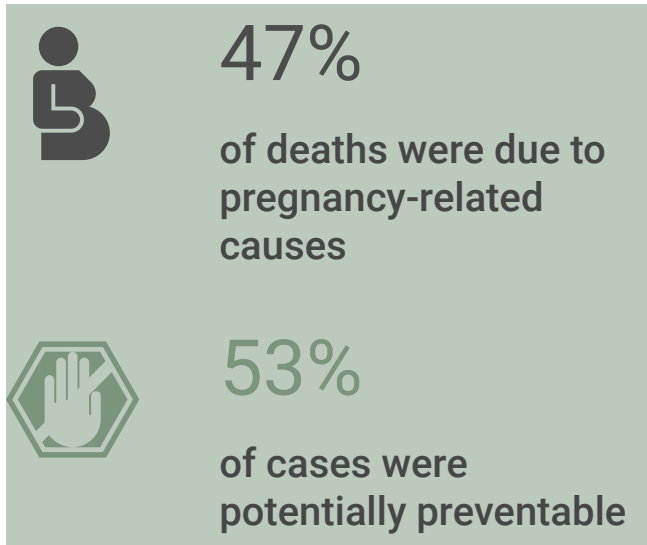
2018 MMR Committee findings include:

1. There is an increasing prevalence of pregnancy-associated deaths over the last few years. This may be linked to the changes in case identification procedures. Late ascertainment of maternal deaths is occurring based on the vital statistics linkage.
2. There is a lack of continuity of care or referral between the emergency department, where patients may access care, and substance abuse treatment. Every point of contact is an opportunity to ask if the patient is ready to access services, provide a referral or a list of resources and call the primary care physician.
3. The MMR panel recommends that DHSS explore the availability of resources for inpatient and outpatient drug rehabilitation and accessibility for high risk populations.
4. There may be need for increased public awareness education on the risk of breast cancer even in younger women and the importance of getting checked for a palpable breast lump.
5. Family planning counseling is an important part of the care plan for women and men of child bearing age undergoing cancer treatment.



MMR cases reviewed in 2011-2018: cumulative findings

Since the inception of the MMR program in Delaware, 34 cases have been reviewed by the MMR Committee.



There has been an increasing number of pregnancy-associated deaths identified over time mainly as a result of adding the vital statistics linkage to the case identification process. For case counts over time, see the 2018 data addendum. A higher proportion of pregnancy-related deaths (50%) involved Black mothers as shown in Table 5.

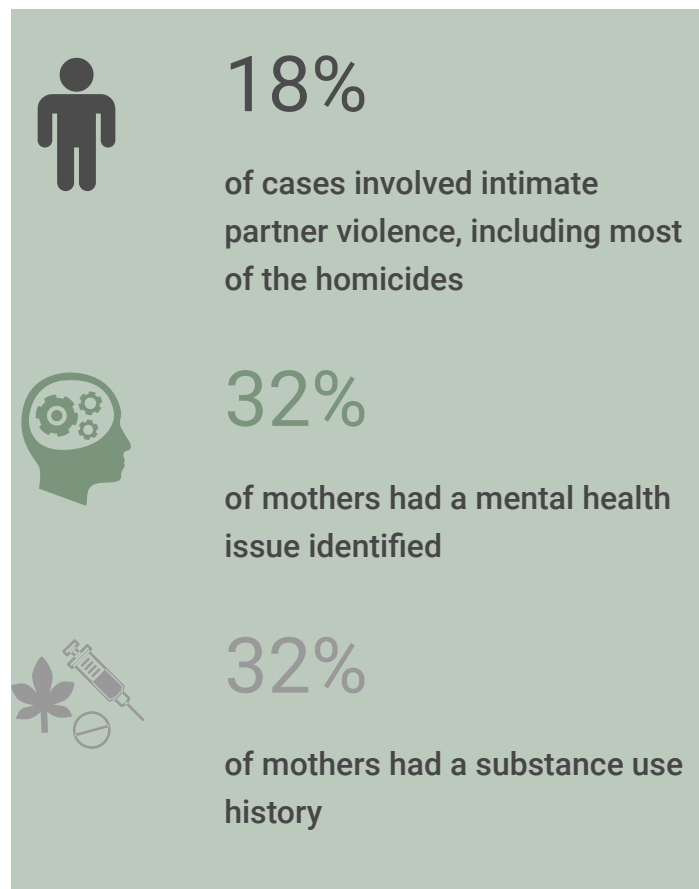
Table 5: Maternal deaths and pregnancy-related deaths, by maternal race

	All maternal deaths (n=34)	Pregnancy-related deaths (n=16)
White	50%	44%
Black	38%	50%
Other	12%	6%

Based on the data available to date, the pregnancy-related mortality ratio in Delaware is 18 per 100,000 live births for calendar years 2009-2018, a ratio on par with the 2014 national ratio as reported by the CDC's Pregnancy Mortality Surveillance System.* (7)

Figure 5 (see page 17 of this report) summarizes some key statistics from the Delaware MMR program and national data to highlight the racial disparity in poor pregnancy outcomes.

The underlying causes of maternal death are very different between pregnancy-related and pregnancy-associated deaths. The former mostly includes medical complications of pregnancy, and the latter are predominantly attributable to motor vehicle crashes, acute drug intoxication and homicides. Key contributing factors identified in MMR cases include:



*This includes a review of the death certificate information for 9 cases not fully reviewed by the MMR Committee because they were identified over 2 years after the death, one of which had a likely pregnancy-related cause of death.

(7) CDC. Pregnancy Mortality Surveillance System. Accessed on May 1, 2019. Updated on August 7, 2018. Available at: <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-mortality-surveillance-system.htm>.