South Carolina Maternal Morbidity and Mortality Review Committee

Legislative Brief
March 2023

The South Carolina Maternal Morbidity and Mortality Review Committee (SCMMMRC), established by state law in 2016, investigates maternal deaths associated with pregnancy. Data are reported through vital records, voluntary reporting, and CDC notification. A **pregnancy-related (PR)** death occurs when a person dies while pregnant or within one year of pregnancy from a pregnancy complication, a chain of events initiated by the pregnancy, or a condition made worse by the pregnancy.[1]

VISION: To eliminate preventable maternal deaths, reduce maternal morbidities, and improve population health for people of reproductive age in South Carolina.

BACKGROUND

The **goals** of the SCMMMRC are: 1) determine the annual number of pregnancy-associated (PA) deaths that are PR; 2) identify trends and risk factors among preventable PR deaths in SC; and 3) develop actionable recommendations for prevention and intervention. SCMMMRC reviews all maternal deaths that occur during pregnancy and up to 365 days following the end of the pregnancy regardless of the cause of death. Each death is reviewed using a standardized approach that includes investigating underlying causes of death, pregnancy-relatedness, preventability, circumstances and contributing factors surrounding the death. **In 2022, the SCMMMRC completed the review of 66 deaths from 2019, 22 of these deaths determined to be PR (30%)**. Although all deaths are tragic, the focus of the SCMMMRC is PR deaths. **In 2019 the SC Pregnancy-Related Mortality Ratio (PRMR) was 38.6 PR deaths per 100,000 live births, a 9.3% increase from 35.3 in 2018.**

WINS

- Extended post-partum Medicaid coverage to 12 months.
- Hired social worker to conduct family interviews.
- Added cardiology and forensic pathologist committee members.
- Completed prioritized Covid-19 death reviews for 2020 and 2021.

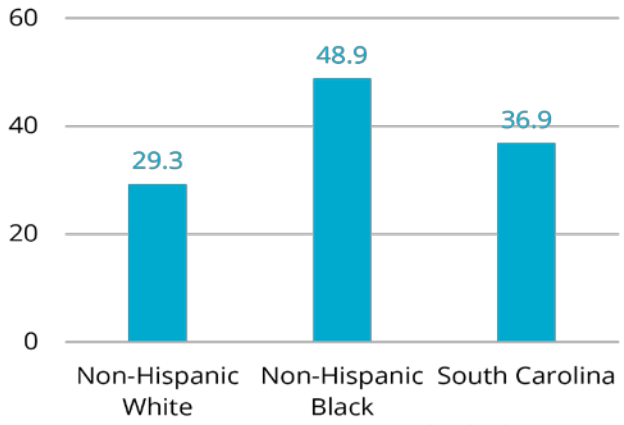
COVID-19 UPDATE

- All COVID-19 deaths through 2021 were investigated.
- **13** Pregnancy-associated deaths through 2021 were investigated by the SCMMMRC.
  - **10** deaths determined as PR
  - **80**% Preventable
- **100%** Unvaccinated
- **90%** Post-Partum Period
- **70%** Obese
- **Advanced** maternal age

RECOMMENDATIONS

1. The SCMMMRC committee supports and recommends COVID-19 vaccination for all pregnant or post-partum women.
2. Providers caring for pregnant or post-partum women should educate, counsel, and convey the benefits of COVID-19 vaccination.
3. Pregnant women should not delay receiving the COVID-19 vaccination.
4. COVID-19 medical interventions that include medications should not be withheld due to pregnancy.

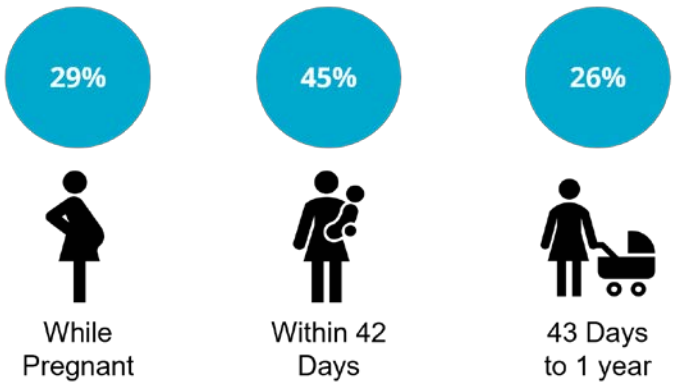
PRMR, by Race and Ethnicity



Note: Years 2018-2019; Rate per 100,000 live births.

In SC, the non-Hispanic Black population experienced a 67% higher pregnancy-related mortality ratio than their White counterparts in 2018 and 2019. Both were higher than the United States PRMR of 17.3.[2] The SCMMMRC recommendation is for hospitals and providers to recognize and address racism and improve the quality of care to birthing women of color. Individuals of color should receive equitable and comprehensive care before, during, and after pregnancy.

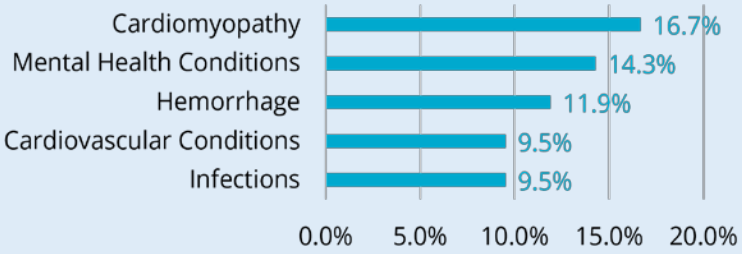
Pregnancy Related Deaths, by Timing



Notes: Years 2018-2019

In 2018 and 2019, over 70% of pregnancy-related deaths occurred during the post-partum period. The SCMMMRC recommends all birthing women have a post-partum checkup within 1-3 weeks after delivery, allowing clinical assessment and monitoring of medical and behavioral health conditions.

Leading Causes of Pregnancy-related Deaths

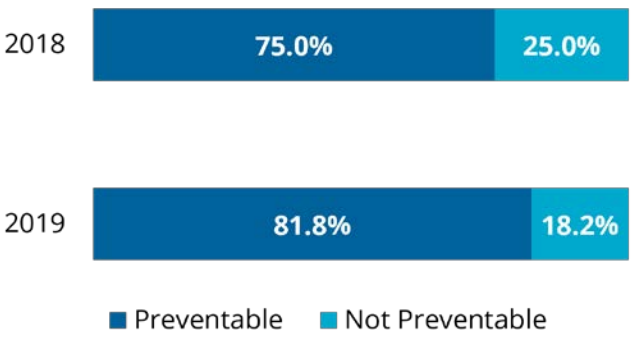


Note: Years 2018-2019

The top three underlying causes of maternal deaths for 2018 and 2019 were cardiomyopathy, mental health conditions and hemorrhage. The SCMMMRC defines mental health conditions as psychiatric disorders (such as depression), suicide, and substance use disorder. Combined, cardiomyopathy and cardiovascular conditions account for 1 in 4 PR deaths. **The leading cause of death in non-Hispanic Blacks was cardiomyopathy, while mental health conditions were the leading cause of death for non-Hispanic Whites.**

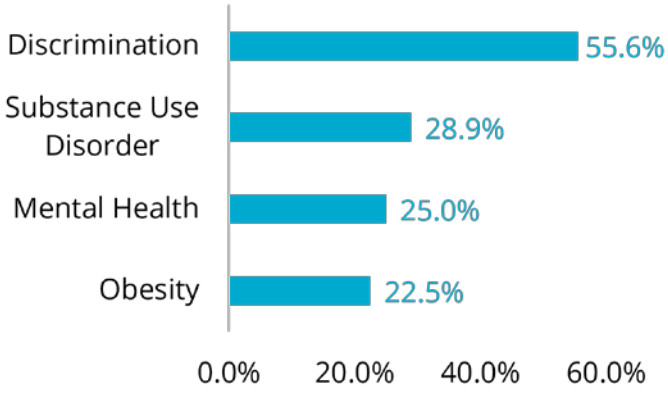
In 2019, 81.8% of the pregnancy-related deaths investigated by the SCMMMRC were determined to be preventable. This aligns with the national statistic of 80%.[3] A death is considered preventable if the committee determines that there was at least some chance of the death being averted by one or more reasonable changes. These changes may occur at the patient/family, provider, facility, system, or community level and may be associated with various contributing factors.

Preventability of PR Deaths



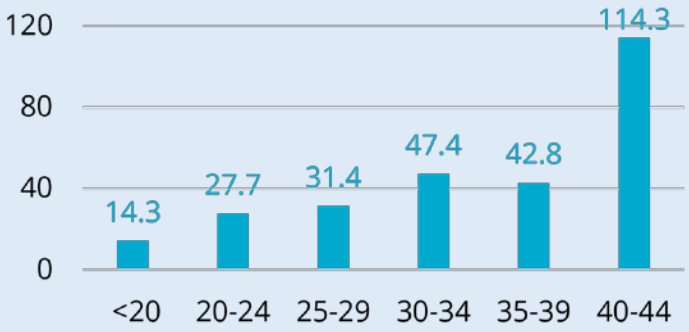
The possibility of discrimination is described as treating someone less or more favorably based on the group, class, or category they belong to resulting from biases, prejudices, and stereotyping. It can manifest as differences in care, clinical communication, and shared decision-making.[4] Discrimination was recognized as a contributing factor in more than half of the pregnancy-related deaths reviewed.

Contributing Factors of PR Deaths



Note: Years 2018-2019

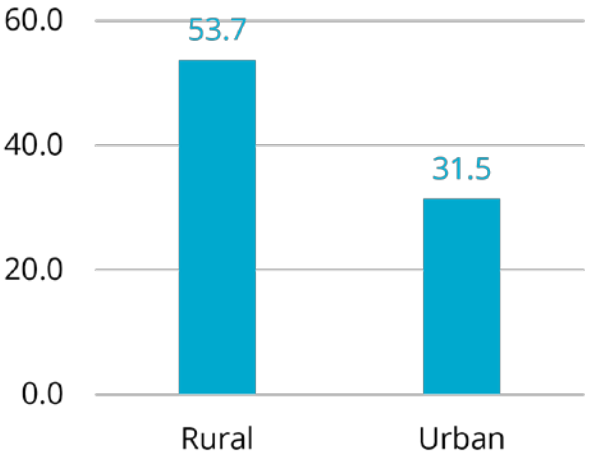
PRMR, by Age Range



Note: Years 2018-2019; Rate per 100,000 live births.

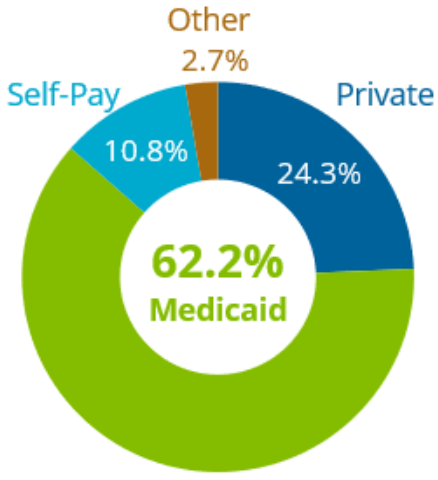
As maternal age increases, so does the risk of a pregnancy-related death. In 2018-2019, women over the age of thirty experienced a higher rate of pregnancy-related deaths than younger women. Individuals aged 40-44 were 3-4 times more likely to experience a PR death than their younger counterparts.

PRMR, by Rurality



Note: Years 2018-2019 ; Rate per 100,000 live births.

PR Deaths, by Payor Source



Note: Years 2018-2019

In 2018 and 2019, women who resided in rural South Carolina counties had a 70.4% higher rate of a pregnancy-related death than their urban counterparts. Medicaid was identified as the leading payor source for prenatal care and delivery of pregnancy-related deaths.

Committee Recommendations for Reducing Pregnancy-Related Deaths in South Carolina

The South Carolina Maternal Morbidity and Mortality Review Committee was asked to prioritize recommendations in order of importance to prevent pregnancy-related deaths.

1	**Heath Care Access -** All birthing women should have an established primary care provider who can address chronic health, mental health conditions before, during and after pregnancy.
2	**Clinical Intervention -** All SC birthing hospitals should adopt hemorrhage protocols/safety bundles and educate providers and staff regarding hemorrhage recognition and management to include quantitative blood loss measurement, surgical management, ICU care and blood product administration.
3	**Continuity of Care -** All birthing women should have a post-partum appointment within 1-3 weeks following delivery.
4	**Discrimination -** Recognize and address racism and improve the quality of care to birthing women of color. Birthing women of color should receive equitable and comprehensive care during pregnancy and the post-partum period.
5	**Referrals -** Birthing women should receive referrals to appropriate medical specialties, and behavioral health providers.
6	**Clinical Intervention -** SC should support the education and training of obstetrical and emergency department medical and nursing staff, utilizing simulations of obstetrical emergencies and training seminars focusing on hemorrhage, high blood pressure, cardiovascular conditions, and mental health conditions.
7	**Discrimination -** All SC hospitals and obstetric providers should utilize interpretative services to assist birthing women when English is not their primary language.
8	**Clinical Intervention -** All birthing women should have Screening, Brief Intervention, Referrals and Treatment (SBIRT) screenings for mental health and be screened for substance use, domestic violence, and chronic disease at the initial prenatal appointment, during pregnancy and at post-partum follow up appointments.

SUMMARY

The SCMMMRC is committed to the elimination of preventable pregnancy-related deaths. The committee acknowledges that the PRMR is higher in SC than the national average, especially among non-Hispanic Black mothers and birthing women. The SCMMMRC is actively working through its partners and stakeholders to address the health and healthcare needs of birthing women and to leverage existing resources to support continued education and training among providers and payors.

Citations

1. Maternal Mortality Review Committee Decisions Form. Retrieved from https://reviewtoaction.org/national-resource/mmria-committee-decisions-form-and-additional-guidance

2. Centers for Disease Control and Prevention (CDC). (2020,November). Pregnancy Mortality Surveillance System. Retrieved form https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm.

3. Pregnancy Related Death: Data from Maternal Mortality Revie Committees in 36 States, 2017-2019. Retrieved from https://reviewtoaction.org/tools/resource-center

4. Smedley et al, 2003 and Dr. Rachel Hardeman

CR-013357 4/2023