South Carolina Maternal Morbidity and Mortality Review Committee

Legislative Brief
March 2021

The South Carolina Maternal Morbidity and Mortality Review (MMMR) Committee, established by state law in 2016, investigates the death of mothers associated with pregnancy to determine which ones can be prevented. A pregnancy-related death occurs when a woman dies while pregnant or within 1 year of pregnancy. The cause is related to or made worse by her pregnancy or its management. This does not include accidental or incidental causes.[1]

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

Across the United States, roughly 700 women die each year from the result of pregnancy or delivery complications.[2] Some groups of women experience this tragic event at a much higher rate than other groups.[3]

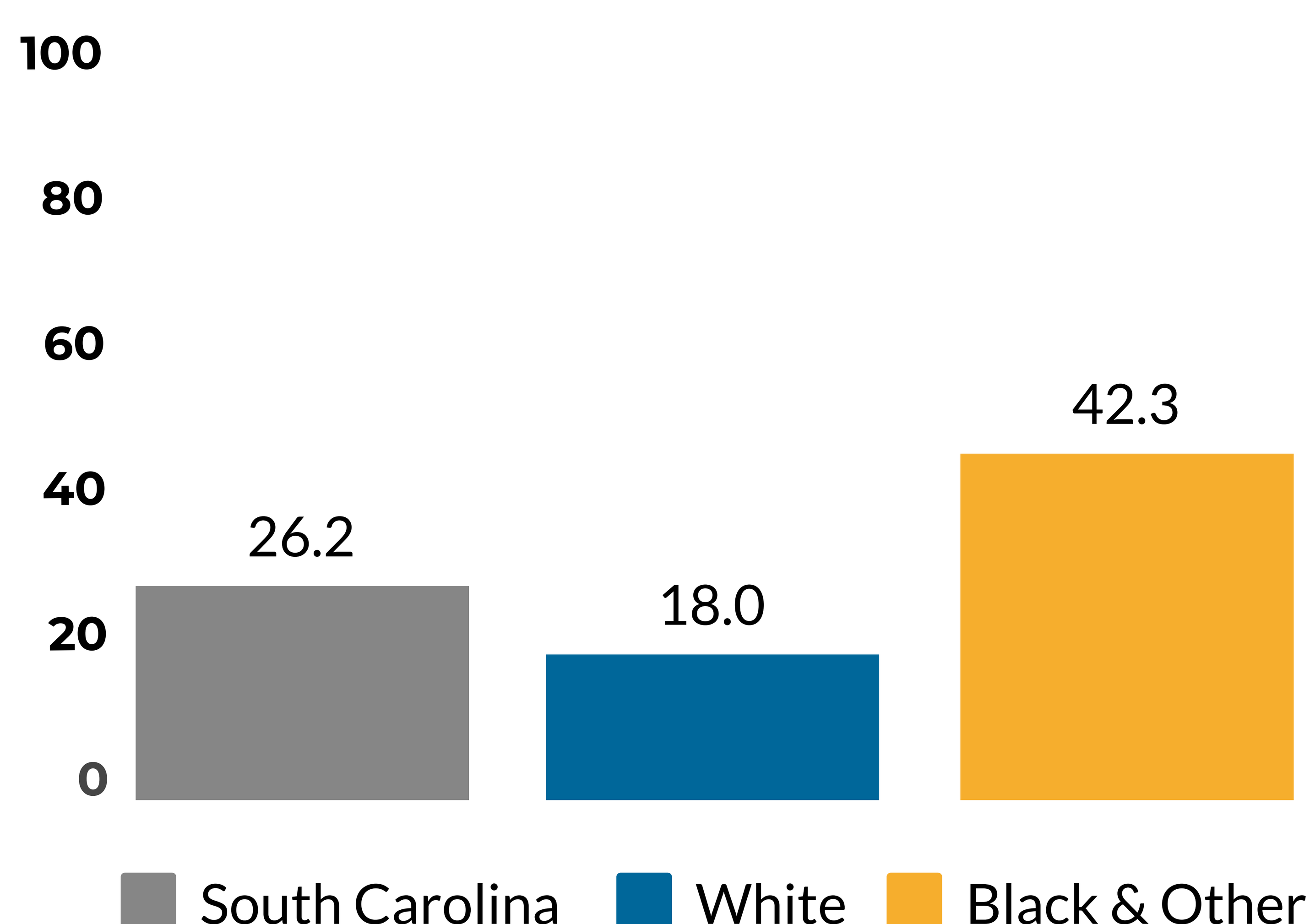
Between 2015 and 2019, 75 South Carolina women died within six weeks of giving birth, a rate of 26.2 deaths per 100,000 live births. The maternal mortality rate was 2.4 times higher for Black and Other women versus White women (42.3. vs. 18.0 maternal deaths per 100,000 live births, respectively).[3]

GOALS:

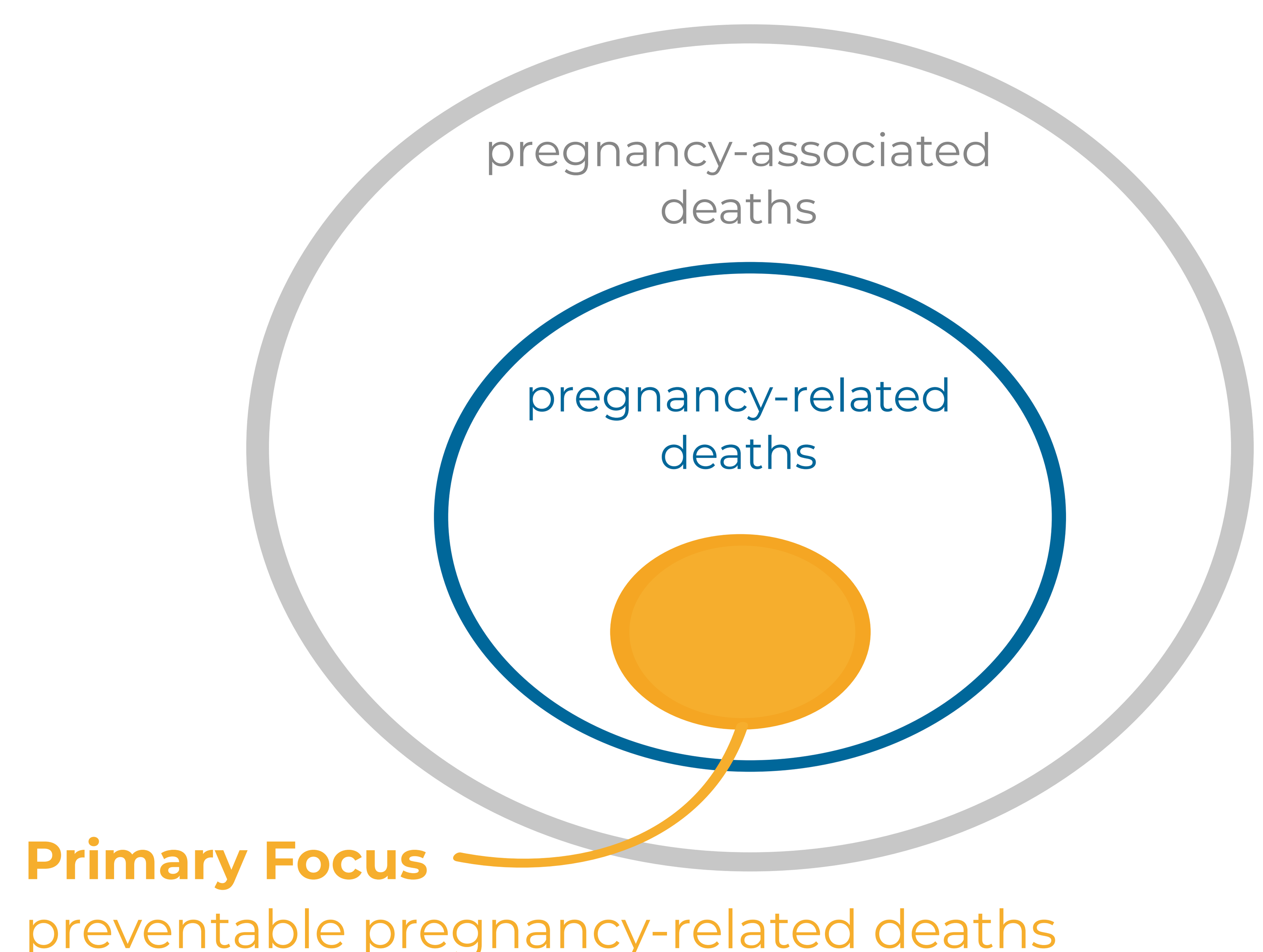
1. Determine the annual number of pregnancy-associated deaths that are pregnancy-related.
2. Identify trends and risk factors among preventable pregnancy-related deaths in SC.
3. Develop actionable recommendations for prevention and intervention.

South Carolina Maternal Mortality Rate by Race, 2015-2019

Rate per 100,000 live births



Scope of Case Review for the South Carolina Maternal Morbidity and Mortality Review Committee



SC MMMR Committee Findings

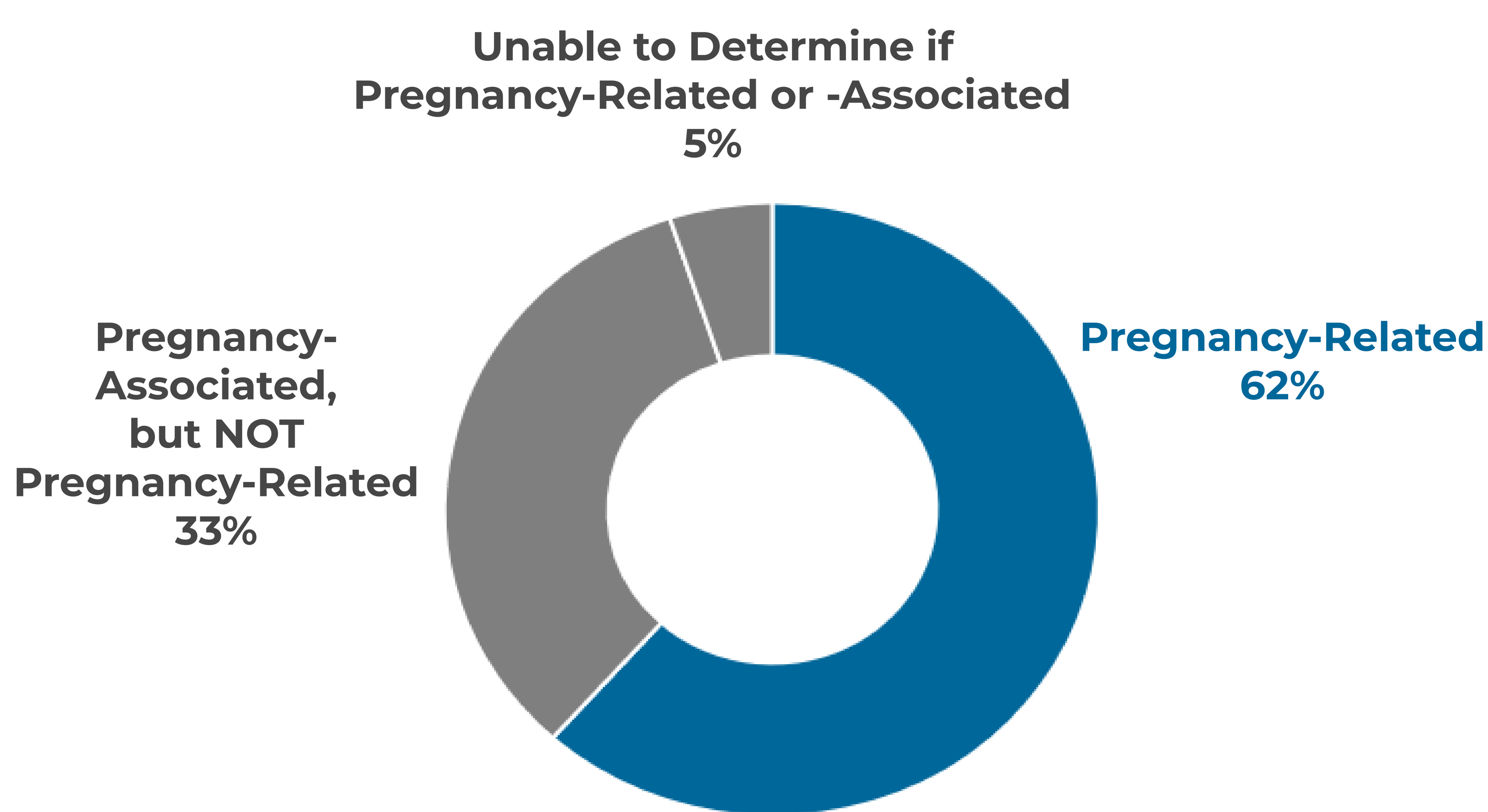
There are six primary decisions that the SC MMMR Committee makes for each maternal death reviewed. These decisions increase understanding of the medical and non-medical contributors to maternal deaths and prioritize interventions that effectively reduce their occurrence.

Between 2016 and 2020, there were 63 maternal deaths reviewed. Of which, 60 were within the scope of case review. The Committee findings are summarized below.

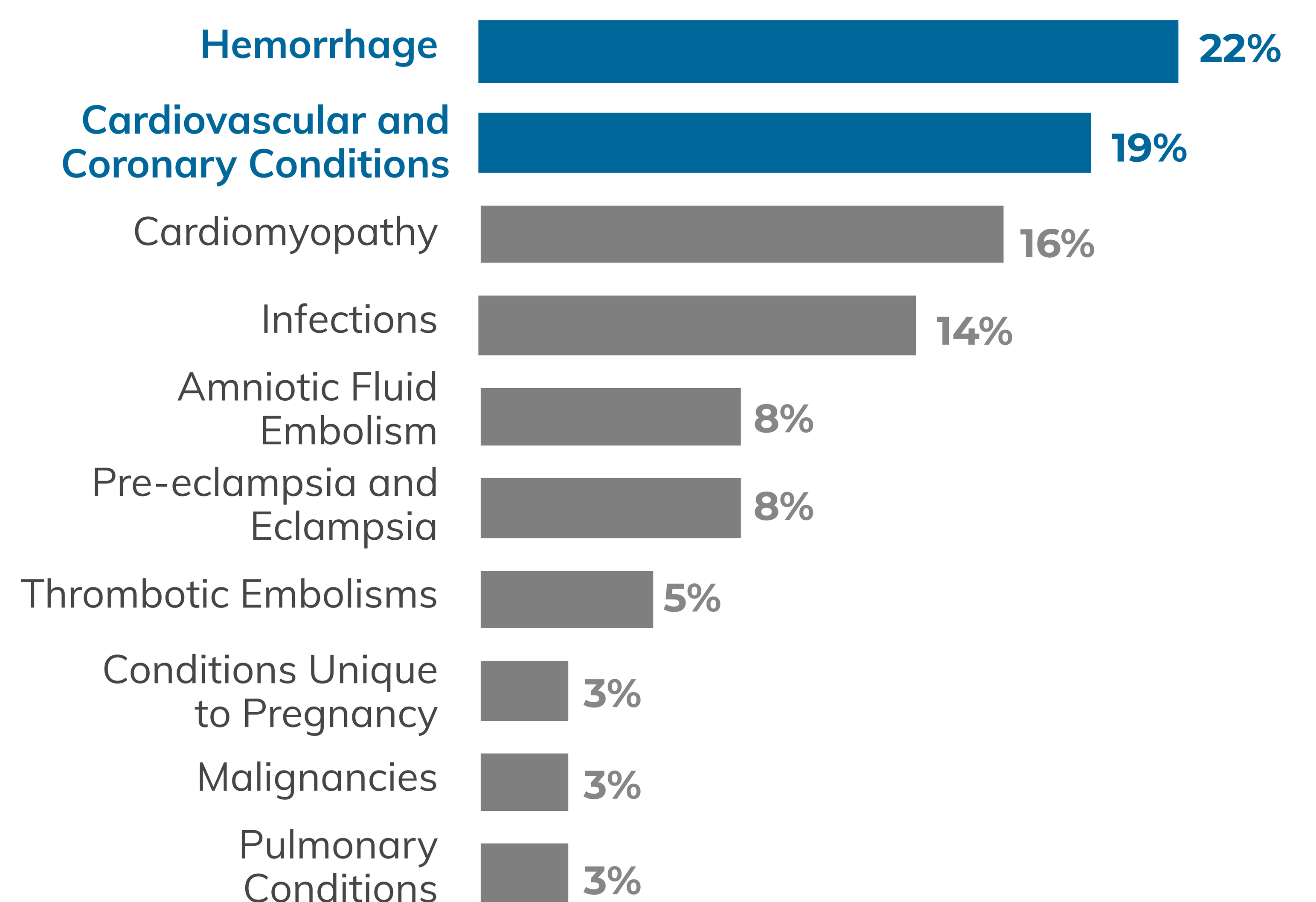
WINS:

- Increased capacity to abstract and review maternal deaths.
- Instituted a linkage process with vital records for case ascertainment.
- Established a specialized subcommittee to review maternal deaths that are broader in scope (i.e., pregnancy-associated).
- Transitioned from "local hosting" to "central hosting" of the data management system for standardization across states and jurisdictions.

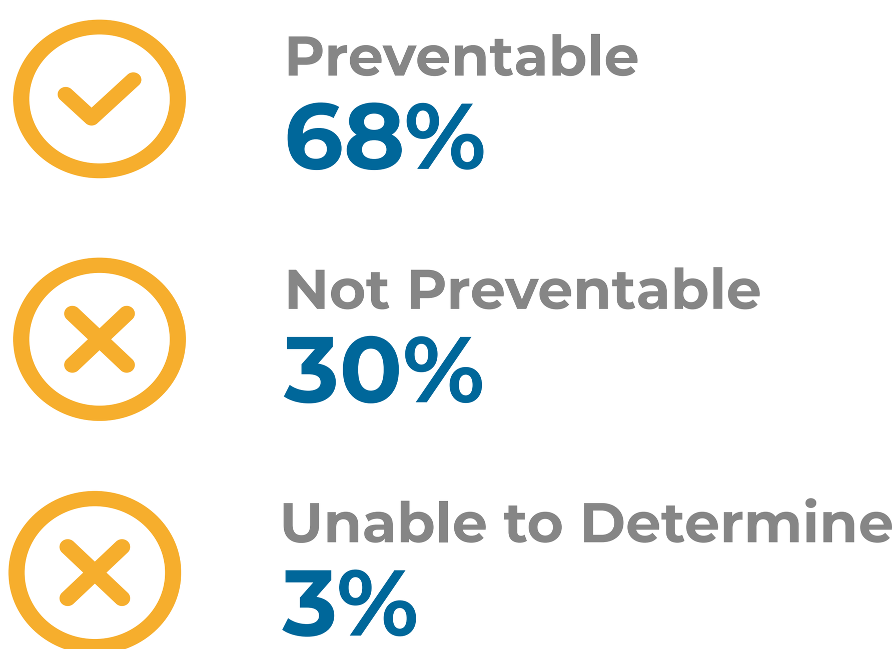
1 62% of maternal deaths reviewed by the Committee were determined to be pregnancy-related (n=37).



2 Hemorrhage and cardiovascular and coronary conditions were the leading causes of pregnancy-related deaths.

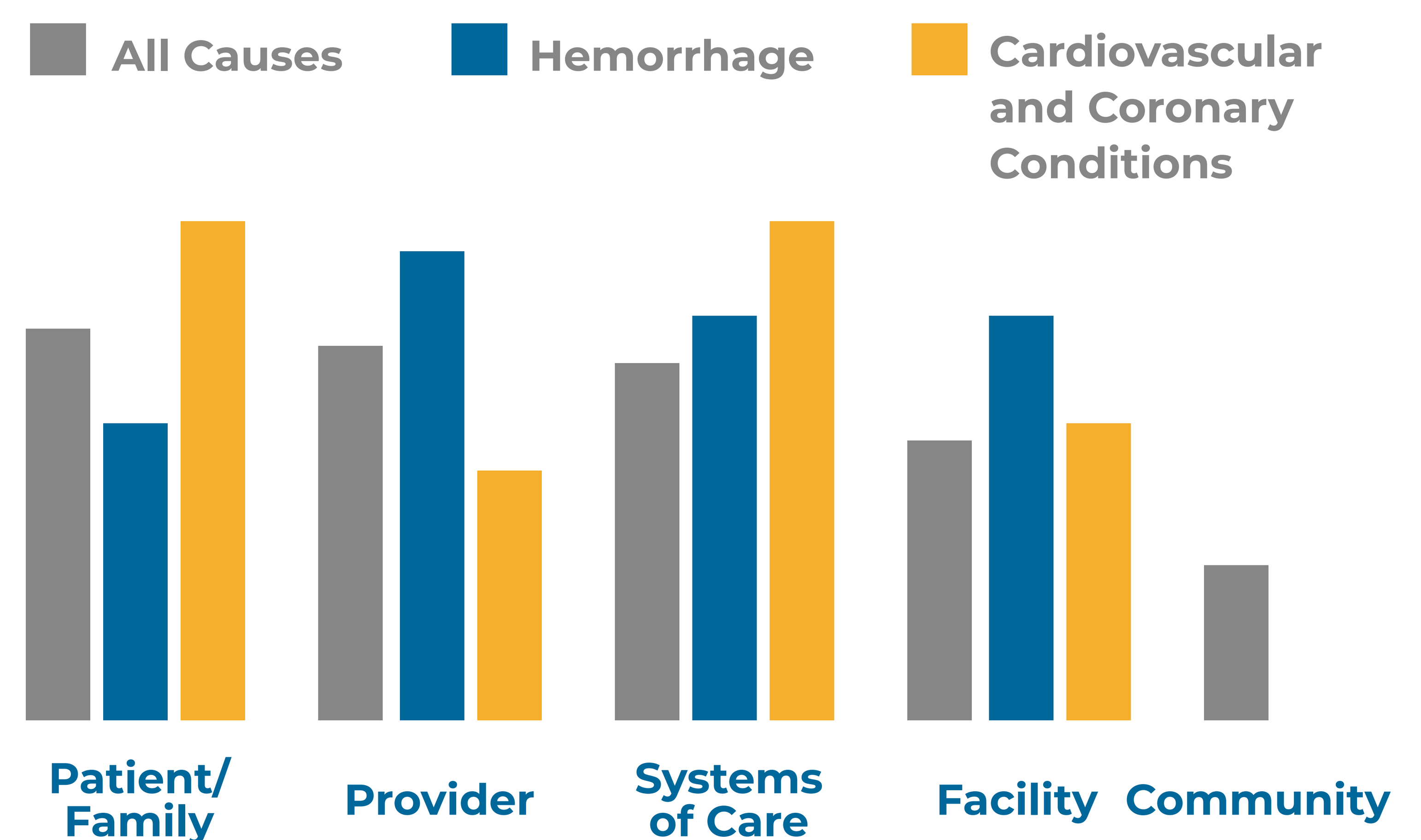


3 68% of pregnancy-related deaths were determined to be preventable (i.e., there was at least some chance to alter the outcome).



A preventable pregnancy-related death is defined by a "yes" response to preventability or where at least some chance to alter the outcome was noted.

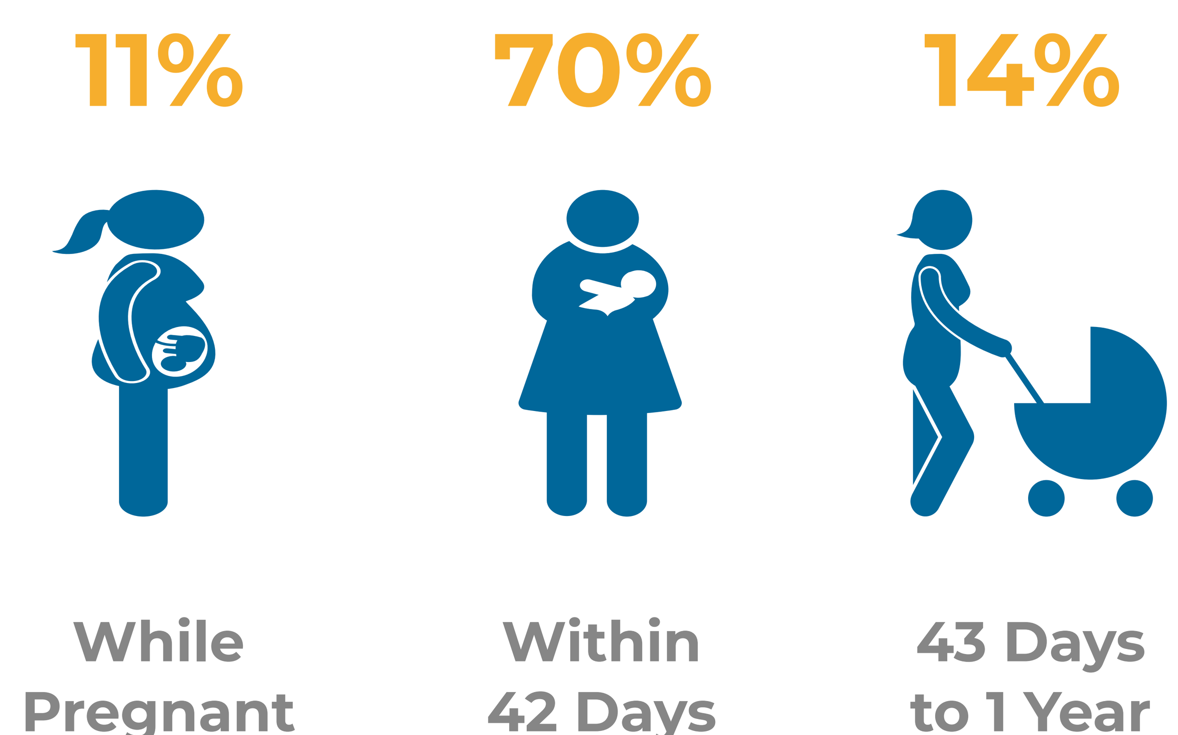
4 Contributing factor classifications vary in their distribution within the leading causes of pregnancy-related death.



Racial Disparities in Pregnancy-Related Deaths

- Black maternal deaths accounted for 43% of all pregnancy-related deaths reviewed between 2016 and 2020 (White, 27%; Other, 8%, Unknown, 22%).
- Disparate causes of death were observed by race - hemorrhage was the most common cause of Black maternal deaths, while infection and cardiomyopathy were tied as the leading cause of White maternal deaths.
- The immediate postpartum period is the most vulnerable period for women of all races.

Distribution of Pregnancy-Related Deaths by Timing of Death in Relation to Pregnancy



*Pregnancy-related deaths where timing was unknown were excluded (2).

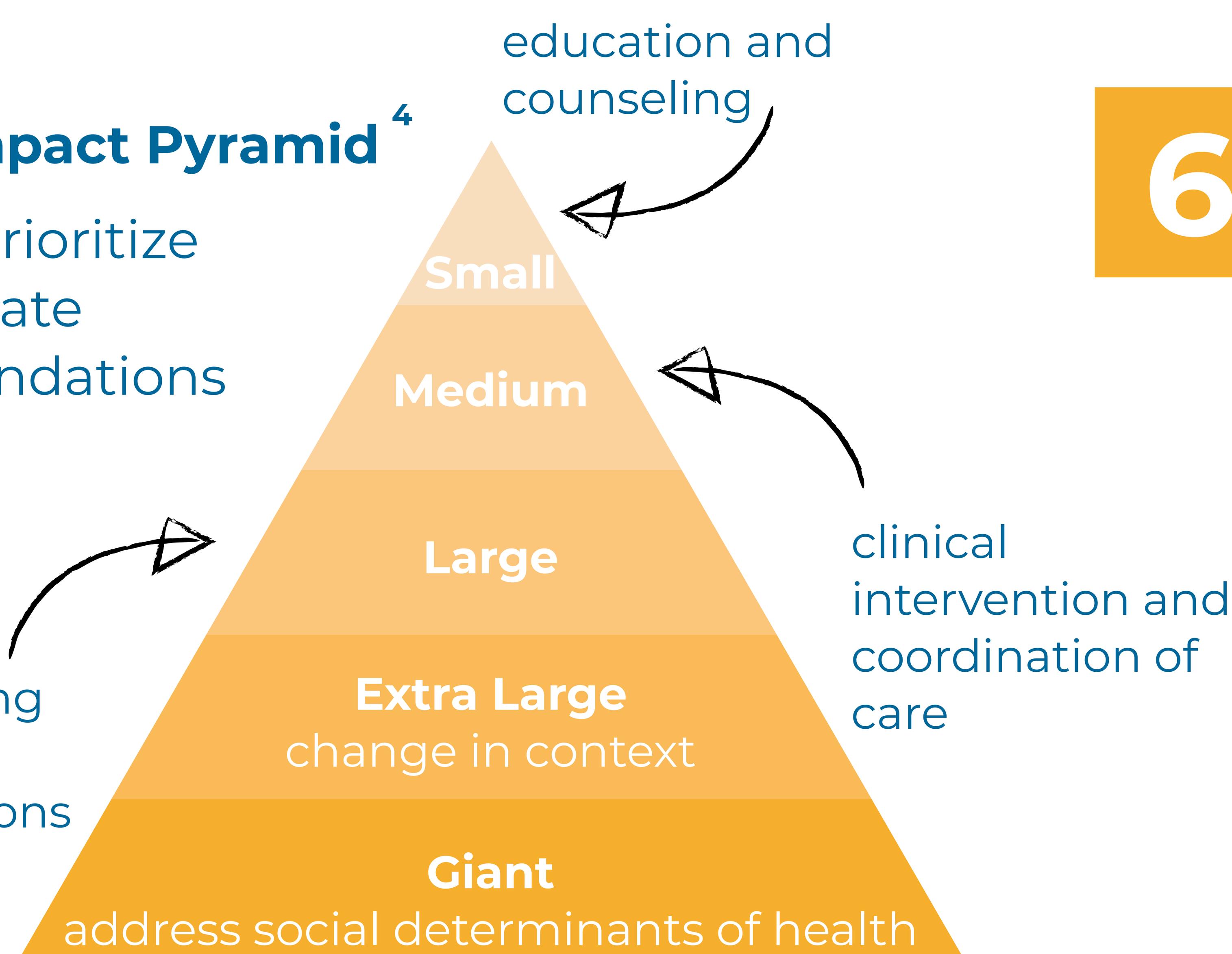
Committee Recommendations and Impact

5 What can be done to reduce pregnancy-related deaths in South Carolina moms?

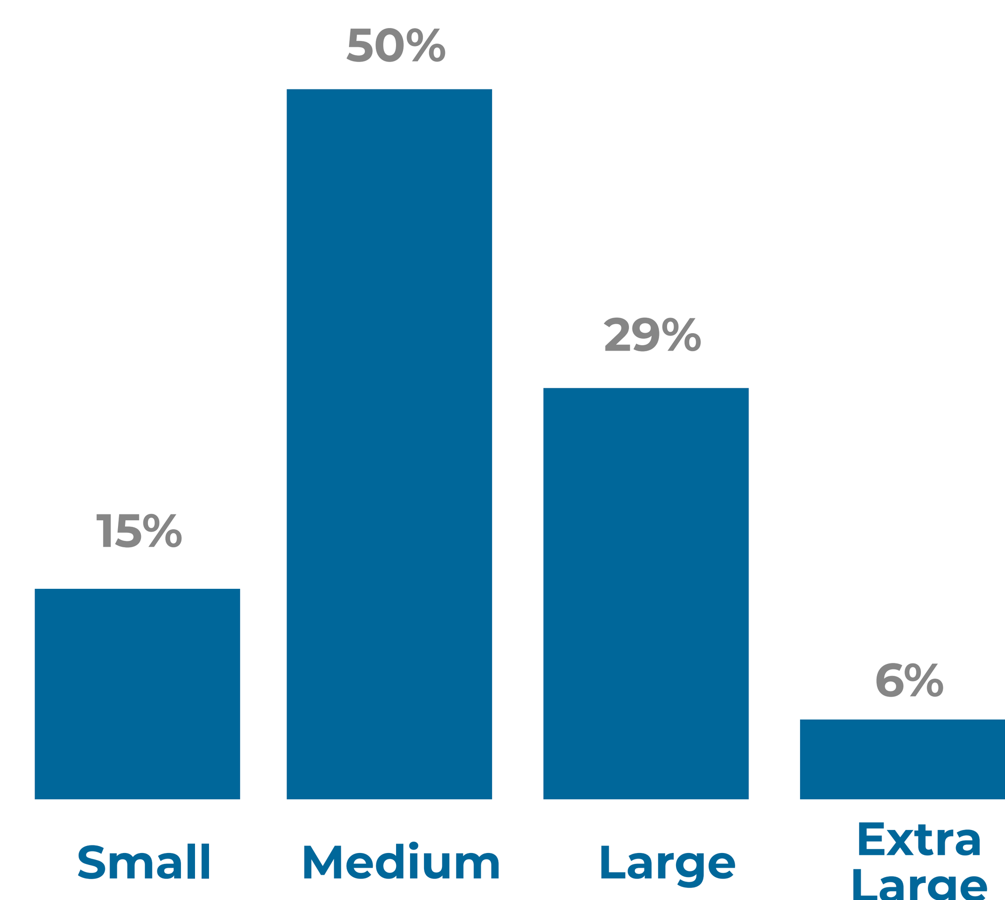
- SC should expand Medicaid to cover 12 months post-partum; this will allow for comprehensive medical care and will reduce racial disparities that occur in SC with regards to maternal mortality.
- SC should address racism and improve the quality of care provided to women of color. Women of color should receive equitable and comprehensive care during the pregnancy and postpartum period.
- All SC hospitals should adopt hemorrhage protocols and educate providers and staff regarding hemorrhage recognition and management to include adequate surgical management, ICU care and blood product administration.
- SC should increase the use of OB Care Coordinators/Navigators who would link women to appropriate medical, mental health, and social services.
- Women who have preexisting coronary artery disease/cardiac conditions or a newly diagnosed cardiovascular condition should receive referrals to advanced obstetric care (Maternal Fetal Medicine) and Cardiology.
- All SC hospitals and obstetric providers should utilize interpretative services to assist women when English is not their primary language.
- SC should continue to support the education and training of medical and nursing staff utilizing simulations of obstetrical emergencies.

Health Impact Pyramid [4]

Helps to prioritize and translate recommendations to action



6 What Level of Impact is Anticipated if Recommendations are Implemented?



CONCLUSIONS:

The SC MMMR Committee found that nearly two out of three women who died during pregnancy or within the first year of pregnancy died from a cause directly related to pregnancy or its management. From the deaths reviewed, hemorrhage and cardiovascular and coronary conditions were identified as the two leading causes of pregnancy-related deaths. The largest proportion of factors found to contribute to hemorrhage deaths include provider, systems of care, and facility factors. Conversely, patient/family and systems of care were tied as largely contributing to deaths due to cardiovascular and coronary conditions.

South Carolina recognizes the health inequities faced by the state's racially diverse population and those living in rural communities. The addition of committee recommendations to this report highlights the work that is most needed to meet our goals. The successes achieved in the past year by the Committee underscores the state's commitment to close the gaps in access and services for all women and to strengthen quality improvement efforts. Just as important to this work is understanding the role of racism and discrimination in pregnancy and birth outcomes and how collective, targeted upstream and downstream approaches are needed to ameliorate their effects.

CITATIONS:

1 Berg, C., Danel, I., Atrash, H., Zane, S., & Bartlett, L. (2001). Strategies to reduce pregnancy-related deaths. from identification and review to action, 2001.
2 Petersen, E. E., Davis, N. L., Goodman, D., Cox, S., Mayes, N., Johnston, E., ... & Barfield, W. (2019). Vital signs: pregnancy-related deaths, United States, 2011–2015, and strategies for prevention, 13 states, 2013–2017. Morbidity and Mortality Weekly Report, 68(18), 423.
3 South Carolina Vital and Morbidity Statistics 2019. (2020, November). Retrieved from https://scdhec.gov/sites/default/files/media/document/Vital-Morbidity-Statistics_2019.pdf.
4 Building U.S. Capacity to Review and Prevent Maternal Deaths. (2018). Report from nine maternal mortality review committees. Retrieved from http://reviewtoaction.org/Report_from_Nine_MMRCs