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Preventing the Preventable: A Review of Maternal Mortality Rates in South Carolina

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PREVENTING THE PREVENTABLE: A REVIEW OF MATERNAL MORTALITY RATES IN SOUTH CAROLINA

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I. INTRODUCTION

The United States has the highest maternal mortality rate of any high-resource country, and it is one of only three countries where that rate continues to rise.[1] Maternal mortality, or "pregnancy-related death," is defined by the Centers for Disease Control and Prevention (CDC) as "the death of a woman while pregnant or within 1 year of the end of pregnancy from any cause related

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1. Melia Thompson-Dudiak, *The Black Maternal Health Crisis: How to Right a Harrowing History Through Judicial and Legislative Reform*, DEPAUL J. SOC. JUST., Jan. 2021, at 1, 11. The other two countries with rising maternal mortality rates are Afghanistan and Sudan. *Id.*

to or aggravated by the pregnancy."[2] Within this broad definition is a narrower definition of "maternal death" as defined by the World Health Organization (WHO).[3] WHO's definition is the international standard for reporting and tracking maternal mortality rates.[4] WHO defines a maternal death as "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from unintentional or incidental causes."[5] This definition excludes accidents,[6] homicides, and suicides.[7]

The divergence in terminology used to describe maternal mortality provides a small glimpse into the struggle underlying the fight against rising rates. How can the definition of maternal mortality assist in accurately compiling and reporting data to effectuate positive change? Inconsistencies and inaccuracies in record keeping have resulted in a shortage of reliable data upon which to make policy decisions.[8]

One solution, which the CDC has adopted, is using WHO's strategy of separately classifying maternal deaths and late maternal deaths when gathering and reporting data on maternal mortality rates.[9] These categories are encompassed in the CDC's broader definition of maternal mortality.[10] "Late

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2. *Pregnancy Mortality Surveillance System*, CTRS. FOR DISEASE CONTROL & PREVENTION (Nov. 25, 2020), https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm [https://perma.cc/LV74-ECY5].

3. *See* WORLD HEALTH ORG. ET AL., TRENDS IN MATERNAL MORTALITY 2000 TO 2017, at 8 (2019).

4. *Id.* at 9.

5. *Id.* at 8.

6. "Accidental" death is a term used by WHO. *See id.* n.10. In the eleventh revision of its Internal Classification of Diseases (ICD-11), "accidental" is replaced with "unintentional." *Id.* However, countries still use the tenth revision (ICD-10) because ICD-11 does not go into effect until January 2022. Press Release, World Health Org., WHO Releases New International Classification of Diseases (ICD 11) (June 18, 2018) (on file with the *South Carolina Law Review*). As such, all diagnosis and coding terminology will be in reference to ICD-10 terminology with the caveat that certain wording and coding may change with the induction of ICD-11.

7. Donna L. Hoyert et al., *Evaluation of the Pregnancy Status Checkbox on the Identification of Maternal Deaths*, NAT'L VITAL STAT. REP., Jan. 30, 2020, at 1, 4.

8. Press Release, Ctrs. for Disease Control & Prevention, First Data Released on Maternal Mortality in over a Decade (Jan. 30, 2020) (on file with the *South Carolina Law Review*).

9. *See generally* Hoyert et al., *supra* note 7, at 1 (noting that the CDC implements WHO's terminology to identify maternal deaths). Usage of this terminology excludes late maternal deaths. *Id.*

10. *See Pregnancy Mortality Surveillance System*, *supra* note 2 (giving a broad definition of "pregnancy-related death"). Therefore, as used by the CDC in its reporting, the terms "maternal deaths" or "maternal mortality" are in reference to WHO's definition of maternal

maternal death" refers to the death of a woman "from direct or indirect obstetric causes, more than 42 days but less than one year after termination of pregnancy."[11] Over the last two decades, the CDC's National Center for Health Statistics (NCHS), under the purview of United States Department of Health and Human Services (HHS), has implemented strategic data collection and reporting methods to comply with this uniform terminology.[12] On January 30, 2020, these efforts culminated in the United States' first data report on maternal mortality since 2007.[13] This report reflected the reality of a fractured and ill-equipped health system that continues to fail American mothers.

In 2018, the maternal mortality rate in the United States was 17.4 deaths per 100,000 live births, and more than half of these deaths have been deemed preventable by the CDC.[14] This number may appear relatively small, but when compared to nations with similar resources, the perspective is troubling. An American woman is three times as likely to die from childbirth than a Canadian woman and six times as likely than a Scandinavian woman.[15] The United States' dire situation is further illustrated and compounded by drastic racial disparities within the national maternal mortality rate. The CDC has found that, for every fifteen White women who die from childbirth-related causes, roughly thirty-seven Black women die from the same cause.[16] These national statistics pale in comparison to the conditions in South Carolina.

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deaths. "Late maternal deaths," as defined by the CDC, refers to WHO's definition for "late maternal deaths." In general, this Note refers to "maternal mortality rates" as only including maternal deaths. If late maternal deaths are included in a mortality rate statistic, this will be noted.

11. WORLD HEALTH ORG. ET AL., *supra* note 3, at 8.

12. *See infra* Section II.A.

13. *See* Lauren M. Rossen et al., *The Impact of the Pregnancy Checkbox and Misclassification on Maternal Mortality Trends in the United States, 1999–2017*, 3 VITAL HEALTH STAT. 1, 2 (2020). Reports published by the CDC and its affiliates in 2020 include mortality rates as recent as 2018 and as far back as 1999, but most of the comparative data ranges from 2003 to 2017. *Id.* at 19 (finding that states' staggered adoption of the pregnancy checkbox beginning in 2003 resulted in increased statistical reporting of maternal mortality); Hoyert et al., *supra* note 7, at 1; Donna L. Hoyert & Arialdi M. Miniño, *Maternal Mortality in the United States: Changes in Coding, Publication, and Data Release, 2018*, NAT'L VITAL STAT. REP., Jan. 30, 2020, at 1, 8.

14. Hoyert & Miniño, *supra* note 13, at 4; *see* NICOLE L. DAVIS ET AL., CTRS. FOR DISEASE CONTROL & PREVENTION, PREGNANCY-RELATED DEATHS: DATA FROM 14 U.S. MATERNAL MORTALITY REVIEW COMMITTEES, 2008–2017, at 3 (2019) (explaining that a death is considered preventable if it could have been averted by one or more reasonable changes to care factors).

15. Renee Montagne, *To Keep Women from Dying in Childbirth, Look to California*, NPR (July 29, 2018, 8:02 AM), https://www.npr.org/2018/07/29/632702896/to-keep-women-from-dying-in-childbirth-look-to-california [https://perma.cc/35A3-6UU6].

16. Press Release, Ctrs. for Disease Control & Prevention, *supra* note 8. To remain consistent with the terminology used by the CDC and WHO, races are identified as White and Black rather than Caucasian and African-American.

South Carolina's maternal mortality rate is the nation's eighth highest rate,[17] coming in at 25.5 per 100,000 live births.[18] Compared to national statistics, racial disparities are also more drastic in the state.[19] For every fourteen White women who die from childbirth-related causes, approximately forty-six Black women die from those same causes.[20] Despite legislative action prompting increased data collection and planning, South Carolina's rates have increased,[21] which raises the question: what can be done to save new mothers?

To decrease South Carolina's maternal mortality rate, this Note argues that policy changes must increase the efficiency of data collection, expand access to care, and implement and enforce requirements for the care provided to South Carolina mothers. Part II describes legislative and regulatory efforts to institute efficient processes for the collection of reliable data on maternal mortality in the United States. Part III discusses the specific issues facing South Carolina and examines possible causes for the state's high rates. Part IV explores policies that have worked elsewhere and recommends policies that South Carolina could adopt to shrink racial disparities and decrease its maternal mortality rate. Finally, Part V concludes by reiterating the overarching theme in reducing maternal morality: prevent the preventable by being prepared for the worst-case scenario.

17. Alicia Neaves, *South Carolina Has Eighth Highest Death Rate Among New Moms*, NEWS 19 (Nov. 11, 2018), https://www.wltx.com/article/news/local/south-carolina-has-eighth-highest-death-rate-among-new-moms/101-613516857 [https://perma.cc/4CT8-TNE3].

18. S.C. MATERNAL MORBIDITY & MORTALITY REVIEW COMM., LEGISLATIVE BRIEF 1 (2020) [hereinafter 2020 LEGISLATIVE BRIEF] (explaining that the rate was calculated per 100,000 live births, was based on the Committee's review of maternal deaths in South Carolina between 2014 and 2018, and does not include late maternal deaths).

19. In 2018, the national maternal mortality ratio was 14.9 deaths and 37.2 deaths per 100,000 births for White women and Black women, respectively. Hoyert & Miniño, *supra* note 13, at 5 fig.2. Thus, the maternal mortality difference between White and Black women was 22.3 deaths per 100,000 live births. *See id.* In comparison, the racial disparity in South Carolina was 26.9 deaths per 100,000 live births. *See* 2020 LEGISLATIVE BRIEF, *supra* note 18, at 1 (identifying a mortality rate of 16.4 for White women and 43.3 for women of other races).

20. *See* 2020 LEGISLATIVE BRIEF, *supra* note 18, at 1.

21. *Compare* 2020 LEGISLATIVE BRIEF, *supra* note 18, at 1 (noting that South Carolina's maternal mortality rate between 2014 and 2018 was 25.5), *with* S.C. MATERNAL MORBIDITY & MORTALITY REVIEW COMM., LEGISLATIVE BRIEF 2018, at 1 [hereinafter 2018 LEGISLATIVE BRIEF] (highlighting that South Carolina's maternal mortality rate between 2013 and 2017 was 24.7).

II. BACKGROUND

A. The Pregnancy Checkbox

In the early 2000s, HHS determined it was unable to properly quantify maternal mortality rates in the United States, largely due to misclassified causes of death and fragmented classification systems between states.[22] In 2003, HHS and NCHS added the pregnancy checkbox on the U.S. Standard Certificate of Death.[23] However, because each state controls its vital registration system, this addition was merely a recommendation, resulting in uneven implementation throughout the country.[24] Although it took more than a decade for states to completely implement the pregnancy checkbox on certificates of death,[25] the checkbox has allowed for more extensive tracking of maternal mortality rates in the United States.[26] But the use of pregnancy checkboxes is still not entirely accurate. NCHS has acknowledged that misclassifications still occur due to a misalignment of coding rules at the checkbox's institution.[27] The death certificate itself fails to specify "the information . . . needed to facilitate identification of maternal deaths."[28] That failure has led to underreported numbers of maternal deaths.[29]

Figure 1 depicts the checkbox that was added to the new standardized death certificate in 2003.[30] This checkbox reflects the coding procedures[31] and checkbox model implemented by the states through 2017.[32]

22. *See* Rossen et al., *supra* note 13, at 19.

23. *Id.* at 2.

24. *See* Press Release, Ctrs. for Disease Control & Prevention, *supra* note 8; *see also* Rossen et al., *supra* note 13, at 2 (explaining the impact of the staggered adoption).

25. Press Release, Ctrs. for Disease Control & Prevention, *supra* note 8 (highlighting that, although implementation of the checkbox began in 2003, it was not until 2017 that the final state adopted it).

26. Hoyert et al., *supra* note 7, at 9.

27. *See generally* Hoyert & Miniño, *supra* note 13, at 1 (highlighting that miscalculations, especially in regard to older age groups, occurred after the checkbox's implementation, and in an effort to correct the issue, NCHS adopted a new coding program).

28. Hoyert et al., *supra* note 7, at 2.

29. *Id.*

30. *Id.*

31. *See id.* at 2–3 (explaining that this checkbox aligns with the concepts and codes set out in ICD-10 regarding when and how to code a maternal death).

32. For a detailed explanation of the method adopted in 2018, see Hoyert & Miniño, *supra* note 13, at 3.

Figure 1. Pregnancy Question Checkbox

IF FEMALE:
□ Not pregnant within past year
□ Pregnant at time of death
□ Not pregnant, but pregnant within 42 days of death
□ Not pregnant, but pregnant 43 days to 1 year before death
□ Unknown if pregnant within the past year

In its 2020 report, the CDC calculated the pregnancy checkbox's impact by examining national maternal death records in 2015 and 2016.[33] The study analyzed 2,029 American deaths where the decedent was assigned a maternal ICD-10 code as well as a checkbox item indicating pregnancy within one year of the date of death.[34] The study showed that the ratio between maternal death rates classified with and without the checkbox was 3.07.[35] Table A illustrates these differences for each age group, race, and cause of death.

Table A. Deaths and Ratios of Deaths Classified with and Without Pregnancy Checkbox: 47 States and the District of Columbia, 2015–2016[36]

Characteristic	Classified with Checkbox	Classified Without Checkbox	Ratio Between Classifications
Total	1,527	498	3.07
Age (Years)			
Under 25	204	95	2.15
25–39	799	366	2.18
40–54	523	37	14.14
40–44	108	35	3.09
45–54	415	2	*
Race and Hispanic Origin			
Non-Hispanic Black	497	167	2.98
Non-Hispanic White	738	174	4.24
Hispanic	210	70	3.00
Cause of Death			
Cardiomyopathy in the puerperium	30	50	0.60
Complications of the puerperium, not elsewhere classified	43	51	0.84

33. Hoyert et al., *supra* note 7, at 1. Notably, Alabama is excluded from the 2015 calculation; West Virginia and California are both excluded from the 2015 and 2016 calculations. *Id.* at 4.

34. *Id.*

35. *Id.* at 5 tbl.A, 11 tbl.1. The ratio of 3.1 shows that using the checkbox tripled the number of reported "maternal deaths" and illustrates the direct link between the checkbox's inclusion and U.S. maternal mortality measures. *See id.*

36. For the data in Table A, see *id.* at 5 tbl.A.

Table A. Deaths and Ratios of Deaths Classified with and Without Pregnancy Checkbox: 47 States and the District of Columbia, 2015–2016[36]

Pregnancy with abortive outcome	34	37	0.92
Eclampsia and preeclampsia	54	55	0.98
Complications of labor and delivery	60	50	1.20
Obstetric embolism	81	45	1.80
Diseases of the circulatory system complicating pregnancy, childbirth and the puerperium	148	38	3.89
Other specified pregnancy-related conditions	446	84	5.31
Other specified diseases and conditions complicating pregnancy, childbirth and the puerperium	267	29	9.21

* Ratio does not meet NCHS standards of reliability.

In 2018, the National Vital Statistics Reports published evidence of checkbox errors, which revealed a substantial likelihood of misclassification in higher age ranges, specifically ages forty-five and older.[37] This resulted in updates to maternal death coding, referred to as "the 2018 method."[38] The 2018 method introduced two changes to the collection methods used from 2003 to 2017.[39] First, it restricted the checkbox to only female decedents ages ten to forty-four, no longer including decedents ages forty-five to fifty-four.[40] Second, it altered the method of reporting maternal deaths on the mortality file, specifically for female decedents ages ten to forty-four.[41] Rather than requiring the assignment of a single maternal code where pregnancy is indicated, the new reporting method allows for the retention of ICD-10 coding for underlying causes of death.[42] This not only facilitates the reporting of more complete data but also decreases the possibility of errors that were permitted by the old checkbox system. Mainly, the 2018 method reduces the risk of over-reporting deaths that occurred independent of pregnancy, in comparison to deaths that were caused by pregnancy.

37. Hoyert & Miniño, *supra* note 13, at 2.
38. *Id.* at 3.
39. *Id.*
40. *Id.* (explaining that, under the 2018 method, deaths of women ages forty-five and older are no longer assigned maternal mortality codes if the only indication of their pregnancy is within the checkbox).
41. *Id.*
42. *Id.*

B. Safe Motherhood: 42 U.S.C. § 247b-12

Along with HHS and NCHS implementing the pregnancy checkbox, Congress began combatting maternal mortality. In the early 2000s, it enacted the Safe Motherhood statute to improve data collection and maternal mortality reporting.[43] The statute signaled a shift in the federal government's focus toward keeping American mothers safe in pregnancy and childbirth. The main framework of the statute functions largely as a list of goals and a grant of authority to the U.S. Secretary of Health and Human Services "acting through the Director of the Centers for Disease Control and Prevention."[44] But there are no specific requirements or guideposts for measuring the progress of those goals. This is because, as noted with the adoption of the pregnancy checkbox, data collection and reporting policies are left to the states.[45]

The Safe Motherhood statute does, however, incentivize and guide each state in combatting the rise in maternal mortality rates.[46] In 2018, Congress amended the statute with the Preventing Maternal Deaths Act, which added a statutory framework for funding Maternal Mortality Review Committees.[47] These committees are technically created and maintained by the states, but as long as they meet the requirements set forth in 42 U.S.C. § 247b-12(d), the federal government will support their establishment and operation.[48] In this way, the Act serves as a vehicle for the federal government's direct support of state activities that seek to prevent maternal deaths.

The Safe Motherhood statute also encourages interstate partnerships, which, in turn, encourage more unified methods. It allows states that do not qualify for funding under the program on their own to be designated as qualified if they partner with at least one qualifying state. However, even though some states are partnered in this way, information surrounding maternal mortality in the United States can be somewhat disjointed.

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43. *See* Children's Health Act of 2000, Pub. L. No. 106–310, § 901, 114 Stat. 1101, 1125 (codified as amended at 42 U.S.C. § 247b-12). The statute was amended in 2018 to establish the funding program for the review committees, but this purpose remains a central part of the statute's proposed goal. *Id.*

44. 42 U.S.C. § 247b-12(a).

45. *See* § 242k(d) (explaining that the Secretary's role is to assist the states).

46. § 247b-12(d)(3), (f).

47. *See* Preventing Maternal Deaths Act of 2018, Pub. L. No. 115-344, § 2, 132 Stat. 5047, 5048–49 (codified at 42 U.S.C. § 247b-12).

48. 42 U.S.C. § 247b-12(a)(2)(D).

C. *South Carolina's Legislative Efforts*

In 2016, two years before Congress's 2018 amendment,[49] the South Carolina General Assembly established a Maternal Morbidity and Mortality Review Committee (the Committee).[50] The legislature recognized South Carolina was behind in caring for new mothers, and it was motivated to prevent maternal deaths.[51] In its 2016 form, the statute attempted to give the Committee broad responsibilities and data collection powers.[52] However, in granting those responsibilities and powers, the legislature failed to indicate what parameters and data points the Committee should report.[53] As previously noted, part of the problem with attempts to combat rising maternal mortality rates is failing to accurately identify maternal deaths with a consistent method.[54]

When Congress passed the Preventing Maternal Deaths Act in 2018, states like South Carolina were forced to choose between meeting new qualifications set forth in the Safe Motherhood statute and forfeiting federal funding that could help prevent maternal deaths.[55] The statute's qualifications specify the process for confidential reporting,[56] prescribe methods and set standards for data collection and review,[57] require strict standards of confidentiality,[58] and direct qualified mortality committees participating in the federal program to report their findings and data collection methods to the CDC.[59] South Carolina responded by amending its existing statute to meet the required criteria for participation in the federal program.[60] Notably, the state statute, as amended, now includes seventeen specific data points the Committee must collect and report.[61] Using death certificates from women who died in South Carolina within one year of pregnancy, the Committee compiles these data points and reports them to the State Registrar.[62] The points

49. Preventing Maternal Deaths Act of 2018 § 2.
50. *See* S.C. CODE ANN. § 44-1-310(A) (2018 & Supp. 2020).
51. H.B. 3251, 2015–2016 Gen. Assemb., 121st Sess. (S.C. 2016).
52. *See* § 44-1-310(B).
53. *See id.*
54. *See supra* Part I.
55. 42 U.S.C. § 247b-12(a)(2)(D) (authorizing the Secretary to "develop a program to support States . . . in establishing or operating maternal mortality review committees, in accordance with subsection (d) . . . ."); *see* Preventing Maternal Deaths Act of 2018, Pub. L. No. 115-344, § 2, 132 Stat. 5047, 5047 (codified at 42 U.S.C. § 247b-12) (amending the statute to include subsection (d), which establishes the requirements states must satisfy).
56. 42 U.S.C. § 247b-12(d)(2).
57. § 247b-12(d)(3).
58. § 247b-12(d)(4).
59. § 247b-12(d)(5).
60. *See* S.C. CODE ANN. § 44-1-310 (2018 & Supp. 2020).
61. § 44-1-310(B).
62. *Id.*

of data deemed "necessary" include the decedent's name; her time and date of death; her state and county of residence; her date of birth; her marital status; her citizenship status; her veteran status; her educational background; her race and ethnicity; the time and date of her injury; the place of her injury; the location where her injury occurred; her place of death (facility name, address, or both); her manner of death; whether an autopsy was performed on her and, if so, any findings available as to cause of death; whether tobacco contributed to her death; and any primary and contributing causes of death.[63] There is, however, a glaring gap of information in this seemingly extensive list: insurance status.

In a health system that largely relies on health insurance revenue, it is questionable why "the money" is not a data point being collected. Although hospitals generally cannot turn patients away based on insurance status,[64] it is tremendously important to track the relationship between coverage and care. For example, failure to expand Medicaid has led to additional maternal deaths after coverage ends—a mere sixty days after delivery.[65] Furthermore, including insurance status along with existing race and ethnicity data points could allow the state to evaluate the correlation between these data points and determine whether targeted insurance coverage could alleviate racial disparities in maternal mortality rates.

In addition to heightening specificity, the legislature also authorized the Department of Health and Environmental Control (DHEC) to extract health records and data for, and on behalf of, the Committee.[66] DHEC's involvement is essential because it not only helps increase the Committee's access to information but also allows for more uniform and efficient processing as DHEC already has the infrastructure and ability to access and report state health statistics. DHEC's association will also assist in transitioning from the data collection and planning stages to the implementation stage. It should be reiterated here that one of the overarching goals of creating the Committee was to "develop actionable strategies for prevention and intervention."[67] However, it is difficult to find guidance from the statute or existing Committee reports as to when, and in what form, such strategies will be implemented. It is also unclear what entity or individual—DHEC, the legislature, or healthcare providers—will be responsible for effectuating these strategies.

The statute, newly strengthened by federal funding and widely encompassing data collection provisions, is just that: new. It has instigated a

63. *Id.*

64. 42 U.S.C. § 139dd(h).

65. *See* Austin Frakt, *What's Missing in the Effort to Stop Maternal Deaths*, N.Y. TIMES (July 13, 2020), https://www.nytimes.com/2020/07/13/upshot/maternal-deaths-policy-neglect.html [https://perma.cc/M74A-AR23]; *see also infra* note 120 and accompanying text.

66. *See* § 44-1-310(E).

67. 2020 LEGISLATIVE BRIEF, *supra* note 18, at 1.

long and arduous process in the fight against rising maternal mortality rates. As such, the Committee's legislative briefs are full of data points and statistics but include nothing more than "goals" and broad "recommendations."[68] These goals and recommendations are the Committee's closest semblance of "actionable strategies."[69] One would hope for change in the near future, but it is hard to determine from the statute how, in what form, and when these "actionable strategies for prevention and intervention" will be developed.[70] The statute itself is allusive in that it fails to instruct the Committee on the state's expectations in regard to this goal. It is unclear how much data is needed to develop "actionable strategies," and even further, it is ambiguous whether those strategies would be instituted by the legislature or through administrative regulations. However, with new reports coming from both the Committee and the CDC,[71] it is clear that maternal mortality rates in South Carolina are simply too high.

III. ANALYSIS

A. Maternal Mortality in South Carolina

In South Carolina, the most recent data places the state's maternal mortality rates at 25.5 per 100,000 live births.[72] This number was reported by the Committee in its 2020 legislative brief, which evaluated maternal mortality after including new data points and implementing the pregnancy checkbox.[73] The same report found that non-White mothers died at a rate 2.6 times higher than White mothers.[74] It is important to note these rates only take into account mothers who die within forty-two days of giving birth, leaving out those who die between forty-three days and one year after birth.[75] The Committee has not released information regarding mothers who suffer a late maternal death.[76]

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68. *Id.*; 2018 LEGISLATIVE BRIEF, *supra* note 21, at 2.

69. *See, e.g.*, 2020 LEGISLATIVE BRIEF, *supra* note 18, at 1; 2018 LEGISLATIVE BRIEF, *supra* note 21, at 2.

70. 2020 LEGISLATIVE BRIEF, *supra* note 18, at 1; *see also* § 44-1-310(A).

71. *See* 2020 LEGISLATIVE BRIEF, *supra* note 18, at 1; Press Release, Ctrs. for Disease Control & Prevention, *supra* note 8.

72. 2020 LEGISLATIVE BRIEF, *supra* note 18, at 1. A rate of 25.5 signifies that, between 2014 and 2018, there were 25.5 maternal deaths per 100,000 live births in South Carolina. *Id.*

73. *Id.*

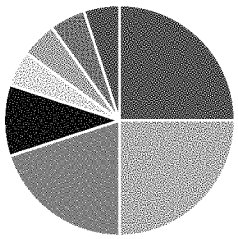
74. *Id.* Between 2014 and 2018, 16.4 White women died per 100,000 live births as compared to 43.3 women of other races. *See id.*

75. *Id.*

76. *See id.* Late maternal death is a form of maternal mortality that both the CDC and WHO track, yet it is not included in South Carolina's reported data. *E.g.*, WORLD HEALTH ORG. ET AL., *supra* note 3, at 8.

Between 2016 and 2019, the leading causes of pregnancy-related deaths[77] in the state were hemorrhage and infections, accounting for 50% of all pregnancy-related deaths.[78] Figure 2 depicts the percentages for each core cause of pregnancy-related death in South Carolina.[79]

Figure 2. Causes of Pregnancy-Related Deaths in South Carolina (2016–2019)



- Hemorrhage – 25%
- Infections – 25%
- Cardiovascular and Coronary Conditions – 20%
- Amniotic Fluid Embolism – 10%
- Cardiomyopathy – 5%
- Malignancies – 5%
- Preeclampsia and Eclampsia – 5%
- Pulmonary Conditions – 5%

Along with each cause of death analysis, the Committee evaluated the factors contributing to pregnancy-related deaths.[80] It determined the largest

77. "Pregnancy-related deaths" are defined as "[t]he death of a woman 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 . . . these deaths are causally related to pregnancy or its management." DAVIS ET AL., *supra* note 14, at 4. This contrasts with "pregnancy-associated deaths," which involve the "death of a woman during pregnancy or within one year of the end of pregnancy from a cause that is not related to pregnancy." *Id.* Deaths that "have a temporal relationship to pregnancy are included." *Id.*

78. 2020 LEGISLATIVE BRIEF, *supra* note 18, at 2 fig.2. The percentages are based on the study of twenty-seven maternal deaths between 2016 and 201, which were reviewed by the Committee and used as an indicator of broader state statistics. *Id.*

79. *Id.*

80. *Id.* at 2 fig.4.

contributors were patient/family factors[81] and healthcare provider factors.[82] Other contributors included facility, systems of care, and community.[83] In its findings, the Committee recommended birthing facilities adopt standards of maternal care to create more robust prevention policies, enforce standardized hemorrhage procedures, and improve patient management policies.[84]

When comparing the Committee's 2018 and 2020 findings, the results are cause for concern. In 2018, the Committee reported that, between 2013 and 2017, South Carolina's maternal mortality rate was 24.7.[85] In that same briefing, the Committee set out its "Healthy People 2020 Goal" of reaching a rate of 11.4.[86] Yet, two years later, the rate was moving even further away from this goal.[87] The Committee also listed recommendations for improving South Carolina's evaluation and understanding of the causes of pregnancy-related deaths.[88] The main points of the recommendations included removing barriers to data access, identifying funding sources, and improving maternal deaths reporting.[89] Finally, the Committee mentioned Congress's newly enacted Preventing Maternal Deaths Act and noted its positive effects on state review committees.[90]

81. Patient/family factors are those that largely relate to patient and family education and advocacy, such as not recognizing warning signs and needing to seek care. Katharine Hendrix, *Maternal Safety Comes in Threes: Keeping Moms Healthy with New Safety Bundles*, PROGRESSNOTES: MUSC'S MED. MAG., Spring 2019, at 22, 25.

82. Provider factors are those that relate to the individual provider of care and usually involve things like misdiagnoses and ineffective treatments. *Id.*; 2020 LEGISLATIVE BRIEF, *supra* note 18, at 2.

83. *Id.*

84. Hendrix, *supra* note 81, at 25.

85. 2018 LEGISLATIVE BRIEF, *supra* note 21, at 1.

86. *Id.* It is unclear from the report if this rate includes women who die between forty-three and 365 days of delivery. From the 2020 report, it could be assumed that late maternal deaths are not included; however, this is yet another example of inconsistency in reporting. The Committee's creation defines pregnancy-related death as death occurring when a woman "dies while pregnant within 1 year after the pregnancy . . . ." *Id.* But it does not appear that this is what is reported.

87. *See* 2020 LEGISLATIVE BRIEF, *supra* note 18, at 1. South Carolina moved from a rate of 24.7 for the years 2013 through 2017 to a rate of 25.5 for the years 2014 through 2019. 2018 LEGISLATIVE BRIEF, *supra* note 21, at 1; 2020 LEGISLATIVE BRIEF, *supra* note 18, at 1.

88. 2018 LEGISLATIVE BRIEF, *supra* note 21, at 2.

89. *Id.*

90. *Id.*

B. Demographics and Insurance Disparities

Roughly 5 million individuals live in South Carolina.[91] People of color comprise about one-third of the entire population; just over 25% of the population is Black and roughly 6% is Hispanic.[92] South Carolina's ratio of White and non-White residents is fairly consistent with the national average.[93] However, the percentage of Black residents is approximately 10% higher than the southern average and over double the national average.[94] This difference is important when examining certain types of pregnancy-related deaths and the possible effects that proposals for new policies and procedures may have. More specifically, this data is critical when evaluating pregnancy-related deaths where the cause of death is related to cardiovascular conditions and complications because Black women are 60% more likely than White women to suffer from high blood pressure—a precursor for heart disease.[95] Furthermore, in general, both Black women and men are 20% more likely to die of coronary heart disease than White men and women.[96] These susceptibilities are part of the reason why a substantial amount of South Carolina mothers are at a higher risk of severe maternal morbidity[97] and pregnancy-related death. Although combatting maternal mortality rates in the state requires consideration of racial and ethnic distributions, wealth disparity plays a large role as well.

Nearly one in five South Carolina residents is considered poor.[98] Low income has been linked to many negative health effects, such as obesity and depression.[99] It is unsurprising then that, with South Carolina's high poverty

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91. *Key Data on Health and Health Coverage in South Carolina*, KFF (Feb. 10, 2016), https://www.kff.org/racial-equity-and-health-policy/fact-sheet/key-data-on-health-and-health-coverage-in-south-carolina/ [https://perma.cc/9D67-EVAR] [hereinafter *Key Data*].

92. *Id.*

93. *See id.* at fig.1.

94. *See id.*

95. *Heart Disease and African Americans*, U.S. DEP'T HEALTH & HUM. SERVS., OFF. MINORITY HEALTH, https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlID=19 [https://perma.cc/5RTQ-K9U4].

96. *Id.*

97. "Severe maternal morbidity," or SMM, includes "unexpected outcomes of labor and delivery that result in significant short- or long-term consequences to a woman's health." *Severe Maternal Morbidity in the United States*, CTRS. FOR DISEASE CONTROL & PREVENTION, https://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html [https://perma.cc/PV39-HJPT].

98. *Key Data*, *supra* note 91. In 2014, 17% of South Carolina's population was below the federal poverty level. *Id.* at fig.2. That same year, the national average was 15%. *Id.*

99. Lisa Esposito, *The Countless Ways Poverty Affects People's Health*, U.S. NEWS & WORLD REP. (Apr. 20, 2016, 9:37 AM), https://health.usnews.com/health-news/patient-advice/articles/2016-04-20/the-countless-ways-poverty-affects-peoples-health [https://perma.cc/7SNQ-7NPM].

rate, two-thirds of its residents are overweight or obese.[100] This is a large part of why South Carolinians are considered to have "significant health needs."[101] However, in a climate of skyrocketing healthcare costs, many Americans find themselves without the ability to pay for treatments that address these needs, and South Carolinians are no exception.[102]

Arguably, South Carolinians are more likely than the average American to be uninsured.[103] In 2014, 18% of nonelderly South Carolinians were uninsured.[104] This is not entirely surprising given that South Carolina's income eligibility levels for Medicaid and the Children's Health Insurance Program (CHIP)[105] are lower than the national median, meaning less individuals can qualify for Medicaid and other programs like CHIP.[106]

South Carolina plans to further alter its Medicaid eligibility landscape in response to being approved by the Centers for Medicare and Medicaid Services (CMS) to include work requirements as a prerequisite for, or continuation of, Medicaid coverage.[107] On December 12, 2019, CMS approved South Carolina's request to implement Healthy Connections, a plan that requires all non-exempt applicants for Medicaid coverage to "engage in qualifying community engagement activities for at least 80 hours per month."[108] With its approval, CMS authorized the state to determine what groups should be exempt from this requirement.[109] Notable on South

100. *Key Data*, *supra* note 91.

101. *Id.*

102. *See* Megan Henney, *Health Insurance Is Becoming More Unaffordable for Americans*, FOX BUS. (Nov. 21, 2019), https://www.foxbusiness.com/money/health-insurance-is-becoming-more-unaffordable-for-americans-study-says [https://perma.cc/38PJ-Y6YB]; Vera Bergengruen, *South Carolinians Rank Low on Economic Security, Report Says*, THE STATE (Jan. 25, 2016), https://www.thestate.com/news/nation-world/national/article56496478.html [https://perma.cc/9V4W-7B2D].

103. *Key Data*, *supra* note 91. Fifteen percent of South Carolina's total non-elderly population was uninsured in 2014, as compared to the national average of 12%. *Id.*

104. *See id.*

105. CHIP provides health coverage to eligible children through both Medicaid and separate CHIP programs. *See generally* 42 U.S.C. § 1397aa. Like Medicaid, CHIP programs are typically administered by the state with shared funding from the federal government but are instead targeted at providing coverage to low-income children rather than low-income adults. *Id.*

106. *Key Data*, *supra* note 91. For example, in 2016, the Medicaid and CHIP eligibility limit for children in South Carolina was 213% of the federal poverty level, whereas the national median for such coverage was 255%. *Id.*

107. *See* Letter from Seema Verma, Adm'r, Dep't of Health & Hum. Servs., Ctrs. for Medicare & Medicaid Servs., to Joshua Baker, Dir., S.C. Dep't of Health & Hum. Servs. (Dec. 12, 2019) (on file with S.C. Dep't of Health & Hum. Servs.).

108. *Id.*

109. *Id.*

Carolina's list of exemptions are "individuals who are pregnant through 365 days postpartum."[110]

The state also attempted to expand Medicaid coverage under CHIP for women within a year of birth.[111] CMS recognized this type of expansion as one that was properly included in the state's waiver request but nevertheless denied the request.[112] Although South Carolina has yet to expand Medicaid as prescribed in the Affordable Care Act, it seems to have recognized the shortfalls in its coverage of pregnant and postpartum women.[113] If approved, the state's request would have allowed a targeted expansion of Medicaid coverage for women with incomes of up to 241% of the federal poverty level, but it would have allowed South Carolina to use funding from the state's budget, rather than from its Medicaid funds, for CHIP.[114] As stated, though the overall plan was approved through 2024, the expansion under CHIP was not.[115]

Currently, South Carolina provides full Medicaid coverage for pregnant mothers.[116] The eligibility level is relaxed and allows pregnant mothers to receive all Medicaid covered services while part of the program.[117] To be eligible for these benefits, a woman must (1) be pregnant, (2) be a South Carolina resident, (3) be a U.S. citizen or lawful permanent resident alien, (4) have a social security number or valid application for one, and (5) have an income at or below the applicable income limit.[118] For a single woman with no other children, the current annual income limit is $24,754.40, which calculates to roughly 194% of the federal poverty level.[119] Medicaid benefits are available from the beginning of pregnancy and terminate sixty days after

110. *Id.*

111. *Id.*

112. *See id.*

113. *See id.*

114. *Id.*

115. *Id.*; *see also* Harris Meyer, *South Carolina Becomes First Nonexpansion State with a Medicaid Work Requirement*, MOD. HEALTHCARE (Dec. 12, 2019), https://www.modernhealthcare.com/medicaid/south-carolina-becomes-first-nonexpansion-state-medicaid-work-requirement [https://perma.cc/7P9M-N6A8].

116. *Pregnant Women and Infants*, S.C. HEALTHY CONNECTIONS MEDICAID, https://www.scdhhs.gov/eligibility-groups/pregnant-women-and-infants [https://perma.cc/6WMG-2J22].

117. *See id.*

118. *Id.*

119. *See id.* (listing annual income limits); *2020 Poverty Guidelines*, U.S. DEP'T HEALTH & HUM. SERVS., OFF. ASSISTANT SECRETARY FOR PLAN. & EVALUATION, https://aspe.hhs.gov/2020-poverty-guidelines [https://perma.cc/EFV9-ZGXL] (listing the federal poverty level for a single-person family). Income limits for these benefits were updated and effective as of March 1, 2020. S.C. Dep't Health & Hum. Servs., *Am I Eligible?*, S.C. HEALTHY CONNECTIONS MEDICAID, https://www.scdhhs.gov/income-limits [https://perma.cc/68YJ-WV9S].

birth.[120] With coverage ending only sixty days postpartum, some mothers with complications beyond that cutoff are left in a precarious position.

To put this scenario into perspective, suppose a pregnant single woman has an income at 95% of the federal poverty level. She qualifies for pregnancy coverage, but at sixty days postpartum, she loses coverage and no longer qualifies for standard Medicaid services because she is not poor enough.[121] For instance, the parent or caretaker Medicaid coverage requires her to have an income roughly 62% of the federal poverty level.[122] The mother does not qualify for premium tax credits under the Affordable Care Act because she does not meet the 100% federal poverty level income requirement.[123] This situation is commonly referred to as a coverage gap.[124] The mother makes too much money to qualify for Medicaid and not enough to qualify for premium tax credits, yet she is likely unable to afford coverage without such assistance. Roughly 20% of noninsured South Carolinians find themselves in this coverage gap.[125] It is unsurprising there are so many uninsured South Carolinians: they have no feasible way of securing coverage. Narrowing the coverage gap is, in large part, the targeted purpose of Medicaid expansion programs.[126] South Carolina, however, has opted out of expansion programs

120. S.C. HEALTHY CONNECTIONS MEDICAID, *supra* note 116. Under this program, benefits for infants are in effect until the child's first birthday. *Id.*

121. In 2014, to qualify for Medicaid, parents in South Carolina needed an income at 67% of the federal poverty level. *Key Data*, *supra* note 91.

122. This percentage was calculated by dividing the 2020 South Carolina income requirement for its parent/caretaker plan by the 2020 federal poverty level for an equally sized family. *See* S.C. Dep't Health & Hum. Servs., *supra* note 119 (listing a monthly income requirement of $659.26, or $7,911.12 annually); *2020 Poverty Guidelines*, *supra* note 119 (listing a federal poverty limit of $12,760 annually). Different types of Medicaid plans have varying income requirements and include other types of asset calculation, but a woman in the described situation remains the same: she falls within the coverage gap. *See id.*

123. I.R.C. § 36B(c)(1)(A). Additionally, those who qualify for premium tax credits are, at times, still left without coverage because the premiums of qualified health plans greatly exceed these credits. Cynthia Cox et al., *Affordability in the ACA Marketplace Under a Proposal Like Joe Biden's Health Plan*, KFF (Sept. 28, 2020), https://www.kff.org/health-reform/issue-brief/affordability-in-the-aca-marketplace-under-a-proposal-like-joe-bidens-health-plan/ [https://perma.cc/5NT7-9N38]. In many cases, these premiums, after tax credits, end up being greater than 8% of the would-be beneficiaries' income. King v. Burwell, 576 U.S. 473, 482 (2015). Congress was aware of this possibility, so it included a provision in the Affordable Care Act's original form that allowed individuals in this situation to opt out of coverage without penalty. *Id.* However, that would leave many Americans where they started: uninsured.

124. Rachel Garfield & Kendal Orgera, *The Coverage Gap: Uninsured Poor Adults in States That Do Not Expand Medicaid*, KFF (Jan. 21, 2021), https://www.kff.org/medicaid/issue-brief/the-coverage-gap-uninsured-poor-adults-in-states-that-do-not-expand-medicaid/ [https://perma.cc/SKL2-3258].

125. *Key Data*, *supra* note 91.

126. Garfield & Orgera, *supra* note 124.

thus far.[127] These factors leave South Carolinians more likely than the average American to fall into the coverage gap.

Understanding Medicaid's implementation in South Carolina is crucial to fighting against maternal mortality. Nationally, Medicaid finances over 40% of births.[128] Considering approximately 15% of South Carolinians rely on Medicaid or their own thinly funded pocketbooks for healthcare coverage,[129] a large portion of the state's population can be reached through Medicaid reform. Further, just over 44% of Medicaid recipients in the state are Black.[130] Knowing that Black women are far more likely to suffer a maternal death, a significant number of South Carolina mothers could benefit from the state addressing shortfalls in its Medicaid coverage.

The state evidently recognizes a need for mothers to have coverage during and after pregnancy. Separate Medicaid eligibility requirements for pregnant women and new mothers succeed in addressing some of the needs of South Carolina mothers. However, when coverage ends sixty days postpartum, many are left without insurance. This is a hazardous position for a new mother to be in—choosing between going to the doctor to treat a worsening heart condition without insurance or toughing it out and hoping for the best. She has to think about her child and, given her income, is likely cash-strapped already. So, when a mother has what feels like acid reflux, she is unlikely to seek treatment. Unfortunately for her, this may be a cardiac complication from pregnancy. As the CDC has reported, there are a significant number of late maternal deaths in the United States,[131] and women with these symptoms are more frequently victims of that statistic.[132]

There is an additional problem in this scenario, however. Even among the population of expectant women and new mothers who receive Medicaid coverage, many of the covered services are not being utilized.[133] Two main areas of concern arise: (1) lack of prenatal care and monitoring and (2) lack of education in postpartum care.

Reports have shown South Carolina falls well below the bottom quartile performance mark for live births after a prenatal care visit in the first

127. *See Key Data*, *supra* note 91.

128. Frakt, *supra* note 65.

129. *Key Data*, *supra* note 91.

130. *Distribution of the Nonelderly with Medicaid by Race/Ethnicity*, KFF, https://www.kff.org/medicaid/state-indicator/medicaid-distribution-nonelderly-by-raceethnicity/ [https://perma.cc/9XKC-DRGX].

131. *See* Hoyert et al., *supra* note 7, at 14 tbl.2.

132. *See* Andis Robeznieks, *Inequities in Maternal Mortality Must Be Attacked Head-On*, AM. MED. ASS'N (May 16, 2019), https://www.ama-assn.org/delivering-care/population-care/inequities-maternal-mortality-must-be-attacked-head [https://perma.cc/P98G-U9WX].

133. *See Medicaid & CHIP in South Carolina*, MEDICAID.GOV https://www.medicaid.gov/state-overviews/stateprofile.html?state=south-carolina [https://perma.cc/KCB4-V24R].

trimester.[134] What does this mean? It means that, of the pregnant women with Medicaid coverage in South Carolina, very few receive prenatal care in their first trimester.[135] Complete prenatal care can lead to better outcomes for both mothers and babies. Regarding mothers, monitoring their health from the beginning of pregnancy can allow for better detection of preexisting conditions and pregnancy-related or pregnancy-associated conditions. It can also allow for a complete picture of a mother's health trends throughout gestation and after delivery. More specifically, complete monitoring and record keeping allow for early identification of high-risk pregnancies and provide essential baseline data. For example, blood pressure measurements in the first and second trimesters are important because they allow doctors to better detect preeclampsia symptoms during delivery.[136] A woman with a history of low blood pressure during pregnancy is at a much higher risk of misdiagnosed preeclampsia where her doctor is unaware of this history;[137] for her, what appears to be only a slightly elevated blood pressure at delivery may be substantially more severe than anyone realizes until it is too late.

Also immensely important is the population's education about problematic symptoms and postnatal care. In 2020, patient/family factors were the largest contributors to maternal deaths in South Carolina.[138] New mothers and their families must be aware of warning signs so that they can advocate for care when necessary. One investigation involving more than 500,000 pages of hospital quality records and 150 case studies of women who suffered serious complications from pregnancy revealed that U.S. hospitals fall perilously short of meeting recommended safety standards, and the result is a "widespread failure to protect new mothers."[139] The investigation mainly focused on hospitals in New York, Pennsylvania, and the Carolinas, finding that, at some of the hospitals, less than 15% of mothers at risk for serious complications or death received recommended treatments.[140] After a review

134. *Id.*

135. *Id.* South Carolina falls in the lower end of the bottom quartile of pregnant Medicaid recipients receiving prenatal care in their first trimester.

136. Lisa Rapaport, *Pregnant Women Need Routine Blood Pressure Checks*, REUTERS (Apr. 25, 2017), https://www.reuters.com/article/us-health-pregnancy-preeclampsia-screeni/pregnant-women-need-routine-blood-pressure-checks-idUSKBN17R2AK [https://perma.cc/7QEF-DB6P].

137. *See* Nina Martin & Renee Montagne, *The Last Person You'd Expect to Die in Childbirth*, NPR (May 12, 2017, 5:00 AM), https://www.npr.org/2017/05/12/527806002/focus-on-infants-during-childbirth-leaves-u-s-moms-in-danger [https://perma.cc/V2P6-G69N].

138. 2020 LEGISLATIVE BRIEF, *supra* note 18, at 2 fig.4.

139. Alison Young, *Hospitals Know How to Protect Mothers. They Just Aren't Doing It*, USA TODAY (Mar. 23, 2021, 11:28 AM), https://www.usatoday.com/in-depth/news/investigations/deadly-deliveries/2018/07/26/maternal-mortality-rates-preeclampsia-postpartum-hemorrhage-safety/546889002/ [https://perma.cc/9PVH-ZLW5].

140. *Id.*

of the cases, it became clear the vast majority of bad outcomes could have been avoided if mothers received proper care when they needed it. For example, one New Jersey case involved a mother who was a Neonatal Intensive Care Unit nurse and father who was an orthopedic surgeon, and even they were ill-equipped to recognize dangerous warning signs of HELLP syndrome—the most severe form of preeclampsia.[141]

In South Carolina, a mother gave birth at one of the top hospitals in the state, and yet, when warning signs of a serious condition emerged, she did not receive treatment and died as a result.[142] Her name was YoLanda Mention, and she was thirty-eight years old.[143] After giving birth to her third daughter without complication, YoLanda's chart noted that her blood pressure was elevated.[144] She was sent home shortly after with her daughter and some blood pressure pills.[145] It would later be discovered there was no record of her blood pressure being read within five hours of discharge.[146] Shortly after arriving home, YoLanda mentioned that her head hurt but not too bad.[147] Within an hour, her headache grew exponentially worse, and she and her husband drove back to the hospital's emergency room for treatment.[148] YoLanda informed hospital staff that her blood pressure had been elevated and that she had given birth and been discharged that day.[149] The nurse read her blood pressure; it

141. *See* Martin & Montagne, *supra* note 137. HELLP syndrome is an acronym named after hemolysis, elevated liver enzymes, and low platelet count. *HELLP Syndrome*, PREECLAMPSIA FOUND., https://www.preeclampsia.org/hellp-syndrome [https://perma.cc/M624-4F9C]. Hemolysis refers to the breakdown of red blood cells. *Id.* Low platelet count is a clotting deficiency that commonly results in excessive or uncontrolled bleeding, which can lead to a hemorrhagic stroke. *Id.*; April Kahn, *Bleeding Disorders*, HEALTHLINE (Feb. 26, 2018), https://www.healthline.com/health/factor-v-deficiency [https://perma.cc/LLT4-5TAW]. Hemorrhagic strokes are commonly the final and fatal symptom of preeclampsia and are the result of ruptured blood vessels in the brain. *HELLP Syndrome*, *supra*; *Hemorrhagic Stroke (Bleeds)*, AM. STROKE ASS'N, https://www.stroke.org/en/about-stroke/types-of-stroke/hemorrhagic-strokes-bleeds [https://perma.cc/Y5UT-S49Z]. The blood from these ruptured vessels compresses brain tissue, causing intracranial pressure to skyrocket. *Hemorrhagic Stroke (Bleeds)*, *supra*. This type of catastrophic brain bleed is almost always fatal. Marilyn M. Rymer, *Hemorrhagic Stroke: Intracerebral Hemorrhage*, 108 MO. MED. 50, 50 (2011).

142. *See* Alison Young, *"Mommy Went to Heaven,"* USA TODAY (July 26, 2018), https://www.usatoday.com/in-depth/news/investigations/deadly-deliveries/2018/07/26/preeclampsia-high-blood-pressure-maternal-mortality-rates/546966002/ [https://perma.cc/8X3Y-G3NJ].

143. *Id.*

144. *Id.*

145. *Id.*

146. *Id.*

147. *Id.*

148. *Id.*

149. *Id.*

was 209/117.[150] She was taken for a brain scan and then returned to the waiting room, where she waited three hours before asking the nurse to retake her blood pressure because the headache was "getting in [her] eyes."[151] At the time, her blood pressure was 216/104, and her husband had to become confrontational to get his wife examined.[152] The couple was taken to an exam room and waited to be seen.[153] As they waited for a doctor five hours after their arrival, YoLanda suffered a hemorrhagic stroke and died a few days later.[154] Early detection and intravenous admission of a specific blood pressure medication could have easily saved YoLanda's life,[155] but her warning signs went unnoticed and untreated.

So why is it that medical providers miss symptoms that have existed and been recognized for centuries? Many contributing factors exist, but in the end, the vast majority can be combatted simply by enforcing standardized policies. It starts at the beginning—with culture. In the United States, maternal death is treated as a "private tragedy" whereas most other developed countries see it as a "public health catastrophe."[156] This culture reinforced the lack of standardized data on the subject until very recently. And yet, there is still a lack of transparency. States like South Carolina collect data on the facilities where pregnancy-related deaths are occurring, but this information—along with any possible trends—is impossible to access without internal hospital records.[157] This contrasts with the United Kingdom, where each pregnancy-related death is considered a "system failure" that is rigorously investigated, in some cases with public hearings.[158] The Preventing Maternal Deaths Act was targeted at addressing a large part of this issue, yet information is still difficult to obtain and there is no express statutory requirement that review committees release facility data to the public.

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150. *Id.* A reading of 120/80 is considered the high end of "normal" blood pressure. *Blood Pressure Chart: What Your Reading Means*, MAYO CLINIC (Feb. 3, 2021), https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/in-depth/blood-pressure/art-20050982 [https://perma.cc/6R6X-2L2R]. After twenty weeks of pregnancy, a systolic (top value) reading above 140 on at least two occasions four hours apart can indicate a serious condition. *High Blood Pressure and Pregnancy: Know the Facts*, MAYO CLINIC: PREGNANCY WEEK BY WEEK (Oct. 7, 2020), https://www.mayoclinic.org/healthy-lifestyle/pregnancy-week-by-week/in-depth/pregnancy/art-20046098 [https://perma.cc/M287-4T37].

151. Young, *supra* note 142.

152. *Id.*

153. *Id.*

154. *Id.*

155. *Id.*

156. Martin & Montagne, *supra* note 137.

157. Young, *supra* note 139; S.C. CODE ANN. § 44-1-310(A)–(B) (2018 & Supp. 2020).

158. Martin & Montagne, *supra* note 137.

There was also an assumption in the early 2000s that the American medical system had "conquered maternal mortality."[159] The divergent trends in infant and maternal mortality evidence a departure from saving moms to saving babies. Barbara Levy, former Vice President for Health Policy at the American Congress of Obstetricians and Gynecologists, admitted: "we don't pay enough attention to those things that can be catastrophic for women."[160] One professional went a step further: "we do not give women enough information for them to manage their health postpartum."[161] While the United States focuses on infant mortality, the rest of the developed world has implemented standardized operating procedures to target maternal mortality.[162]

For example, the United Kingdom decreased its preeclampsia deaths to a total of two between 2012 and 2014 by simply standardizing its detection and early treatment protocols.[163] That equates to one in a million.[164] Considering approximately fifty to seventy American women die of this condition each year,[165] it is painfully clear the American healthcare system is failing its mothers; the healthcare systems in South Carolina are no exception.

IV. PREVENTING THE PREVENTABLE

A. What Is Working Elsewhere?

In 2014, a group of America's leading medical societies created the Alliance for Innovation on Maternal Health[166] (AIM). AIM quickly formalized standard safety practices that were proven effective at the state level.[167] The program's "safety bundles" set standards of care, such as deadlines for when to take blood pressure readings, procedures for how to appropriately combat high readings, and methods for monitoring blood loss to allow for early hemorrhage intervention.[168] However, these standards are only recommendations and, as such, have not been followed by the overwhelming majority of states and facilities.[169] It is within the state's power

159. *Id.*
160. *Id.*
161. *Id.* (statement by Elizabeth Howell, Professor of Obstetrics and Gynecology at the Icahn School of Medicine at Mount Sinai Hospital in New York City, recounting her personal experience with the lack of information healthcare providers give to expectant mothers).
162. *See id.*
163. *Id.*
164. *Id.*
165. *Id.*
166. Young, *supra* note 139.
167. *Id.*
168. *See id.*
169. *See id.*

to form a quality care collaborative with the ability to better monitor, train, and effectuate these practices. Such organizations are encouraged by the Preventing Maternal Deaths Act as part of state maternal mortality review programs.

California's establishment of a Maternal Quality Care Collaborative in 2006, for example, identified leading complications and, in response, implemented training programs for providers across the state.[170] The main theme behind the training programs is preparing for the worst-case scenario.[171] Treating childbirth as a trauma, rather than as a miracle of life, prepares nurses and doctors for the worst; even if trauma never occurs, it is better to be overprepared than utterly unprepared. In California, when a woman begins hemorrhaging after childbirth, her medical team has a treatment toolkit nearby and is armed with massive transfusion protocols when needed.[172] South Carolina can establish these practices through a similar collaborative effort. The key elements in every country and state with consistently low maternal mortality rates are uniform standards of care.[173]

B. Policy Proposals for South Carolina

South Carolina should create a Quality Care Collaborative (QCC) to implement AIM's safety bundles by beginning with three core bundles: "OB Hemorrhage, Severe Hypertension in Pregnancy, and Venous Thromboembolism Prevention in Pregnancy."[174] Funding for this program could come from a variety of sources. Other states have used block grants from divisions within their state public health agency.[175] For South Carolina, this would likely mean acquiring funding from DHEC's Division of Women's Health. The QCC would furnish additional benefits by providing more complete information directly to the Committee. The Committee currently compiles data and reports, but many of its initiatives could be efficiently activated through the experience and reach of medical professionals involved in the QCC.

DHEC regulations can also effectuate the standardization of care at healthcare facilities. Under the supervision of the South Carolina Board of Health and Environmental Control, DHEC has authority to "make, adopt, disseminate and enforce reasonable rules and regulations for the promotion of

170. *See* Montagne, *supra* note 15.

171. *Id.*

172. *Id.*

173. *Id.*; Martin & Montagne, *supra* note 137.

174. Hendrix, *supra* note 81, at 25.

175. *See, e.g.*, *CA-PAMR (Maternal Mortality Review)*, CAL. MATERNAL QUALITY CARE COLLABORATIVE, https://www.cmqcc.org/research/ca-pamr-maternal-mortality-review [https://perma.cc/X387-P4AU]; *see also* Martin & Montagne, *supra* note 137.

public health."[176] Such regulations could include requiring delivery nurses or doctors to complete "checkboxes" at the time of delivery and before hospital discharge. Although they may seem trivial, these regulations would allow the state to establish a quality threshold for care. This type of system has allowed states, like California, to cut maternal mortality rates by more than half.[177]

The sheer instances where clear warning signs are missed by South Carolina providers illustrate the cost of allowing the current disjointed system to remain status quo. Individualized medical care is ideal, but this goal is not an appropriate reason for allowing such drastic quality disparities to go unchecked. The state must identify and comply with established and effective methods of care if preventable maternal deaths are, in fact, to be prevented. Imagine if each provider approached cardiac arrest with a different method of CPR despite there being only one established and effective method.[178] This is the scenario South Carolina finds itself in, where, in its attempts to prevent maternal deaths, there are neither statewide standards nor strong recommendations for monitoring and treating pregnancy-related conditions, such as hemorrhage and preeclampsia. For instance, AIM and similar coalitions have established that, by weighing a mother's blood loss at regular intervals, a dangerous hemorrhage can be detected early on; mothers being monitored in this way have a better chance of surviving even severe hemorrhages.[179]

Likewise, some U.S. providers still believe in the outdated thought that delivering the child is a fool-proof cure for preeclampsia.[180] This is sometimes the case. But even so, delivery can come too late and, even then, may not be enough to reverse the condition.[181] There are best practices for using specified blood pressure medicines and magnesium sulfate depending on the severity of one's condition, but not all providers follow them.[182] AIM and other leading organizations in the United States and United Kingdom have established that a blood pressure reading of 140/90 in a woman with no previous history of

176. *S.C. Board of Health and Environmental Control*, DEP'T HEALTH & ENV'T. CONTROL, https://scdhec.gov/index.php/about-dhec/sc-board-health-environmental-control [https://perma.cc/C4SR-QEJK]; *see also* S.C. CODE ANN. § 44-1-20 (2018).

177. *See* Montagne, *supra* note 15.

178. *See id.* (statement by Elliott Main, co-founder of the California Maternal Quality Care Collaborative, explaining that, before California implemented standardized toolkits and training, there was a large discrepancy in provision of care after a pregnancy or delivery complication).

179. *Id.*; Martin & Montagne, *supra* note 137.

180. Martin & Montagne, *supra* note 137. *But see Preeclampsia*, KAISER PERMANENTE (Oct. 8, 2020), https://healthy.kaiserpermanente.org/health-wellness/health-encyclopedia/he.preeclampsia.hw2834 [https://perma.cc/MTD3-KCZW] (stating that preeclampsia usually goes away after giving birth).

181. Martin & Montagne, *supra* note 137.

182. *See id.*

high blood pressure is an indicator of preeclampsia.[183] Yet a number of providers would only label this reading as "elevated."[184]

Importantly, the CDC has identified more than twenty "critical factors" that can contribute to pregnancy-related deaths.[185] Rarely does just one factor lead to maternal death: the average number of factors involved is 3.7.[186] At the top of the list is a lack of standardized policies.[187] Prevention requires "a structured, organized, [and] standardized approach" to maternal care.[188] By enforcing specified standards, such as those set by AIM and similar organizations, DHEC could institute a minimum standard of care to protect South Carolina mothers.

Setting threshold practice standards is only part of a larger picture. More information is needed to efficiently plan policies and effectively institute uniform quality care. First, the state must understand insurance's role in maternal mortality. Better tracking of insurance status is required to note trends and create targeted policies. For instance, if it is unknown whether there is a correlation between access to insurance and quality care, it would be hard to estimate the effectiveness of insurance incentives for plans with quality requirements.

Second, facilities must have quality transparency so that mothers can protect themselves and their children where possible. Although seemingly obvious, this is nearly impossible because there is no readily available data on facility or provider outcomes. This is another area where insurance plays a role: networks create possible barriers to access. Even if an expectant mother has information on a particular facility's quality of care, her facility or provider of choice may be out of network, possibly forcing her to settle for less than she previously hoped. Setting threshold standards throughout the state will help minimize this dilemma. However, it is important to note that, as patients gain access to facility and provider quality statistics, those entities and individuals will be incentivized to transition to, and comply with, the new best practices set forth by DHEC. States implementing uniform standards have received pushback from providers reluctant to change their practices.[189] Transparency in quality provides an incentive to make that change.

Third, it is essential to incentivize providers or insurers that require higher standards and oversight for maternal health. These incentives can go hand-in-hand with requiring at least one OB/GYN per service area to receive state

183. *Id.*
184. *Id.*
185. *Id.*
186. *Id.*
187. *Id.*
188. *Id.* (statement by Elliott Main, co-founder of the California Maternal Quality Care Collaborative, regarding how to prevent maternal deaths).
189. *Id.*

funding or grants. This can be partly subsidized by establishing the QCC but may still prove problematic. Many smaller and more rural facilities will likely be unable to afford this outright, and as such, government funding would likely be required. Additionally, tying existing funds to compliance with this initiative will probably not be well received by legislators or providers. It is possible, then, to frame this staffing addition as a recommendation that, if complied with, would provide additional monetary incentives. This would be as follows: for each mother cared for under Medicaid, the provider would get a higher rate of pay for obstetric services by fully licensed OB/GYNs rather than nurse practitioners or doctors of a different specialty. All of this would require delicate maneuvering and planning; however, many rural South Carolina hospitals have closed their doors already,[190] and many existing facilities are stretched thin from dwindling funds and COVID-19 overload.[191]

Fourth, South Carolina should consider small changes in licensing to help ensure OB/GYNs are fully trained and experienced in the field before running their own delivery room. It is common for doctors to complete residency without doing a full labor and delivery rotation.[192] New requirements for state licensing could mandate this rotation for all doctors who will act as an obstetrician in their practice. The QCC can also address current, undertrained providers through educational programs. In states where QCCs exist to implement uniform care practices and responses to trauma, training has routinely been one of their functions.[193]

Finally, legislation can prevent later maternal deaths by addressing the coverage gap. Medicaid expansion is unlikely given the state legislature's aversion to such a plan.[194] However, legislation may extend the pregnancy plan to 365 days postpartum. This is, in essence, what South Carolina tried to accomplish in its request to waive work requirements for Medicaid

190. Andy Brack, *Rural South Carolina Hospitals Close, More Threatened*, STATEHOUSE REP. (Feb. 12, 2016, 12:24 PM), https://www.statehousereport.com/2016/02/12/news-rural-south-carolina-hospitals-close-more-threatened/ [https://perma.cc/LEU4-2T2R].

191. Anna King, *Rural Health Systems Challenged by COVID-19 Surge*, NPR (Dec. 12, 2020, 7:01 AM), https://www.npr.org/2020/12/12/945550903/rural-health-systems-challenged-by-covid-19-surge [https://perma.cc/M3ZE-5FFP].

192. Martin & Montagne, *supra* note 137.

193. *See* Montagne, *supra* note 15.

194. Anthony Keck, *South Carolina's View: The Affordable Care Act's Medicaid Expansion Is the Wrong Approach*, S.C. HEALTHY CONNECTIONS MEDICAID (Sept. 6, 2012), https://www.scdhhs.gov/blog/2012-09-20/south-carolinas-view-affordable-care-acts-medicaid-expansion-wrong-approach [https://perma.cc/5J3K-5LUK]. It is of note, however, that South Carolina House Bill 3226 was pre-filed in December 2020 and resides in the House Committee on Ways and Means as of April 2021. H.B. 3226, 2021–2022 Gen. Assemb., 124th Sess. (S.C. 2021). This Bill seeks to expand Medicaid coverage in South Carolina by lowering eligibility to residents sixty-five years and younger who have an income at 133% of the federal poverty level, as provided in the Affordable Care Act. *Id.*

eligibility.[195] The difference is, in that plan, HHS was seeking to use its CHIP funding for the expansion.[196] A plan more likely to succeed is one where state Medicaid funds extend the term of coverage for women who qualify under the current plan. If Medicaid was originally intended to provide care for low-income families and children, this type of coverage would further that goal.

V. CONCLUSION

The key to avoiding trauma is to prepare for birth as if it were a trauma. Families, providers, and facilities must always be prepared for the worst-case scenario. Both the CDC and the Committee have found that numerous mothers can be saved annually.[197] Knowing maternal deaths are preventable, however, is effectively useless. Steps must be taken to prevent them from happening in the first place. Preparation is the foundation of prevention. South Carolina's facilities and providers must prepare for the worst if they are to enjoy the best that life has to offer. Every South Carolinian should have the right to enjoy the miracle of life and the love of family.

195. Letter from Seema Verma to Joshua Baker, *supra* note 107.

196. *Id.*

197. *Maternal Mortality*, CTRS. FOR DISEASE CONTROL & PREVENTION (Aug. 13, 2020), https://www.cdc.gov/reproductivehealth/maternal-mortality/index.html [https://perma.cc/27CM-9CUS]; 2020 LEGISLATIVE BRIEF, at 1.