Maternal Mortality in U.S. Federal Policies: Success, Failure, and Opportunity

By: Erin Marshall

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INTRODUCTION

A man is awakened in the dark of night by a baby's cry. For a moment, he does not know where he is. He is on a couch; the baby is crying. He is at his mother's home. He carefully rolls over and gropes in the darkness for the lamp on the end table. There is the baby crib in the middle of the living room. He sweeps his newborn baby into his arms and gently presses her to his chest while he prepares a bottle of donor milk. Baby hungrily eats. It hits him. His stomach tightens in a knot, but he cannot stop the tears from coming. They had planned to breastfeed the baby. She wasn't here. She was gone and the baby would never know her mother. He begins to quietly sob as the baby nestles into his chest and falls back to sleep.

The father of this baby found himself a thousand miles from home that night. Away from the home and memories of his beloved wife and mother of his baby. For years they had tried to conceive. They had been ecstatic when the pregnancy 'took' this time. They spent months planning, preparing, eating well, exercising, painting the nursery, and picking out clothes for their baby. His wife had some early issues with hypertension and borderline diabetes, which blossomed into gestational diabetes late in pregnancy. She went into labor at 37 weeks—early, but not too early. She was so tired after the birth. She looked so fragile and pale. The nurses assured him that she was just exhausted, but fine. They told him to go home and rest, as he would not get much rest with a newborn baby. That was more than truth. His wife, the mother of his newborn baby, had a massive stroke overnight and never regained consciousness. Now, he had come home to his mother's home to try to pick up the pieces of his life.[1] Maternal death, such as in this vignette, are usually preventable but continue to rise in the United States.

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[1] This is a fictionalized story based on amalgamation of several true stories.

The Centers for Disease Control and Prevention (CDC) has identified three cardiovascular conditions and related health indicators that are the main contributors to preventable maternal mortality in the U.S.[2] The CDC has also stated that at least 60% of pregnancy-related deaths are preventable.[3] This article explores the disconnect between federal policy and proposed legislation with CDC and Health Resources and Services Administration (HRSA) data on why maternal mortality rates continue to rise in the U.S. Maternal mortality in the United States has been rising over the past several decades despite a multitude of legislative efforts to identify and address the contributing issues. Federal agencies, particularly the CDC, have been collecting and evaluating maternal mortality data for decades and offering recommendations for reduction. Through examination of federal legislation addressing maternal mortality, the legislative intent of such proposals, and state responses as innovator incubators, this article will summarize current efforts and provide a guide to development of federal policy recommendations to effectively reduce maternal mortality.

Current federal policies fall short of reaching CDC recommendations on preventing cardiovascular conditions that are significant contributors to maternal mortality. The CDC recommendations and strategies to impact the identified conditions are reflected in Congressional findings within some pending bills. There is opportunity to craft legislation that would reach the CDC-identified conditions and meet recommendations for impact on reducing U.S. maternal mortality.

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[2] CDC Reproductive Health, Data on Selected Pregnancy Complications in the United States, https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-complications-data.htm (Page last reviewed February 28, 2019).

[3] CDC Vital Signs, https://www.cdc.gov/vitalsigns/maternal-deaths/index.html (Page last reviewed May 7, 2019).

Maternal mortality and morbidity are a problem in our country. The rates of maternal mortality have not dropped in the U.S. as they have in similar countries in the past few decades. The United States has charged federal agencies, most significantly the CDC, with monitoring and evaluating maternal mortality data and development of recommendations to reduce the rates. Women of color, and particularly those of Black or African American heritage, experience the most significant disparities in maternal mortality and morbidity rates. Access to quality prenatal, perinatal, and maternal health care are at the center of these inequities. Congress has adopted or introduced legislation establishing strategies to address some maternal health access issues. The strategies have included data collection, improvement in quality of care, distribution of maternal health professionals in areas of need, and funding programs for evidence-based initiatives such as home visiting. Many more legislative and administrative efforts have not been passed or implemented.

Some states have developed localized programs to demonstrate efficacy of state-tailored strategies to reduce maternal mortality. Some have potential for national application. Many state programs are federally funded, mostly through the CDC. California has an independent maternal mortality initiative that has been very successful and may serve as a national model. The United States is falling behind the world in how we care for mothers and infants and our maternal mortality rates are unacceptably high. It is time to examine how we have tried to reduce maternal mortality and morbidity, what has worked and what falls short, and implement the promising strategies nationwide.

This article will frame known national data on maternal mortality to identify preventable causes, and then evaluate federal policies and policy proposals, including state activities under those federal policies, against the known preventable causes of maternal mortality. Part I of this

article evaluates federal responses to rising maternal mortality rates. Section A considers the work of federal agencies in tracking and evaluating maternal mortality data and their recommendations to reduce rates of pregnancy-related deaths in the United States. Section B examines recent federal policy efforts including legislative intent and barriers, common threads, potential solutions. Section C looks at proposed legislation to raise awareness or build on these efforts, while Section D evaluates maternal mortality legislation with traction in Congress. Section E explores state initiatives that have shown success and potential for national models in reducing maternal mortality. In Part II there is discussion on if and how the policies or initiatives align with federal agency data and recommendations both at the federal level in Section A and with state's as innovators in Section B. Finally, it will discuss why the federal government needs to be involved in reducing maternal mortality and to what extent: through increased funding, ensuring racial inequities are addressed, supporting consistent data collection, and funding demonstration projects.

I. Maternal Mortality in the U.S. and the Federal Response.

Maternal mortality is a complicated issue involving the intersection of health conditions, access to health care, and environmental factors that contribute to risk of death. A pregnancy-related death is defined as the death of a woman while she is pregnant or up to one year following the end of the pregnancy.[4] For inclusion in maternal mortality statistics, the cause of death can be directly from pregnancy complications or conditions aggravated by pregnancy.[5] Medical or health conditions are sometimes referred to as indicators in data collection. Indicators may be factors that, when taken together with others—such as pregnancy—can indicate a person is at risk for

[4] Centers for Disease Control and Prevention (CDC), Pregnancy Mortality Surveillance System, https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm (Page last reviewed November 25, 2020).
[5] *Id.*

developing a particular health outcome. Scholars evaluating maternal mortality use the measure of pregnancy-related mortality ratio, which is the rate of pregnancy-related deaths per 100,000 live births.[6] This article will explore health conditions with the greatest impact that are aggravated by pregnancy and potential strategies for prevention.

Section A will explore how the Centers for Disease Control and Prevention (CDC) has developed information and guidance, including identification of the topmost preventable causes of maternal mortality. Section B provides an overview of the federal policy landscape addressing maternal mortality in the U.S. Section C will briefly summarize bills without Congressional traction in 2020. Section D will explore two major pieces of legislation to address improving maternity care and reducing maternal mortality that were enacted in the 115th Congress (2017-2019): (1) the Preventing Maternal Deaths Act of 2018[7] and (2) the Improving Access to Maternity Care Act.[8] Then, of all the pending proposals, this article will consider in section D the two pieces that have some traction in Congress: (1) The Maternal Health Quality Improvement Act of 2020[9], which incorporates the Rural Maternal and Obstetric Modernization of Services Act[10] and the Excellence in Maternal Health Act of 2019,[11] and (2) the Helping Medicaid Offer Maternity Services Act of 2020 (also known as the Helping MOMS Act of 2020)[12] and how they may impact

[6] *Id.*
[7] Preventing Maternal Deaths Act of 2018, (Enacted) 115 H.R. 1318, codified as amended at 42 U.S.C. § 247b-12 (2020).
[8] Improving Access to Maternity Care Act, 132 Stat. 4437, (Enacted) 115 H.R. 315, codified at 42 U.S.C. § 254e (2020).
[9] Maternal Health Quality Improvement Act of 2020, H.R. 4995, 116th Cong.
[10] Rural Maternal and Obstetric Modernization of Services Act or the Rural MOMS Act, S. 2373, 116th Cong. (2019-2020).
[11] Excellence in Maternal Health Act of 2019, H.R. 4215, 116th Cong. (2019-2020).
[12] Helping Medicaid Offer Maternity Services Act of 2020 or the Helping MOMS Act of 2020, H.R. 4996, 116th Cong.

the major preventable maternal mortality contributors as identified by the CDC. Section E of this article will explore state projects for reducing maternal mortality.

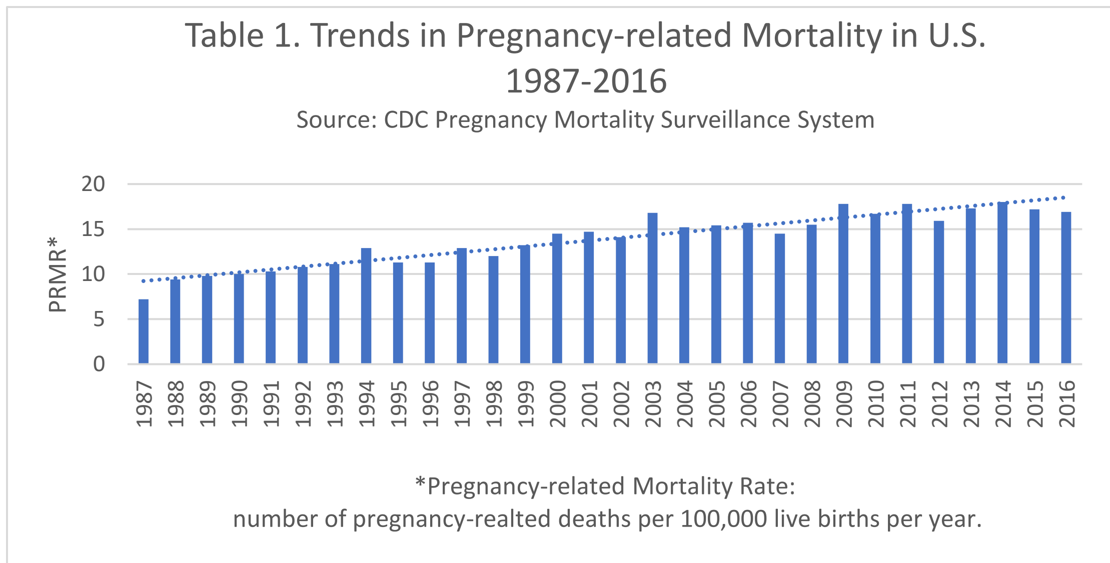
The background for the policy landscape begins with the decades of work of the CDC and the resulting recommendations for reducing maternal mortality. The policy landscape then rests on the two enacted laws from the 115th Congress providing state support for maternal mortality reduction and increased maternal health care providers in underserved areas. Most of the maternal mortality reduction proposals pending before the 116th Congress have stalled, but two Senate proposals included the CDC findings in their text. There are two bills that have passed the House and are before the Senate in the 116th Congress which have proposed creating rural obstetric networks and expanding Medicaid coverage to postpartum women up to one year. Finally, states have acted as laboratories in collecting and evaluating data for maternal health project development and are potential incubators for national solutions. Taken together, these pieces form the federal policy landscape for the maternal mortality crisis in the United States.

A. Defining maternal mortality in the United States and reducing preventable maternal death via CDC recommendations.

Federal legislative proposals to address improving maternity care and reducing maternal mortality have taken a variety of forms based on Congressional inquiry and recommendations from agencies. Congress not only relies on its internal committee and staff inquiries to inform its responses to public health issues, but it also looks to federal agencies such as the CDC that are tasked with long-term monitoring of public health data and analysis of issues. The CDC has developed recommendations for policies to impact reducing maternal mortality. The CDC is the federal agency that has been charged with collecting and evaluating data and development of

recommendations to reduce maternal mortality for decades.[13] Since 1986, the CDC has tracked the major contributors to maternal mortality in the U.S. and identified those medical conditions or indicators that are preventable or manageable to reduce maternal mortality rates.[14] Federal policies, however, do not appear to address those indicators. Congress has investigated and considered several potential solutions including access to providers, which has been effective in improving outcomes for some health indicators including those related to maternal mortality.[15] The work of the federal agency might be expected to guide the development of federal policy, and that is what this article explores.

The CDC Pregnancy Mortality Surveillance System was implemented "to fill data gaps about causes of maternal death" in 1986.[16] Since then, the reported number of pregnancy-related deaths has more than doubled in the United States (see Table 1). About 700 women die annually



[13] Centers for Disease Control and Prevention (CDC), Pregnancy Mortality Surveillance System, https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm#when (Page last reviewed February 2, 2020).
[14] *Id.*
[15] Health Resources & Services Administration (HRSA), National Center for Health Workforce Analysis (NCHWA), https://bhw.hrsa.gov/health-workforce-analysis/about (Date Last Reviewed: June 2019).
[16] CDC Pregnancy Mortality Surveillance System: https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm (Page last reviewed November 25, 2020).

from pregnancy or delivery complications in the United States.[17] While reported causes of pregnancy-related deaths are tracked by the CDC (see Table 2), the underlying reasons for the increase remain unknown.[18] Cardiovascular conditions now contribute to over one-third of pregnancy-related deaths (34.4%, not including hypertensive disorders),[19] indicating preventative care is critical to include in policy solutions. The CDC has reported that approximately 60% of maternal deaths are preventable.[20] Additionally, the CDC has identified significant racial and ethnic disparities in pregnancy-related mortality.[21] Black and American Indian/Alaskan Native women have more than double the rate of deaths per live births than Asian/Pacific Islanders, white and Hispanic women.[22] Hispanic women have the lowest national rate of pregnancy-related deaths.[23] Congressional efforts have focused more on identifying which groups are most impacted rather than addressing why they are impacted at such higher rates.

By analyzing Congressional legislation and proposals to reduce maternal mortality, gaps between policy and impact can be identified. While there may not be a substantiated reason for the racial and ethnic disparities in outcomes, there are policy interventions that could comprehensively address both access and quality issues in stronger alignment with the data available from the CDC. The highest incidence of causes for pregnancy-related death are cardiovascular: general 15.7%, cardiomyopathy 11%, cerebrovascular events (including stroke)

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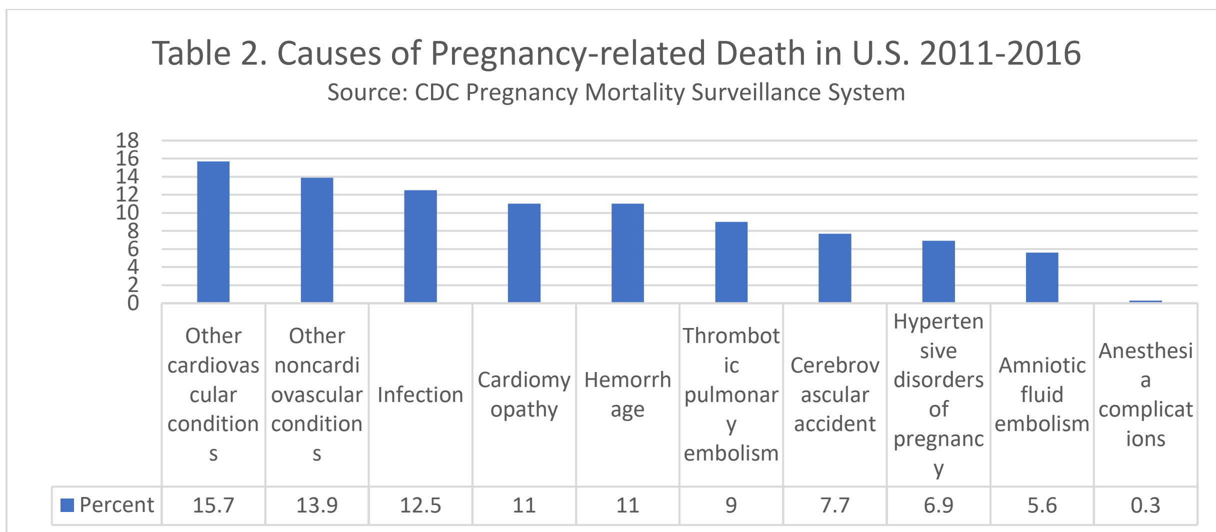
[17] CDC Reproductive Health: https://www.cdc.gov/reproductivehealth/maternal-mortality/index.html (Page last reviewed August 13, 2020).
[18] CDC Pregnancy Mortality Surveillance System: https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm (Page last reviewed November 25, 2020).
[19] *Id.*
[20] CDC Vital Signs, https://www.cdc.gov/vitalsigns/maternal-deaths/index.html (Page last reviewed May 7, 2019).
[21] *Id.*
[22] *Id.*
[23] *Id.*

7.7%, and hypertensive disorders of pregnancy 6.9% (see Table 2).[24] The overall occurrence of post-partum hemorrhage (PPH) and PPH-related blood transfusions has significantly increased between 1993 and 2014 (see Table 2).[25] The CDC has identified three preventable conditions in pregnancy-related death: hypertensive disorders, postpartum hemorrhage, and blood clots (deep vein thrombosis and pulmonary embolism).[26] Preventative initiatives addressing these conditions could be incorporated into federal policy solutions for reducing maternal mortality rates overall.



The CDC publishes the Morbidity and Mortality Weekly Report (MMWR)[27] which is its avenue for sharing data and evidence-based recommendations for improving public health conditions. In 2014, an article published in the MMWR addressed preconception health indicators

[24] *Id.*
[25] *Id.*
[26] CDC Reproductive Health, Data on Selected Pregnancy Complications the United States, https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-complications-data.htm (Page last reviewed February 28, 2019).
[27] Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report (*MMWR*), https://www.cdc.gov/mmwr/index.html (Page last reviewed December 7, 2020).

that had been gathered from state data via the Pregnancy Risk Assessment Monitoring System (PRAMS) and the Behavioral Risk Factor Surveillance System (BRFSS).[28] The data analysis by the authors was based on evaluating 39 preconception health indicators, 23 of which are PRAMS indicators, to reduce "adverse pregnancy outcomes."[29] The results of the analysis underscored the importance of using existing "evidence-based interventions and clinical practice guidelines" to ensure chronic conditions are controlled, in addition to reducing risky behaviors and unintended pregnancies.[30] The MMWR article recommended (1) improving preventative health care access for all women of reproductive age, (2) improving availability of healthier nutrition and physical activity options, (3) creating systems to increase social and emotional support, and (4) improving ongoing data surveillance and research to (5) monitor outcomes of policy interventions.[31] The findings in this data analysis support the clinical CDC recommendations. The lifestyle and health data reported here

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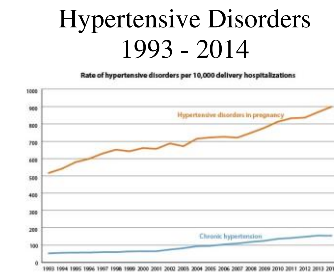
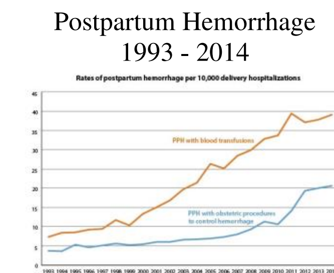
[28] Cheryl L. Robbins, Ph.D. et al, *Core State Preconception Health Indicators—Pregnancy Risk Assessment Monitoring System and Behavioral Risk Factor Surveillance System, 2009*, 63(ss03) MMWR 1, 1-62 (April 25, 2014) (discussing the importance of monitoring data to improve preconception health for better women's health and pregnancy outcomes).
[29] *Id.*at 2 and 4.
[30] *Id.* at 2.
[31] *Id.*

CDC-Identified preventable conditions contributing to maternal mortality in the U.S.*

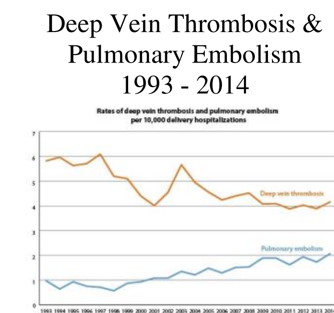
Hypertensive Disorders
1993 - 2014



Postpartum Hemorrhage
1993 - 2014



Deep Vein Thrombosis &
Pulmonary Embolism
1993 - 2014



*CDC Reproductive Health; Data on Selected Pregnancy Complications in the United States:

https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-complications-data.htm

(Page last reviewed Februrary 28, 2019.)

reflect the influence of social determinants of health: the options available to and impacts on health for individuals based on where they work, live, and play.

The concept of improving access to positive factors for "determinants of health" in reducing maternal, as well as child, mortality rates is substantiated in economic theory.[32] Modeling economic data on how much a government spends on those positive factors for health determinants including access to education, immunization, clean water and sanitation, illustrates a correlation with a reduction in mortality.[33] The CDC recommendations address the clinical results of lifestyle and chronic condition data, and economic analysis supports governmental spending on health determinants. Both the determinants of health and government support for access to factors supporting improved health should be considered in developing a comprehensive policy solution for reducing maternal mortality.

B. The federal policy landscape for addressing U.S. maternal mortality.

The foundation of the policy landscape rests on two pieces of legislation that provide supporting states in collecting and assessing data, developing plans to address findings, and quality improvement efforts, plus increasing the number of maternal health care providers in underserved areas. These two Congressional Acts concerning maternal mortality passed in the 115th Congress. Several legislative proposals are pending before the 116th Congress, with many of the efforts to address maternal mortality lacking Congressional traction. The proposals in Congressional limbo include planning under the Secretary of Health and Human Services to allow a deeper understanding of access issues and how they are impacting maternal mortality rates,[34] and

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[32] Stephen Hall et al., *Government Revenue and Child and Maternal Mortality*, Open Econ. Rev. (Sept. 12, 2012), https://doi.org/10.1007/s11079-020-0959-0.
[33] *Id.* at 5.
[34] Ending Maternal Mortality Act of 2018, H.R. 5761, 115th Cong. This was legislation that was introduced in the 115th Congress but failed to pass; it aimed to prioritize the issue of maternal mortality

allocating funds for states to develop programs exploring strategies to reduce maternal mortality—also called demonstration projects. This article mentions some of these efforts for foundation, but the focus here is on those federal policies with potential for passage into law.

Congressional proposals pending in the 116th Congress build on the framework provided by the two Acts passed in the 115th Congress (see Table 1.). The Public Health Service Act was amended by the Preventing Maternal Deaths Act of 2018[35] and the Improving Access to Maternity Care Act[36] to implement national strategies for reducing material mortality. The first establishes grants for states to establish maternal mortality programs for data collection and evaluation, and the second provides incentives for maternity health care professionals to locate in underserved areas. The current proposals in the 116th Congress address rising maternal mortality rates in the U.S. are focused on supporting state programs, data collection, improvements in quality of care, increasing the number and distribution of maternity health care providers, and modification of health care payment system. Several current proposals support funding to states for demonstration projects or to implement known programs for reducing maternal mortality. States are often the best testing ground for innovations because factors are easier to control on smaller scales. State projects can potentially inform national policy. CDC demonstration projects are federally funded localized efforts to "test and measure the effects of program changes in real-world situations."[37] Working in partnership with the CDC provides consistent state project evaluation for identification of those programs with strong results and potential for large-scale or national policy efforts.

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for the Secretary of Health and Human Services by requiring a national biennial plan to reduce the rate of maternal mortality.

[35] Preventing Maternal Deaths Act of 2018, (Enacted) H.R. 1318, 115th Cong. (2nd Sess. 2018).

[36] Improving Access to Maternity Care Act, H.R. 315, 115th Cong. (2nd Sess. 2018).

[37] Centers for Disease Control and Prevention, https://www.cdc.gov/hiv/research/demonstration/index.html#:~:text=Demonstration%20projects%20test%20and%20measure,the%20United%20States%20(CAPUS) (Page last reviewed November 13, 2019).

Table 3.

<table>
<tr><th colspan="4">U.S. Federal Legislation Addressing Reduction of Maternal Mortality</th></tr>
<tr><td colspan="2">115th Congress (enacted)</td><td colspan="3">116th Congress (passed House)</td></tr>
<tr><td rowspan="2">Preventing Maternal Deaths Act of 2017</td><td rowspan="2">Improving Access to Maternity Care Act, 2018</td><td colspan="2">Maternal Health Quality Improvement Act of 2020

Incorporates:</td><td rowspan="2">Helping MOMS Act of 2020</td></tr>
<tr><td>Excellence in Maternal Health Act of 2019</td><td>Rural Maternal and Obstetric Modernization of Services Act</td></tr>
<tr><td colspan="5">State Demonstration Programs: MMRCs, Perinatal Collaboratives, etc.</td></tr>
</table>

The 115th Congress saw the passage of the Preventing Maternal Deaths Act of 2018[38] and Improving Access to Maternity Care Act, 2018.[39] The first provision allows for CDC support of state maternal mortality review committees. The second intended "to distribute maternity care health professionals to health professional shortage areas identified as in need of maternity care health services."[40] These two enacted bills in the 115th Congress set the federal stage for numerous proposals in the 116th Congress. However, many are duplicative and there remain questions around whether the proposals align with the CDC and state data for greatest impact on the national maternal mortality rate.

C. Federal maternal mortality proposals lacking Congressional traction in 2020.

A multitude of proposals for improving U.S. maternal mortality and morbidity are pending for the 116th Congress (2019-2021). The pending federal legislation can be categorized into proposals for funding state programs, data collection, improvements in quality of care, increasing the number and distribution of maternity health care providers, and modification of health care payment system. Companion bills, identical legislation introduced in each chamber of Congress,

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[38] Preventing Maternal Deaths Act of 2018, H.R. 1318, 115th Cong. (2nd Sess. 2018).
[39] Improving Access to Maternity Care Act, H.R. 315, 115th Cong. (2nd Sess. 2018).
[40] *Id.*

have been introduced as the "Maternal Health Pandemic Response Act of 2020" specifically to address maternal mortality during the COVID-19 pandemic.[41]

There are two bundles of legislative proposals to reduce maternal mortality pending in the 116th Congress, plus several others, none of which has passed either Chamber. The first bundle addresses military health care and insurance. The second is the Black Momnibus, a collection of proposals focused on racial disparities in maternal mortality. Two bills have been incorporated into one which has passed the House and is being discussed here: The Maternal Health Quality Improvement Act of 2020. Remaining bills address a variety of specific issues including home visiting, midwifery access, birth centers in underserved areas, data mapping, racial bias and discrimination, and Medicaid expansion. There are two bills that address CDC indicators, but have stalled after introduction in early 2019. This article focuses on those bills with traction for passage in Congress and will not address the others in detail.

The military health system is overall doing a better job with maternal mortality rates at 7.4/100,000 as compared to the national rate of 11.3/100,000 between 2009 and 2018 according to the Defeat Infant and Maternal Mortality Act.[42] Examining factors driving the military health care system's success in reducing maternal mortality may be similar to looking to state demonstration projects in theory. However, the system and the population served is different and narrow in scope as to make application difficult to the variety of private, nonprofit, and public health systems nationally, plus information sharing is a significant obstacle. Two additional proposals related to U.S. military beneficiaries are pending in 2020, the TRICARE Coverage for

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[41] Maternal Health Pandemic Response Act of 2020, S. 4769 and H.R. 8027, 116th Cong. (2nd Sess. 2020).
[42] Defeat Infant and Maternal Mortality Act, H.R. 6533, 116th Cong. (2020). Introduced in April 2020, this Act would allow information sharing from the military health system in preventing maternal mortality. The Act looked to apply lessons learned from successful reduction rates in the U.S. military health care system more broadly to our national healthcare system. It has little chance of passing in 2020.

Doula Support Act[43] and the Military Moms' Mental Health Assessment Act.[44] This article is limited to exploring legislative efforts for the broader population of mothers in the U.S. and will not analyze such targeted legislation.

A bundle of proposals in the 116th Congress, collectively called the Black Maternal Health Mominbus (BMHM) Act of 2020[45], have been introduced to comprehensively approach reforms in maternity care and include a focus on and racial disparities. The bills in the BMHM Act of 2020 focus on implicit bias and racial disparities, highlighting Black and African American disparities, yet reflect similar strategies and approaches in more broadly written legislative proposals, including those considered here. The BMHM does not have the traction of other proposals before Congress. Two resolutions were also introduced to declare "Black Maternal Health Week" in each Congressional Chamber to raise awareness of the disparities in maternal mortality rates for Black pregnant women.[46] The evolution of the BMHM Act of 2020 deserves an entire article unto itself, and so will not be the focus on this article.

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[43] TRICARE Coverage for Doula Support Act, S. 3826, 116th Cong. (2nd Sess. 2020). The TRICARE act would not only improve access to doula services, it would establish advisory committees and data collection among beneficiaries on results of services. TRICARE is the worldwide health care program for armed forces personnel and dependents. This act has a low chance of passage.

[44] Military Moms' Mental Health Assessment Act, S. 3809, 116th Cong. (2nd Session 2020). The Mental Health Assessment act would commission a study of prenatal and postpartum mental health for TRICARE beneficiaries (Armed Forces and dependents) and development of recommendations for improvements.

[45] Black Maternal Health Momnibus Act of 2020: Titles I – IX: Social Determinants of Health (H.R. 6132), Kira Johnson Act (H.R. 6144), Protecting Moms Who Served Act (H.R. 6141), Perinatal Workforce Act (H.R. 6164), Data to Save Moms Act (H.R. 6165), Moms MATTER Act (H.R. 6143), Justice for Incarcerated Moms Act (H.R. 6129), Tech to Save Moms Act (H.R. 6138), IMPACT to Save Moms Act (H.R. 6137). S. 3424, 116th Cong. (2020). Collectively these acts address a wide variety of factors impacting maternal mortality for all women but with a focus on Black and African American women, who have significantly higher rates of maternal mortality. The bills contain several provisions to address implicit bias and racial disparities in health care delivery. While the Momnibus does not appear to have Congressional traction, it has received national attention and is successfully raising awareness of the disparities in U.S. maternal mortality rates.

[46] Recognizing the Week of April 11 through April 17, 2019, as "Black Maternal Health Week" to bring national attention to the maternal health crisis in the Black community, S. Res.154, 116th Cong., 165 Cong. Rec. S 2390 (2019); and Resolution recognizing the designation of the week of April 11 through

While there are a variety of bills pending before the 116th Congress, most have either not passed out of committee or have only been introduced and lack a committee assignment. Of these myriad legislative proposals, two address the CDC indicators in their text. The Modernizing Obstetric Medicine Standards Act of 2019 (also known as the MOMS Act of 2019)[47] and the Mothers and Offspring Mortality and Morbidity Awareness Act (also known as the MOMMA's Act).[48] Both of these two acts were introduced in the Senate in 2019, and both list CDC indicators in their text under "maternal safety bundles" to be addressed by either "state-based collaborative teams"[49] or entities defined in the bill as eligible for funding.[50] The MOMMA's Act also requires that the maternal safety bundles incorporate "results and findings of relevant data reviews, such as reviews conducted by a State maternal mortality review committee.[51] The CDC indicators listed include:

Table 4.

MOMS Act of 2019, S. 116	MOMMA's Act (2019) S. 916
(i) Obstetric hemorrhage	(I) obstetric hemorrhage
(iii) Maternal venous and thromboembolism	(VIII) severe hypertension in pregnancy
(iv) Severe hypertension in pregnancy, including preeclampsia	(XI) thromboembolism

Additionally, the MOMMA's Act specifically addresses the CDC indicators in the textual list of Congressional Findings that call for the Act: "(8) Hemorrhage, cardiovascular and coronary conditions, cardiomyopathy, infection, embolism, mental health conditions, preeclampsia and

17, 2020, as "Black Maternal Health Week" to bring national attention to the maternal health crisis in the Black community and the importance of reducing maternal mortality and morbidity among Black women and birthing persons, H.R. Res. 926, 116th Cong. (2020).

47 Modernizing Obstetric Medicine Standards Act of 2019 (also known as the MOMS Act), S. 116, 116th Cong. (2019).

48 Mothers and Offspring Mortality and Morbidity Awareness Act (also known as the MOMMA's Act), S. 916, 116th Cong. (2019).

49 Modernizing Obstetric Medicine Standards Act of 2019 (also known as the MOMS Act), S. 116, 116th Cong. (2019).

50 Mothers and Offspring Mortality and Morbidity Awareness Act (also known as the MOMMA's Act), S. 916, 116th Cong. (2019).

51 *Id.*

eclampsia […] are the predominant medical causes of maternal-related deaths and complications. Most of these conditions are largely preventable or manageable."[52] It is intriguing that these are both Senate proposals and reflect some sense of Congressional knowledge the CDC indicators need to be specifically addressed. However, since they have stalled since introduction, this article will not discuss them in depth.

These recent federal legislative efforts illustrate the current policy landscape for addressing the maternal mortality crises in the U.S. The most crucial of these Acts to consider in developing new policy are the enacted Preventing Maternal Deaths Act of 2018[53] and Improving Access to Maternity Care Act,[54] and the proposed Maternal Health Quality Improvement Act of 2020[55] and the Helping MOMS Act of 2020.[56] Each of these policies adds to the maternal mortality policy landscape, but the question remains if they reach the underlying preventable causes identified by the CDC.

D. Successful federal policy proposals enacted or with Congressional traction.

This article explores what Congress has enacted or may enact in attempts to reduce maternal mortality, based on committee recommendations and Chamber passage. Two enacted bills are Preventing Maternal Deaths Act of 2018[57] and Improving Access to Maternity Care Act.[58] The first provides support for state maternal mortality review committees for data collection and evaluation, and the second provides incentives for maternity health care professionals to locate in underserved areas. Two bills that have passed the House and are before the Senate are Maternal

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[52] *Id.*
[53] Preventing Maternal Deaths Act of 2018, H.R. 1318, 115th Cong. (2nd Sess. 2018).
[54] Improving Access to Maternity Care Act, H.R. 315, 115th Cong. (2nd Sess. 2018).
[55] Maternal Health Quality Improvement Act of 2020, H.R. 4995, 116th Cong. (2019).
[56] Helping Medicaid Offer Maternity Services Act of 2020 or the Helping MOMS Act of 2020, H.R. 4996, 116th Cong.
[57] Preventing Maternal Deaths Act of 2018, H.R. 1318, 115th Cong. (2nd Sess. 2018).
[58] Improving Access to Maternity Care Act, H.R. 315, 115th Cong. (2nd Sess. 2018).

Health Quality Improvement Act of 2020[59] and the Helping MOMS Act of 2020.[60] These two pending bills have Congressional traction and opportunity to be enacted. These four acts are considered in this article as they pertain to reaching the maternal mortality prevention indicators set forth by the CDC.

1. The Preventing Maternal Deaths Act of 2018.

The Preventing Maternal Deaths Act of 2018[61] amends the Public Health Service Act[62] by supporting State programs in reducing disparities and pregnancy-related deaths, and to improve maternal health care quality and outcomes. The Act expands the scope of concern for the health of postpartum women to one year for "activities to promote physical, mental, and behavioral health."[63] While earlier versions of the bill provided funding for states via grants to establish and sustain Maternal Mortality Review Commissions, the enacted version outlines a program for MMRCs without mention of grants.[64] The bill authorized the CDC to provide support to MMRCs, which has translated into funding awards.[65] According to testimony from the American College of Obstetricians and Gynecologists to the House Commerce Subcommittee, 33 states had MMRCs and many were brand new in 2018.[66] In 2020, the CDC works with 24 State MMRCs. Elimination of the grant funding may have impacted the 2018 expansion of the MMRC programs.

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[59] Maternal Health Quality Improvement Act of 2020, H.R. 4995, 116th Cong. (2019).
[60] Helping Medicaid Offer Maternity Services Act of 2020 or the Helping MOMS Act of 2020, H.R. 4996, 116th Cong.
[61] Preventing Maternal Deaths Act of 2018, H.R. 1318, 115th Cong. (2nd Sess. 2018).
[62] 42 U.S.C. § 247b-12 (2014). Safe motherhood.
[63] Preventing Maternal Deaths Act of 2018, H.R. 1318, 115th Cong. (2nd Sess. 2018).
[64] Preventing Maternal Deaths Act of 2017, H.R. 1318, 115th Cong. (1st Sess. 2017).
[65] Centers for Disease Control and Prevention, Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM), https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/index.html (Page last reviewed February 26, 2020).
[66] *"House Commerce Subcommittee Issues Testimony From American College of Obstetricians & Gynecologists,"* Targeted News Service; Washington, D.C. 27 Sep 2018.

Using states as venues for data collection and innovation incubators to identify and develop effective strategies is not novel. The late Justice Sandra O'Connor supported giving states leeway to develop such innovation when considering the "challenging task" of developing frameworks to address end of life medical care in the "laboratory of the States."[67] There has been a great deal of state involvement in defining the problems and developing strategies to reduce maternal mortality as discussed in section E. This Act did not include CDC recommendations on addressing prevention and management of the CDC-identified conditions that most contribute to maternal mortality.

2. The Improving Access to Maternity Care Act.

The federal Improving Access to Maternity Care Act, 2018, amended the Public Health Service Act[68] and was intended "to distribute maternity care health professionals to health professional shortage areas identified as in need of maternity care health services."[69] The Act provides for data collection in support of establishing criteria to identify communities in need of maternity health professionals within existing health professional shortage areas (HPSAs). It also provides loan repayment or scholarships to encourage maternity health professionals to commit to at least two years of service in approved communities under the National Health Service Corps (NHSC). Senators Tammy Baldwin, D-Wisconsin, and Lisa Murkowski, R-Alaska, co-sponsored the bipartisan effort to address access issues for women in areas with shortages of maternity health professionals.[70] The bill creates "a designation for maternity care for use under the [NHSC]… to

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[67] *Vacco v. Quill,* 521 U.S. 793, 796, 809 (1997).
[68] 42 U.S.C. § 254e (2010). Health professional shortage areas.
[69] Improving Access to Maternity Care Act, H.R. 315, 115th Cong. (2018).
[70] *"Senator Baldwin introduces Bill to Distribute Maternity Care Health Professionals,"* Targeted News Service; Washington, D.C. 01 April 2017.

boost the maternity care workforce in underserved areas."[71] Senator Maggie Hassan, D-New Hampshire, celebrated the passage of the Act saying, "[a]ccess to high quality maternity care should not depend on one's zip code, and this bill will help incentivize health care providers to practice in the communities that need them most."[72]

Leading up to passage of the Act, Senator Patty Murray, D-Washington, ranking member of the Senate Health, Education, Labor and Pensions Committee said that this Act would "help us better understand the shortages we face when it comes to providing critical maternity care services—especially for women and families in rural and underserved areas."[73] She went on to characterize the issue as a "nationwide maternal mortality crisis."[74] While the Act applies an evidence based premise that increasing providers in an area will increase access to care, this Act fell short of incorporating CDC recommendations on prevention of cardiovascular conditions that contribute to maternal mortality. Increasing the number of providers without requiring or providing training on diagnosis, prevention, and management of the CDC-identified conditions is a missed opportunity.

3. The Helping Medicaid Offer Maternity Services Act of 2020 or the Helping MOMS Act of 2020.

This legislation has passed the House in the 116th Congress and is now before the Senate. This Act would modify sections of the Social Security Act[75] by providing a State option to extend

[71] *"President Signs Into Law Bipartisan Legislation Cosponsored by Senator Hassan to Improve Access to Maternal Care in Rural and Underserved Areas,"* Targeted News Service; Washington, D.C. 20 Dec 2018.
[72] *Id.*
[73] *"Senator Murray Issues Remarks on Committee Passage of Five Bills,"* Targeted News Service; Washington, D.C. 29 Nov 2018.
[74] *Id.*
[75] Amends the Social Security Act, 42 U.S.C. § 1396a(e) (2019): State plans for medical assistance; and, 42 U.S.C. § 1397II (2009): Optional coverage of targeted low-income women through a State plan amendment.

Medicaid eligibility to women while pregnant and up to one year postpartum. States that adopt the option would receive a temporary five percent increase to the State's federal medical assistance program. This effort to expand coverage is particularly targeted toward low-income women but would be available to any woman eligible for Medicaid. The Act includes a reporting component to evaluate efficacy of the expansion in reducing maternal mortality, identification of coverage gaps and recommendations for addressing such gaps, and data on payments under the State plans pursuant to pregnancy-related services.

The Act also requires reporting on State Medicaid coverage of doula[76] services to evaluate barriers and develop strategies to increase use of doula services. The correlation of available doula services and improved maternal and infant health outcomes is acknowledged in the Act. The Act supports creation of State initiatives to increase the doula workforce, especially for underserved areas and communities of color. Language in the Act specifically calls for development of recommendations for future legislative and administrative action to increase access to doula services.

The House Committee on Energy and Commerce submitted a report on the Act that included citations of CDC statistics on maternal mortality and listed the identified contributing cardiovascular conditions.[77] However, the neither the bill language nor the amendments made prior to referral to the Senate reflect any directive or intent to address the CDC-identified conditions contributing to maternal mortality.

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[76] Doulas are layperson birthing professionals without formal obstetric training who provide guidance, information, emotional support, and non-medical physical comfort for pregnant women.
[77] H.R. Rep. No. 116-527, at 4 (2020).

4. The Maternal Health Quality Improvement Act of 2020.

Congressional House members reached consensus on this legislation that incorporates the intent of the Excellence in Maternal Health Act of 2019[78] (Excellence Act) and the Rural MOMS Act.[79] The Maternal Health Quality Improvement Act of 2020[80] (MHQI Act of 2020) passed the House on September 21, 2020 and has been referred to the Senate Committee on Health, Education, Labor, and Pensions. The MHQI Act of 2020 intends to establish obstetric networks that would work collaboratively to reduce maternal mortality through training and program evaluation. Provisions of the MHQI Act of 2020 provide innovation grants to eligible entities to implement best practices for improving maternal health quality and outcomes and to *eliminate preventable maternal mortality*. The Act also supports maternal mortality review committees and development of new models of care for better maternal and infant health outcomes.

The MHQI Act of 2020 includes six additional grant programs: training health care providers, perinatal quality collaboratives (PQC), integrated health care services programs, rural obstetric networks, telehealth, and rural maternal training demonstration projects. The health care provider training requirements are focused on reducing and preventing discrimination, including both implicit and explicit bias, in delivery of maternal and infant care. A two-year study is required for evaluation of the anti-discrimination training program. The CDC is directed to oversee the PQC grant program to establish and support the PQCs to identify, develop and disseminate maternal and infant health best practices. The legislative language for the PQC direction echoes the work of the California Maternal Quality Care Collaborative, which has been held up by

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[78] Excellence in Maternal Health Act of 2019, H.R. 4215, 116th Cong. (2019-2020).
[79] Rural Maternal and Obstetric Modernization of Services Act or the Rural MOMS Act, S. 2373, 116th Cong. (2019-2020).
[80] Maternal Health Quality Improvement Act of 2020, 116 H.R. 4995, 116th Cong. (2019-2020).

President-elect Biden as a potential national model.[81] The integrated health care services grants are focused on coordinating multi-disciplinary allied and community health[82] providers in providing pregnancy and postpartum related care. The rural obstetric network grants focus on improvement to maternal and infant care and *reducing preventable maternal mortality* by improving access to care. The rural obstetric network grants include training for health care professionals that are not maternity experts, the use of telehealth, and strategies to reduce disparities in maternal health outcomes.

This MHQI Act of 2020 comprises elements from two other legislative proposals. Significantly, the elements adopted from the Excellence Act provide for improvements in perinatal care, for preventative measures, and reducing discrimination via health care professional training. The Excellence Act also provides grants for "identifying, developing or disseminating best practices to improve maternal health care quality and access, [and] eliminate preventable maternal mortality."[83] The Rural MOMS Act proposes funds for the Health Resources and Services Administration (HRSA) to implement six provisions: innovation networks, home-visiting programs, collaboration among health facilities, health professional training, collaboration with academic institutions, and measurement of disparities.[84] Plus, the Rural MOMS Act intended to provide grants for maternity training for non-maternity care health professionals and support

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[81] Michelle Long et al., "The 2020 Presidential Election: Implications for Women's Health," https://www.kff.org/womens-health-policy/issue-brief/the-2020-presidential-election-implications-for-womens-health/ Kaiser Family Foundation, Women's Health Policy, (Published October 15, 2020).
[82] The MHQI Act of 2020 discusses community-based health workers and home visitors, and people of racial and ethnic minority populations. These would include promotoras in Hispanic and Latino communities, Tribal Community Health Representatives, as well as community health workers, social workers, behavioral health providers, and substance use counselors.
[83] Excellence in Maternal Health Act of 2019, H.R. 4215, 116th Cong. (2019-2020).
[84] *Id.*

academic programs to improve rural maternity care.[85] All of the Excellence Act and Rural MOMS Act provisions have been incorporated into the MHQI Act of 2020.

The House Committee on Energy and Commerce amended the MHQI Act of 2020 and passed it on Sept 17, 2020. In its report, statistics from the CDC on maternal mortality are listed and the text includes a description of the CDC-identified contributing cardiovascular conditions.[86] This indicates Congressional awareness of the contributing conditions. The combined proposal under the Maternal Health Quality Improvement Act of 2020[87] aligns Congressional intent with CDC recommendations for focusing on preventative care. In at least two places in the bill text, it mentions reducing preventable maternal mortality. It does not, however, mention prevention of the specific CDC-identified cardiovascular conditions.

E. States as innovation incubators for effective federal policy solutions to reduce maternal mortality.

Many states have initiated maternal health improvement and mortality reduction projects under federal funding for such demonstration projects. The CDC currently funds thirteen state Perinatal Quality Collaboratives. The Perinatal Quality Collaboratives identify processes for improvement in maternal and infant health care delivery.[88] The CDC also funds the Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM) program which supports Maternal Mortality Review Committees across the nation.[89] These committees are focused on data collection and analysis. The California Perinatal Quality Care Collaborative is a state-based and

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[85] *Id.*
[86] H.R. Rep. No. 116-514, at 9 (2020).
[87] Maternal Health Quality Improvement Act of 2020, 116 H.R. 4995 (2019-2020).
[88] Centers for Disease Control and Prevention, Perinatal Quality Collaboratives, https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pqc.htm (Page last reviewed November 13, 2020).
[89] Centers for Disease Control and Prevention, Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM), https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/index.html (Page last reviewed February 26, 2020).

state-funded project founded in 1997 by the California Association of Neonatologists.[90] By engaging maternal health professionals to guide and drive their work in four specific maternal and infant health care areas,[91] the California collaborative has cut their state maternal mortality rate in half.[92] President-elect Joe Biden has mentioned the California collaborative as a possible national model for addressing maternal mortality.[93] Evaluation and investment in these initiatives may lead to innovations that can inform federal policy for national application.

Several states have adopted legislative proposals to address reducing maternal mortality. In some states, these efforts have focused on convening stakeholders and those knowledgeable about the maternal health to collect and analyze data, develop options, and even act in the capacity of innovation incubators in developing effective interventions and laboratories[94] for health care systems to improve outcomes. In other states, funding has been allocated to implement interventions with evaluation strategies to further determine successful efforts. If state level efforts are successful, they may provide more foundation to persuade Congress to enact federal legislative proposals to reduce maternal mortality.

There has been research into state level data by the CDC demonstrating a national increase in maternal mortality most significantly between 2008 and 2014 among "non-Hispanic Black women, of lesser magnitude in Native American and non-Hispanic white women, and was not

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[90] California Perinatal Quality Care Collaborative, Who We Are, https://www.cpqcc.org/about/who-we-are (Retrieved December 9, 2020).
[91] California Perinatal Quality Care Collaborative, What We Do, https://www.cpqcc.org/about/what-we-do (Retrieved December 9, 2020).
[92] Michelle Long et al., "The 2020 Presidential Election: Implications for Women's Health," https://www.kff.org/womens-health-policy/issue-brief/the-2020-presidential-election-implications-for-womens-health/ Kaiser Family Foundation, Women's Health Policy, (Published October 15, 2020).
[93] *Id*.
[94] *Vacco v. Quill,* 521 U.S. 793, 796, 809 (1997) (Reference to Justice Sandra Day O'Connor's Concurring Opinion).

seen in Asian or Hispanic women."[95] While this research is of note, the paper presenting the longitudinal meta-analysis was retracted as the data use was unauthorized.[96] There is a need for such research in the future to better inform policy development for the greatest impact.

1. Investment in state Perinatal Quality Collaboratives by the Centers for Disease Control and Prevention to reduce maternal mortality.

The CDC currently funds 13 state Perinatal Quality Collaboratives. The Perinatal Quality Collaboratives identify processes for improvement in maternal and infant health care delivery.[97] The CDC has funded state PQCs under their Division of Reproductive Health in Colorado, Delaware, Florida, Georgia, Illinois, Louisiana, Massachusetts, Minnesota, Mississippi, New Jersey, New York, Oregon, and Wisconsin. In addition to direct funding for the 13 PQCs, the CDC also coordinates and supports the National Network of Perinatal Quality Collaboratives for sharing best practices for improvements in maternal care.[98] The PQCs have wide breadth to choose the focus for each specific collaborative. The key elements of a PQC are a multi-disciplinary clinical health professional membership, inclusion of patients and community members, and

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[95] Amirhossein Moaddab et al., MD, *Health Care Disparity and State-Specific Pregnancy-Related Mortality in the United States, 2005-2014*, Amer. Coll. Obstet. & Gynecol., Vol. 128, No. 4, Oct. 2016. (Retracted due to unauthorized release of state-specific data.)

[96] *Id.* This research investigation into differing state rates of maternal mortality found two main contributory factors, a higher "proportion of non-Hispanic black" pregnancies and "[r]acial disparities in health care availability, or utilization by underserved populations."[96] Other state-level factors found to correlate with higher rates included "Cesarean deliveries, unintended births, unmarried status, […] and four or less prenatal visits."[96] The initial publication of this data was retracted due to unauthorized release of state-level data, so no specific data shall be quoted here. However, the results of such longitudinal meta-analysis of state-level data provides guidance for effective policy development in addressing those factors with most potential for impact.

[97] Centers for Disease Control and Prevention, Perinatal Quality Collaboratives, https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pqc.htm (Page last reviewed November 13, 2020).

[98] Centers for Disease Control and Prevention, National Network of Perinatal Quality Collaboratives, https://www.cdc.gov/reproductivehealth/maternalinfanthealth/nnpqc.htm (Page last reviewed: July 3, 2018).

stakeholder participation—including public health leaders.[99] There is no directive around addressing the CDC-identified contributing cardiovascular conditions.

The CDC's PQC list of successes includes:[100]

1) North Carolina: Reduced infant bloodstream infections.
2) Massachusetts: Increased the rate of breast milk feeding pre-term infants by 15%.
3) Ohio: Improvements to birth registry data.
4) New York: Improved the rates of babies born full-term.[101]
5) Illinois: Reduced severe pregnancy complications by 27% by focusing on improving maternal hypertension care, and preeclampsia and eclampsia response and treatment.
6) California: Reduction of maternal mortality related to preeclampsia (high blood pressure during pregnancy).[102]

The successes listed are all important. However, only two states have PQC initiatives that directly reflect the CDC-identified preventable cardiovascular conditions that contribute to maternal mortality.

2. States Participating in Maternal Mortality Review Commissions to collect and analyze state-level data.

The CDC funded the Nine Maternal Mortality Review Committees project to evaluate state data from diverse sources over several years in the 2000s to determine the potential opportunities

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[99] Centers for Disease Control and Prevention, Perinatal Quality Collaboratives, https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pqc.htm (Page last reviewed November 13, 2020).

[100] *Id.*

[101] The New York PQC reduced the number of scheduled C-sections in a number of ways to improve the rate of full-term births. One of the interventions was to identify which patients were medically indicated for pre-term birthing, which *could* indicate some effort to identify the CDC-identified conditions. This was not clearly reported in the New York PQC information.

[102] Although the California Maternal Quality Care Collaborative (CMQCC) was founded in 1997, the CDC funded it to launch the California Maternal Data Center in 2012 and, therefore, lists this success on their web site. The Data Center supports the greater work of the CMQCC which has long been focused on the CDC-identified conditions.

for standardizing data collection to identify preventable causes of pregnancy-related deaths.[103] The CDC has been expanding the program due to successes. A Maternal Mortality Review Committee (MMRC) is a group of diverse health professionals and advocates in a city or state that, in partnership with the CDC, review data collected on deaths of women within a year of the end of pregnancy.[104] The data from the Nine was then reevaluated when five additional states were added to the project and the CDC issued a report on data from those 14 states in 2019 from 2008 – 2017.[105] The report on the data from the 14 states indicated that two of three pregnancy-related deaths were preventable and pointed significantly to cardiovascular conditions.[106] There are now 25 states with CDC funding under the Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM) program which supports MMRCs focused on data collection and analysis across the U.S.[107]

The original nine states with CDC-funded initiatives contributed their surveillance data from vital statistics using state and local MMRCs to create a joint report in 2018.[108] The nine states included were Colorado, Delaware, Georgia, Hawaii, Illinois, North Carolina, Ohio, South

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[103] Building U.S. Capacity to Review and Prevent Maternal Deaths. (2018). Report from Nine Maternal Mortality Review Committees, http://reviewtoaction.org/Report_from_Nine_MMRCs (Retrieved Oct 13, 2010).
[104] Centers for Disease Control and Prevention, Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM), https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/index.html (Page last reviewed February 26, 2020).
[105] Nicole Davis et al., Pregnancy-Related Deaths: Data from 14 U.S. Maternal Mortality Review Committees, 2008-2017, Atlanta, GA Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, 2019, https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/mmr-data-brief.html (Page last reviewed September 4, 2019).
[106] *Id.*
[107] Centers for Disease Control and Prevention, Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM), https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/index.html (Page last reviewed February 26, 2020).
[108] Building U.S. Capacity to Review and Prevent Maternal Deaths. (2018). Report from Nine Maternal Mortality Review Committees, http://reviewtoaction.org/Report_from_Nine_MMRCs (Retrieved Oct 13, 2010).

Carolina, and Utah.[109] The CDC added additional state data and issued a data brief in 2019 summarizing the findings.[110] The highlights included the following key findings:

- Approximately 1 in 3 deaths among women during or within a year of pregnancy were pregnancy-related;
- Pregnancy-related deaths occurred during pregnancy, delivery, and up to a year postpartum;
- Leading causes of pregnancy-related deaths varied by race/ethnicity;
- Two out of three were determined to be preventable.[111]

Fourteen states comprised the next CDC-funded MMRC project iteration including the original nine and adding Arizona, Florida, Louisiana, Mississippi, and Tennessee.[112] The years of data submitted by states varied in the reports and some states only submitted partial year data, but because the data evaluation was looking for preventable factors contributing to pregnancy-related deaths and not trends over time, this was not a concern for the results.[113] The report from the 14 states indicated as many as 65.8% of pregnancy-related deaths were preventable.[114] The top contributing conditions include the cardiovascular conditions of coronary artery disease, pulmonary hypertension, valvular heart disease, vascular embolism, hypertensive cardiovascular disease, and other cardiovascular disease, plus hemorrhage, embolism, cardiomyopathy, and

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[109] *Id.*
[110] Nicole Davis et al., Pregnancy-Related Deaths: Data from 14 U.S. Maternal Mortality Review Committees, 2008-2017, Atlanta, GA Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, 2019, https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/mmr-data-brief.html (Page last reviewed September 4, 2019).
[111] *Id.*
[112] *Id.*
[113] Building U.S. Capacity to Review and Prevent Maternal Deaths. (2018). Report from Nine Maternal Mortality Review Committees. Retrieved Oct 13, 2010 from http://reviewtoaction.org/Report_from_Nine_MMRCs.
[114] Nicole Davis et al., Pregnancy-Related Deaths: Data from 14 U.S. Maternal Mortality Review Committees, 2008-2017, Atlanta, GA Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, 2019, https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/mmr-data-brief.html (Page last reviewed September 4, 2019).

preeclampsia and eclampsia.[115] Other non-cardiovascular contributing conditions were infection and mental health conditions.[116]

These two reports support the importance of consistent data surveillance for identification of preventable conditions and development of recommendations. Varying definitions and data reporting practices were identified resulting in later attempts to standardize data collection over time and among states. However, the report is limited by its retrospective nature in evaluating current practices at a moment in time. It is useful to evaluate data collection and evaluation issues when there is lack of consistency in how parameters are defined—what is pregnancy-related—and how those indicators may be recorded in differing record sets—death certificates v. autopsy reports. There are now 24 states with MMRCs that have engaged in using a data system to facilitate "common data language."[117] This CDC-funded initiative has started the process of standardizing data reporting and collection on maternal mortality indicators. The ERASE MM data system acts as a data repository for analysis and evaluation for deepening the understanding of causes and developing strategies for preventing maternal deaths.[118] The limitations of the MMRCs and the ERASE MM programs are that they are retroactively looking at data.

3. The California Maternal Quality Care Collaborative.

The California Maternal Quality Care Collaborative (CMQCC) may provide a national model for identifying high-risk pregnancy and improvement of diagnosis and treatment to reduce

[115] *Id.*
[116] *Id.*
[117] Centers for Disease Control and Prevention, Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM), https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/index.html (Page last reviewed February 26, 2020).
[118] *Id.*

maternal mortality.[119] The CMQCC is a state-based and state-funded project founded in 1997 by the California Association of Neonatologists.[120] By engaging maternal health professionals to guide and drive their work in four specific maternal and infant health care areas,[121] the California collaborative has cut their state maternal mortality rate in half.[122]

The CMQCC developed a system[123] for scoring conditions called maternal comorbidities, which means conditions that impact one another. Pregnancy is a health condition as are hypertension, heart disease, diabetes, atrial fibrillation, etc. Any condition that impacts pregnancy would then be a comorbidity of pregnancy. The comorbidities the CMQCC identified as most significant align with CDC recommendations on cardiovascular prevention, plus they include placenta accreta spectrum.[124] Placenta accreta spectrum is a condition contributing to maternal mortality where the placenta abnormally adheres into the uterine wall and causes hemorrhage upon delivery.[125] Under funding from the CDC in 2012, the CMQCC launched a Maternal Data Center for online use for "near real-time data and performance metric [for] maternity care services."[126]

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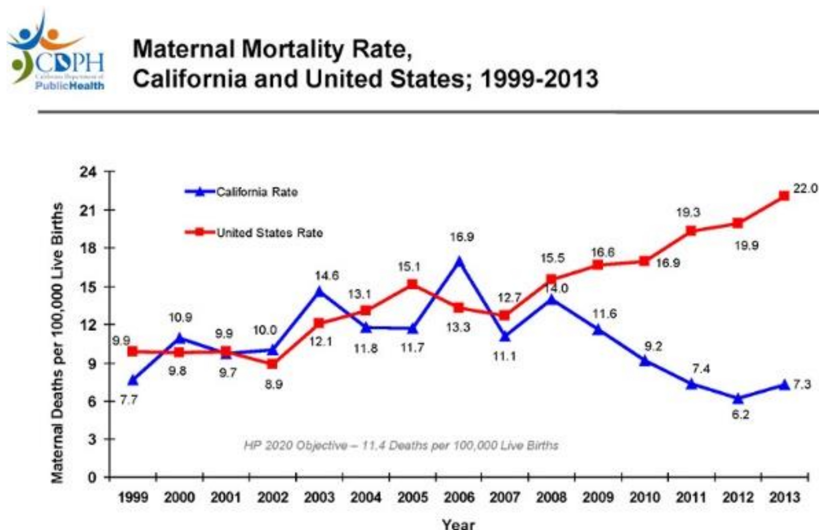
[119] California Maternal Quality Care Collaborative Obstetric Comorbidity Scoring System, https://www.cmqcc.org/research/severe-maternal-morbidity/obstetric-comorbidity-scoring-system (updated March 6, 2020).
[120] California Perinatal Quality Care Collaborative, Who We Are, https://www.cpqcc.org/about/who-we-are (Retrieved December 9, 2020).
[121] California Perinatal Quality Care Collaborative, What We Do, https://www.cpqcc.org/about/what-we-do (Retrieved December 9, 2020).
[122] Michelle Long et al., "The 2020 Presidential Election: Implications for Women's Health," https://www.kff.org/womens-health-policy/issue-brief/the-2020-presidential-election-implications-for-womens-health/ Kaiser Family Foundation, Women's Health Policy, (Published October 15, 2020).
[123] Stephanie A. Leonard et al., *An Expanded Obstetric Comorbidity Scoring System for Predicting Severe Maternal Morbidity*, 136(3) Obstetrics and Gyn., Sep. 2020, at 440.
[124] California Maternal Quality Care Collaborative Obstetric Comorbidity Scoring System, https://www.cmqcc.org/research/severe-maternal-morbidity/obstetric-comorbidity-scoring-system (updated March 6, 2020).
[125] *Placenta accreta spectrum*, Obstetric Care Consensus No. 7, Amer. Coll. Obstet. & Gynecol., Vol. 132 at 259 (2018). Published concurrently in Amer. Jrnl. of Obstet. & Gynecol., Dec 2018.
[126] California Maternal Quality Care Collaborative Maternal Data Center, https://www.cmqcc.org/maternal-data-center (Retrieved October 13, 2020).

The Maternal Data Center tool has been used to generate real-time metrics[127] that allow hospitals to identify and correct deficiencies[128] in maternal care practices in a timely manner. Washington and Oregon hospitals participate in the Maternal Data Center in addition to hospitals in California.[129] The CMQCC operates a maternal mortality review for California and has seen a decline in maternal mortality of 55% between 1999 and 2013 (see Chart 1). The CMQCC focus closely aligns with the CDC-identified cardiovascular conditions contributing to maternal mortality.

Chart 1.[130]



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[127] Metrics in this context are data or information that are meaningful to delivery of care and comparable across providers and/or to standards that, if followed, will result in optimal care and improved health outcomes.
[128] Identification and correction of medical practices in this context is called data-driven quality improvement. The CMQCC develops toolkits for the quality improvement initiatives based on research through the Maternal Data Center so that the participating hospitals can make internal changes based on real performance and outcomes.
[129] California Maternal Quality Care Collaborative Maternal Data Center, https://www.cmqcc.org/maternal-data-center (Retrieved October 13, 2020).
[130] Source: State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1999-2013.

II. Maternal Mortality Policies Compared to CDC Recommendations.

Federal policy should be expected to reflect the evaluation of data and the development of recommendations by the federal agency charged with such duties. Legislation drafted by Congress to solve or address scientific problems or issues should be evidence based and data driven.[131] The CDC is the federal agency which has for decades been tracking maternal mortality data and issuing recommendations for strategies based on the medical conditions that most significantly contribute to maternal mortality in the United States. The CDC-identified conditions are cardiovascular and include hypertensive disorders, postpartum hemorrhage, and deep vein thrombosis or pulmonary embolism in the top three preventable pregnancy-related death causes. Federal grants to states have provided funding for localized initiatives to reduce maternal mortality resulting in similar findings to the CDC in underlying medical causes. Local projects have also added an array of social determinants of health to the contributing factors for maternal mortality. The social determinants of health—the places people live, work and play—are most often overlooked in federal policy. Federal policies for reducing maternal mortality, enacted and proposed, vary in impact on the CDC-identified contributing conditions and the social determinants of health.

Federal policies vary in alignment with CDC recommendations and mostly fall short. Neither enacted law from the 115th Congress address the CDC-identified cardiovascular conditions. Pending proposals in the 116th Congress have room for amendment to more effectively target the underlying causes of maternal mortality in the United States. State projects have generated innovations for programs to reduce maternal mortality. The state projects need to move

[131] *See* Section C. Discussion on stalled Senate proposals: Modernizing Obstetric Medicine Standards Act of 2019 (also known as the MOMS Act), S. 116, 116th Cong. (2019) and Mothers and Offspring Mortality and Morbidity Awareness Act (also known as the MOMMA's Act), S. 916, 116th Cong. (2019).

from data collection and evaluation into action. The California model is an example of a successful state program and may have potential for national application. Federal policies have an opportunity to incorporate lessons from both the large body of CDC work and state projects.

A. Federal Policy to Reduce Maternal Mortality in Light of CDC Indicators.

Decades of data and evaluation has led the CDC to create specific indicators that contribute to maternal mortality. These indicators include three cardiovascular conditions to which 60% of preventable pregnancy-related deaths in the United States can be attributed. These conditions—hypertensive disorders including preeclampsia, postpartum hemorrhage, and deep vein thrombosis and embolism—can be prevented and managed if they are diagnosed and treated. The two existing federal policies codified into law fall short of meeting the expectations raised by the work of the CDC and the results of state projects. The two bills pending before the 116th Congress expand efforts toward CDC recommendations, but still fall short of addressing the specific underlying factors contributing to maternal mortality. These four federal policies provide opportunities due to increased Congressional awareness of the maternal mortality crisis to include the CDC-identified cardiovascular conditions in future policy language.

1. The Preventing Maternal Deaths Act of 2018.

The Preventing Maternal Deaths Act of 2018[132] was passed into law to support states in reducing disparities and improving maternal health quality and outcomes. The Act as introduced in 2017 refers to the CDC in the citation of findings by saying that the increase in U.S. maternal mortality rates by 26.6 percent between 2000 and 2014 is "a source of great concern" for the agency.[133] The CDC indicators identified as most significant and preventable contributors to maternal mortality are listed in the Congressional findings: hemorrhage, hypertensive disease and

[132] Preventing Maternal Deaths Act of 2018, H.R. 1318, 115th Cong. (2nd Sess. 2018).
[133] Preventing Maternal Deaths Act of 2017, H.R. 1318, 115th Cong. (1st Sess. 2017).

preeclampsia, embolic disease, and non-cardiovascular causes.[134] The version passed into law provides support via the CDC to state maternal mortality review committees (MMRC) rather than grants to establish the MMRCs, and there is no mention of the specific CDC indicators in the final version codified into law.[135] The enacted version defines pregnancy-related deaths to be considered by states as "the death of a woman while pregnant or during the one-year period following the date of the end of pregnancy."[136] The question, then, is whether and how this Act reaches the CDC-defined conditions that most significantly contribute to maternal mortality.

The first purpose of this law is to support state-level data collection committees to review maternal mortality and pregnancy-related deaths. However, the CDC is the federal agency that has been charged with data collection, evaluation, and development of policy and program recommendations for decades. States have been collecting such data and reporting it to the CDC for compilation and development of these recommendations. The first prong of this Act does not appear to do anything new programmatically, but it does add in a directive for identifying disparities and groups of women with disproportionally high rates of maternal mortality. It also serves to highlight the need for data and evaluation to inform policy development. All states that participate in the MMRC program are required to confidentially report their data to the CDC, and, to the extent practicable, identify contributing causes of pregnancy-related deaths. There is no requirement to track the CDC-identified contributing causes, nor are they mentioned.

The only way for the directives of this Act to reach the three most significant contributing conditions for maternal mortality are if the states find localized data indicating the conditions are prevalent in their state data. Even if the conditions of hypertensive disorders, postpartum

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[134] *Id.*
[135] Preventing Maternal Deaths Act of 2018, H.R. 1318, 115th Cong. (2nd Sess. 2018).
[136] *Id.*

hemorrhage, and deep vein thrombosis or pulmonary embolism are identified as prevalent in a state data set, there is no directive for prioritizing strategies to address them. The Act only refers to improving quality of maternal health care and outcomes. There is no surety that a state will adopt improvements that will reach the CDC-identified conditions in any meaningful way. This Act is focused on data collection and reporting without parameters to ensure the top CDC-identified contributing conditions to maternal mortality are addressed.

2. The Improving Access to Maternity Care Act.

The Improving Access to Maternity Care Act[137] was passed into law by Congress in 2018 and provides incentives for maternity health care professionals to locate in underserved areas. Distribution of health care providers is a long recognized and effective means to improve patient access to health care.[138] There are many programs across the United States that encourage health care providers to locate in underserved areas, such as tuition reduction or forgiveness in return for agreements to locate and practice in health care for a term of years in a Health Resources and Services Administration Medically Underserved Area or Population[139]. This law does not do anything new. There is some evidence that regional increases in maternal health providers may be associated with lower maternal mortality rates.[140] Those findings correspond with known improvements in health outcomes where the numbers of health providers are increased. The law highlights the need for increased providers specifically in maternal health care, thus, improving

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[137] Improving Access to Maternity Care Act, H.R. 315, 115th Cong. (2nd Sess. 2018).
[138] U.S. Health Resources & Services Administration, Health Workforce, Shortage Designation, https://bhw.hrsa.gov/shortage-designation (Date Last Reviewed: May 2020).
[139] HRSA Health Workforce, Medically Underserved Areas and Populations (MUA/Ps), https://bhw.hrsa.gov/shortage-designation/muap (Revised May 2020).
[140] John E. Synder, M.D., M.S., M.P.H. et al., *Regional Variations in Maternal Mortality and Health Workforce Availability in the United States*, Annals of Internal Med., Dec 2020, at S45, S45, (Retrieved from https://doi.org/10.7326/M19-3254).

access which may improve outcomes with reduced maternal mortality. The law does not mention the CDC-identified contributing conditions.

The law fails to provide any specific requirements around addressing the CDC-identified contributing factors for maternal mortality. There are no provisions for training maternal health providers in preventative care or management of the CDC-identified cardiovascular conditions or identification of maternal patients who may be at risk for such conditions. There are no provisions for any interdisciplinary consultation or intervention should such conditions be identified. This law does not directly reach the CDC-identified contributing conditions, but it may improve outcomes indirectly by improving access to maternal health services. By improving access, the law reaches social determinants of health in maternal health care. Increasing available providers via distribution in underserved areas and populations where factors such as transportation, environmental exposure, education, health behaviors, and socioeconomic status—among others—contribute to lack of access to health care. The Improving Access to Maternity Care Act may not directly reach the CDC contributing conditions, but it builds on known effective strategies to address the maternal mortality crisis. This law needs additional bolstering with direction for the maternal health providers to be trained on diagnosis of the CDC-identified contributing conditions, and either prevention and management or referral for at-risk patients.

3. The Helping Medicaid Offer Maternity Services Act of 2020 or the Helping MOMS Act of 2020.

The Helping MOMS Act of 2020[141] has some traction in Congress and would expand Medicaid eligibility to women to one-year postpartum. Coupled with the Improving Access to Maternity Care Act[142], the Helping MOMS Act of 2020 could significantly improve access for

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[141] Rural Maternal and Obstetric Modernization of Services Act or the Rural MOMS Act, S. 2373, 116th Cong. (2019-2020).
[142] Improving Access to Maternity Care Act, H.R. 315, 115th Cong. (2nd Sess. 2018).

pregnant and postpartum women to maternal health services. Medicaid coverage would remove the financial burden from women who may not otherwise qualify for or be able to afford maternity care insurance. This increased access may allow more women to receive critical prenatal and postpartum care to increase the likelihood of identifying the CDC contributing conditions and consultation with or referral to appropriate health care providers to manage their risk factors for hypertensive disorders, postpartum hemorrhage, and deep vein thrombosis or pulmonary embolism, thus reducing the risk of pregnancy-related death and maternal mortality. This Act would have indirect, but potentially significant, impact on the CDC-identified contributing conditions for maternal mortality by generally increasing access to maternal health care. The Helping MOMS Act of 2020 also reaches into the social determinants of health by creating a mechanism to remove the barrier of cost of health care from pregnant and postpartum women.

4. The Maternal Health Quality Improvement Act of 2020.

The Maternal Health Quality Improvement Act of 2020[143] (MHQI Act of 2020) has gained traction in Congress, passing the House late in 2020. It incorporates two other Acts: the Excellence in Maternal Health Act of 2019[144] and the Rural MOMS Act.[145] Collectively, the MHQI Act of 2020 would provide additional grants to states for improvement in rural maternal health with a focus on identification and development of successful models for collaborative maternal health care delivery, provision of training for health facilities, and use of data to address inequities in birth outcomes, plus it provides grants for demonstration projects for rural-serving maternal health care workforce development.

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[143] Maternal Health Quality Improvement Act of 2020, 116 H.R. 4995, 116th Cong. (2019-2020).
[144] Excellence in Maternal Health Act of 2019, H.R. 4215, 116th Cong. (2019-2020).
[145] Rural Maternal and Obstetric Modernization of Services Act or the Rural MOMS Act, S. 2373, 116th Cong. (2019-2020).

While the MHQI Act of 2020 does not directly address the three cardiovascular conditions identified by the CDC as the most significant contributors to maternal mortality, it does address some aspects of social determinants of health. The Act supports models of collaboration between maternal health facilities and rural health facilities as well as academic institutions with regional data expertise. There is potential that, if such provisions are implemented collaboratively, patients will have increased access to general health care and greater chance of the CDC-identified contributing conditions to be recognized and managed. However, there is no mandate or recommendation to include maternity-related cardiovascular complications in the collaborative models.

The provisions of the Act include maternal and obstetric training for general health care providers in rural areas. General health providers have greater training in cardiovascular conditions than maternal health specialists, both in prevention and management, due to the high prevalence of such conditions in the general population. By cross-training general providers in maternal health services the chance is increased that there will be increased rates of recognizing the cardiovascular risk factors in their pregnant patients. However, this is an assumption. Assumptions beg for testing and evaluation. There is no provision in the Act to include any training specific to identification or management of the CDC-identified conditions: hypertensive disorders, postpartum hemorrhage, or deep vein thrombosis or pulmonary embolism in the training demonstration projects. This is an opportunity for amendment to include language directing administrators of the programs to require training on diagnosis of the CDC-identified contributing cardiovascular conditions, and prevention and management or referral for at-risk patients.

As with the enacted Improving Access to Maternity Care Act in 2018, the MHQI Act of 2020 would indirectly reach social determinants of health in rural settings. It provides for

increasing the number of rural providers trained in maternity care by including maternity and obstetrics training for general practitioners in rural areas. It also supports academic programs targeted to improve rural maternity care. With these provisions, this Act would continue to build on known successful strategies where increases in health care providers in underserved areas and populations increases access to care, a social determinant of health, and produces better health care outcomes in general.

The MHQI Act of 2020 has potential to address the CDC-identified cardiovascular conditions contributing to maternal mortality through the myriad grant programs it includes. A challenge will be for the bill to pass the Senate with such high potential for funding allocation to support all of the grant programs. There is both opportunity and challenge in the Act. If the providers are trained to recognize and timely treat and manage the cardiovascular conditions that most contribute to maternal mortality, the health professional cross-training grants within the Act could make significant impact on reducing pregnancy-related deaths. If the perinatal quality collaboratives are funded with stipulations that they must focus on the cardiovascular conditions as a priority, the initiatives could make significant impact on reducing maternal mortality. There are good bones in this Act, but they could use more flesh on them to ensure the implementation of the provisions align with the CDC recommendations.

B. State Efforts to Reduce Maternal Mortality in Light of CDC Indicators.

In all of the federal policies, implementation is carried out by the States. The CDC provides support, coordination, and connection among state projects. When the CDC makes financial awards to state programs, it can require that specific indicators to be addressed by the funded states. The actual grant funding language for states was removed from the Preventing Maternal Deaths Act of 2018 prior to being enacted. Here, this article examines how the CDC has promoted its recommendations on reducing maternal mortality. Two CDC programs that are supported by the

agency and include state funding awards are the ERASE MM and the Perinatal Quality Collaborative programs. Plus, California has one of the oldest maternal mortality initiatives that was founded independently by maternal health professionals and the State of California in a private-public partnership. The question is which approach best addresses the CDC-identified preventable cardiovascular conditions that most contribute to maternal mortality.

1. CDC-funded State Initiatives and the CDC Indicators.

The ERASE MM program supports 24 State maternal mortality review committees (MMRCs). The MMRCs collect state data from a variety of sources including birth and death records, medical records, and other sources to identify the underlying causes of death of pregnant and postpartum women. The MMRCs then evaluate the data to identify pregnancy-related deaths and report those with their causes; this excludes those who die of other causes such as accidental deaths. One limitation of the MMRCs is that they operate retrospectively in evaluating deaths that have already occurred. Another limitation is the high variance in data from collection via differing records, systems using differing recording methods, and States varying from one another in how they record or report pregnancy-related death data. The CDC ERASE MM program has taken significant steps to coordinate the MMRCs and to establish a standardized system of data collection and evaluation. While this work is critical to understanding and tracking maternal mortality and morbidity rates for the United States, it is slow. The data may identify gaps or areas for potential improvement in care, and strategies could be developed based on those deficiencies highlighted in the data. However, this program has no mechanism for implementation with either grants or mandates for health delivery systems to cooperate with any recommendations made. The ERASE MM program and its data system is necessary but will not have a significant impact in reducing maternal mortality on its own in the near future.

The CDC-funded Perinatal Quality Collaborative (PQC) program supports 13 state collaboratives. The state PQCs convene multidisciplinary maternity health professionals, patient and community members, and public health leaders to identify and address maternal and infant health issues specific for their states. As illustrated in the previous section, each state defines its own priorities which most often do not align with the CDC-identified preventable cardiovascular conditions that most contribute to maternal mortality.

2. The California Maternal Quality Care Collaborative and the CDC Indicators.

The California Maternal Quality Care Collaborative (CMQCC) has been a leader in reducing maternal mortality in its state. The success of a 55% reduction of maternal mortality between 1999 and 2013 is impressive. The CMQCC has run its own maternal mortality review to track data in California and launched the CDC-funded Maternal Data Center in 2012. Unlike the ERASE MM data system, the Maternal Data Center provides nearly real-time data on maternal health care delivery indicators. This allows health care providers in participating hospitals to identify and correct insufficient practices immediately through data-driven quality improvement initiatives. The data indicators identified by the CMQCC as most relevant to track are cardiovascular, accounting for 25% of pregnancy-related deaths in California between 2002 and 2006. The CMQCC also notes these deaths are preventable. In response to this, the CMQCC published the *Improving Health Care Response to Cardiovascular Disease in Pregnancy and Postpartum* Toolkit in 2017.[146] The CMQCC best aligns and impacts the CDC-identified preventable cardiovascular conditions that most contribute to maternal mortality of all the policies and programs considered here.

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[146] California Maternal Quality Care Collaborative, Improving Health Care Reponse to Cardiovascular Disease in Pregnancy and Postpartum, https://www.cmqcc.org/resource/improving-health-care-response-cardiovascular-disease-pregnancy-and-postpartum (Date Published: November 30, 2017).

Finally, the CMQCC includes a birth equity collaborative focused on improving care, experiences, and outcomes for Black Mothers. This CMQCC program is in the pilot phase. If the CMQCC approach was adopted as a national model, inclusion of the birth equity work would provide opportunity to continue the discussion flowing from the Black Momnibus Act and incorporate those principles into all state collaboratives.

III. Conclusion.

Bringing the Maternal Health Quality Improvement Act of 2020 (MHQI Act of 2020) together with the model from the California Maternal Quality Care Collaborative (CMQCC) provides the strongest opportunity for Congress to reduce maternal mortality in the U.S. The nation needs more standardized and reliable data collection and evaluation, and more providers trained in maternal health in underserved areas. Coupling the grant programs in the MHQI Act of 2020 with the framework of the CMQCC and requiring focus on the cardiovascular conditions would address the leading causes of pregnancy-related deaths. It has been shown that states will not necessarily choose to address the cardiovascular conditions contributing to maternal mortality. States cannot choose whether to focus on cardiovascular conditions because these conditions are known to contribute to the highest percentage of pregnancy-related deaths in the U.S. Now that the House proposals have passed, the Senate has an opportunity to amend the proposed Acts with the CDC recommendations to address the underlying cardiovascular conditions. The Senate could pull language from the findings in the Senate MOMS Act of 2019 and the MOMMA's Act (2019) to send the House the message that federal policy needs to align with expert recommendations. Marrying the CMQCC program implementation with the myriad grant programs proposed in the MHQI Act of 2020 would make an ideal policy proposal. Our nation has invested both money

and time—decades—into learning what causes our high maternal mortality rates. It is time to invest in policies that align with what experience and the data says will work.