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## NOTES

### INDIANA'S EFFORTS TO REDUCE MATERNAL MORTALITY: NECESSARY, BUT INSUFFICIENT

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#### I. INTRODUCTION

Nearly one-hundred women in Indiana die from a pregnancy-related complication each year.<sup>1</sup> Courtney Reimlinger, a twenty-three-year-old Indianapolis native was nearly one of them.<sup>2</sup> One week after delivering her son, she experienced excruciating chest pain that spread to her head and neck and resulted in periods of unconsciousness.<sup>3</sup> Courtney was rushed to a local hospital and was diagnosed with postpartum eclampsia, a pregnancy complication that when left untreated, can lead to seizures, strokes, organ damage, and even death.<sup>4</sup> After spending a week in the hospital for treatment, Courtney recovered.<sup>5</sup> Unfortunately, the same cannot be said for other Indiana women who live in one of the nation's worst states for maternal mortality.

#### A. The Issue

Maternal mortality is a leading indicator for the overall health quality of a

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1. Darian Benson, *Health Experts Discuss How to Lower Indiana's Maternal Mortality Rate*, WFYI (May 26, 2021), <https://www.wfyi.org/news/articles/health-experts-discuss-how-to-lower-indianas-maternal-mortality-rate> [<https://perma.cc/UA8M-6HZH>]. (Cisgender women are not the only people who may become pregnant, but I chose to use the term “woman” and “women” in this Note to refer to those who experience pregnancy because data collected around maternal mortality generally utilizes the categories of “woman” and “women.”).

2. Lauren Bavis, *Why New Mothers in Indiana are Dying at One of the Nation's Highest Rates*, SIDE EFFECTS (June 13, 2018, 6:00 AM), <https://www.sideeffectspublicmedia.org/community-health/2018-06-13/why-new-mothers-in-indiana-are-dying-at-one-of-the-nations-highest-rates> [<https://perma.cc/4PZN-YG48>].

3. *Id.*

4. *Id.*

5. *Id.*

population.<sup>6</sup> Multiple factors contribute to maternal mortality including barriers to health care access, missed or delayed diagnoses, racial and ethnic disparities, escalating maternal comorbidities, failure to recognize warning signs, and variable reporting statistics.<sup>7</sup> Despite an array of contributing factors, each death “reflects a web of missed opportunities” because the majority of maternal deaths are preventable.<sup>8</sup>

In the United States, maternal mortality has been the focus of recent national attention due to its high rates. Moreover, in 2018, Indiana ranked the third worst state in the U.S. with a maternal mortality rate of 43.6 deaths per 100,000 live births,<sup>9</sup> a rate nearly twice as high as neighboring states such as Kentucky, Ohio, Illinois, and Michigan, and twice as high as the national average.<sup>10</sup> By comparison, California, Massachusetts, and Nevada, have some of the lowest rates with 4.0, 8.4, and 8.4 deaths per 100,000 live births, respectively.<sup>11</sup> The variability in maternal mortality rates between states is just one example of why improving maternal mortality rates is a complex and challenging issue to improve. Even so, solutions exist that prove rates can be lowered if policymakers are willing to support a multifaceted approach.

This Note discusses policy efforts implemented by the federal government and other states to improve maternal mortality and morbidity rates, including the state of Indiana. To decrease Indiana’s maternal mortality rate, this Note first argues that policy changes must include funding doula support services for Medicaid eligible women, reviewing severe maternal morbidity events, expanding home visiting services, requiring implicit bias training for health care providers, and partnering with a statewide health information exchange. Part II describes the rise in maternal mortality over the past seventy years, including counting and identifying maternal deaths, as well as the causes and disparities in maternal mortality. Part III discusses federal and state legislative efforts to address maternal mortality. Part IV examines other states’ policy efforts to reduce maternal mortality rates. Part V analyzes and argues policies Indiana should adopt to decrease maternal mortality rates. Finally, part VI concludes by reiterating why Indiana’s efforts to improve maternal mortality are necessary, but insufficient to improve Indiana’s current unacceptable maternal mortality rate.

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6. *Indiana Maternal Mortality Review Committee: 2020 Annual Report*, IND. DEP’T. HEALTH 1, 16 (2020).

7. *Pregnancy-Related Deaths*, CTR. DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/vitalsigns/maternal-deaths/index.html> [<https://perma.cc/TG7G-5XGC>] (last updated May 7, 2019).

8. *Id.*

9. Laura Ungar & Carline Simon, *Which States Have the Worst Maternal Mortality?*, USA TODAY (Nov. 1, 2018, 2:26 PM), <https://www.usatoday.com/list/news/investigations/maternal-mortality-by-state/7b6a2a48-0b79-40c2-a44d-8111879a8336/> [<https://perma.cc/5KJ9-JQKE>].

10. Bavis, *supra* note 2.

11. Ungar & Simon, *supra* note 9.

## II. MATERNAL MORTALITY OVER THE LAST SEVENTY YEARS

To best understand maternal mortality and why this Note focuses on Indiana's unacceptable high rates, the following section provides details about how maternal mortality is defined and measured, causes of maternal mortality, disparities that exist, and how examining severe maternal morbidity may aid in preventing maternal deaths.

*A. A Premature Declared Victory*

In 1950, leaders in medical research made a bold and dramatic claim in the *Journal of the American Medical Association*—the fight to stop women from dying during childbirth had ended.<sup>12</sup> The Journal reported that what was once unthinkable, was achieved; the maternal mortality rate dropped to *one* per 1,000 live births.<sup>13</sup> For several decades, maternal mortality rates remained low as a result of healthier living conditions, improved maternity healthcare services, safer surgery procedures, and access to antibiotics.<sup>14</sup> Obstetric experts in the medical community believe this was a premature declared victory that led to a shift in focus from mothers to babies.<sup>15</sup> Infant mortality rates continue to reach historic lows, while maternal mortality rates continue to rise, leading some medical experts to conclude that the American health care system has prioritized infant survival over maternal care.<sup>16</sup> Today, the U.S. has the highest maternal mortality rate among developed countries.<sup>17</sup>

*B. Maternal Mortality and Morbidity Rates in the U.S.*

Almost seven-hundred women die each year as a result of complications during pregnancy or delivery.<sup>18</sup> According to the Centers for Disease Control and Prevention (“CDC”), about three in five pregnancy-related deaths are

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12. Renee Montagne, *To Keep Women from Dying in Childbirth, Look to California*, NAT'L PUB. RADIO (July 29, 2018, 8:02 AM), <https://www.npr.org/2018/07/29/632702896/to-keep-women-from-dying-in-childbirth-look-to-california> [<https://perma.cc/S634-ZH9A>].

13. *Id.*

14. Eugene Declercq & Laurie Zephyrin, *Maternal Mortality in the United States: A Primer*, COMMONWEALTH FUND (Dec. 16, 2020), <https://www.commonwealthfund.org/publications/issue-brief-report/2020/dec/maternal-mortality-united-states-primer> [<https://perma.cc/EES2-FL3L>].

15. Montagne, *supra* note 12.

16. *Id.* (Improvements in infant mortality rates have not kept pace with other developed countries.)

17. Roosa Tikkanen et al., *Maternal Mortality and Maternity Care in the United States Compared to 10 Other Developed Countries*, COMMONWEALTH FUND (Nov. 18, 2020), <https://www.commonwealthfund.org/publications/issue-briefs/2020/nov/maternal-mortality-maternity-care-us-compared-10-countries> [<https://perma.cc/NEP8-BNYK>].

18. Michael C. Lu, *Reducing Maternal Mortality in the United States*, 320 JAMA 1237, 1237 (2018).

preventable.<sup>19</sup> Further, an additional fifty-thousand women suffer from maternal morbidity, which includes short or long-term health consequences such as postpartum hemorrhage or hypertensive complications.<sup>20</sup> Perhaps even more troubling is that the COVID-19 pandemic has disrupted maternal health care by altering or cancelling prenatal visits and limiting some birth-related services.<sup>21</sup> In fact, the maternal mortality rate increased twenty-percent from 2019 to 2020, illustrating the potential impact the COVID-19 pandemic has had on worsening maternal mortality.<sup>22</sup> Moreover, understanding the true picture of maternal mortality can be difficult due to the different terms classifying maternal mortality and the different methods of counting maternal mortality.

### *1. Classifying and Counting Maternal Deaths*

The World Health Organization (“WHO”) defines maternal mortality as “the death of a woman while pregnant or within [forty-two] days of termination of pregnancy, irrespective of the duration and the site of pregnancy, from any cause related to, or aggravated by the pregnancy or its management, but not from accidental or incidental causes.”<sup>23</sup> This definition is used for international comparisons and is expressed as a ratio of deaths per one-hundred-thousand births.<sup>24</sup> More specific definitions are used to add value and context to the data regarding maternal mortality. For example, pregnancy-associated death is defined as “death while pregnant or within one year of the end of pregnancy, irrespective of the cause.”<sup>25</sup> Conversely, the CDC defines a pregnancy-related death as “the death of a woman while pregnant or within [one] year of the end of pregnancy[.]” regardless of the outcome, duration or site of the pregnancy, “from any cause

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19. *Pregnancy-Related Deaths*, *supra* note 7.

20. *Analysis of Federal Bills to Strengthen Maternal Health Care*, KAISER FAM. FOUND. (Dec. 21, 2020), <https://www.kff.org/womens-health-policy/fact-sheet/analysis-of-federal-bills-to-strengthen-maternal-health-care/> [<https://perma.cc/K5D7-PQKM>]; Nan H. Troiano & Patricia M. Witcher, *Maternal Mortality and Morbidity in the United States: Classification, Causes, Preventability, and Critical Care Obstetric Implications*, 32 J. PERINATAL & NEONATAL NURSING 222, 227 (2018).

21. Steven R. Johnson, *The U.S. Maternal Mortality Rate Surged by Nearly 20% in 2020*, U.S. NEWS & WORLD REP. (Feb. 23, 2022), <https://www.usnews.com/news/health-news/articles/2022-02-23/u-s-maternal-mortality-rate-surged-in-2020>.

22. *Id.*; see also Donna L. Hoyert, *Maternal Mortality Rates in the United States*, CTR. DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2020/maternal-mortality-rates-2020.htm> [<https://perma.cc/NA84-6MUM>] (last visited Mar. 20, 2023). (The U.S. maternal mortality rate increased from 20.1 deaths per 100,000 live births in 2019, to 23.8 deaths per 100,000 live births in 2020.)

23. Nan H. Troiano & Patricia M. Witcher, *Maternal Mortality and Morbidity in the United States: Classification, Causes, Preventability, and Critical Care Obstetric Implications*, 32 J. PERINATAL & NEONATAL NURSING 222, 223 (2018).

24. Tikkanen et al., *supra* note 17.

25. *Id.*

related to or aggravated by the pregnancy or its management” and generally excludes deaths due to injury.<sup>26</sup> In other words, pregnancy-associated deaths are a broader category representing *all* deaths that occur within one year of pregnancy, regardless of the cause, while pregnancy-related deaths are a more narrow category of deaths related to pregnancy or its management.<sup>27</sup> For example, a woman’s death caused by a motor vehicle accident within one year of pregnancy would *not* be counted as a pregnancy-related death, but it would be counted as a pregnancy-associated death.

Currently two national sources exist for capturing maternal death information. The first source, the National Vital Statistics System (“NVSS”), is part of the U.S. Federal Statistical System and reports the number of maternal deaths per one-hundred-thousand live births.<sup>28</sup> The NVSS utilizes two pieces of information to identify maternal death. One includes the pregnancy checkbox, and the other is a certified recording of the ICD-10 codes used to assign a maternal death, both of which are located in death records.<sup>29</sup>

The second source, the CDC’s Pregnancy Mortality Surveillance System (“PMSS”), is a more rigorous and in-depth review of death records than the NVSS, and the review is conducted by medical epidemiologists.<sup>30</sup> Similar to the NVSS, the PMSS examines death records for women of reproductive age, but it also incorporates media searches, reporting from public health agencies, and reporting from health care providers to identify maternal deaths from pregnancy through one year postpartum.<sup>31</sup> When the CDC began monitoring maternal deaths using the PMSS in 1987, the maternal mortality rate was 7.2 deaths per 100,000 live births.<sup>32</sup> By 2019, the U.S. rate had nearly tripled to 20.1 deaths per 100,000 live births, the highest among high-income countries.<sup>33</sup> The rising rates are even more troubling considering that during this time, global maternal mortality rates among high income countries declined.<sup>34</sup> For example, France has the next highest rate of 8.7 deaths per 100,000 live births, while New Zealand and Norway

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26. *Pregnancy Mortality Surveillance System*, CTR. DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm> [<https://perma.cc/YJ6W-NZ6D>] (last updated Nov. 25, 2020). The U.S. is the only country that utilizes the pregnancy-related deaths as a category and this measurement is usually reported as a ratio of deaths per one-hundred thousand live births.

27. IND. DEP’T. HEALTH, *supra* note 6, at 16.

28. Troiano & Witcher, *supra* note 20, at 223; *Pregnancy Mortality Surveillance System*, *supra* note 26.

29. *Pregnancy Mortality Surveillance System*, *supra* note 26.

30. *Id.*

31. *Id.*

32. *Id.*

33. Donna L. Hoyert, *Maternal Mortality Rates in the United States, 2019*, CTR. DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/nchs/data/hestat/maternal-mortality-2021/maternal-mortality-2021.htm> [<https://perma.cc/FG43-ABH7>] (last updated Mar. 23, 2021).

34. Tikkanen et al., *supra* note 17.

have the lowest rates of 1.7 and 1.8 deaths per 100,000 live births, respectively.<sup>35</sup>

The last method of identifying maternal deaths occurs at a state level through Maternal Mortality Review Committees (“MMRCs”). MMRCs convene to systematically and comprehensively review deaths that occurred during pregnancy or within one year of the termination of pregnancy.<sup>36</sup> MMRCs identify maternal deaths in a similar manner as the PMSS through linkage of vital records, but they are able to more thoroughly examine medical and social contributing factors by accessing additional sources of information such as medical records, police investigations, and interviews.<sup>37</sup> MMRCs are considered the gold standard in identifying pregnancy-associated deaths because they critically evaluate information related to maternal deaths and subsequently identify solutions to improve care for deaths that are determined to be preventable.<sup>38</sup>

## 2. The “Pregnancy Checkbox”

In part, maternal mortality rates have been increasing since 2003 because of changes in reporting of vital statistics. In 2003, a “pregnancy checkbox” was added to death certificates indicating whether a decedent was currently or recently pregnant.<sup>39</sup> This checkbox was added to more accurately identify maternal deaths, as rates prior to 2000 are believed to be underreported.<sup>40</sup> However, states adopted the checkbox revision at different times between 2003 and 2017, creating difficulty in accurately estimating national trends in maternal mortality prior to 2017.<sup>41</sup>

Improved reporting has undoubtedly contributed to a documented increase in mortality rates; however, this explanation does not sufficiently explain why the U.S. has the highest rate of maternal mortality among developed countries.<sup>42</sup> Further, variability among maternal mortality rates between states have raised questions about access and availability of family planning methods, as well as the increasing prevalence of chronic medical conditions like obesity, diabetes, and

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35. *Id.*

36. Susanna L. Trost et al., *Preventing Pregnancy-Related Mental Health Deaths: Insights from 14 US Maternal Mortality Review Committees, 2008-2017*, 40 HEALTH AFF.’S 1551, 1552 (2021).

37. Troiano & Witcher, *supra* note 20, at 224.

38. Ai-Ris Y. Collier & Rose L. Molina, *Maternal Mortality in the United States: Updates on Trends, Causes, and Solutions*, 10 NEOREVIEWS 1, 3-4 (2019).

39. Lauren M. Rossen et al., *The Impact of the Pregnancy Checkbox and Misclassification on Maternal Mortality Trends in the United States, 1999-2017*, 44 VITAL & HEALTH STAT. 1, 2 (2020).

40. *Id.*

41. *Id.*

42. Michael R. Kramer et al., *Changing the Conversation: Applying a Health Equity Framework to Maternal Mortality Reviews*, 221 AM. J. OBSTETRICS & GYNECOLOGY 609, 609 (2019).

heart disease.<sup>43</sup> Moreover, advanced maternal age, high rates of cesarean deliveries, the opioid epidemic, and limited access to quality care in the perinatal period have been cited as potential contributors to the increased rates.<sup>44</sup>

### *C. Causes of Maternal Mortality*

The leading causes of maternal mortality differ depending on whether the death occurs during or after pregnancy.<sup>45</sup> For example, hemorrhages and cardiovascular conditions are responsible for most deaths during pregnancy.<sup>46</sup> During delivery, obstetric emergencies such as hemorrhage and an amniotic fluid embolism are responsible for the most deaths.<sup>47</sup> In the week following delivery, hemorrhage, hypertension, and infections are the most common causes of death.<sup>48</sup> Cardiomyopathy is the leading cause beyond the week after delivery.<sup>49</sup> Overall, heart disease and stroke are responsible for most maternal deaths.<sup>50</sup>

### *D. Disparities in Maternal Mortality*

Since the beginning of comprehensive data collection for maternal mortality in 1915, disparities between black and white maternal mortality ratios have existed.<sup>51</sup> Rates declined more quickly for white mothers as compared to black mothers after World War II, and that disparity continued to increase until today.<sup>52</sup> In 2019, the maternal mortality rate for non-Hispanic black women was 44.0 deaths per 100,000 live births, a rate double that of non-Hispanic white women (17.9) and triple of Hispanic women (12.6).<sup>53</sup> In other words, black women are three to four times more likely to die of pregnancy-related causes than white women.<sup>54</sup>

Racial and ethnic disparities in maternal mortality rates are attributable to the “legacy of structural racism that permeates people’s lived experiences, including experiences in the health care system.”<sup>55</sup> Notably, between 2005 and 2013, 12.3% of black respondents reported experiencing racial discrimination in a health care setting as compared to 2.3% of white respondents in a nationally representative

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43. Collier & Molina, *supra* note 38, at 2.

44. *Id.*

45. *Pregnancy-Related Deaths*, *supra* note 7.

46. Declercq & Zephyrin, *supra* note 14.

47. *Pregnancy-Related Deaths*, *supra* note 7.

48. *Id.*

49. *Id.*

50. *Id.*

51. Declercq & Zephyrin, *supra* note 15. In 1915, the Black maternal mortality ratio was 1,065 deaths per 100,000 births compared to 601 deaths per 100,000 births for whites.

52. *Id.*

53. Hoyert, *supra* note 33, at 3.

54. Benson, *supra* note 1.

55. Collier & Molina, *supra* note 38, at 7.

survey.<sup>56</sup> Further, a study at an academic health center in Chicago found that healthcare providers were more than twice as likely to describe black patients using one or more negative patient descriptors in the electronic health records as compared to their white counterparts.<sup>57</sup> Further, disparities are not limited to race and ethnicity. Women living in rural parts of the country experience greater risks during childbirth than women in urban areas.<sup>58</sup>

### *E. Examining Severe Maternal Morbidity*

Maternal mortality is considered only the “tip of the iceberg” of an even larger phenomenon of adverse maternal outcomes impacting women across the U.S. known as severe maternal morbidity (“SMM”).<sup>59</sup> SMM is defined as “unexpected outcomes of labor and delivery that result in significant short- or long-term consequences to a woman’s health.”<sup>60</sup> In fact, for every maternal death, an estimated one-hundred episodes of SMM occur.<sup>61</sup> In 2014, it was estimated that SMM affected more than fifty-thousand women.<sup>62</sup>

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56. Irena Stepanikocva & Gabriela R. Oates, *Perceived Discrimination and Privilege in Healthcare: The Role of Socioeconomic Status and Race*, 52 AM. J. PREVENTIVE MED. S86, S88 (2016). The Behavioral Risk Factor Surveillance System (“BRFSS”) is a national telephone survey that collects state data about U.S. residents regarding their health-related risk behaviors, chronic health conditions, and use of preventive services.

57. Michael Sun et al., *Negative Patient Descriptors: Documenting Racial Bias in the Electronic Health Record*, 41 HEALTH AFF.’S 203, 203 (Jan. 19, 2022). These findings persisted after controlling for sociodemographic and health characteristic variables. Fifteen negative descriptors were used such as noncompliant, hysterical, challenging, defensive, unpleasant, refuse, and exaggerate.

58. Katy Backes Kozhimannil et al., *Beyond the Preventing Maternal Deaths Act: Implementation and Further Policy Change*, HEALTH AFF. (Feb. 4, 2019), <https://www.healthaffairs.org/doi/10.1377/hblog20190130.914004/full/> [<https://perma.cc/3WAU-WAE8>].

59. Sophie Wheelock et al., *Complications of Childbirth: Racial & Ethnic Disparities in Severe Maternal Morbidity in New York State*, N.Y. STATE HEALTH FOUND. 1, 2 (2020), <https://nyshealthfoundation.org/wp-content/uploads/2020/08/severe-maternal-morbidity.pdf> [<https://perma.cc/8VDN-H4CZ>].

60. *Severe Maternal Morbidity in the United States*, CTR. DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html> [<https://perma.cc/ZRQ7-49G3>] (last updated Feb. 2, 2021). This is the most recent year that SMM data is available. SMM is not limited to poor health outcomes for women, but also increases fetal deaths and infant mortality.

61. Press Release, Am. Coll. Obstetricians & Gynecologists, National Initiative Aimed at Reducing Maternal Deaths Shows Early Signs of Improvement in Severe Maternal Morbidity (Jan. 2, 2018), <https://www.acog.org/news/news-releases/2018/01/national-initiative-aimed-at-reducing-maternal-deaths-shows-early-signs-of-improvement-in-severe-maternal-morbidity> [<https://perma.cc/3ZBU-HWV3>].

62. *Severe Maternal Morbidity in the United States*, *supra* note 60. This is the most recent year that SMM data is available. SMM is not limited to poor health outcomes for women, but also

Women who experience a pregnancy-related death typically progress along a continuum; normal pregnancy, morbidity, severe morbidity, near-miss morbidity, to maternal death.<sup>63</sup> Postpartum hemorrhage and hypertensive complications account for two-thirds of SMM events.<sup>64</sup> It is unclear why SMM rates are steadily increasing, but factors related to the overall health of women such as increased maternal age, obesity, and other preexisting chronic health conditions may be contributing.<sup>65</sup> Health experts argue that cases of SMM merit quality review because like maternal mortality, SMM has a high rate of preventability.<sup>66</sup> Systematic reviews of SMM events provides a proactive approach to provide quality improvement in obstetric care that could stop the progression from morbidity to maternal death, given that SMM occurs at a significantly higher frequency than maternal deaths.<sup>67</sup> Furthermore, SMM is often considered a “near miss” for maternal mortality because identifying and treating these conditions can help avoid death.<sup>68</sup>

While health experts are advocating for hospitals to review SMM cases, this endeavor may be slightly difficult because to date, there is not complete consensus among health care professionals about which conditions should represent SMM.<sup>69</sup> Despite this lack of consensus, the American College of Obstetricians and Gynecologists (“ACOG”) encourages institutions to adopt an existing screening criteria, or to create their own list of outcomes to review based on the determination of which conditions are consequential to their population.<sup>70</sup> The CDC also standardized a list of twenty-one indicators that correspond to International Classification of Diseases (“ICD”) diagnosis and procedure codes to identify SMM cases, which could serve as a resource for those wanting to examine SMM.<sup>71</sup>

It is also important to note that some morbidity cases reflect the underlying health conditions of a woman and therefore are unavoidable. For example, if a physician plans to admit a woman to an intensive care unit for observation and to receive safe intrapartum care because of a known congenital heart disease, this would not be considered a SMM event.<sup>72</sup> Conversely, a woman who develops acute heart failure and requires significant interventions to manage the heart

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increases fetal deaths and infant mortality.

63. Troiano & Witcher, *supra* note 23, at 227.

64. *Id.*

65. *Severe Maternal Morbidity in the United States*, *supra* note 60.

66. Sarah K. Kilpatrick & Jeffrey L. Ecker, *Severe Maternal Morbidity: Screening and Review*, 215 AM. J. OBSTETRICS & GYNECOLOGY B17, B17-18 (2016).

67. *Id.* at B17.

68. *Id.* at B18.

69. *Id.*

70. *Id.*

71. *Severe Maternal Morbidity in the United States*, *supra* note 60.

72. Kilpatrick & Ecker, *supra* note 66, at B18.

failure would be considered a SMM event.<sup>73</sup> While it is true that not all cases of morbidity are preventable, it is still critically important to review cases in detail to determine if changes in the delivery of care is needed to ensure quality obstetric care is provided.<sup>74</sup> Preventing SMM is a key component for reducing maternal mortality, however many states' MMRCs, including Indiana's MMRC, do not review SMM cases.<sup>75</sup>

### III. LEGISLATIVE EFFORTS TO ADDRESS MATERNAL MORTALITY

Both the United States Congress and the Indiana General Assembly have enacted policies to reduce maternal mortality rates. This Section describes those recently enacted federal and state policies, with a particular focus on the creation of Indiana's own MMRC and the MMRC's findings.

#### *A. Recent Federal Legislative Efforts*

Long overdue, given the persistent high rates of maternal mortality, Congress passed the Preventing Maternal Deaths Act of 2018 ("PMDA"), allowing the CDC to establish state and tribal MMRCs and increase support for existing MMRCs.<sup>76</sup> Beginning in 2019 and lasting through 2023, the law provides fifty-eight million dollars annually to fund prevention research, preventive programs, and MMRCs.<sup>77</sup> In the wake of passing the PMDA, Congress introduced nearly three dozen bills during the 2019-20 legislative session.<sup>78</sup> These bills addressed a number of issues pertaining to maternal health including devoting funding for health equity and implicit bias training for clinical providers, extending Medicaid postpartum coverage beyond sixty days, broadening obstetric support in rural areas, and providing Medicaid coverage for doula care.<sup>79</sup> Only two of these bills made it past the introduction phase, and both bills died in the Senate.<sup>80</sup>

Additionally, the American Rescue Plan Act of 2021 ("ARP") fills in a gap that exists for many low-income women in the postpartum period by allowing states the option to extend Medicaid postpartum coverage from sixty days to twelve months.<sup>81</sup> States that elect to extend the postpartum coverage period to one year may do so by filing a state plan amendment to their Medicaid program.<sup>82</sup>

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73. *Id.*

74. *Id.*

75. *See* IND. DEP'T. HEALTH, *supra* note 6.

76. Preventing Maternal Deaths Act, 42 U.S.C. § 247b-12.

77. *Id.* The Preventing Maternal Deaths Act is an amendment to the Public Health Service Act, which implements the Safe Motherhood Initiative of the CDC.

78. *Analysis of Federal Bills to Strengthen Maternal Health Care, supra* note 20.

79. *Id.*

80. *Analysis of Federal Bills to Strengthen Maternal Health Care, supra* note 20; *see also* Helping Medicaid Offer Maternity Services Act of 2020, H.R. 4996, 116th Cong. (2020); *and* Maternal Health Quality Improvement Act of 2020, H.R. 4995, 116th Cong. (2020).

81. 42 U.S.C. § 1396a(e)(16)(A).

82. Usha Ranji et al., *Postpartum Coverage Extension in the American Rescue Plan Act of*

This statute also requires states to provide the full set of Medicaid benefits, rather than the narrow set of pregnancy-related benefits that is currently allowed.<sup>83</sup> Extending postpartum coverage to a full year is an important policy to address the largely preventable maternal mortality and morbidity rates, specifically to address the racial and ethnic disparities that exist.<sup>84</sup> Additionally, it is an important strategy to address many conditions that significantly impact pregnancy-related mortality and morbidity such as hypertension and depression, both of which generally require long-term care.<sup>85</sup>

Moreover, providing extended Medicaid coverage to low-income women increases accessibility of preventive services such as family planning services and intrapartum care.<sup>86</sup> Notably, funding for Medicaid's extended coverage will expire after five years unless Congress reauthorizes the funding or amends it to become permanent.<sup>87</sup>

### *B. Indiana's Recent Legislative Efforts*

The Indiana General Assembly has historically supported committees and commissions that focus specifically on issues that Hoosier women face.<sup>88</sup> For example, the bipartisan Indiana Commission for Women ("ICW") was established in 1992 by a Gubernatorial Executive Order and later codified in 1996 to signify "Indiana's commitment to improving the quality of life for women and families."<sup>89</sup> Notably, one of ICW's duties includes assessing the health care needs of Indiana women.<sup>90</sup>

Similarly, the Office of Women's Health ("OWH"), housed within the Indiana Department of Health ("IDOH"), was established in 1998 and later codified in 1999.<sup>91</sup> OWH is responsible for assisting the state health commissioner in "identifying, coordinating, and establishing priorities for programs, services, and resources [Indiana] should provide for women's health

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2021, KAISER FAM. FOUND. (Mar. 18, 2021), <https://www.kff.org/policy-watch/postpartum-coverage-extension-in-the-american-rescue-plan-act-of-2021/> [<https://perma.cc/99TC-XN2S>].

83. *Id.*

84. *Id.*

85. *Id.*

86. *Id.*

87. Whitney Downard, *Federal Provision Could Change Indiana's Maternal Mortality*, HERALD BULL. (Apr. 2, 2021), [https://www.heraldbulletin.com/news/state\\_news/federal-provision-could-change-indianas-maternal-mortality/article\\_ffac827a-93da-11eb-b0b8-9745d10ad55c.html](https://www.heraldbulletin.com/news/state_news/federal-provision-could-change-indianas-maternal-mortality/article_ffac827a-93da-11eb-b0b8-9745d10ad55c.html) [<https://perma.cc/LP9Y-UQJG>].

88. *See* IND. CODE § 4-23-25-7 (2021); IND. CODE § 16-19-13-3 (2021).

89. *Indiana Commission for Women About Us*, IN.GOV, <https://www.in.gov/icw/about-us/> [<https://perma.cc/PU2S-4V74>] (last visited Feb. 4, 2022).

90. IND. CODE § 4-23-25-7(1)(F) (2021).

91. *Office of Women's Health History*, IN.GOV, <https://www.in.gov/health/owh/about-womens-health/history/> [<https://perma.cc/K6TQ-845P>] (last visited Feb. 4, 2022).

issues. . .relating to the reproductive, menopausal, and postmenopausal phases of a woman's life, with an emphasis on *postmenopausal health*.”<sup>92</sup> Further, OWH is tasked with recommending programs for the state health commissioner to include for IDOH's budget, seeking funding to carry out its purposes, and upon request, representing the state health commissioner before the General Assembly and the ICW.<sup>93</sup>

While it is clear Indiana lawmakers support committees that assess the health needs of women and make recommendations based on those assessments, it is less clear whether lawmakers equally support implementing needed recommendations. For example, during the 2020 legislative session, a bill requiring employers to make reasonable accommodations for pregnant employees failed to be enacted.<sup>94</sup> Three of the four Indiana General Assembly members serving on the ICW co-authored or sponsored the bill, emphasizing the importance of the law for women's health.<sup>95</sup> Furthermore, the law was supported by the Governor and the State Health Commissioner as an important measure to prevent preterm labor and ultimately improve the health of pregnant mothers and their babies.<sup>96</sup> Instead of joining twenty-five other states that require reasonable accommodations for pregnant workers, the Indiana General Assembly enacted a law requiring an employer to “respond to an employee's request . . . within a reasonable time[,]” specifically stating that an employer is not required or obligated to provide an accommodation per the request.<sup>97</sup>

### *1. Indiana's Maternal Mortality Review Committee*

In response to Indiana's abysmal rate, the Indiana General Assembly passed Indiana Code Section 16-50-1-3 to establish a statewide MMRC.<sup>98</sup> Indiana's MMRC is also supported by the PMDA that Congress enacted to provide states with financial and technical support to improve maternal mortality.<sup>99</sup> Under Indiana Code Section 16-50-1-3(a)(1)-(4) the MMRC is established to:

- (1) “review cases of maternal morbidity and maternal mortality;
- (2) determine factors contributing to maternal morbidity and maternal

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92. IND. CODE § 16-19-13-3(2) (2021) (emphasis added).

93. IND. CODE §§ 16-19-13-3(6), (7), (11) (2021).

94. S.B. 342, 121st Gen. Assemb., 2d Reg. Sess. (Ind. 2020).

95. *See id.*; *Commissioners*, IN.GOV, <https://www.in.gov/icw/about-icw/commissioners/> [https://perma.cc/A3CH-AWG8] (last visited Feb. 4, 2022).

96. Kayla Sullivan, *Governor Holcomb Wants Accommodations for Pregnant Workers*, FOX 59 (Dec. 12, 2019), <https://fox59.com/news/gov-holcomb-wants-accommodations-for-pregnant-workers/> [https://perma.cc/LB9S-Q8TK].

97. IND. CODE § 22-9-12-3 (2021). Employers with at least fifteen employees may be required to provide reasonable accommodations to pregnant workers under the American with Disabilities Act Amendments Act of 2008. *See* 42 U.S.C. § 12101.

98. IND. CODE §§ 16-50-1-3(a)(1)-(4) (2021).

99. 42 U.S.C. § 247b-12(a)(1).

- mortality;
- (3) identify public health and clinical interventions to improve systems of care and enhance coordination; and
  - (4) develop strategies for the prevention of maternal morbidity and maternal mortality.”<sup>100</sup>

Further, the statute states that the MMRC “*shall* review cases involving the death of a woman occurring during pregnancy, irrespective of the duration and site of the pregnancy, through one (1) year after the pregnancy; and *may* review cases of maternal morbidity[.]”<sup>101</sup> Thus, the MMRC must review all maternal mortality cases in Indiana, but it is not required to review maternal morbidity cases.

## 2. *Indiana and Medicaid Expansion*

Indiana lawmakers proposed bills in the 2020 and 2021 legislative sessions extending the pregnancy Medicaid coverage period from sixty days to one year postpartum.<sup>102</sup> The Indiana MMRC also made this Medicaid policy recommendation in its 2020 Annual Report.<sup>103</sup> Despite the proposed bills and MMRC recommendation, the bills failed to pass.<sup>104</sup> Yet, Indiana elected to extend Medicaid under the federal ARP, meaning that Medicaid-eligible pregnant women in Indiana would continue to receive Medicaid benefits for twelve months postpartum rather than the previous sixty-day limit.<sup>105</sup> Notably, this was a temporary measure that was due to expire in 2026 unless Congress or the Indiana General Assembly passed legislation to permanently extend Medicaid benefits through one year postpartum.<sup>106</sup>

Fortunately, during the 2022 legislative session, the Indiana General Assembly voted to permanently expand Medicaid coverage for pregnant women to “at least [sixty] days but not more than [twelve] months.”<sup>107</sup> Moreover, the bill expands Medicaid access by increasing the income eligibility requirements.<sup>108</sup>

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100. IND. CODE §§ 16-50-1-3(a)(1)-(4) (2021).

101. IND. CODE §§ 16-50-1-3(b)(1)-(2) (2021) (emphasis added).

102. H.B. 1155, 122nd Gen. Assemb., Reg. Sess. (Ind. 2021); H.B. 1248, 121st Gen. Assemb., Reg. Sess. (Ind. 2020).

103. IND. DEP'T HEALTH, *supra* note 6, at 43.

104. Ind. H.B. 1155; Ind. H.B. 1248.

105. Brandon Smith, *Indiana Expanding Medicaid Coverage to New Mothers 12 Months Postpartum*, WFYI INDIANAPOLIS (Apr. 19, 2021), <https://www.wfyi.org/news/articles/indiana-expanding-medicaid-coverage-to-new-mothers-12-months-postpartum> [<https://perma.cc/4GTD-9L2L>].

106. Downard, *supra* note 87.

107. H.B. 1140, 123rd Gen. Assemb., Reg. Sess. (Ind. 2022).

108. *Id.*; Press Release, Indiana House Democratic Caucus, Summer Commends Passage of Medicaid Expansion for Pregnant Women, More Action Needed in 2023 (Mar. 7, 2022),

Additionally, the bill eliminates the pregnancy Medicaid limitation that medical assistance coverage only applied to pregnancy-related services.<sup>109</sup>

The importance of the Indiana General Assembly permanently extending Medicaid coverage beyond sixty days to potentially a full year cannot be overstated. The year after delivery is a medically vulnerable period for women who may be suffering from childbirth complications, anxiety, or depression, and it is a period when many maternal mortality cases occur.<sup>110</sup> Traditionally, postpartum care was centered around one clinical visit about eight weeks after delivery; however, it is becoming increasingly understood that postpartum care is an ongoing process, potentially requiring multiple visits and follow up care beyond eight weeks.<sup>111</sup> In fact, the majority of pregnancy-associated deaths in Indiana occur after six weeks postpartum, highlighting this policy's integral role in protecting the health of postpartum women.<sup>112</sup>

### 3. Doula Services Under Indiana Medicaid

Indiana enacted a law that provides reimbursement for doula services for Medicaid recipients in 2019, signaling that the Indiana General Assembly was committed to taking action to mitigate the state's maternal mortality crisis.<sup>113</sup> At that time, Indiana was only the third state to extend Medicaid to cover doula care.<sup>114</sup> Doulas provide physical, emotional, and educational support and encouragement for women during labor, delivery, and the postpartum period.<sup>115</sup> Doula support helps lead to better birth outcomes by supporting women in foregoing epidurals, avoiding unnecessary cesarean deliveries, and having less stressful births overall.<sup>116</sup> Notably, the positive impact that doula support provide is shown to be greater for women who are "socially disadvantaged, low income, unmarried, primiparous, giving birth in a hospital without a companion, or had

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<https://indianahousedemocrats.org/news-media/summers-commends-passage-of-medicaid-expansion-for-pregnant-women-more-action-needed-in-2023> [https://perma.cc/J6J3-FTTZ].

109. Ind. H.B. 1140; Press Release, Ind. House Democratic Caucus, Summers Commends Passage of Medicaid Expansion for Pregnant Women, More Action Needed in 2023 (Mar. 7, 2022), <https://indianahousedemocrats.org/news-media/summers-commends-passage-of-medicaid-expansion-for-pregnant-women-more-action-needed-in-2023> [https://perma.cc/J6J3-FTTZ].

110. Usha Ranji et al., *Expanding Postpartum Medicaid Coverage*, KAISER FAM. FOUND. (Mar. 9, 2021), <https://www.kff.org/womens-health-policy/issue-brief/expanding-postpartum-medicaid-coverage/> [https://perma.cc/6VMR-HNSC].

111. *Id.*

112. IND. DEP'T HEALTH, *supra* note 6, at 27.

113. IND. CODE § 12-15-5-7(a) (2021).

114. Jill Sheridan, *Indiana Moves to Expand Medicaid Coverage for Doulas*, WFYI INDIANAPOLIS (Apr. 22, 2019), <https://www.wfyi.org/news/articles/indiana-moves-to-expand-medicaid-coverage-for-doulas> [https://perma.cc/PYA7-S3TB].

115. Kenneth J. Gruber et al., *Impact of Doulas on Healthy Birth Outcomes*, 22 J. PERINATAL EDUC. 49, 49 (2013).

116. *Id.*

experienced language/cultural barriers.”<sup>117</sup>

Instead, the \$20,000 that was included in the state budget and to be matched with federal dollars, was stripped from the bill during the final days of the 2019 legislative session, making it unclear how the law moves forward without the necessary financial means.<sup>118</sup> Given that Medicaid pays for half of all Indiana births, this law would greatly improve access to doulas for low-income, vulnerable families.<sup>119</sup> In reality, without funding for these services, the law has little effect on improving maternal mortality in the state. Further, Indiana lawmakers have introduced several bills in the 2021 legislative session aiming to improve maternal health, including a bill allowing doulas to directly bill Medicaid for their services, but the bills received little to no attention.<sup>120</sup>

### *C. Indiana's Maternal Mortality Review Committee Findings*

Indiana's MMRC produced its first annual report in 2020, which included key findings, opportunities for intervention, and multi-level recommendations based on its review of the pregnancy-associated and pregnancy-related deaths that occurred in 2018.<sup>121</sup> The Indiana MMRC used multiple methods to identify maternal deaths. One method included reviewing death certificates to verify if the “pregnancy checkbox” was marked to identify whether a woman was pregnant at the time of death or within the past year.<sup>122</sup> An additional method included matching death certificates to birth and fetal death records, as death certificates for any woman between the ages of ten and sixty are linked with birth and fetal death records that occurred within the previous two years.<sup>123</sup> Further, the Indiana Hospital Association and Indiana Hospitals must report any known pregnancy-associated deaths to the Indiana Department Of Health (“IDOH”).<sup>124</sup> Lastly, to identify how a woman died, whether her death was preventable, or whether other contributing factors existed, the Indiana MMRC follows the CDC's recommendations and gathers additional information from medical records, social service records, and law enforcement records where applicable.<sup>125</sup>

In Indiana, the pregnancy-associated mortality ratio in 2018 was 77.2 per 100,000 live births, while the pregnancy-related mortality ratio was 12.2 per

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117. *Id.* at 50.

118. Jill Sheridan, *Funding for Doulas Cut Out of Budget*, IND. PUB. RADIO (Apr. 26, 2019), <https://indianapublicradio.org/news/2019/04/funding-for-doulas-cut-out-of-budget/> [<https://perma.cc/GMV4-LKC6>].

119. Sheridan, *supra* note 114.

120. Downard, *supra* note 87.

121. *See* IND. DEP'T HEALTH, *supra* note 6.

122. IND. DEP'T. HEALTH, *supra* note 6, at 19.

123. *Id.*

124. IND. CODE § 16-50-1-6 (2021).

125. IND. DEP'T. OF HEALTH, *supra* note 6, at 19-20.

100,000 live births through its method of case identification.<sup>126</sup> Specifically, the MMRC determined that forty-seven deaths were pregnancy-associated<sup>127</sup> meaning, a “death while pregnant or within one year of the end of pregnancy, irrespective of the cause.”<sup>128</sup> Further, the MMRC determined ten deaths in Indiana were pregnancy-related, meaning that those deaths were a “direct result of a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiological effects of pregnancy.”<sup>129</sup>

The complicated issue with these ratios, as calculated by the Indiana MMRC, is that they differ greatly from the rates provided by the PMSS, making it challenging to compare Indiana’s maternal mortality ratios to the national average and other states.<sup>130</sup> Furthermore, the 2018 mortality ratios as calculated by the Indiana MMRC should *not* be used for comparisons to any rates based on PMSS or other data, unless that data originates from a comparable MMRC that analyzes their own pregnancy-related deaths.<sup>131</sup> Despite the challenges that now come with comparing the Indiana MMRC ratios to past rates in Indiana, the Annual Report highlights several important findings that are critical to consider when examining strategies to reduce Indiana’s maternal mortality.

First, the report confirmed that Indiana is not immune to the racial disparities that exist within maternal mortality. The ratio of pregnancy-associated deaths by race indicates that black women are more likely to die during childbirth (103.1 per 100,000 live births) than their white counterparts (86.0 per 100,000 live births).<sup>132</sup> Next, 70% of pregnancy-related deaths occurred during pregnancy or within the first week of the postpartum period, while 65% of pregnancy-associated deaths occurred after six weeks postpartum.<sup>133</sup> Moreover, 10% of pregnancy-related deaths occurred among women living in an OB desert.<sup>134</sup> An OB desert means there is limited access, or no maternity healthcare services available.<sup>135</sup> More than a quarter of Indiana counties are OB deserts,<sup>136</sup> and given the proportion of births that occur in those counties, the MMRC reported it expected this figure.<sup>137</sup>

Notably, substance use disorder was the most prevalent contributing factor

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126. *Id.* at 23.

127. *Id.* at 22.

128. Tikkanen et al., *supra* note 17.

129. IND. DEP’T. HEALTH, *supra* note 6, at 22.

130. *Id.* at 23-24.

131. *Id.*

132. *Id.* at 25.

133. *Id.* at 27.

134. *Id.* at 28.

135. Jill Sheridan, *Report: 27 Percent of Hoosiers Counties Considered ‘Maternal Care Deserts*, WFYI INDIANAPOLIS (Oct. 10, 2018), <https://www.wfyi.org/news/articles/report-27-percent-of-hoosier-counties-considered-maternal-care-deserts> [<https://perma.cc/43YD-3HFW>].

136. *Id.*

137. IND. DEP’T. HEALTH, *supra* note 6, at 28.

to maternal deaths, occurring in 49% of pregnancy-associated deaths.<sup>138</sup> Additionally, the MMRC concluded that mental health conditions (excluding substance use) either definitely or likely contributed to 38% of pregnancy-associated deaths.<sup>139</sup> The committee also noted a heavy overlap existed between the occurrence of substance use disorder and other mental health conditions.<sup>140</sup> Finally, the MMRC concluded that 87% of pregnancy-associated deaths were preventable as compared to 90% of pregnancy-related deaths.<sup>141</sup>

#### IV. OTHER STATES' EFFORTS TO ADDRESS MATERNAL MORTALITY

Other states such as New York, Michigan, and California have implemented policies to reduce maternal mortality that Indiana has yet to enact. Thus, this Section analyzes those policies and their potential to prevent future maternal deaths, so that Indiana may have a roadmap to address its own policy gaps.

##### *A. New York Efforts*

The New York City Health Department recently became the first city in the country to implement SMM surveillance in an effort to ensure that life-threatening complications at childbirth are included in case reviews to promote health equity, reduce disparities in maternal health, and to create supportive materials for other jurisdictions.<sup>142</sup> Even with the lack of a consensus definition for SMM, obstetric healthcare experts recommend that SMM cases are reviewed as it is an “important step toward promoting safe obstetric care.”<sup>143</sup>

Additionally, New York included in its state budget an investment totaling \$8 million over two years to improve maternal health initiatives like a perinatal data warehouse.<sup>144</sup> Modeled after the California Maternal Data Center, this data warehouse may add significant value by creating comparative maternal performance measures for hospitals and other perinatal providers by linking vital statistics, electronic medical records, and autopsy reports.<sup>145</sup>

This type of data warehouse allows for real-time monitoring and gives the state the ability to assess adverse outcomes in a timely manner, rather than

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138. *Id.* at 35. Substance use disorder and how the opioid epidemic has impacts maternal mortality and infant health is an important issue that extends beyond the scope of this Note.

139. *Id.*

140. *Id.*

141. *Id.* at 37.

142. Press Release, N.Y.C. Health, Health Department Receives \$1.8 Million Grant to Reduce Disparities in Maternal Health and to Support Improvements in Maternal Care Across the City (Feb. 23, 2018), <https://www.nyc.gov/site/doh/about/press/pr2018/pr014-18.page> [<https://perma.cc/Y9QE-4QYV>].

143. Kilpatrick & Ecker, *supra* note 66, at B17.

144. Wheelock et al., *supra* note 59, at 32.

145. *Id.*; see *infra* Section C. (Discussing California Maternal Data Center.)

studying multiple cases in a single period of review.<sup>146</sup> While it is too early to know if these initiatives will lower maternal mortality or SMM rates, they will nonetheless provide transparency to healthcare consumers. In particular, these initiatives empower pregnant healthcare consumers to make informed decisions about where they may want to deliver based on comparisons of maternal performance measures.<sup>147</sup>

### *B. Michigan Efforts*

Michigan has a long history of supporting maternal health. In 1950, a collaborative effort between the state's public health agency and medical society formed a maternal death review process.<sup>148</sup> Further, Michigan has utilized Medicaid to help finance home visiting for more than two decades through the Medicaid Maternal and Infant Health Program ("MIHP").<sup>149</sup> MIHP is available to all pregnant women enrolled in Medicaid, and aims to promote healthy pregnancies and birth outcomes through home visiting services provided by teams of social workers, nurses, and dietitians.<sup>150</sup> While Michigan's maternal mortality was still too high at 16.4 deaths per 100,000 in 2018,<sup>151</sup> it was far better than Indiana's 24.5 deaths per 100,000.<sup>152</sup> This evidence further illustrates that this type of state support and investment makes a difference.

Additionally, Michigan recently passed administrative rules requiring licensed health care providers to receive implicit bias training in an effort to address health care disparities and improve equity in the delivery of health care services.<sup>153</sup> New applicants for licensure must complete two hours of training and those applying for license renewal must complete at least one hour of training.<sup>154</sup> The training may cover an array of topics that relate to implicit bias, but it must include strategies to reduce disparities in accessing healthcare services, as well

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146. *Id.*

147. *Id.* at 4.

148. *Michigan Maternal Mortality Surveillance*, MICH. DEP'T HEALTH & HUM. SERV.'S, [https://www.michigan.gov/mdhhs/0,5885,7-339-73971\\_4911\\_87421---,00.html](https://www.michigan.gov/mdhhs/0,5885,7-339-73971_4911_87421---,00.html) [https://perma.cc/YD3D-9QDC] (last visited Mar. 20, 2023).

149. JOHNSON GRP. CONSULTING, INC., *Medicaid and Home Visiting: The State of States' Approaches* 1, 16 (2019).

150. *Id.*

151. *Peristats Michigan*, MARCH DIMES, <https://www.marchofdimes.org/Peristats/ViewSubtopic.aspx?reg=26&top=6&stop=370&lev=1&slev=4&obj=35> [https://perma.cc/N33Y-92Z3] (last visited Mar. 20, 2023).

152. *Id.*

153. Press Release, Gretchen Whitmer, Governor Gretchen Whitmer and LARA Announce Adopted Training Requirement to Improve Equity Across Michigan's Health Care System (June 1, 2021), [https://www.michigan.gov/whitmer/0,9309,7-387-90499\\_90640-561034--,00.html](https://www.michigan.gov/whitmer/0,9309,7-387-90499_90640-561034--,00.html) [https://perma.cc/7X79-4ES5].

154. *Id.*

as pre- and post-self-assessments.<sup>155</sup>

### *C. California Efforts*

California has become a beacon for improving maternal health outcomes since it formed the California Maternal Quality Care Collaborative (“Collaborative”) in 2006.<sup>156</sup> Between 2006 and 2013, the maternal mortality rate decreased from 16.9 to 7.3 maternal deaths per 100,000 live births, or a 57% reduction.<sup>157</sup> This reduction was achieved by an array of strategies, including the launch of a statewide quality improvement initiative aiming to improve the quality and safety of maternity care in hospitals.<sup>158</sup> The Collaborative began by reviewing maternal deaths from the previous five years and identified that when hemorrhage and preeclampsia are treated properly, it offers the greatest chance for survival.<sup>159</sup> The Collaborative created innovative toolkits that promoted a standardized approach in treating obstetrical emergencies by providing best practices, educational tools, sample protocols, and policies.<sup>160</sup>

Impressively, a control trial involving 147 California hospitals revealed that implementing the toolkit to address obstetrical hemorrhage led to a 20.8% reduction in SMM hemorrhaging episodes.<sup>161</sup> Taking notice of this impressive reduction, in 2015, the Maternal and Child Health Bureau and Health Resources and Services Administration, launched the Alliance for Innovation in Maternal Health (“AIM”) program, which is led by ACOG.<sup>162</sup> Similar to California’s quality improvement toolkits, the AIM program has designed safety bundles to aid providers, hospitals, and health systems, in improving the “4Rs”—readiness, recognition, response, and reporting.<sup>163</sup>

Further, California developed a robust statutory scheme, implementing more than twenty policy actions to improve maternal health—more than any other state.<sup>164</sup> While some may contend that California may be over-legislating when it comes to maternal health policies, it is difficult to ignore that California has

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155. MICH. ADMIN. CODE R. 338.7004(2)(3)(2021); *see id.*

156. Montagne, *supra* note 12.

157. Lu, *supra* note 18.

158. *Id.*

159. Montagne, *supra* note 12.

160. Lu, *supra* note 18.

161. *Id.* at 1238; *see also* Jeanne Mahoney, *The Alliance for Innovation in Maternal Health Care: A Way Forward*, 61 CLINICAL OBSTETRICS & GYNECOLOGY 400, 401 (2018).

162. Lu, *supra* note 18, at 1238; Jeanne Mahoney, *The Alliance for Innovation in Maternal Health Care: A Way Forward*, 61 CLINICAL OBSTETRICS & GYNECOLOGY 400, 401 (2018).

163. Lu, *supra* note 18, at 1238.

164. *State Policies to Improve Maternal Health Outcomes*, COMMONWEALTH FUND (Nov. 19, 2020), <https://www.commonwealthfund.org/publications/maps-and-interactives/2020/nov/state-policies-improve-maternal-health-outcomes> [<https://perma.cc/6GN7-5AWF>].

managed to cut its maternal mortality rate in half.<sup>165</sup> The decrease in maternal mortality rates in California is in stark contrast to the situation occurring in the rest of the country,<sup>166</sup> and it is undoubtedly because of the Collaborative's quality improvement efforts strengthened by enacted state policies to support these efforts. For example, one statute requires that any hospital that provides perinatal care must implement an evidenced-based implicit bias program for all health care providers providing perinatal care to patients.<sup>167</sup> Implicit bias training is required every two years and must include a curriculum that provides information about communicating more effectively across racial, ethnic, and religious identities, as well as identifying previous or current unconscious bias and misinformation, among several other topics.<sup>168</sup>

California also requires the State Department of Public Health to collect and track data on SMM, including conditions such as obstetric hemorrhage, hypertension, preeclampsia and eclampsia, venous thromboembolism, sepsis, cerebrovascular accident, and an amniotic fluid embolism.<sup>169</sup> To better understand and prioritize addressing these events, California established what may be described as a "low burden, rapid-cycle data system."<sup>170</sup> The Maternal Data Center is a "real-time" data warehouse that depends on already collected data from birth certificates, as well as hospital discharge diagnosis files for both mothers and infants.<sup>171</sup> This approach means that over 98% of data elements are automatically transmitted into the Maternal Data Center, reducing the need for expensive chart reviews.<sup>172</sup> In total, this data warehouse creates over fifty maternal and infant performance measures that help hospitals track progress and compare outcomes with other hospitals.<sup>173</sup>

Additionally, Medi-Cal also provides targeted case management services to at-risk pregnant women and infants through evidenced based programs such as Nurse Family Partnership and Healthy Families of America, as well as other local community-based organizations.<sup>174</sup> These programs are highly effective and provide in-home support, services, and education for vulnerable families beginning in pregnancy and continuing through early childhood.<sup>175</sup>

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165. Montagne, *supra* note 12.

166. Elliot K. Main et al., *Addressing Maternal Mortality and Morbidity in California Through Public-Private Partnerships*, 37 HEALTH AFF.'S 1484, 1485 (2018).

167. CAL. HEALTH & SAFETY CODE § 123630.3(a) (2021).

168. CAL. HEALTH & SAFETY CODE § 123630.3 (2021).

169. CAL. HEALTH & SAFETY CODE §§ 123630.4(a)(1)-(7) (2021).

170. Main et al., *supra* note 166.

171. *Id.*

172. *Id.*

173. *Id.*

174. Rachel Herzfeldt-Kamprath et al., *Medicaid and Home Visiting*, CTR. AM. PROGRESS (Jan. 25, 2017), <https://www.americanprogress.org/issues/early-childhood/reports/2017/01/25/297160/medicaid-and-home-visiting/> [<https://perma.cc/V57P-8PKS>]. (Medi-Cal is California's Medicaid health care program).

175. *Id.*

Most recently, California is receiving praise for its passage of the California Momnibus Act.<sup>176</sup> Notably, this bill addresses racial and socio-economic factors that contribute to higher rates of maternal mortality in communities of color.<sup>177</sup> The Momnibus Act codifies the work of the Pregnancy Associated Mortality Review Committee, which includes not only analyzing pregnancy-related deaths, but also analyzes common indicators of SMM to reduce near-miss events.<sup>178</sup> Importantly, the statute provides that to the degree practicable, family members, support persons, and members of the medical team with direct knowledge or involvement in a maternal death or SMM event should be interviewed to gain qualitative information of the circumstance.<sup>179</sup> Finally, it builds on the 2021-2022 state budget priorities by providing doula services for Medi-Cal recipients and extending Medi-Cal eligibility for postpartum women from sixty days to one year after delivery.<sup>180</sup>

#### V. POLICY RECOMMENDATIONS FOR INDIANA

Given California's incredible success of reversing its maternal mortality rate and becoming a state with one of the lowest rates, it would seem logical that Indiana adopt a similar statutory scheme. Although California's efforts to decrease maternal mortality rates are laudable, it is important to keep in mind that California's success cannot be attributed to any single factor or statute. Further, to improve maternal mortality in Indiana, it is imperative that the recommendations are tailored to the needs of Indiana women. This Section argues for an array of policies that Indiana should enact. While these recommendations are based on policies similar to New York, Michigan, and California, they are also based on recommended best practices. Importantly, several of these policy recommendations align with what Indiana's own MMRC is recommending.

##### *A. Indiana's MMRC Shall Review SMM Events*

First, Indiana should amend Indiana Code Section 16-50-1-3(b)(2) to require the MMRC to review SMM cases, rather than allowing it to be optional. Several studies of small datasets utilize SMM as a surrogate for maternal mortality because SMM is believed to be a "near miss" that leads to increased risk of

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176. Press Release, March of Dimes, March of Dimes Hails New California Law to Reduce Black Maternal and Infant Death (Oct. 5, 2021), <https://www.marchofdimes.org/news/march-of-dimes-hails-new-california-law-to-reduce-black-maternal-and-infant-death.aspx> [<https://perma.cc/8NA9-9T6N>].

177. Press Release, Gov. Gavin Newsom, Governor Newsom Signs 'Momnibus' Act to Tackle Racial Disparities in Maternal and Infant Health (Oct. 4, 2021), <https://www.gov.ca.gov/2021/10/04/governor-newsom-signs-momnibus-act-to-tackle-racial-disparities-in-maternal-and-infant-health/> [<https://perma.cc/569S-MTLV>].

178. S.B. 65, 2021 Legis. Sess. (Cal. 2021).

179. *Id.*

180. *Id.*

death.<sup>181</sup> Because the Indiana MMRC is currently studying a small data set, which will likely remain the case for the next several years, analyzing SMM cases will add value in understanding the circumstances and contextual factors that may not be available if the case reviews continue to be limited to solely deaths. Further, obstetric experts recommend reviewing SMM events to ensure safe obstetric care is being provided.<sup>182</sup>

Moreover, the Indiana MMRC entered into a collaborative relationship with the Grassroots Maternal Child Health Leadership Training Project (“Grassroots Project”).<sup>183</sup> The Grassroots Project’s purpose is to train community leaders in conducting survivor interviews to gain qualitative insights from the families, friends, and communities of women who suffered from a pregnancy-associated or pregnancy-related death.<sup>184</sup> The MMRC highlighted lessons from the Fetal Infant Mortality Review process that includes interviewing families who suffered infant losses, to gain valuable insights into the families’ interactions with health care providers leading up to and including the death of their baby.<sup>185</sup> Recognizing that the perspectives of family and friends is important for enriching the data and circumstances leading up to an infant or maternal death would also be useful in SMM cases. Women who have experienced near death events during pregnancy, delivery, or the postpartum period may provide valuable qualitative insight related to their interactions with health care providers leading up to the event. These perspectives are integral to understanding the full context of SMM events.

#### *B. Indiana Should Fund Doula and Home Visiting Services*

Next, the Indiana General Assembly seemed as if it was beginning to prioritize maternal health when it enacted a statute to provide doula services to low-income Hoosier women. Instead, lawmakers removed \$20,000 in appropriated funds toward doula services on the final days of the 2019 legislative session making the effort void.<sup>186</sup> Doula care is a promising intervention for combating poor birth outcomes for low-income women and women of color, as doulas are well positioned to provide individual, patient-centered care that is culturally appropriate.<sup>187</sup> Doula services not only improve birth outcomes for mothers, but they also support healthy infant outcomes such as increased breastfeeding initiation rates and fewer low birth weight infants.<sup>188</sup> Given the numerous benefits, it is troubling that the Indiana General Assembly felt it was important enough to codify doula service coverage for Medicaid recipients, but

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181. Kramer et al., *supra* note 42.

182. See Kilpatrick & Ecker, *supra* note 66.

183. IND. DEP’T. HEALTH, *supra* note 6, at 51.

184. *Id.*

185. *Id.*

186. Sheridan, *supra* note 118.

187. *Doula Medicaid Project*, NAT’L HEALTH L. PROGRAM, <https://healthlaw.org/doulamedicaidproject/> [<https://perma.cc/GDH9-CGSX>] (last visited Mar. 20, 2023).

188. *Id.*

not important enough to fund doula services.<sup>189</sup>

Additionally, providing home visiting services to every eligible new mother is an important strategy to combat maternal mortality and morbidity. Several states pay for home visiting programs with public and private funding streams, including Indiana.<sup>190</sup> Currently, IDOH and the Department of Child Services receive federal dollars from the Maternal, Infant and Early Childhood Home Visiting grant to provide home visiting services in six Indiana counties.<sup>191</sup> Further, Indiana Code Section 16-46-14-2 provides funds to IDOH under the protecting Indiana's newborns ("Safety PIN") grant.<sup>192</sup> The Safety PIN grant provides funds to evidence-based home visitation programs for at-risk pregnant women.<sup>193</sup>

While these grants undoubtedly provide critical home visitation services to vulnerable pregnant women, the funds are limited and leave other vulnerable families from receiving services. Similar to Michigan and California, utilizing Medicaid funds to expand home visitation services is an important step that Indiana should take. To be sure, financing home visitation programs with Medicaid funds can be complex because of the range of services that different home visiting programs provide, coupled with Medicaid program requirements.<sup>194</sup> Fortunately, Medicaid provides multiple paths for states to finance home visiting services, including through the use of Medicaid waivers or amendments to state plans.<sup>195</sup> Further, the MMRC found that several pregnancy-associated deaths occurred shortly after women were discharged from an inpatient substance use treatment facility.<sup>196</sup> The Indiana MMRC recommends that women who use substances are immediately connected to outpatient services.<sup>197</sup> Similarly, supporting pregnant women with social support services, such as home visitation, is an integral strategy to supporting women going through recovery because it adds an additional layer of support to families.

### *C. Indiana Should Require Implicit Bias Training for All Healthcare Providers*

Importantly, the Indiana MMRC also recommends that standardized education regarding implicit bias is provided for clinicians.<sup>198</sup> It is well-established that healthcare providers' implicit biases are associated with lower-

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189. IND. CODE § 12-15-5-7(a) (2021); *see Sheridan, supra* note 118.

190. Becky Normile et al., *Medicaid Financing of Home Visiting Services for Women, Children, and Their Families*, Nat'l Acad. State Health Pol'y 1, 9 (2017).

191. Governor Newsom Signs 'Mominibus' Act, *supra* note 177.

192. IND. CODE § 16-46-14-2 (2021).

193. IND. CODE § 16-46-14-4(a)(4) (2021).

194. Normile et al., *supra* note 190, at 2.

195. *Id.* at 9.

196. Bavis, *supra* note 2, at 49.

197. *See id.*

198. *See id.* at 10.

quality patient-provider communication for patients in marginalized groups.<sup>199</sup> Further, it is well-established that the U.S. healthcare system has historically minimized the concerns of people of color and women.<sup>200</sup> For example, a study reviewing audio recordings of healthcare encounters found that healthcare providers who tested higher on implicit bias measures were “more verbally dominant and used less-patient centered language with Black patients.”<sup>201</sup> Accordingly, requiring clinicians to undergo regular implicit bias training is an important step for mitigating health inequities that exist for pregnant women of color and pregnant women who use substances.

Moreover, recent national attention has highlighted the critical importance of mitigating racial bias in healthcare, but discriminatory practices among people who use substances has received less attention.<sup>202</sup> Substance users are “often seen as criminals, poor employees, and lacking a moral compass”<sup>203</sup> and this becomes especially important to understand in the context of pregnant women who use illicit substances.<sup>204</sup> In fact, studies have shown that regardless of knowledge and experiences’, the majority of nurses report feeling anger toward pregnant women who use substances.<sup>205</sup> Providing staff with education about addictions, and recognizing their own feelings about addictions has been shown to decrease provider frustration, and in turn, improve care.<sup>206</sup>

Further, when clinicians do not understand their own biases, they are more likely to make unconscious assumptions about their patients and their patients’ needs that can lead to inappropriate treatment and misdiagnosis.<sup>207</sup> Accordingly, Indiana should adopt a similar law as Michigan’s administrative rule requiring that health care providers receive implicit bias training as a condition to receiving or renewing a health care license. This is a straightforward strategy to ensure the standardized education that the Indiana MMRC recommends.

The Indiana General Assembly is arguably obligated to enact such policy, yet

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199. Nao Hagiwara et al., *A Call for Grounding Implicit Bias Training in Clinical and Translational Frameworks*, 395 LANCET 1457, 1457 (2020). See also Sun et al., *supra* note 57.

200. Shanoor Seervai, *Health Care Has a Bias Problem: Here’s How to Fix It*, COMMONWEALTH FUND (Nov. 16, 2019), [https://www.commonwealthfund.org/publications/podcast/2019/nov/health-care-has-bias-problem-heres-how-fix-it?gclid=CjwKCAjwzaSLBhBJEiwAJSRokn4tQr9upiUc4UFhgX3a8trxYCGwYATstYYcMRkAVTwmRkcuv4DbuBoC7eEQAvD\\_BwE](https://www.commonwealthfund.org/publications/podcast/2019/nov/health-care-has-bias-problem-heres-how-fix-it?gclid=CjwKCAjwzaSLBhBJEiwAJSRokn4tQr9upiUc4UFhgX3a8trxYCGwYATstYYcMRkAVTwmRkcuv4DbuBoC7eEQAvD_BwE) [<https://perma.cc/K9FL-XQA9>].

201. Sun et al., *supra* note 57.

202. See Dara Seybold et al., *Evaluation of a Training to Reduce Provider Bias Toward Patients with Substance Abuse*, 14 J. SOC. WORK PRAC. ADDICTIONS 1, 3 (2015).

203. Zara Greenbaum, *The Stigma that Undermines Care*, AM. PSYCH. ASS’N. (June 2019), <https://www.apa.org/monitor/2019/06/cover-opioids-stigma> [<https://perma.cc/UR6N-WL8F>].

204. See Seybold et al., *supra* note 202.

205. *Id.*

206. *Id.*

207. Mary Kate Brogan, *Addressing Racial Bias in Health Care a ‘Life or Death’ Matter*, VA. COMMONWEALTH UNIV. HEALTH (Jan. 11, 2021), <https://www.vcuhealth.org/news/addressing-racial-bias-in-health-care-a-life-or-death-matter> [<https://perma.cc/SJF5-3GER>].

it seems unlikely that it would pass, given the legislature's recent push to enact a policy in public education that is nearly the complete opposite. During the 2022 legislative session, republican lawmakers introduced House Bill 1134, attempting to ban "divisive concepts" by limiting what teachers could speak about in their classrooms including race, sex, and religion.<sup>208</sup> Specifically, the bill was inspired by opposition to "critical race theory" and aimed to give parents more power to oppose material they found inappropriate.<sup>209</sup> The bill was highly controversial and ultimately died in the Senate, but not before drawing criticism from the Indiana State Teachers Association and the black community.<sup>210</sup> Notably, critics were concerned that the bill would prevent children from receiving an honest education.<sup>211</sup> Undoubtedly education and healthcare are separate issues, but the republican lawmakers tenacity towards passing a bill that would stifle teaching accurate racial history is indicative of whether the legislature would pass a law requiring implicit bias training for healthcare providers.<sup>212</sup>

In the likely event the General Assembly refuses to act, hospitals and other healthcare facilities are well-suited to fill this gap by implementing implicit bias training for employees. Because racism and bias are antithetical to the oaths and ethical responsibilities that healthcare professionals hold, it follows that organizations employing and training healthcare providers are well-positioned to develop and implement specific, concrete strategies to combat and raise awareness of biases held by their employees.<sup>213</sup> Importantly, before healthcare organizations invest time and financial resources in implicit bias training, they should critically evaluate the type of training they select.<sup>214</sup> Meaning, to truly move the needle and mitigate bias, healthcare organizations must commit to providing more than "box-checking training activities that result in no improvement in antiracism competencies or in institutional measures of inclusion, equity, or health outcomes."<sup>215</sup> This will require implementing a range of strategies such as aligning antiracism training with the organization's mission and values, identifying institutional leaders and staff to oversee and direct trainings, developing a longitudinal antiracism training curriculum, and developing external

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208. Arika Herron, *Indiana Senate Kills CRT-Inspired Legislation that Created Outrage Among Educators, Black Hoosiers*, INDY STAR (Feb. 28, 2022), <https://www.indystar.com/story/news/education/2022/02/28/hb-1134-indiana-senate-kills-crt-critical-race-theory-inspired-legislation/9323738002/> [<https://perma.cc/D5FR-QSUV>]; see H.B. 1134, 123rd Gen. Assemb., Reg. Sess. (Ind. 2022).

209. Herron, *supra* note 208.

210. *Id.*

211. *Id.*

212. *See id.*

213. Alicia D.H. Monroe et al., *Antiracism Training in Medicine*, JAMA HEALTH F. (Dec. 3, 2020), <https://jamanetwork.com/journals/jama-health-forum/fullarticle/2773845> [<https://perma.cc/EY5E-UT8E>].

214. Hagiwara et al., *supra* note 199, at 2.

215. Monroe et al., *supra* note 213.

partnerships to build trust with vulnerable populations.<sup>216</sup>

#### *D. Indiana Should Create a Perinatal Data Warehouse*

Finally, the Indiana MMRC recommends that Indiana promotes a statewide information exchange among Indiana providers and agencies.<sup>217</sup> Through the Indiana's MMRC case review, it became clear that a woman's outcome may have been different if health care providers from different organizations and agencies were able and willing to communicate with each other regarding the woman's personal and health history.<sup>218</sup> Indiana is well-positioned to partner with an already existing and reputable health information exchange that exists in Indiana—the Indiana Health Information Exchange (“IHIE”).

IHIE has existed for over a decade and enables hospitals, doctors, labs and other health care service providers to deliver efficient and quality health care.<sup>219</sup> IHIE achieves this by promoting interoperability between Electronic Health Records (“EHRs”), holding a large inter-organizational data repository, and maintaining a platform that supports population health efforts.<sup>220</sup> Partnering with IHIE can potentially serve several purposes. First, it can eliminate the barriers to inter-provider communication that the MMRC highlighted such as disjointed EHRs, fragmented data sharing between state agencies and local health care providers, and HIPAA limitations.<sup>221</sup> Second, multiple health systems participate in IHIE across Indiana, creating an already strong foundation for inter-provider communication that can be readily built on.<sup>222</sup> Finally, partnering with IHIE provides an opportunity for Indiana to create an innovative perinatal data warehouse similar to New York and California, where health officials can track maternal mortality, SMM, and other maternal health indicators in real time.

## VI. CONCLUSION

Because of the complexity of factors that contribute to maternal mortality, a multifaceted approach and sustained effort will be required to reduce the prevalence. While Indiana has made necessary progress in implementing policies to reduce maternal mortality, these policies alone are insufficient. Indiana has an unacceptable rate of maternal mortality. The Indiana MMRC is undoubtedly doing critical work to study, evaluate, and make recommendations to prevent

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216. *Id.*

217. IND. DEP'T. HEALTH, *supra* note 6, at 41.

218. *Id.*

219. *About Us*, IND. HEALTH INFO. EXCH., <https://www.ihie.org/about-us/> [<https://perma.cc/A933-LC6J>] (last visited Oct. 15, 2021).

220. *Id.*

221. IND. DEP'T. HEALTH, *supra* note 6, at 42. HIPAA is a federal law that requires standards to protect sensitive patient health information from being disclosed without the patient's consent or knowledge.

222. *See CareWeb Facilities List*, IND. HEALTH INFO. EXCH. (Jan. 2020), <https://www.ihie.org/wp-content/uploads/2020/01/CareWeb-Facility-List.pdf> [<https://perma.cc/42WK-24X4>].

maternal deaths and improve Indiana's maternal mortality rates, yet it is unlikely that Indiana will see improvements without more state legislative support.

Moving the needle to improve Indiana's maternal mortality requires more than the Indiana General Assembly codifying another committee or commission, such as the Indiana MMRC, that focuses on women's health. It requires implementing policies that are proving to reduce maternal deaths and appropriating the necessary funds. Indiana has the opportunity to improve from its position as the third worst state for maternal mortality, but it will require the Indiana General Assembly to find the political will to enact policies that are recommended by its own MMRC and also working in other states. Every Hoosier woman deserves to have a healthy and safe outcome during pregnancy, delivery, and the postpartum period, and no family should lose a mother for reasons that are largely preventable.