Racial and Ethnic Disparities in Maternal Mortality in the United States Using Enhanced Vital Records, 2016–2017

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See also Galea and Vaughan, p. 1584.

Objectives. To better understand racial and ethnic disparities in US maternal mortality.

Methods. We analyzed 2016–2017 vital statistics mortality data with cause-of-death literals (actual words written on the death certificate) added. We created a subset of confirmed maternal deaths that had pregnancy mentions in the cause-of-death literals. Primary cause of death was identified and recoded using cause-of-death literals. We examined racial and ethnic disparities both overall and by primary cause.

Results. The maternal mortality rate for non-Hispanic Black women was 3.55 times that for non-Hispanic White women. Leading causes of maternal death for non-Hispanic Black women were eclampsia and preeclampsia and postpartum cardiomyopathy with rates 5 times those for non-Hispanic White women. Non-Hispanic Black maternal mortality rates from obstetric embolism and obstetric hemorrhage were 2.3 to 2.6 times those for non-Hispanic White women. Together, these 4 causes accounted for 59% of the non-Hispanic Black–non-Hispanic White maternal mortality disparity.

Conclusions. The prominence of cardiovascular-related conditions among the leading causes of confirmed maternal death, particularly for non-Hispanic Black women, necessitates increased vigilance for cardiovascular problems during the pregnant and postpartum period. Many of these deaths are preventable. (*Am J Public Health*. 2021;111(9):1673–1681. https://doi.org/10.2105/AJPH.2021.306375)

Significant disparities in maternal mortality between White and Black mothers have been recorded as long as national data have been available. In 1933, all states reported maternal deaths for the first time, and the mortality rate for Black mothers (1000 per 100 000 births) was 1.8 times the rate for White mothers (564 per 100 000).[1] These disparities have persisted, averaging 4 times higher for Black compared with White mothers as recently as 1990 to 1996,[2] with the most recent publication of 2018 maternal mortality rates showing a disparity of 2.5 times.[3] The

breadth and persistence of these racial disparities have led to clinical,[4] policy,[5] and programmatic[6] initiatives. Compounding the challenges has been a lack of clarity in the measurement of maternal mortality.[7]

Vital statistics provide the official US maternal mortality estimates and also identify cases for more detailed review for other maternal mortality data systems such as the Pregnancy Mortality Surveillance System and maternal mortality review committees.[7] However, concerns about the accuracy of US vital statistics data used to measure maternal

mortality have persisted for decades. Before 2003, the concern about accuracy of vital statistics data focused mainly on underreporting of maternal deaths.[8,9] With the 2003 standard revision of birth and death certificates, a pregnancy checkbox was added to address this underreporting,[10] and, as a result, more maternal deaths were captured on the death certificate.[11,12] However, recent validity studies found that the pregnancy checkbox also led to overreporting of maternal deaths (i.e., reproductive-aged women were counted as a maternal death with no

indication of pregnancy upon further validation), ranging from 21% in a 4-state study[13] to 50% in a Texas study.[14]

Another problem identified in vital statistics maternal mortality data is the large and increasing number of deaths coded to ill-defined causes. Studies found that 40% to 50% of maternal deaths were coded to ill-defined causes that do not provide any information as to the actual cause of death.[15,16] With so many deaths coded to ill-defined causes, it is impossible to accurately identify the leading causes of maternal death or the percent contribution of individual causes of death to maternal mortality disparities. To address these challenges, we developed a different cause-of-death coding method to increase the specificity of causes identified while greatly reducing the number of maternal deaths coded to ill-defined causes.[17] To correct for overreporting errors, we analyzed the cause of death literals (actual words written on the death certificate) to identify cases in which the decedent's pregnancy or postpartum status was not only identified by the pregnancy checkbox or a maternal mortality code on the death certificate but was also confirmed by specific terms written in the cause-of-death section of the death certificate—hereafter known as confirmed maternal deaths. The purpose of this study was to use this set of confirmed maternal deaths to re-examine racial and ethnic disparities in US maternal mortality, to identify the leading causes of maternal death by race and ethnicity, and to identify the specific causes of death that contributed the most to racial and ethnic disparities. Accurate information is critical to the development of preventive measures to address the profound racial/ethnic disparities in maternal mortality in the United States.

METHODS

US maternal mortality data used for national and international comparisons are based on information reported on death certificates filed in state vital statistics offices and compiled into national data through the National Vital Statistics System.[3] Physicians, medical examiners, or coroners are responsible for completing the medical portion of the death certificate, including the cause of death. The United States uses the World Health Organization (WHO) definition of maternal death: "The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes."[18(p1238)] Late maternal deaths are those that occur from 43 days to 1 year after pregnancy.[18] Since 1999, cause-of-death data in the United States have been coded according to the *International Statistical Classification of Diseases and Related Health Problems, 10th Revision* (*ICD-10*).[18] Maternal deaths are those coded to *ICD-10* codes A34, O00–O95, and O98–O99, while late maternal deaths are coded to O96.[3,18]

We used the 2016 and 2017 US multiple cause-of-death data files from the National Center for Health Statistics (NCHS), with cause-of-death literals added. The cause-of-death literals are the actual words written in the cause-of-death section of the death certificate, which serve as the basis for assignment of *ICD-10* codes and provide much richer detail as to the actual circumstances of death. We created a subset of all possible maternal or late maternal deaths for coding. This included all females aged 10 to 54 years with a maternal code (A34, O00–O96, or O98–O99) in the multiple cause-of-death data or with pregnant or postpartum status indicated by the pregnancy checkbox.[17] For confirmed maternal deaths, the timing of death (maternal or late maternal) was identified by the pregnancy checkbox, together with information in the cause-of-death literals.

By 2016, all states except West Virginia had a pregnancy checkbox on their death certificate. West Virginia added the checkbox in 2017, and we included their data to be able to provide US estimates and because their inclusion or exclusion did not appreciably affect our findings. California had a nonstandard pregnancy question that ascertained whether the woman was pregnant at the time of death or up to 1 year before death. Given that more detailed information was not available, we included the California data and used the NCHS designation of whether these deaths were maternal or late maternal.[19]

Recoding Records to the Primary Cause of Death

NCHS coding practices specify that if the pregnancy checkbox indicates that the death occurred during or within 1 year of pregnancy, then the cause of death is automatically coded as a maternal or late maternal death, regardless of whether the condition was related to or exacerbated by the pregnancy. The only exception is for injury deaths (i.e., accidents, homicides, and suicides), which are coded to nonmaternal causes.[20] However, because of major problems with the pregnancy checkbox data,[13,14] we chose to examine each case independent of the checkbox. Thus, we recoded records with a pregnancy or postpartum mention in the cause-of-death literals as maternal deaths and

records with no such mention as non-maternal causes.[17] This does not mean that the latter deaths were nonmaternal but merely indicates that we were unable to confirm pregnant or postpartum status from the cause-of-death literals. The recoding was done to increase the specificity of conditions coded and to provide an alternative code for cases in which it was unclear whether they were maternal deaths.

We developed an alternative coding strategy to identify the primary cause of death directly from the cause-of-death literals using methods described in more detail elsewhere.[17] We defined the "primary cause of death" as the cause of death that was the most likely, or primary, cause that led to the decedent's death, regardless of order of terms listed on the death certificate.[17] Standard underlying cause-of-death coding rules rely heavily on the order of causes listed and whether there is a plausible sequence of one cause leading to another.[18,20] However, maternal death certificates are often not filled out with proper cause-of-death sequencing. In these cases, an application of the standard cause-of-death coding rules often does not result in the most informative cause being selected as the underlying cause, a point explored in depth in a previous paper.[17] While assigning primary cause of death involves human judgment, we minimized bias by having all records jointly coded by 2 PhD epidemiologists trained at NCHS (M. F. M. and M. T.). Any discrepancies between the coders were resolved via individual case review and discussion, consultation with WHO and NCHS *ICD-10* coding manuals,[18,20] medical textbooks,[21] and with medical and coding experts. This coding reduced the percentage of maternal deaths coded to ill-defined causes (O26.8, O95, O99.8) from 43.5%

in the NCHS-coded data to 2.5% among confirmed maternal deaths.

Late maternal deaths are coded to *ICD-10* code O96, which does not provide any information about the actual cause of death.[18] Thus, late maternal deaths with pregnancy mentions in the cause-of-death literals were coded to more specific maternal causes, while records with no such mention were coded to nonmaternal causes.

Analysis

We chose all "confirmed" maternal and late maternal death records for more detailed analysis. These were records in which specific terms indicating pregnancy or postpartum status (e.g., pregnant, postpartum, ectopic, amniotic) were written in the cause-of-death section of the death certificate.[17] This, together with the pregnancy checkbox being checked (in almost all cases), provides a high degree of confidence that these were in fact maternal or late maternal deaths.

We analyzed data separately for non-Hispanic White, non-Hispanic Black, and Hispanic women. Other race and ethnic groups were included in the total population but were not shown separately because of insufficient numbers of deaths to support a detailed cause-of-death analysis. An additional reason to restrict the analysis to non-Hispanic White, non-Hispanic Black, and Hispanic women is that race/ethnicity reporting is quite accurate on death certificates for these groups, but is less accurate for other racial/ethnic groups such Asians, Pacific Islanders, and Native Americans.[22] As not all states reported multiracial data in 2016 to 2017, we used NCHS bridged race data for our analysis.[23] NCHS provided bridged race data to reassign the 0.5% of US records

reporting more than 1 race back to single-race categories using methods described elsewhere.[23] The purpose of this reassignment was to provide consistent racial categorization for data years when some states reported multiracial data and some did not.

We computed maternal mortality rates per 100 000 live births. We ascertained live births by race/ethnicity for the 2016 and 2017 data years from Centers for Disease Control and Prevention WONDER births online database.[19] Our population of maternal deaths includes those deaths that could be confirmed as maternal from specific terms listed in the cause-of-death literals. Thus, our maternal mortality rates likely underestimate the true levels of maternal death in the United States. In our analysis, we emphasized other estimates, specifically the ranking of leading causes of death, and maternal mortality rate ratios (MRRs). The advantages of this approach were to (1) identify a set of deaths that we can clearly confirm as maternal deaths, (2) improve the specificity of cause-of-death coding for these confirmed maternal deaths, and (3) greatly reduce the number of deaths coded to ill-defined causes. Thus, relative comparisons of maternal deaths and causes of death can be made with greater accuracy.

We ranked leading causes of maternal death from a longer tabulation list of causes of maternal death using NCHS ranking procedures.[17,24] We used our recoded primary cause data to identify the leading causes of maternal death for the total population and for non-Hispanic White, non-Hispanic Black, and Hispanic women. We compared maternal MRRs by race and ethnicity from our recoded data to corresponding rate ratios from NCHS data. The maternal MRR is the maternal mortality rate for

group A (e.g., non-Hispanic Black women) divided by the maternal mortality rate for group B (e.g., non-Hispanic White women).

We identified the causes of death that contributed the most to the non-Hispanic Black–non-Hispanic White maternal mortality disparity. This was done by computing the total difference in maternal mortality rates between non-Hispanic Black and non-Hispanic White women and the difference for each of the leading causes. The difference for each cause was then divided by the total difference to yield a percent contribution of each cause to the total difference.

Rates and ratios based on 10 to 19 deaths are shown but are flagged as being statistically unreliable, while rates based on fewer than 10 deaths are suppressed.[19] All statements in the text were tested for statistical significance and a statement that a rate is higher or lower than another rate indicates that the rates were significantly different at a *P* level of less than .05.

RESULTS

Among our study's confirmed maternal deaths, the 2016–2017 maternal mortality rate for non-Hispanic Black women was 3.55 times that for non-Hispanic White women (MRR = 3.55; Table 1). This ratio was higher than in the NCHS-coded data (MRR = 2.46). Numbers and rates are shown in Table A (available as a supplement to the online version of this article at http://www.ajph.org). The confirmed late maternal mortality rate (6 weeks to 1 year after delivery) for non-Hispanic Black women was 3.52 times that for non-Hispanic White women (MRR = 3.52). This ratio was also higher than in the NCHS-coded data (MRR = 2. 14). The confirmed maternal MRR was

not significantly higher for Hispanic than for non-Hispanic White women with ratios of 1.08 for maternal and 1.29 for late maternal deaths. This finding was in direct contrast with the NCHS-coded data, which found significantly lower maternal mortality rates among Hispanic compared with non-Hispanic White women (MRR = 0.76).

For the total population, obstetric embolism and eclampsia and preeclampsia were tied for the leading cause of maternal death (Table 2). The obstetric embolism category includes amniotic fluid embolism, pulmonary embolism, and any other type of embolism occurring during the pregnant or postpartum period. The third leading cause of maternal death was postpartum cardiomyopathy, followed by obstetric hemorrhage, and other complications of obstetric surgery and procedures (many from problems during cesarean section). Together, the 5 leading causes of maternal death accounted for nearly two thirds (65.7%) of confirmed maternal deaths. Rankings were similar for non-Hispanic White and Hispanic women (Table 2).

For non-Hispanic Black women, eclampsia and preeclampsia was the leading cause of death, followed by postpartum cardiomyopathy, obstetric embolism, and obstetric hemorrhage (Table 2). Ectopic pregnancy was the fifth leading cause of maternal death for non-Hispanic Black women but did not fall among the 5 leading causes for non-Hispanic White and Hispanic women. For non-Hispanic Black women, the risk of dying from eclampsia and preeclampsia (MRR = 5.06), and postpartum cardiomyopathy (MRR = 4.86) was about 5 times that for non-Hispanic White women.

The causes of death that contributed the most to the non-Hispanic

Black–non-Hispanic White maternal mortality disparity were eclampsia and preeclampsia (22.1%), postpartum cardiomyopathy (19.1%), and obstetric embolism (11.0%; Table 2). If the non-Hispanic Black maternal mortality rate for these 3 causes could be reduced to non-Hispanic White levels, the overall maternal mortality disparity would be reduced by more than one half (52.2%). This is in contrast with the NCHS-coded data in which, by far, the largest contributor to the non-Hispanic Black–non-Hispanic White maternal mortality disparity was ill-defined causes (38.4%).[19]

For late maternal deaths, the leading cause of death was postpartum cardiomyopathy, accounting for 36.9% of all late maternal deaths for the total population, 32.4% of deaths for non-Hispanic White women, and 56.8% of deaths for non-Hispanic Black women (Table 3). Other causes of death that were important in the late maternal period were obstetric embolism, eclampsia and preeclampsia, and diseases of the circulatory system, although small numbers of deaths from these causes make a more detailed analysis infeasible.

For non-Hispanic Black women, the risk of late maternal death from postpartum cardiomyopathy was 6 times that for non-Hispanic White women (MRR = 6.16). About two thirds (66.4%) of the non-Hispanic Black–non-Hispanic White late maternal mortality disparity was attributable to postpartum cardiomyopathy.

DISCUSSION

Despite advances in public health, large racial and ethnic disparities in US maternal mortality remain a critical problem that calls into question our ability as a nation to treat all persons equally. Among confirmed maternal and

TABLE 1— Maternal Mortality Rate Ratios (MRRs) by Race/Ethnicity: United States, 2016–2017

	Maternal,[a] MRR (95% CI)[b]		Late Maternal,[c] MRR (95% CI)[b]		Combined Maternal and Late Maternal, MRR (95% CI)[b]	
	NCHS Coded	Confirmed	NCHS Coded	Confirmed	NCHS Coded	Confirmed
Non-Hispanic Black/Non-Hispanic White	2.46 (2.20, 2.75)	3.55 (2.94, 4.28)	2.14 (1.79, 2.57)	3.52 (2.17, 5.71)	2.37 (2.16, 2.60)	3.55 (2.98, 4.22)
Hispanic/Non-Hispanic White	0.76 (0.66, 0.88)	1.08 (0.85, 1.36)	0.87 (0.70, 1.07)	1.29 (0.72, 2.26)	0.79 (0.70, 0.89)	1.11 (0.89, 1.36)
Non-Hispanic Black/Hispanic	3.23 (2.78, 3.75)	3.30 (2.62, 4.19)	2.47 (1.96, 3.12)	2.73 (1.56, 4.92)	2.99 (2.64, 3.39)	3.21 (2.59, 3.99)

Note. CI = confidence interval; NCHS = National Center for Health Statistics.

[a]Deaths during pregnancy, birth, or up to 42 d postpartum.
[b]Rate ratio = maternal mortality rate for group A divided by maternal mortality rate for group B.
[c]Deaths between 43 and 365 d postpartum.

late maternal deaths, the non-Hispanic Black maternal mortality rate was 3.5 times the non-Hispanic White rate. The excess maternal mortality risk was focused among a few causes of death, and much of this excess mortality is preventable. Specific causes of death had even higher rate ratios. For example, maternal mortality risk was 5 times higher for non-Hispanic Black than for non-Hispanic White women for eclampsia and preeclampsia. These results are consistent with other studies documenting that Black women have higher rates of preeclampsia and eclampsia than do White women and are more likely to die from this complication.[25] Data suggest that 60% of maternal deaths related to preeclampsia are preventable, making this a critical area for intervention.[26] One recommended strategy is the implementation of a hypertension safety bundle in an effort to standardize care. This safety bundle includes provider and staff education on hypertension, protocols, treatment algorithms, and other key strategies to improve care for pregnant women with hypertension during delivery.[27]

Postpartum cardiomyopathy is another important contributor to the non-Hispanic Black–non-Hispanic White maternal mortality disparity, particularly among late (43 days to 1 year) maternal deaths.[28] For non-Hispanic Black women, the maternal mortality rate from postpartum cardiomyopathy was 5 times, and the late maternal mortality rate was 6 times that of non-Hispanic White women. Previous data suggest that Black women with postpartum cardiomyopathy are more likely to present with more severe symptoms and more advanced disease than White women.[29] Increasing awareness of cardiovascular disease in the postpartum setting by health care providers beyond obstetricians and gynecologists (e.g., emergency department physicians, primary care providers) may help to improve early diagnosis and treatment of this complication. Earlier detection is critical as a significant proportion of deaths from cardiomyopathy are thought to be preventable.[30]

For non-Hispanic Black women, obstetric embolism was the third and obstetric hemorrhage was the fourth leading cause of maternal death, with rates 2.6 and 2.3 times those for non-

Hispanic White women, respectively. For both of these conditions, safety bundles have been recommended to standardize delivery care.[31] Similar to deaths from preeclampsia and cardiomyopathy, a significant portion of these deaths (up to 70% in the case of hemorrhage) are thought to be preventable.[32]

Strengths and Limitations

Strengths of this study included the use of cause-of-death literals, which provide richer detail on the specific circumstances of death: detail that is often lost during standard coding processes. For many women, an examination of the cause-of-death literals provided confirmation that the woman was pregnant or postpartum at the time of death, thus ensuring the accuracy of the maternal death attribution. Examination of the literals together with improved coding procedures also allowed us to reduce the percentage of deaths coded to ill-defined causes from 43.5% in the NCHS-coded data to 2.5% among confirmed maternal deaths, illustrating that most records initially coded to ill-defined causes actually contained more specific

TABLE 2— Five Leading Causes of Confirmed Maternal Death by Race and Hispanic Origin: United States, 2016–2017

	Total[a]		Non-Hispanic White[b]		Non-Hispanic Black[c]		Hispanic		Non-Hispanic Black/ Non-Hispanic White, MRR (95% CI)	% Contribution to Non-Hispanic Black– Non-Hispanic White Disparity
	Rank	No. (Rate)[d]	Rank	No. (Rate)[d]	Rank	No. (Rate)[d]	Rank	No. (Rate)[d]		
All causes		615 (7.88)		230 (5.58)		232 (19.81)		109 (6.00)	3.55 (2.94, 4.28)	
Obstetric embolism (O88)	1	98 (1.26)	1	41 (0.99)	3	30 (2.56)	1	22 (1.21)	2.58 (1.55, 4.23)	11.0
Eclampsia and preeclampsia (O11, O13–O16)	1	98 (1.26)	2	32 (0.78)	1	46 (3.93)	3	13 (0.72)[e]	5.06 (3.16, 8.21)	22.1
Postpartum cardiomyopathy (O90.3)	3	86 (1.10)	4	29 (0.70)	2	40 (3.42)	5	11 (0.61)[e]	4.86 (2.93, 8.12)	19.1
Obstetric hemorrhage (O20, O43.2, O44–O46, O67, O71.0, O71.1, O71.3, O71.4, O71.7, O72)	4	82 (1.05)	3	31 (0.75)	4	20 (1.71)	2	19 (1.05)[e]	2.27 (1.22, 4.11)	6.7
Other complications of obstetric surgery and procedures (O75.4)	5	40 (0.51)	7	10 (0.24)[e]	6	14 (1.20)[e]	4	12 (0.66)[e]	4.93 (2.04, 12.4)	6.7

Note. CI = confidence interval; MRR = mortality rate ratio. Maternal deaths include those during pregnancy and up to 42 d postpartum.

[a]Includes other races not shown separately because of small numbers of deaths.
[b]For non-Hispanic White women, diseases of the circulatory system was the fifth leading cause of death with 16 deaths and a rate of 0.39.
[c]For non-Hispanic Black women, ectopic pregnancy was the fifth leading cause of maternal death with 18 deaths and a rate of 1.54.
[d]Per 100 000 live births.
[e]Rate considered statistically unreliable; based on 10 to 19 deaths in the numerator.

cause-of-death information. Our approach also provided greater cause-of-death detail for late maternal deaths, which is obscured with standard coding practices.

A major limitation of this study is that some actual maternal deaths were likely not included in our subset of confirmed maternal deaths when the certifier did not note the woman's pregnant or postpartum status in the cause-of-death section of the death certificate; thus, results may not be generalizable to all maternal deaths in the United States. Because of this, we emphasized rate ratios and percent contribution among confirmed maternal deaths rather than focusing on maternal mortality rates.

It is also possible that we made errors in coding the primary cause of death. We minimized this possibility through careful review and discussion of each identified case and consultation with additional resources when needed. Another limitation is that vital statistics coding procedures do not classify deaths from injuries (i.e., accidents, homicides, or suicides) in pregnant or postpartum women as maternal deaths, while these types of deaths (particularly suicides and drug overdose deaths) are sometimes included as maternal deaths in other studies.[33]

Public Health Implications

Our data suggest that racial and ethnic disparities in maternal mortality in the United States may be even more pronounced than previously reported and further highlight the urgent need to address this public health crisis. Both maternal and late maternal mortality rates for non-Hispanic Black women were 3.5 times those for non-Hispanic White women. For eclampsia and preeclampsia and postpartum cardiomyopathy, rates for non-Hispanic Black women were 5

TABLE 3— Four Leading Causes of Confirmed Late Maternal Death by Race/Ethnicity: United States, 2016–2017

	Total[a]		Non-Hispanic White		Non-Hispanic Black		Non-Hispanic Black/Non-Hispanic White, MRR (95% CI)	% Contribution to Non-Hispanic Black–Non-Hispanic White Disparity
	Rank	No. (Rate)[b]	Rank	No. (Rate)[b]	Rank	No. (Rate)[b]		
All causes		103 (1.32)		37 (0.90)		37 (3.16)	3.52 (2.17, 5.71)	
Postpartum cardiomyopathy (O90.3)	1	38 (0.49)	1	12 (0.29)[c]	1	21 (1.79)	6.16 (2.90, 13.74)	66.4
Obstetric embolism (O88)	2	14 (0.18)[c]		5 (. . .)		5 (. . .)	. . .	. . .
Eclampsia and preeclampsia (O11, O13–O16)	3	12 (0.15)[c]		3 (. . .)		6 (. . .)	. . .	. . .
Diseases of the circulatory system (O99.4)	4	11 (0.14)[c]		4 (. . .)		2 (. . .)	. . .	. . .

Note. CI = confidence interval; MRR = mortality rate ratio. Ellipses indicate that rates were not computed because there were < 10 deaths. Late maternal deaths are those occurring from 42 d to 1 y postpartum.

[a]Includes other races/ethnicities not shown separately because of small numbers of deaths. For example, there were only 21 late maternal deaths for Hispanic women, which was insufficient to support detailed cause-of-death analysis.

[b]Per 100 000 live births.

[c]Rates based on 10 to 19 deaths are considered statistically unreliable.

times those for non-Hispanic White women. These findings are especially concerning because the majority of deaths from these causes are preventable.[32]

The prominence of cardiovascular conditions (i.e., eclampsia and pre-eclampsia, embolisms, cardiomyopathy) among the leading causes of maternal death in general, and particularly for non-Hispanic Black women, highlight the urgent need to optimize women's health across the life course, manage chronic illness, and standardize care. The elevated risk of death for Black women across multiple causes of maternal mortality reveals the impact of structural racism on health and health care in the United States.[34,35] Differences in patient–doctor communication, bias, language issues, shared decision-making, and use of evidence-based practices may help to explain these disparities and warrant further investigation. Groups such as the Council on Patient Safety in Women's Health Care have identified specific steps that health care systems can take to promote equity in women's health.[36] Further research into the experiences of women of color can inform efforts to improve health care systems and, thus, improve the birthing experience for all women.[37]

Racial and ethnic disparities in maternal mortality are unacceptable. Efforts to improve quality of care and equity across the life course are critical to preventing maternal mortality and reducing disparities. Accurate data are vital to our efforts to end maternal mortality disparities. *AJPH*

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CONTRIBUTORS

All authors contributed to the design, research, writing, and editing of the article and approved the final version.

CONFLICTS OF INTEREST

The authors have no conflicts of interest.

HUMAN PARTICIPANT PROTECTION

The study was ruled as exempt from institutional review board review from the University of Maryland institutional review board because the study was based on death certificates and there were no living human participants.

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