



Induced Abortion and the Increased Risk of Maternal Mortality

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Abstract

After years of failure to obtain accurate statistics on maternal mortality, the United States noted a sharp increase in its maternal mortality rate with widening racial and ethnic disparities. The 2016 report shocked the nation by documenting a 26 percent increase in maternal mortality from 18.8/100,000 live births in 2000 to 23.8 in 2014. Suggested etiologies of this increase included artifact as a result of improved maternal death surveillance, incorrect use of ICD-10 codes, healthcare disparities, lack of family support and other social barriers, substance abuse and violence, depression and suicide, inadequate preconception care, patient noncompliance, lack of standardized protocols for handling obstetric emergencies, failure to meet expected standards of care, aging of the pregnant patient cohort with associated increase in chronic diseases and cardiovascular complications, and lack of a comprehensive national plan. While some of the increase in maternal mortality may be a result of improved data collection, pregnancy-related deaths are occurring at a higher rate in the United States than in other developed countries. Some have suggested that the increased maternal mortality is due to limiting women's access to legal abortion. In order to discover effective strategies to improve pregnancy outcomes, maternal mortality must be investigated in an unbiased manner. This review explores the relationship between legal-induced abortion and maternal mortality.

Summary: In Finland, where epidemiologic record linkage has been validated, the risk of death from legal induced abortion is reported to be almost four times greater than the risk of death from childbirth. It is difficult to do this comparison in the United States not only because prior induced abortion history is often not recorded for a pregnancy-related death but also because less than one-quarter of the states require health care providers to report abortion deaths for investigation. These omissions are important because mortality risk in pregnancies subsequent to abortion is increased due to abortion-induced morbidities such as preterm birth and abnormal placentation. Legal induced abortion is a root cause of the racial and ethnic disparity noted in maternal mortality. In the United States, the death rate from legal induced abortion performed at 18 weeks gestation is more than double that observed for women experiencing vaginal delivery.

Keywords

Abortion, Abortion complications, Abortion-related mortality rate, Contextual-level social determinants of health, Incestuous citing, Maternal mortality, Maternal mortality ratio, Placenta accreta, Structural inequality, Women's reproductive issues

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In order to help identify pregnancy-related deaths, the Division of Vital Statistics at the National Center for Health Statistics modified the United States Standard Certificate of Death to include a question about pregnancy status in 2003. The states were so inconsistent applying it that an official maternal mortality report was not published from 2007 until 2016 (MacDorman et al. 2016). The 2016 report on 2014 data documented that maternal deaths had increased to 23.8/100,000 live births (Joseph et al. 2017), the highest of any developed country. The health departments of individual states now sponsor ongoing maternal mortality review committees. Identifying root causes will lead to the development of effective strategies to improve pregnancy outcomes.

The maternal mortality review committees report that 60 percent of these deaths may be preventable (Brantley et al. 2018). Even though they target the lack of standardized protocols for managing obstetrical emergencies as a root cause (*HRSA Maternal Mortality Summit* 2019), some healthcare professionals have suggested that the increase in maternal mortality is due to limiting women's access to abortion. Maternal mortality must be investigated in an unbiased manner to identify all contributing factors including the relationship between legal induced abortion and maternal mortality.

Classification of Maternal Deaths

The World Health Organization reports only deaths occurring during pregnancy or within forty-two days of the end of pregnancy in defining maternal mortality, while the Division of Reproductive Health at the Centers for Disease Control and Prevention (CDC) reports all pregnancy-related deaths occurring within one year of the end of pregnancy.

Deaths are categorized based on their causation and proximity to the end of the pregnancy:

- “Maternal death” is the death of a woman while pregnant or within forty-two days of the end of her pregnancy, irrespective of the duration or site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, excluding accidental or incidental causes.
- “Late maternal death” is the death of a woman from direct or indirect obstetric causes more than 42 days but within 365 days of the end of pregnancy.
- “Pregnancy-related death” is the death of a woman while pregnant or within 365 days

of the end of pregnancy, in which pregnancy may have contributed to the cause of the death.

- “Pregnancy-associated death” is the death of a woman while pregnant or within 365 days of the end of pregnancy from a cause that is either not related to pregnancy or pregnancy relatedness cannot be determined.

Maternal Mortality Estimates

Maternal deaths are investigated to identify root causes and develop effective preventive interventions. The maternal mortality rate that has been used is the number of maternal deaths per 100,000 women of reproductive age (Roser and Ritchie 2020). Because epidemiologists prefer to compare adverse outcomes to the number of at-risk individuals, an ideal mortality rate could be achieved by calculating the number of maternal deaths/100,000 pregnancies. Calculating this mortality rate is impossible because the numbers of spontaneous pregnancy losses are not known and induced abortion data are not available.

Maternal Mortality Ratio

Since the number of live births can be accurately measured due to mandated reporting on birth certificates, epidemiologists assume that the number of live births is a good representation of the number of pregnancies (Patel, Burnett, and Curtis 2003). This led to the development of the maternal mortality ratio, defining it as the number of deaths/100,000 live births. While two-thirds of maternal deaths occur in conjunction with a live birth (Jatlaoui et al. 2018), the rest may be separated from the end of pregnancy by days, weeks or even months and include spontaneous and induced pregnancy losses. Studies show as many as 50 percent of maternal deaths may be missed on death certificates in the United States (Horon 2005). It is not possible to accurately calculate the maternal mortality ratio without this information.

Racial and Ethnic Disparity

Maternal mortality in minority women, particularly non-Hispanic black women, has skyrocketed. Black women have a maternal mortality ratio 330 percent higher than white women (Petersen et al. 2019). Some argue that this is a result of implicit racism—the care provided to black or poor women is not as good as the care provided to non-Hispanic white women or affluent women.

Limiting the discussion to implicit racism does a disservice to women of color and women in poverty by ignoring other factors that contribute to maternal mortality.

Social Determinants

Poverty is a risk factor for failure to obtain appropriate medical care and may contribute to the racial disparity: 20 percent of black women live in poverty compared to 16 percent of Hispanic women and 8 percent of non-Hispanic white women. Only 5 percent of married couples live in poverty. In 2017, 67 percent of black women were unmarried when they gave birth compared with 39 percent of Hispanic women and 27 percent of white women (“Births to Unmarried Women” 2018). Prior to 1950, a black woman was more likely to be married than a white woman, with marriage rates nearing 80 percent, but marriage rates for black women have plummeted (Ricketts 1989). Giving birth and caring for a child without a partner places a woman at obvious disadvantage. If she should become ill, she may not seek emergency care due to lack of social support, childcare, or transportation. Violence is also more prevalent. Illinois reported that 13 percent of its maternal deaths were the result of homicide. While 14 percent of the population identifies as non-Hispanic black, these mothers accounted for 43 percent of the maternal homicide deaths (Koch, Rosenberg, and Geller 2016). Three of the main causes of maternal mortality in Texas were drug overdose, homicide, and suicide, accounting for almost 20 percent of the deaths (Baeva et al. 2018). Poverty and the lack of social and family support are causes of the disparity in maternal mortality ratios.

Diabetes, Hypertension, and Obesity

These social determinants of health are important. Poverty is linked to obesity, diabetes, and hypertension. Obesity is more prevalent in black (46.8 percent) and Hispanic (47 percent) populations than in the white population (37.9 percent; Hales et al. 2017). Diabetes is higher in blacks (12.7 percent) and Hispanics (12.1 percent) than in non-Hispanic whites (7.4 percent; CDC 2017). The rate of hypertension is higher among blacks (40.4 percent) compared to non-Hispanic whites (27.4 percent) or Hispanics (26.1 percent; CDC 2013). Preexisting hypertension increases the likelihood that a woman will develop preeclampsia or

eclampsia during her pregnancy. Obesity, diabetes, and hypertension predispose women to early obstetrical interventions and Cesarean sections, both of which are linked to increased maternal mortality.

Legal induced Abortion

Differences in pregnancy outcomes may affect maternal mortality risk. The rates of natural losses are similar (16 percent), but 34 percent of pregnancies in black women end in induced abortion compared to 11 percent for non-Hispanic white women. Black women more commonly have later abortions (13 percent) compared with non-Hispanic white women (9 percent; Jones and Finer 2012). The risk of death from legal abortion increases by 38 percent for every week after eight weeks of gestation (Bartlett, Berg, and Shulman 2004). Induced abortion, often in advanced pregnancy, is documented to lead to increased risk-taking behavior that results in death from drug overdose, suicide, or homicide. Legal induced abortion may be a factor in the racial disparity observed in pregnancy-related mortality.

Implicit Racism, Explicit Misogyny

A ten-year Harvard study completed in 2016 found that implicit bias based on race decreased by 17 percent, and explicit bias decreased by 37 percent (Charlesworth and Banaji 2019). If racial bias were a major cause, pregnancy-related mortality in the non-Hispanic black community should have decreased. It has not. To discuss social determinants of disparity without identifying antecedent enslavement and other factors unique to this demographic group is implicit bias, promoting the idea that black and nonblack women start on an equal playing field. It ignores the legacy of family disruption by enslavement’s forced displacement as well as governmental programs that have undermined the intact family unit. The effects of legalized racism are still apparent in structural inequality and the resultant of high prevalence of poverty. It confirms the stereotype that black women, through their behavior, place themselves far behind the rest of the population.

Victim blaming diverts attention from racism, discrimination, segregation, and the powerlessness of the ghetto. Abortion advocacy organizations have a long history of targeting minority communities with inappropriate adventures such as placing abortion clinics in black neighborhoods. Abortionists are opportunists, nonresidents seeking gain by taking advantage of communities of color. Compounding

structural inequality, abortion advocates effectively perpetuate inveterate suppression. Induced abortion may be a root cause of pregnancy-related mortality disparity. Nowhere in America has the lack of respect for women been more prevalent and damaging than in the black community (WHO Working Group on Maternal Mortality and Morbidity Classification 2012). It is critical to address these contextual-level social determinants of health to eliminate this disparity.

Determining Pregnancy Deaths

The CDC relies on death certificates to determine maternal deaths, but death certificates have been proven unreliable in identifying all maternal deaths. Deaths due to live births are the most accurately recorded because most live births occur in a hospital setting or with the assistance of medical personnel. However, deaths from other pregnancy outcomes such as induced abortion are not accurately reported.

Information about abortion is often not recorded on death certificates for women of reproductive age. Inconsistent implementation of a pregnancy checkbox on death certificates and search engine failures to provide the *ICD-10* obstetric-specific codes for abortion-related deaths thwart this documentation (Owens 2018). The Texas Maternal Mortality Task Force discovered that more than 50 percent of the maternal deaths identified by *ICD-10* obstetric codes showed no evidence of pregnancy and another 10 percent had insufficient information to determine whether a pregnancy had occurred (Baeva et al. 2018).

Either these deaths were erroneously coded as pregnancy-related or the deaths were subsequent to spontaneous or induced losses early in pregnancy and could not be correlated with fetal birth or fetal death certificates. Independent providers perform almost all abortions in Texas, and their records are not available. In Finland, 73 percent of maternal deaths were not identified on death certificates, demonstrating the clear inadequacy of death certificate data alone (Gissler et al. 2004). The quality of US maternal mortality data is poor.

Determining Induced Abortion Deaths

Published abortion mortality rates are inaccurate because the total number of legal abortions performed in the United States is not known (Studnicki et al. 2017). Estimated numbers of abortions are voluntarily reported to the CDC by state health departments. California, the state with the largest

volume, does not report any data (Jatlaoui et al. 2018). The Guttmacher Institute also tracks abortions, consistently reporting higher numbers than the CDC. The Guttmacher Institute reported 926,000 abortions in 2014, while the CDC reported only 652,639 (Jatlaoui et al. 2017; Dreweke 2017). Twenty-seven states require abortion providers to report complications, but there are no enforcement penalties for noncompliance. Only twelve states require coroners, emergency rooms, and other healthcare providers to report abortion complications or deaths for investigation.

Deaths from Legal Induced Abortion May Not Be Recorded

If an abortion initiates a cascade of events that results in a woman's death, the doctor may not list it on the death certificate. Because most abortion providers lack hospital-admitting privileges, other healthcare providers must provide the hospital care. The physician certifying the death may be unaware of the abortion or mistakenly believe that a miscarriage led to the complications. Furthermore, ideological commitments may lead a certifier to omit this information. Correlating public documentation of malpractice cases with autopsy reports, an investigative reporter was able to document 30 percent more abortion deaths nationwide than the CDC (Reardon et al. 2004). The reported death rate from abortion represents only the tip of the iceberg; it is a problem much larger than it appears.

Legal Induced Abortion: Is It Safe?

There has been widespread misinformation about legal abortion. It seems that deaths rarely occur, and abortion is perceived to be a very safe procedure. When discussing pregnancy-related mortality, one must recognize that physiologic changes begin as soon as a pregnancy commences. Induced abortion interrupts this normal physiology, and there are unique risks due to this intervention (Skop 2019).

Death and Medical Abortion

Animal models of mifepristone-induced pregnancy termination (medical abortion) warn of the potential for long-term negative well-being indicative of depression and anxiety (Camilleri et al. 2019). While medical abortion accounts for 31 percent of US abortions, it has been associated with 40 percent of legal abortion deaths in the United States (Strauss et al. 2007). Medical abortion may disrupt innate

immunity and fatal cases of septic shock following medical abortion have occurred (Aronoff et al. 2008; Miech 2008).

Death and Surgical Abortion

Severe injuries occur from surgical abortion. Experienced abortionists not infrequently damage adjacent organs or major blood vessels as they insert suction curettes or grasping forceps into the soft, gravid uterus (Autry et al. 2002). The frequency of abortion complications increases as the pregnancy advances due to greater technical complexity related to the anatomical and physiologic changes that occur (Zane et al. 2015). After eight weeks of gestation, the risk of death from abortion increases exponentially: 38 percent increased risk for each additional week (CDC 2017). The American Board of Medical Specialties recognizes the inherent danger of late-term abortions. In 2018, it approved the new American Board of Obstetrics and Gynecology subspecialty “Complex Family Planning” to train abortionists to perform late-term abortions (Marmion 2020). Emergency surgery may be required to perform a hysterectomy, bowel resection, bladder repair, or other repair (Niinimäki et al. 2009). Death from surgical abortion can occur due to hemorrhage, sepsis, pulmonary embolism, and complications of anesthesia such as cardiac or cerebrovascular events.

Abortion and Death in Subsequent Pregnancy

In addition to the immediate physical risks, there are long-term complications that increase a woman’s risk of death during a subsequent pregnancy. Forcibly opening a cervix that is designed to remain closed until natural childbirth may result in cervical trauma and cervical incompetence in future pregnancies. Obstetrical interventions for the management of preterm birth raise the risk of maternal mortality. Instrumental trauma to the endometrium may result in faulty adherence of the placenta in subsequent pregnancies. The placenta may invade into the cervix, uterine wall, or adjacent organs. The Placenta Accreta Spectrum (PAS) includes placenta accreta, placenta increta, and placenta percreta. In 1950, the incidence of PAS was 1:30,000 deliveries, but in 2016, the incidence was reported to be 1:272 deliveries (Mogos et al. 2016). This 110-fold increase in incidence raises the risk of pregnancy-related mortality. Occurring in women with a history of uterine surgery, including induced abortion (Baldwin et al. 2018), PAS can cause massive hemorrhage, and

deaths occur even in tertiary hospitals (Klemetti et al. 2012).

Risk of Death in Postabortive Women

Childbirth may have a protective emotional effect, whereas voluntary or spontaneous pregnancy loss may be deleterious (Coleman, Reardon, and Calhoun 2013). A Finnish comprehensive record linkage study reported that, compared with women who carried to term, postabortive women were two to three times as likely to die within a year, six times as likely to commit suicide, four times as likely to die from an accident and fourteen times as likely to be murdered (Karalis et al. 2017).

Legal Induced Abortion Mortality Rate Unknown

Due to restricted data access, poor record keeping, and lack of mandatory complication reporting, the actual induced abortion mortality rate for the United States cannot be determined. Legal or ideological motivation may obscure the initiating event that led to death. The failure of most abortion providers to maintain hospital privileges forces a different hospital-based healthcare provider to treat complications (Reardon and Thorp 2017). It is not possible to link deaths related to early pregnancy events to an infant’s birth or death certificate. Even in Finland, a country with single payer healthcare and meticulous record keeping, 94 percent of abortion deaths are not identified on death certificates (Gissler et al. 2004).

Report of the National Academies of Science

In spite of these documented risks of abortion mortality, the National Academies of Science, Engineering and Medicine (NAS) published a report stating that legal induced abortion is extremely safe. They concluded that serious complications or long-term physical or mental health effects are virtually nonexistent; specifically, they denied that abortion increases the risk developing mental health disorders, and they also denied that abortion increases the risk of preterm delivery in subsequent pregnancies. Abortion is so safe, they wrote, that it does not need to be performed by a physician. Trained midlevel practitioners can perform abortions in an office-based setting via telemedicine without the need for hospital admitting privileges, special equipment, or protocols for emergency transport of women with

complications. They wrote that the only risks associated with abortion are the imposition of “barriers to safe and effective care” by some state legislatures (NAS 2018).

Selection Bias

Stringent selection criteria allowed the NAS to exclude the eleven studies that provided results allowing comparison between the death rates associated with all possible pregnancy outcomes. These studies showed that the risk of death within 180 days is over twice as high following abortion compared to delivery, and this risk remains elevated for at least ten years (Deneux-Tharoux et al. 2005). The risk of death in a given year for a woman who was not pregnant was 57/100,000 women, but after an abortion, the risk was 83/100,000, after miscarriage 52/100,000, and for those who carried a pregnancy to term 28/100,000 (Studnicki et al. 2017). Danish studies reported that the risk of death within 180 days after a first trimester abortion was 244 percent higher than the risk of death after childbirth; the risk of death after a late-term abortion was 615 percent higher than that after childbirth (Reardon and Coleman 2012).

“Incestuous Citing”

The NAS allowed abortionists to control the dialogue by only discussing reports authored by them or their aligned organizations. This is known as “incestuous citing,” allowing abortionists to cite each other to prove their points. Planned Parenthood’s 317,000 California abortions were reviewed, yet California refuses to report to the CDC (Upadhyay et al. 2015). The paucity of voluntary reporting nationwide yields the outcome that abortion advocates demand: most abortion complications are never identified. The NAS was aware of its selection bias and should have made a call for more studies, not a categorical dismissal that abortion complications are nonexistent.

Legal Induced Abortion versus Childbirth: Safety

Epidemiologists define the abortion mortality rate as the number of induced abortion procedure deaths/100,000 induced abortions. There are many pregnancy events excluded from the denominator of “100,00 induced abortions” that may result in mortality. If abortion procedure deaths were erroneously or intentionally classified as pregnancy-related

maternal deaths, this would inflate the maternal mortality ratio and decrease the abortion mortality rate. For example, a death from an induced abortion following intentional feticide could be coded as a death caused by a procedure to evacuate an intrauterine fetal demise. Deaths from abortion are underreported and the numbers of abortions are inflated.

Abortion advocates claim that abortion is four-times safer than childbirth (Raymond and Grimes 2012). They even argue that since childbirth is so dangerous, abortion should be readily available so women can “opt out” of being pregnant.

A False Equivalence

Is abortion really safer than childbirth? Deaths from abortion are compared to the number of legal abortions while pregnancy-related deaths are compared to the number of live births. Of the four variables used in the abortion mortality rate and the pregnancy-related mortality ratio, the number of live births is the only variable that can be accurately determined. One cannot use three impossible-to-quantify variables to compare two disparate outcomes: it is a false equivalence.

To make a valid comparison, the abortion mortality rate must be compared to a maternal mortality rate. Finland has excellent record linkage, and they are able to compare rates using the common denominator “ended pregnancy.” The risk of death from abortion (101 deaths per 100,000 ended pregnancies) was almost four times greater than the risk of death from childbirth (27 deaths per 100,000 ended pregnancies; Gissler et al. 1997).

A Valid Comparison

It is not possible to use “ended pregnancy” to compare mortality rates in the United States. An outcome-specific measure must be used as the denominator when comparing these rates. This is already done for abortion-related mortality, the number of deaths/100,000 abortions. For childbirth, it should be the number of deaths/100,000 vaginal deliveries. Cesarean sections are excluded for these reasons:

- abortion and most childbirth deliveries are done vaginally and
- abortion may increase the percent of women undergoing Cesarean section in subsequent pregnancies due to preterm birth and abnormal placentation.

Using outcome-specific rates, the mortality rate for vaginal delivery is 3.6 deaths/100,000 vaginal deliveries (Caughey et al. 2014), while the mortality rate for abortion performed at eighteen weeks is 7.4 deaths/100,000 abortions (Niinimäki et al. 2009). Put another way, the risk of death from these abortions is more than double that for women who deliver vaginally.

Conclusion

Biased academic physicians have led the discussion on maternal mortality. These elite abortion advocates publish articles that document “safety” for an industry that profits from widespread abortion access. To increase their credibility, each one quotes the others’ poor data. Journal editors are frequently ethically challenged (Silverman 2019), but they must ensure that independent reviewers critically evaluate submissions by academic abortion advocates before publication. The public must not be deluded by the abortion industry as it protects its product by reassuring that abortion is safe, an assertion based on deliberately deceitful and inadequate data. The politics of pregnancy-related mortality and induced abortion must not be allowed to continue to obstruct root cause analyses of maternal mortality.

Authors’ Note

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