AAPLOG

AAPLOG Comments on "Reproductive Health Services" IFR
Oct. 11, 2022

The American Association of Pro-Life Obstetricians and Gynecologists (AAPLOG) is the largest non-sectarian pro-life medical professional organization in the world. Our members include many physicians who are veterans and many who actively serve at VA hospitals. Thus, the Interim Final Rule Reproductive Health Services (IFR) directly affects our membership.

AAPLOG is familiar with and concurs with both the ethical and legal concerns raised by the United States Conference of Catholic Bishops in their comments opposing the interim final rule on Reproductive Health Services. In addition to those comments however, AAPLOG contributes the perspective of physicians who are serving US military personnel or who themselves are in the military. Thus, it is AAPLOG members who will be directly affected by this rule.

AAPLOG opposes this unnecessary imposition of the performance of or participation in the ending of the lives of human beings in the womb. Further AAPLOG opposes the lack of gestational age limits making abortion on demand available at VA hospitals even though the human beings being torn apart can feel pain. And AAPLOG further decries the lack of conscience protections for those physicians, nurses and other medical staff who have faithfully served our Armed Forces for years or generations, and who in fact have been able to serve conscientiously until now. Forcing violations of conscience and integrity are not acceptable in the US military, and especially not for unnecessary political motivations.

Here we detail the fallacious and inaccurate statements in the IFR and the premises which underly those statements. (Quotations from the IFR are in italics and yellow highlight throughout this document)

"After Dobbs, certain States have begun to enforce existing abortion bans and restrictions on care, and are proposing and enacting new ones, creating urgent risks to the lives and health of pregnant veterans and CHAMPVA beneficiaries in these States."

In fact, the Dobbs ruling now allows states to regulate or ban *elective* abortion, which is defined for example by statute in Texas:

"Sec. 245.002. DEFINITIONS. In this chapter:

(1) "Abortion" means the act of using or prescribing an instrument, a drug, a medicine, or any other substance, device, or means with the intent to cause the death of an unborn child of a woman known to be pregnant. The term does not include birth control devices or oral contraceptives. An act is not an abortion if the act is done with the intent to:

(A) save the life or preserve the health of an unborn child;
(B) remove a dead, unborn child whose death was caused by spontaneous abortion; or
(C) remove an ectopic pregnancy." [1]

It is exquisitely clear from the Texas statute as well as laws from other states, that what is being regulated or banned are not life-saving procedures, ectopic treatment or miscarriage treatment but rather elective abortions which are procedures done for the purpose of feticide.

There is currently no evidence of any urgent risk to the lives or health of pregnant veterans raised by the Dobbs ruling. The Department presents no evidence whatsoever that women are dying from states which ban elective abortion. There is not one state in the entire country which bans separating the mother from her preborn child in cases where the mother's life is at risk. And not one state in the country bans treatment of ectopic pregnancies or miscarriages. What states do ban is elective abortion: the intentional ending of a human life in the womb for no proportionate reason.

Since the only abortion procedures banned or regulated after Dobbs are elective abortions then it is particularly egregious that the Department is using the privileges given to the VA Hospital system to advance a political agenda of abortion on demand throughout the entire pregnancy. And what is worse, the VA is using its authority to command physicians and hospital personnel to commit acts which are felonies in the states in which abortion is banned.

"In response, VA is acting to help to ensure that, irrespective of what laws or policies States may impose, veterans who receive the care set forth in the medical benefits package will be able to obtain abortions, if determined needed by a health care professional, when the life or the health of the pregnant veteran would be endangered if the pregnancy were carried to term or the pregnancy is the result of an act of rape or incest."

US military personnel are by this IFR being commanded to commit state felonies. This is not only an integrity violation but also an unfounded and unprecedented usurpation of the VA Hospital system to advance the Department's political ideology surrounding elective abortion. The Department presents no evidence of need for this IFR to save any woman's life. Women can and are adequately cared for by the VA system, including all life-saving procedures.

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[1] HEALTH AND SAFETY CODE TITLE 2. HEALTH SUBTITLE H. PUBLIC HEALTH PROVISIONS CHAPTER 171. ABORTION SUBCHAPTER A. GENERAL PROVISIONS Sec. 171.001. SHORT TITLE. This chapter may be called the Woman's Right to Know Act. Acts 2003, 78th Leg., ch. 999, Sec. 1, eff. Sept. 1, 2003. Sec. 171.002. DEFINITIONS available at https://statutes.capitol.texas.gov/Docs/HS/htm/HS.171.htm

What is being forced down the throats of VA Hospital personnel by the wording of this IFR are abortions carried out for the "health" of the pregnant veteran. The term "health" was used under Roe v. Wade to allow for any abortion for any reason throughout the entire duration of pregnancy. It is transparent then what the real intent of the Department is under this IFR, and that is to force VA physicians and hospital personnel to participate in elective abortions, with no ability to conscientiously object to the killing of human beings who are in utero and who are the physician's second patient.

What is also transparent is that "*health care personnel*"referred to in the IFR may not be obstetrician gynecologists or in fact anyone who is actually medically qualified to determine the acuity of a pregnant patient. In fact, Health Care Personnel are defined in Joint Publication 4-02 Joint Health Services[2] as including veterinarians, dentists, opthamologists, audiologists, lab techs and the like. To state that a determination of a non-life-threatening condition "*requiring*" abortion will be determined by a "*health care professional*" is to allow for personnel without any gynecological or obstetrical skill or experience to make that determination, which renders the Department's statement medically nonsensical.

"VA is taking this action because it has determined that providing access to abortion-related medical services is needed to protect the lives and health of veterans... As abortion bans come into force across the country, veterans in many States are no longer assured access to abortion services in their communities, even when those services are needed."

The Department justifies this unprecedented power grab without any factual basis or data to support such an action. Since it is clear that the only abortion services banned by any state in the United States are elective abortions, the Department is claiming that elective abortions are "needed". The product that the abortionist is paid to produce is a dead offspring.

AAPLOG asks the Department to explain in writing what is the government's compelling interest in producing feticide in veterans for no medical reason.

"Unless VA removes its existing prohibitions on abortion-related care and makes clear that needed abortion-related care is authorized, these veterans will face serious threats to their life and health."

[2] Joint Health Services Publication 4-02 Joint Health Services Chapter III Force Health Protection available at https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp4_02ch1.pdf

This completely fallacious, scientifically unsupported assertion is what the Department limply uses to justify its political overreach, using the VA Hospital system as a political pawn.

"Similarly, VA has determined that providing access to abortion-related medical services is medically necessary and appropriate to protect the health of CHAMPVA beneficiaries. See38 U.S.C. 1781; 38 CFR 17.270(b) (defining "CHAMPVA-covered services and supplies" as "those medical services and supplies that are medically necessary and appropriate for the treatment of a condition and that are not specifically excluded under [38 CFR 17.272(a)(1)] through (84)").

AAPLOG is asking the Department to respond in writing explaining what research the Department has done, and what data it has relied upon to claim that elective abortion is "medically necessary"?

And what data and research has the Department relied upon to make this completely unscientific and medically unfounded claim: "*Unless VA removes existing prohibitions on abortion-related care and makes clear that medically necessary and appropriate abortion-related care is authorized, these CHAMPVA beneficiaries will face serious threats to their health.*"
Note that the Department cites no evidence at all of this unfounded and unsupported assertion.

AAPLOG requests the Department to make public the data and research relied upon to reach this ridiculous conclusion.

AAPLOG requests that the Department in writing to enumerate these "threats to their health".

Written in this vague way, the IFR allows for abortion on demand throughout pregnancy, with no gestational age limitations, including abortions performed after the preborn human being is able to survive outside of the womb.

This IFR will legalize the use of D&E, which disarticulates and dismembers living human fetuses after the gestational ages when that fetus could live outside of the mother's womb. This guidance turns military hospitals into abortion mills, and allows for the grisly business of killing human beings on demand. This was never intended by congress, and not called for or sanctioned by the existing military medical personnel. To impose this IFR is to use military hospitals as political pawns in the Department's abortion wars.

"Research has shown that while most pregnancies progress without incident, pregnancy and childbirth in the United States can result in physical harm and even death for certain pregnant individuals."

The Department by implication is saying in this statement that all pregnancies threaten the "*health*" of the mother. This mindset allows for all pregnancies to be aborted based on their "*threat*" to the woman's "*health*". This is an ideological and not a medical statement.

Maternal Mortality Lip Service in the IFR.

The Department cites data on rising maternal mortality from 2005 to 2015. What the department conveniently ignores is that abortion on demand was legal throughout the United States during this time. What was changing, however, was that medical abortions with mifeprex and misoprostol were substantially increasing during this time, paralleling the increase in maternal mortality. Remember that a substantial portion of "maternal mortality" is abortion-related maternal mortality.

Induced Abortion & the Increased Risk of Maternal Mortality[3] (Attached as Appendix F to these comments). Excerpts pertinent to the IFR included here.

"After years of failure to obtain accurate statistics on maternal mortality, the United States has noted a sharp increase in its maternal mortality rate, with widening racial and ethnic disparities. While some of this increase 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. In order to implement effective strategies to improve pregnancy outcomes, this must be investigated in an unbiased manner, and novel contributing factors need to be considered.

Background

A pregnancy question was added to the United States standard death certificate in 2003 in order to improve the identification of maternal deaths. The individual states were initially inconsistent in implementing a pregnancy checkbox on death certificates, rendering data so useless that the United States (U.S.) did not published an official maternal mortality report between 2007 and 2016.1 Using novel correction factors to standardize death certificate data, a 2016 report shocked the nation by documenting a 26 % increase in maternal mortality from 18.8/100,000 live births in 2000 to 23.8 in 2014. Suggested etiologies of the rise included:

1. *artifact as a result of improved maternal death surveillance,*
2. *incorrect use of ICD-10 codes,*
3. *health care disparities,*
4. *lack of family support and other social barriers, substance abuse and violence,*

[3] https://aaplog.org/wp-content/uploads/2020/01/FINAL-CO-6-Induced-Abortion-Increased-Risks-of-Maternal-Mortality.pdf

5. *depression and suicide,*
6. *inadequate preconception care, patient noncompliance, lack of standardized protocols for handling obstetric emergencies,*
7. *failure to meet expected standards of care*
8. *aging of the pregnant patient cohort with associated increase in chronic diseases and cardiovascular complications,*
9. *lack of a comprehensive national plan and defunding women's healthcare by "demonizing Planned Parenthood."*

State maternal mortality committee review committees suggested that 60 % of these deaths may be preventable.12

Racial and ethnic disparity

Maternal mortality in minority women, particularly non-Hispanic Black women, has skyrocketed. Black women have maternal mortality rates 3.3 times higher than white women.20 Unfortunately, there have been accusations that this is a result of implicit racism held by health care providers – 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. Poverty is certainly a risk factor for failure to obtain appropriate medical care and might be expected to contribute to the excess maternal mortality rates in Black women (20 % of whom live in poverty, compared to 16 % Hispanics and 8 % whites). Domestic violence and mental health disorders are also seen more commonly in impoverished communities. In 2011, Illinois reported that 13% of its maternal deaths were the result of homicide. Black mothers bore the greatest risk, accounting for 43% of the maternal homicide deaths while composing only 14% of the population.21 Texas has been noted to have extremely high maternal mortality rates, and an examination of deaths in 2011-2012 found that the overdoses, homicide and suicide accounted for almost 20% of the maternal deaths.22 Poverty and poor social and family support are causes of the disparity noted in maternal mortality rates.23 Giving birth and caring for a child without a partner places a woman at an obvious disadvantage. She is more likely to live in poverty without the resources she may need to seek health care. If she should become ill during or after pregnancy, she may not seek emergency care due to lack of social support, child-care or transportation. It should be noted that only 5% of married couples live in poverty. In 2017, 67% of black women were unmarried when they gave birth to children, compared with 39% of Hispanic women, and 27% of white women.24 Prior to 1950, a black woman was more likely to be married than a white woman, with marriage rates nearing 80%, but marriage rates for Black women have since plummeted.25 Could the breakdown of the Black family be a root cause of the disparity in maternal mortality rates?

It is noteworthy that there are significant differences in birth outcomes in Black women compared with non-Hispanic white women. The rates of natural losses are similar (16%), but ***34% of pregnancies in black women end in induced abortion****, compared to 11% for white women. Less than half of pregnancies in black women result in the birth of a live baby (48%).* ***Induced abortion is 3.7 times more common in Black than in non-Hispanic white women, and Black women more commonly have later abortions (13%) compared with white women (9%).26 It is known that the risk of death increases by 38% for every week after eight weeks gestation.27 It is possible that the higher rate of legal induced abortion may account for most of the racial disparity noted in pregnancy mortality.*** *Genetic determinants of health are important. For example, thrombophilia is more prevalent in nonHispanic Black women and this is a risk factor for pulmonary embolus or thrombotic strokes, both causes of maternal mortality.28 Social determinants of health are paramount: poverty is linked to obesity, diabetes and hypertension. Obesity is more prevalent in Black women (46.8 %) and Hispanic (47 %) than white women (37.9 %).29 Diabetes is higher in Black (12.7 %) and Hispanic (12.1 %) than in non-Hispanic white women (7.4 %).30 The rates of hypertension are higher among Black (40.4 %) compared to non-Hispanic white (27.4 %) or Hispanic women (26.1 %).31 If a woman is predisposed to hypertension, the likelihood that she will develop preeclampsia or eclampsia increases substantially. Obesity, diabetes and hypertension predispose women to early obstetrical interventions and Cesarean sections, both of which are linked to increased maternal mortality.*

A ten-year Harvard study completed in 2016 found that implicit bias based on race decreased by 17 %, and explicit bias decreased by 37 %.32 If racial bias reported in the Harvard study was the sole cause of maternal mortality, pregnancy-related mortality in the non-Hispanic Black community should have decreased. It has not. *To discuss the effects of years of legalized racism without identifying antecedent enslavement is implicit bias and it promotes the idea that Black and non-Black women start on an equal playing field. It confirms the stereotype that Black women, through their reckless behavior, place themselves far behind the rest of the population. Victim-blaming subtly diverts attention from racism, discrimination, segregation and the powerlessness of the ghetto.33* ***Victim-blaming leads to inappropriate adventures, such as placing abortuaries in Black neighborhoods****. Abortionists are like carpetbaggers,34 nonresidents seeking gain by taking advantage of communities of color.*

Compounding structural inequality, abortion advocates effectively perpetuate Jim Crow era suppression. The effects of family disruption by enslavement's forced displacement followed by a long history of voluntary migration due to legalized racism are still apparent in the separation of family units, structural inequality and the resultant high prevalence of poverty. Poverty is a cause of physical disease, emotional stress and mental health distress. Victim-blaming abortion advocacy organizations have a long history of targeting minority communities. Inflicting

abortion, often in advanced pregnancy, is documented to lead to increased risk-taking behavior that results in death from drug overdose, suicide or homicide. Induced abortion may be a root cause of the racial and ethnic pregnancy-related mortality disparity. Addressing contextual-level social determinants of health could eliminate this disparity."

It is telling that the Department, by this IFR is perpetuating the racial bias that it seemingly decries by promoting elective abortion as the cure for racial disparity in maternal morbidity and mortality. **The IFR states**: "*This study identified the factors that likely contributed to this rising maternal mortality rate, including reduced access to family planning and reproductive health services through abortion clinic closures and legislation restricting abortions based on gestational age.*[12]"

The sole scientific study referred to in the IFR to justify the imposition of elective abortion as a cure for maternal mortality and morbidity is a speculative study using the difference in difference methodology which is hugely susceptible to study design bias. This is an exceedingly weak scientific study and provides no proof whatsoever that imposing abortion on demand through the VA system will improve or even address maternal mortality.

AAPLOG requests the Department to publish maternal mortality statistics for the VA health system for the past 30 years as a baseline.

Specifically, AAPLOG requests the publication of military maternal mortality statistics stratified by pregnancy outcome.

Without such baseline statistics, it is nonsensical for the Department to pretend to care about maternal mortality, or to measure the real outcome of this drastic policy change.

How will the Department know whether allowing abortion on demand in the VA system increases or decreases the abortion specific maternal mortality or morbidity?

An increase in maternal deaths is not the only scientifically predictable outcome of the policy change instituted by this IFR. There are other well established maternal health morbidities associated with abortion, including preterm birth in subsequent pregnancies, and an increase in mental health disorders, among other morbidities. We will focus now on preterm birth first, then cover mental health morbidity following abortion.

The Association between Surgical Abortion and Preterm Birth: An Overview[4] (The entire document is attached as Appendix A.) Here are some pertinent excerpts pertinent to the IFR.

"*Evidence in peer-reviewed literature from 168 studies over fifty years points to a causal, dose-response relationship between surgical abortion and subsequent preterm birth. This document provides an overview of this literature, discusses mechanisms for this effect, demonstrates the strength of evidence for causality, and offers guidance for informed consent prior to surgical abortion. This document does not provide detailed statistical analysis or a high-resolution assessment of the quality of studies on surgical abortion and preterm birth (covered in Practice Guideline 11).*

Background

Preterm Birth Preterm birth (PTB), defined as birth before 37 weeks of pregnancy, plagues modern society. There are over 3 million annual deaths worldwide due to PTB, and PTB is estimated to cost over 100 million disability-adjusted life-years, when combined with low birth weight (LBW). The incidence of PTB ranges from 6 to 8% in Europe, Australia, and Canada2-3 to 9 to 12% in Asia, Africa, and is currently 10.1% in the United States, a decrease since the push to eliminate non-indicated PTB.7, 8
The literature has shown for some time the increasing risk for PTB with surgical abortion. In 2018, 92% of abortions were before 13 weeks, with about half of them being surgical.64 Researchers of varying countries and political bent have found that surgical abortion confers an increased risk for PTB, which may be mediated by infection risk.32, 34-36

Evidence for Increased Preterm Birth after Abortion
As of November 2021, 168 studies have been published on the association between abortion and PTB. A complete review of the literature is provided in Practice Bulletin 11, but this document reviews key studies at a foundational level.

The landmark meta-analyses on PTB after abortion are:
- *Swingle et al., a 2009 meta-analysis*
- *Shah et al., a 2009 meta-analysis*
- *Oppenraajj et al., a 2009 review*
- *Lowit et al., a 2010 meta-analysis*
- *Saccone et al., a 2016 meta-analysis*

[4] Abortion and Preterm Birth: an Overview https://aaplog.org/wp-content/uploads/2021/11/PB-5-Overview-of-Abortion-and-PTB.pdf

The first landmark study is Swingle et al., which examined studies published between 1995 and 2007 and found that women with a prior abortion had increased odds of delivery before 32 weeks (1.64, 95% CI 1.38- 1.91). 44 A few comments are helpful to understand these results. The increased odds ratio (OR) published by Swingle et al. was 1.64, and it was statistically significant as denoted by the 95% confidence interval (95% CI) of 1.38 to 1.91, which does not include 1.0. A confidence interval denotes 95% certainty that the true difference in odds resides between the two values; if the 95% CI includes 1.0, we cannot be certain that there is no difference from the control group (here, the group with no prior abortion), denoted by their odds of 1.0. Odds are different than relative risk, or absolute risk difference, and require some computation to derive a clinically memorable percent risk. An odds ratio of 1.64 translates to an increase in risk from 1.5% (the United States baseline rate of delivery before 32 weeks) to about 2.4%. Importantly, this is not a 64% increase. That would be reported in a study as a relative risk (RR) of 1.64, different from odds.

The second landmark study from 2009 is Shah et al, which found increased odds of delivery before 37 weeks (OR 1.35, 95% CI 1.20-1.52). 38 These odds mean the rate of birth before 37 weeks after one abortion is 13%, compared to the baseline 10%. This study also reported the odds of PTB after two or more abortions, OR 1.72 (95% CI 1.45- 2.04). This translates to an increase in risk from 10% to about 18%, nearly doubling. Shah et al.'s results also show the important epidemiological principle of a dose effect: the more abortions prior to first delivery, the higher the risk for PTB.
Oppenraaij et al. combined 13 studies and found increased risk of delivery before 32 weeks and delivery before 37 weeks after one abortion, and that effect was more dramatic after two or more induced abortions (a dose effect). 45

Lowit et al. reported data from seven systematic reviews (including four meta-analyses) and eighteen primary studies found increased risk of delivery before 32 weeks and before 37 weeks, concluding that "[c]urrent evidence ... suggest an association between IA [Induced abortion] and pre-term birth."46

Saccone et al. included 36 studies in a systematic review and meta-analysis. This study found that women with one prior abortion had a significantly increased risk of PTB (OR 1.52, 95% CI 1.08-2.16), a significant increase in odds that translates to a risk increase from 10% to 14%.47

Pathophysiology of Induced Abortion and Preterm Birth
The putative mechanisms by which surgical induced abortion may increase the risk for PTB may include the following:

1. *Cervical trauma from surgical dilation. 3 2.*
2. *Predisposition to inflammation, or subclinical inoculation from the procedure.*

3. 3. *Chronic increased production of maternal stress hormones.*

Regarding mechanical trauma, dilation and curettage (D&C) is independently associated with an increased risk of PTB based on the investigation of neutral researchers.33 The mechanical injury from the surgical procedure itself is the most likely reason that surgical abortion increases PTB risk.27

Regarding infection, this hypothesis emerges from the association of infection and inflammation with PTB, 31 coupled with data about the risk of chorioamnionitis during a subsequent delivery. The risk of chorioamnionitis in a pregnancy after abortion is threefold37 or fourfold38 higher compared to live birth (OR 4.0, 95% CI 2.7-5.8).

Causality in Medicine: Bradford Hill Causation Criteria

There is substantial evidence for an association between surgical abortion and PTB— more evidence than for the relationship between tobacco use and preterm birth. (This is not to belittle the association between tobacco and PTB, but to show that a neutral observer who acknowledges that association would also acknowledge an abortion-PTB association.) But before insisting on a response like that to tobacco, we must discuss criteria for determining causality, whether one thing is actually causing another, or simply associated with it. The Bradford Hill criteria have been used since the 1960s for this purpose (see Box 1).

"Applying the Bradford Hill Criteria to Abortion and Preterm Birth Here, the comparison between surgical abortion and tobacco use is helpful. In 1964, the US Surgeon General applied the emerging Bradford Hill criteria for causality to studies evaluating the association between tobacco use and PTB, and chose to warn the public of a potential causal effect of tobacco use on risk of PTB.

Box 1. The Bradford Hill Criteria for Causality

- *Strength of the association Does the effect meet statistical and/or clinical significance?*
- *Consistency Does the effect provide consistent results or outcomes?*
- *Specificity Is the effect specific to the outcome or result?*
- *Temporality Does the effect occur prior or during the given item under study?*
- *Dose Response Does the effect increase with increasing exposure?*
- *Plausibility Does the effect meet criteria for biologically reasonableness?*
- *Coherence Does the effect make sense with the outcome specified or found?*
- *Experiment Is the effect experimentally reproducible in multiple experiments with diverse authors and/or populations?*

- *Analogy Is the effect similar (analogous) to other effects found experimentally or clinically?*

With regard to timing, surgical abortion occurs before a subsequent pregnancy at risk of PTB. There is a known dose effect demonstrated for the risk of PTB and very pre-term (VPTB) birth increasing with a greater number of induced surgical abortions.31,39 (No such increased risk has been demonstrated with smoking and PTB.) The experiment for surgical abortion has been repeated dozens of times, in over 168 studies on the topic. There is also consistency of the effects of prior surgical abortion, and no study shows a protective effect of prior surgical abortion. There is inconsistency on tobacco use and PTB,40 since some studies show a protective effect of tobacco. 39 Induced abortion has a very strong effect on the rate of subsequent PTB and very preterm birth (delivery before 32 weeks). 32,39 Biologic plausibility for prior surgical abortion as a cause for future preterm birth is thought to be the result of either trauma or inflammation mediated, as mentioned above. 29-32 This leads to coherence with subsequent evidence of cervical insufficiency or chorioamnionitis. This is analogous to the risk of preterm birth from other surgeries that affect cervical integrity (e.g. cervical conization) or on other procedures that may result in intrauterine inflammation. While the effect of abortion on PTB is not unique (there are other factors that increase risk of PTB), this lack of the criterion of Evidence-Based Guidelines for Pro-Life Practice 5 specificity is common in clinical outcomes. Tobacco is also not the only factor associated with increased risk of PTB, and this nonspecificity does not disqualify either tobacco use or surgical abortion as causal in the pathophysiology of PTB. The logical conclusion drawn from the published literature that linked tobacco use and lung cancer is almost exactly the same as the logical conclusion drawn from the published literature linking induced surgical abortion and PTB: there is a causal relationship.

Clinical Questions and Answers

*"Q **What about medication abortion?** There has not been much data on medication abortion yet, in comparison to the decades of data on surgical abortion. Bhattacharya et al., 2012 found that women with previous abortion (medication or surgical) had increased risk of PTB (adjusted relative risk of 2.3, 95% CI 2.27- 2.33). This study had some missing data on tobacco use and type of abortion (not listed in 25% of cases), which are weaknesses in a study of abortion and PTB. 11*

***Q What do other medical experts say about the relationship between surgical abortion and PTB?** AAPLOG is the only organization in the United States has formally acknowledged the risk with induced abortion for PTB, but is not alone in its assessment of the evidence. Dr. Jay Iams is an Associate Editor of the American Journal of Obstetrics and Gynecology and editor of a major*

maternal-fetal medicine textbook. He served as president of the Society for Maternal-Fetal Medicine from 2003-04 and of the American Gynecological and Obstetrical Society in 2013. Dr. Iams is one of the leading researchers in PTB and wrote in 2010, " Contrary to common belief, population-based studies have found that elective pregnancy terminations in the first and second trimester are associated with a very small but apparently real increase in the risk of subsequent spontaneous preterm birth."41

Dr. Phil Steer, editor of the British Journal of Obstetrics and Gynecology wrote an editorial comment on a major meta-analysis of surgical abortion and PTB, "A key finding is that compared to women with no history of termination, even allowing for the expected higher incidence of socio-economic disadvantage, women with just one [termination of pregnancy] had an increased odds of subsequent "42

The Royal College of Obstetrics and Gynaecology (RCOG) acknowledges the association of surgical abortion and PTB. In a 2011 guideline entitled "The Care of Women Requesting Induced Abortion," RCOG advises: "Women should be informed that induced abortion is associated with a small increase in the risk of subsequent preterm birth, which increases with the number of abortions.... ".43

Despite 168 peer-reviewed publications documenting an increased risk for PTB with surgical abortion, the leading medical organizations for women's healthcare including the American College of Obstetricians and Gynecologists (ACOG) refuse to acknowledge the increased associated risk for PTB or acknowledge the substantial body of literature raising this concern, as of their 2016 reaffirmation of Practice Bulletin 130.25

Planned Parenthood, the largest provider of abortion in the U.S., does not inform patients of the association of surgical abortion with PTB, instead stating that [s]afe, uncomplicated abortion does not cause problems for future pregnancies such as birth defects, premature birth or low birth weight babies ...or infant death.44

Q What are the effects of abortion-related preterm birth?

A conservative estimate for the last 43 (1973-2018) years is approximately 102,056 deaths associated with delivery before 32 weeks related to prior abortion.23 ***Of these deaths, 46,268 (45%) are estimated to be of Black infants, an over-representation given that Black Americans represent 15-16% of the total population.25 As noted by one author, this is "equal to the number of lives...lost if 88 fully loaded 747 airliners crashed."****25*

With regard to cerebral palsy, Calhoun et al 2007 calculated an estimated 1,096 cases of cerebral palsy each year attributable to induced surgical abortion and very preterm birth.23

Effects of abortion are not just neonatal: ***Gissler et al. 2004 found that pregnancy-related maternal mortality was three times as high for women within one year of abortion, compared to women after a live birth (83.1/100,000 compared to 28.2/100,000).*** *27 While this is likely related to many factors, it is important not to forget the maternal patient when thinking about the effects of abortion.*

Q What are the physician's ethical obligations regarding this information?
Ethical medical care requires informing women of the most recent and compelling evidence regarding the increased risk of subsequent PTB after a surgical abortion. Informed consent remains a bedrock of ethical care for surgical and medical interventions. Patients deserve to know about of the risks associated with any procedure.

Summary of Recommendations and Conclusion

The following recommendations are based on good and consistent scientific evidence (Level A):
1. Women who have a history of surgical abortion are at increased risk for preterm birth (delivery before 37 weeks).
2. Women who have a history of surgical abortion are at increased risk for very preterm birth (delivery before 32 weeks).
3. Multiple surgical abortions are associated with a "dose effect," meaning more abortions confer more risk.

The following recommendations are based on limited and inconsistent scientific evidence (Level B):
1. Black Americans are disproportionately affected by abortion-related preterm birth.
2. The increased rate of preterm birth after surgical abortion is likely related to the surgical procedure itself.
3. There may be an inflammatory or subclinically infectious pathology associated with abortion-related preterm birth.
4. Women who have undergone medication abortions may be at increased risk for preterm birth, especially if this was completed surgically.

The following recommendations are based primarily on consensus and expert opinion (Level C):
1. The relationship between abortion and preterm birth meets the Bradford Hill criteria for causality.
2. Abortion-related preterm birth has effects on neonates, mothers, and society at large.

3. Women with a previous history of termination of pregnancy should be informed of the increased risk for preterm birth.
4. Authors of studies and statements on preterm birth and abortion occasionally do not report their findings accurately. "

The entire document is attached as Appendix A to our comments here.

See also the ***Detailed Examination of the Data on Surgical Abortion and Preterm Birth***[5], attached as Appendix B to our comments here.

AAPLOG is asking the Department to analyze the consequences of the increasing preterm birth rates among veterans that will predictably happen due to the IFR mandating the performance of abortions in the VA system. The IFR gives lip service to concern for maternal mortality and morbidity, while promulgating the abortion mandate within the IFR which will predictably increase both maternal morbidity and preterm birth.

AAPLOG requests in writing a detailed analysis of how the Department will determine whether allowing abortion on demand in the VA system increases or decreases the rate of subsequent preterm birth.

AAPLOG requests in writing a detailed analysis of how the Department intends to monitor the rate of preterm birth in women who have had abortions in the VA system.

AAPLOG requests in writing the plans to demonstrate clearly whether or not the change in abortion policy subsequently changes the rate of preterm birth for veterans or spouses who have undergone abortions in the VA system.

AAPLOG requests in writing the cost analysis of the projected increased cost of caring for the increase in preterm births which will follow the performance of abortions in the VA system.

In addition to preterm birth, abortion also increases the risk of subsequent adverse mental health outcomes.

[5] https://aaplog.org/wp-content/uploads/2021/11/PG-11-A-Detailed-Examination-of-the-Data-on-Surgical-Abortion-and-Preterm-Birth.pdf

Abortion and Mental Health[6] (Attached as Appendix C) Below are excerpts which are pertinent to the IFR:

"There are few issues related to abortion as controversial as the potential link between abortion and mental health complications. Of course, mental health risks can be difficult to decipher, because often poor social support and difficult life circumstances can factor into a woman's decision to have an abortion, and these can affect her mental health as well. Most pro-choice advocates recommend abortion to a woman in crisis under the assumption that it will resolve the crisis and lead to better mental health outcomes for the woman. They may interpret the "relief" a woman feels with the resolution of the pregnancy crisis to mean that there could be no mental harm from the procedure.1 Pro-life advocates, particularly those who work with women who have had mental health crises that they attribute to their abortion, argue the opposite, that intentionally ending the life of an unborn child leads to much guilt and regret for a woman, triggering symptoms of anxiety, depression, substance abuse and potentially suicidal thoughts. An honest evaluation of the literature is imperative for those who care for women

Background The Pro-abortion Advocacy of Professional Society Reports
National Academy of Science (NAS)
From 1993 to 2018, there were 75 studies examining the abortion-mental health link, of which 2/3 showed an increased risk of mental health complications after abortion. Yet, recently, the National Academies of Science, Engineering and Medicine (NAS) published a widely reported book, The Safety and Quality of Abortion Care in the United States, which concluded that induced abortion is extremely safe.2 It concluded that serious complications or long term physical or mental health effects are virtually non-existent. It stated that abortion is so safe that the only deterrent to its safety is legislative restrictions enacted by the states that may prevent a woman from accessing an abortion immediately, "creating barriers to safe and effective care". Abortions can be performed safely in an office-based setting or by telemedicine without the need for hospital admitting privileges. No special equipment or emergency arrangements are required for medical abortions. It is so safe, in fact, that it does not need to be performed by physicians; it can safely be performed by trained certified nurse midwives, nurse practitioners, and physician assistants. The NAS concluded that abortion has no long-term adverse effects, and it specifically does not increase the risk of preterm delivery, mental health disorders or breast cancer. The National Academy of Sciences has a prestigious professional reputation, so at first glance this statement appears to settle the issue. The NAS is a private nonprofit foundation comprised of scholars in operation since the presidency of Abraham Lincoln. It currently consists of 2100 members, and its past membership has included over 500 Noble Prize winners. The organization was founded to be free from bias. From their best practice's guidelines, "On Being a Scientist,"

[6] https://aaplog.org/wp-content/uploads/2019/12/FINAL-Abortion-Mental-Health-PB7.pdf

the NAS states: The scientific research enterprise is built on a foundation of trust. Scientists trust that the results reported by others are valid. Society trusts that the results of research reflect an honest attempt by scientists to describe the world accurately and without bias. But this trust will endure only if the scientific community devotes itself to exemplifying and transmitting the values associated with ethical scientific conduct.

Does today's National Academy of Sciences still adhere to this ethical standard?
In 2006, the Center for Science in the Public Interest stated in their watchdog report: Are the National Academies Fair and Balanced?: One in Five Scientists on NAS Issue Panels Tied to Firms Involved in the Issue. "We found serious deficiencies in the NAS committee's selection process... The NAS has allowed numerous scientists and others to sit on committees... These conflicts of interest are usually not disclosed to the public."4 It appears that there are a number of financial or institutional conflicts which have not been disclosed by the current academy members.

The origin of the NAS Abortion Safety report demonstrates these biases. The NAS report acknowledges: Funding for this study was provided by The David and Lucile Packard Foundation, The Grove Foundation, The JPB Foundation, The Susan Thompson Buffett Foundation, Tara Health Foundation, and William and Flora Hewlett Foundation. In 2016, these six outspoken pro-choice organizations (Packard, JBD, Grove, Buffett, Tara Health and Hewlett Foundations) all have donated liberally to promote abortion. The Susan T Buffett Foundation is the largest non-governmental funder of abortion worldwide, with a total of $1.2 billion donations, including $300 million to Planned Parenthood and $88 million to UCSF Bixby Center for Global Reproductive Rights. It is clear that these organizations hoped the NAS would create a report exonerating abortion of the implications that it could result in adverse effects, and that is exactly what they got for their money. Regarding the abortion-mental health link specifically, the NAS simply ignored most of the 75 published studies and chose only seven studies to review. Five of these seven studies were derived from the same group of women, the Turnaway cohort5 and the remaining two were reviews by professional organizations: the American Psychological Association (APA)6 and the Royal College of Psychiatrists.7

Problems with the Turnaway cohort.
The Turnaway cohort is a database accumulated by Advancing New Standards in Reproductive Health (ANSIRH). Led by longtime abortion activist Dr. Daniel Grossman,8 who has extensive financial ties to the abortion industry, ANSIRH accumulated a database to rebut any association between abortion and adverse mental health outcomes. This database is the Turnaway cohort, which has resulted in numerous publications all based on the same database. The Turnaway cohort has been extensively criticized for its poor participation rate and high attrition. Only 37% of the women approached agreed to participate, and an additional 44% dropped out before the

study's completion. This leaves a cohort of only 17% of those originally surveyed.9 This extremely low participation rate calls into question whether a self-selection bias occurred, since women more deeply wounded would reasonably be less likely to participate in such a study, falsely lowering the final incidence of mental health problems. Other important details regarding this cohort were also missing, such as how many women in late gestational ages were included, since a known risk factor for adverse mental health consequences is advanced gestational age. The six mental health measures considered in the study were very simplistic. Yet, five of the total seven studies that the NAS relied on came out of this flawed cohort, performed by a known pro-abortion organization. In summary, the NAS examined only seven papers coming from only three study groups out of the then existing 75 published studies to make their determination of no effect of abortion on subsequent mental health. Worse, one of those study groups, the Turnaway study which formed the basis of five of the seven total studies reviewed, was deeply flawed by an extremely low participation rate and extremely low follow up rate. Not surprisingly, considering the NAS preexisting bias, the answer the NAS produced for its funders was "no link" between abortion and mental health complications.

American Psychological Association (APA) Bias

There are other professional organizations in medicine and psychology that also have a prochoice bias which affects their interpretation of the literature. Prior to Roe v. Wade, the APA had previously advocated for abortion on demand, stating in 1969, "Termination of pregnancy should be considered a civil right of a pregnant woman".10 In 2008, the APA published: "There is no credible evidence that a single, elective abortion of an unwanted pregnancy, in and of itself, causes mental health problems for the adult woman."11 It should be noted, however, that most women who present to an abortion clinic in real life are not included by this statement, since:

- *40-50% of American women have had multiple abortions.12*
- *20-60% of women may desire their pregnancy but experience pressure or coercion to terminate. (14% lack support from husband or partner; 19% not sure about relationship; 25% don't want others to know about pregnancy; 14% husband or partner wants the abortion; 6% parents want the abortion)13*
- *Others may terminate a desired pregnancy due to perceived health risks for themselves (12%), or perceived abnormalities in the baby (13%).14*
- *15-30% of abortions occur in minor women, and at least two studies showed that these young women have a significantly higher suicide rate than their peers.15,16*
- *20-50% of women have preexisting mental health conditions that may be triggered or aggravated by the abortion.17,18*
- *A late-term abortion is also a significant risk factor for psychiatric distress after an abortion.19*

In fact, if the 14 risk factors for adverse mental health outcomes published in the APA statement20 are applied to the cohort of women who present to the abortion clinic, then the overwhelming majority of women have at least one of the 14 risk factors. That means a majority of women who actually abort are at risk for adverse mental health outcomes.

Royal College of Psychiatrists Report

Similarly, a 2011 Systemic Review on Induced Abortion and Mental Health from the Royal College of Psychiatrists of all the scientific literature on the topic from 1990 onward found no evidence of adverse mental health consequences after abortion.21 However, as in the NAS study, many studies were excluded without explanation. Only three reviews of the literature were included but 19 were "missed". Twenty-seven empirical studies identifying risk factors were included, but 20 were ignored without explanation. One of the given explanations for exclusion was if the follow up was 90 days or less. But surely, we should care if a woman has significant adverse mental health effects within the first 3 months. That would still be important. Not surprisingly, many of the excluded studies demonstrated adverse postabortion consequences.22

Evaluating Existing Studies for Quality Coleman Scoring Rubric

Dr. Priscilla Coleman, who has extensively studied the association between abortion and mental health, developed an assessment tool with a rubric consisting of nine scientific factors, each of which is scored from 0 to 4. Total scores range from 0 to 36, with higher scores indicative of a stronger overall scientific methodology. The factors incorporated into the assessment tool are listed as:

1. *Sample size*
2. *Generalizability--does the sample adequately represent the population?*
3. *Consent to participate or initial response rate*
4. *Concealment--many don't want to reveal abortion*
5. *Confounding control--variables likely to be systematically related to the choice to abort*
6. *Control group--those who have not experienced an abortion*
7. *Measures-assessment of validity and reliability of instruments used*
8. *Prospective*
9. *Attrition rate*

Dr. Coleman has now applied this assessment tool to a literature review, examining all studies published world-wide from 1993 to 2018. The paper will be submitted for publication early in 2020. Coleman's preliminary findings were presented at the Matthew Bulfin Educational Conference in 2019. Coleman's presentation included data which showed that of the 75 published studies reviewed, 49 (65%) showed a positive correlation between abortion and

adverse mental health consequences, and 26 (35%) showed no correlation. The majority of highly reliable studies demonstrated an association.

The Department has published in this IFR scientific speculation and includes some superficial statistics on maternal mortality, but it is transparently clear that the Department has little interest and no plans to actually address either maternal mortality or morbidity or to even study the effects of this policy change on veterans.

Reardon Composite Descriptions

Dr. David Reardon, in an insightful paper,23 acknowledges that many pro-choice advocates will concede that some women have adverse mental health consequences after abortion, but they feel the procedure itself has minimal impact and the adverse consequences are more likely to be related to the situation that drove them to the abortion. He splits the ideologic camps into abortion-mental health "minimalists" and "proponents", mirroring the controversy often seen regarding climate change. He described two composite young women who had abortions:

"Allie All-Risk" is a 15-year-old abuse victim with a history of anxiety and depression. She was raised in church and believes that abortion is the killing of a human being. She has always wanted to be a mother and when she becomes unintentionally pregnant with her older boyfriend, she is excited. However, her boyfriend and her parents do not want her to have a child and coerce her into an abortion.

"Betsy Best-Case" also becomes pregnant. She is 32 years old, was raised in a secular home, does not desire to become a mother, and is very focused on her career. She easily chooses to have an abortion because she believes the value of a "person" is not based on biological features, but on the individual capacity to have a fulfilling life.

It is easy to see that these two different women have far different risks for suffering adverse mental health consequences after their abortions. Honest pro-choice advocates should acknowledge this if they truly care for the well-being of women. The 96% of Planned Parenthood's pregnancy services which are abortions fit the perceived needs of Betsy Best Case.

However, it is clear that offering abortion as the only option does not fit individual psychological needs of women like Allie All Risk.

Clinical Considerations and Recommendations

What risk factors may place a woman at increased risk for mental health complications after abortion? *The world literature on abortion and women's mental health has grown considerably over the past several decades and the scientific rigor of the published studies has increased*

substantially. Identification of risk factors for adverse outcomes and exploration of a wide range of negative psychological consequences have been the focus of most of this research. 24,25,26 Numerous studies have identified the demographic, individual, relationship, and situational characteristics that place women at risk for psychological disturbance in the aftermath of abortion. Up to 146 risk factors have been identified. Among the most thoroughly substantiated risk factors are the following:

1. Perceptions of the inability to cope with the abortion.27
2. Low self-esteem.28
3. Difficulty with the decision.29,30
4. Emotional investment in the pregnancy.31,32
5. Perceptions of one's partner, family members, or friends as non- supportive.33
6. Timing during adolescence or being unmarried. 34 35,36
7. Pre-existing emotional problems or unresolved traumatization.37
8. Involvement in violent relationships.38,39
9. Traditional sex-role orientations.40
10. Conservative views of abortion and/or religious affiliation.41
11. Pregnancy is intended.42,43,44
12. Second trimester.45
13. Pre-abortion ambivalence or decision difficulty.46
14. When women are involved in unstable partner relationships.47
15. Feelings of being forced into abortion by one's partner, others, or by life circumstances.48

Studies done with nationally representative samples and a variety of controls for personal and situational factors that may differ between women choosing to abort or deliver indicate abortion significantly increases risk for the following mental health problems:

1. Depression.49,50,51,52,53
2. Anxiety.54,55
3. Substance abuse.56,57,58,59
4. Suicide ideation and behavior.60,61

Abortion is associated with a higher risk for negative psychological outcomes when compared to other forms of perinatal loss and with unintended pregnancy carried to term.62,63,64 There is consensus among most social and medical science scholars that a minimum of 20 to 30% of women who abort suffer from serious, prolonged negative psychological consequences,65,66 yielding at least 260,000 new cases of mental health problems each year.

Adjustment to abortion is a highly individualized experience as Goodwin and Ogden noted: "women's responses to their abortion do not always follow the suggested reactions of grief but are varied and located within the personal and social context."67

Women who perceived pre-abortion counseling as being inadequate were more likely to report relationship problems, symptoms of intrusion, avoidance, and hyperarousal and to meet diagnostic criteria for Posttraumatic Stress Disorder (PTSD). Women who disagreed with their partners concerning the decision to abort were more likely to report symptoms of intrusion and to meet the diagnostic criteria for PTSD.68 Women who have abortions after the first trimester may be at greater risk for experiencing trauma symptoms than those who have an abortion during the first 12 weeks of pregnancy.69 Women who suffer from mental health problems associated with abortion may find a path to healing through conventional therapeutic interventions or through faith-based counseling. Unfortunately, very little research has been conducted to assess the efficacy of various treatment protocols.

Summary of Recommendations and Conclusion

The following recommendations are based on good and consistent scientific evidence (Level A):

1. ***Women who have abortions after the first trimester may be at greater risk for experiencing trauma symptoms than those who have an abortion during the first 12 weeks of pregnancy.***

2. All women who present for elective abortion should be screened for risk factors for adverse mental health outcome and these risk factors discussed with the patient as part of informed consent."

AAPLOG would like to highlight for the Department that "*Studies done with nationally representative samples and a variety of controls for personal and situational factors that may differ between women choosing to abort or deliver indicate abortion significantly increases risk for the following mental health problems:*

1. Depression.49,50,51,52,53
2. Anxiety.54,55
3. Substance abuse.56,57,58,59
4. Suicide ideation and behavior.60,61"[7]

[7] https://aaplog.org/wp-content/uploads/2019/12/FINAL-Abortion-Mental-Health-PB7.pdf

It is well known that people at risk for pregnancy in the Armed Forces also are at risk for all 4 of these risk factors for adverse mental health outcomes after abortion. It is incomprehensible then that the Department would subject veterans to elective abortion when the association with adverse mental health outcomes will foreseeably be higher for pregnant women serving in the armed forces than the average woman. The Department is using the VA Health System as a weapon to impose the Department's pro-abortion ideology while at the same time demonstrating a callous disregard for the actual effects of the imposition of this policy on the men and women who are serving in the Armed Forces. This is reprehensible on the part of the Department.

AAPLOG requests the Department to explain in writing how the Department will monitor the effect of these changes in abortion policy mandated by the IFR on suicide rates? Rates of depression? Rates of substance abuse?

AAPLOG requests the Department to provide a detailed costs analysis of the projected increased costs of mental health treatments after initiation of abortion at the VA hospitals.

Equivocation on the term "health"

The Department also demonstrates a deceptive rhetorical sleight of hand in the use of the word "health" in this paragraph (and throughout the IFR document):

B. Abortions When the Health of the Pregnant CHAMPVA Beneficiary Would Be Endangered if the Pregnancy Is Carried to Term Are Medically Necessary and Appropriate

Currently, abortions for CHAMPVA beneficiaries are excluded "except when a physician certifies that the life of the mother would be endangered if the fetus were carried to term." 38 CFR 17.272(a)(64). VA has determined that when the health of the pregnant CHAMPVA beneficiary would be endangered if the pregnancy were carried to term, access to abortions is also medically necessary and appropriate and such abortions should be covered CHAMPVA services.

The Department clearly states here that abortions to save a woman's life are currently covered by CHAMPVA. So, in order to cover elective abortions under the guise of health care, the Department here states *VA has determined that when the health of the pregnant CHAMPVA beneficiary would be endangered if the pregnancy were carried to term, access to abortions is also medically necessary*. But the Department here is assuming that every pregnancy carried to term carries health risks- risks which conveniently are never defined by the Department. So

disingenuously the Department is thus declaring elective abortion medically necessary for every pregnancy, which is of course scientifically and medically ridiculous.

If it were actually medically true that all pregnancies carry significant health risks to the mother, then obgyns would offer abortions as the first line "treatment" for pregnancy. In fact, pregnancy is not a disease, it is a natural physiological process. And somewhere between 75 and 93% of obgyns do not perform abortions.[1]

Deceptive confusion of life-threatening cases with normal pregnancies.

The Department goes on to cite the rare cases of women who become pregnant with significant cardiac or renal disease. In fact, these cases can be life threatening, but in those cases, abortion is already covered. So, by quoting rare life-threatening situations, the Department is attempting to hide the real intent of this IFR, which is forcing VA Hospitals and personnel to participate in elective abortions.

We find it reprehensible that the Department would attempt to force the VA Hospital system and VA hospital personnel into killing human beings in utero. This IFR would force physicians to violate the Hippocratic Oath, which is the underlying basis of medical ethics for the past 2500 years in Western medicine.

Hippocratic Objection to Killing Human Beings in Medical Practice[8] (attached as Appendix D) Excerpts pertinent to the IFR cited here:

"Fundamental to the unique physician-patient relationship is the concept of a fiduciary relationship - the trust that the patient has in her physician, who has greater knowledge, to do the best for her. This trust is based on the patient's belief that her physician will act at all times on her behalf to make professional judgements about treatments and recommendations which will, in the doctor's best judgement, bring her the least harm. That trust stems from the patient's belief that the physician has taken a professional vow, by all that the physician holds sacred, to first do her no harm. That vow, the Hippocratic Oath, is the basis of the doctor-patient relationship.

Recent concerted attempts to use punitive legal coercion to force health care professionals to participate in or perform the killing of their patients has resulted in a need to clearly again

[8] Hippocratic Objection to Killing Human Beings in Medical Practice (Attached as Appendix D) available at: https://aaplog.org/wp-content/uploads/2019/07/AAPLOG_1-1.pdf

articulate the fundamental tenets of Hippocratic Medicine, which explicitly separates medical care from the intentional killing of human beings. It is because the health care professional has bound herself or himself to do and not to do certain things prescribed or prohibited in the Hippocratic Oath, that the patient can trust that the professional will at all times act on her behalf. These tenets have formed the foundation of Western medical ethics for over 2000 years.

Hippocratic Oath Hippocratic medical professionals do not perform certain actions which may be legal in a particular society, but which cause irreparable harm to patients. There are six tenets in the Hippocratic Oath which pertain to physician practice, tenets which set the Hippocratic physician apart from his non-Hippocratic medical colleagues:

1. To act only for the benefit of the patient. "... I will use those ... regimens which will benefit my patients according to my greatest ability and judgment, and I will do no harm or injustice to them...Into whatever homes I go, I will enter them for the benefit of the sick..."

2. To never assist in suicide or practice euthanasia, nor suggest it. "... I will not give a lethal drug to anyone if I am asked, nor will I advise such a plan..."

3. To never perform an abortion. "... and similarly, I will not give a woman a pessary to cause an abortion..."

4. To refer to physicians of sufficient expertise. "... I will not use the knife, even upon those suffering from stones, but I will leave this to those who are trained in this craft..."

5. To never have sex with patients. "... Avoiding any voluntary act of impropriety or corruption, including the seduction of women or men, whether they are free men or slaves..."

6. To maintain patient confidentiality. "... Whatever I see or hear in the lives of my patients, whether in connection with my professional practice or not, which ought not to be spoken of outside, I will keep secret, as considering all such things to be private..."
These ethical limitations historically formed the boundaries of the social contract defined in the doctor-patient relationship."

It is this oath that the IFR is forcing VA hospitals and physicians to violate.

AAPLOG request that the Department state in writing the authority that they have to force VA medical personnel to not only violate medical ethics and conscience, but also to force VA employees to perform an integrity violation and what consists of a felony violation in states where elective abortion is banned.

No gestational age limit

The Department has not set any gestational age limit on the performance of abortions in the VA hospital system. This deliberate exclusion of a gestational age limit will allow for abortions of preborn human beings who can feel pain as they are dismembered and their limbs disarticulated. This is cruelty toward the pain capable human being which is unacceptable even in the treatment of prisoners of war.

The capability of the fetus to feel pain is scientifically undeniable as documented in the **Practice Guideline Fetal Pain**.[9] (attached as Appendix E) Excerpts pertinent to the Department's IFR are quoted below:

"Pain is defined by biologists as aversive behavioral and physiological reactions in response to noxious stimuli, and does not require an intact cerebral cortex. There is significant evidence that fetuses can perceive noxious stimuli and demonstrate physiological and behavioral reactions to them—fetuses are not numb to invasive or harmful interaction

In biology, pain is defined as "aversive behavioral and physiological reactions and...suspension of normal behavior in response to noxious stimuli."2 This definition applies to non-human organisms, whose pain is increasingly and rightly recognized publicly. Typical human adult neurological function is not required for suffering....

In mature humans, painful stimuli are received by nociceptors in the skin and viscera; these communicate impulses via afferent sensory neurons through the spinal cord, are processed in the thalamus, and are received by the sensory cortex before a motor response is elicited. These motor responses are part of the "aversive behavioral [reactions and] suspension of normal behavior" in the definition of pain above. Humans also have reflex arcs that operate through motor neurons in the spinal cord's dorsal root ganglia, allowing the body to cause behavioral changes without the cortex for the sake of speed.[3] Cognition, memory, and other higher functions can add to behavioral changes, but a response to pain does not require them: pain during sleep changes behavior even if consciousness adds more behavioral changes.[45]

[9] https://aaplog.org/wp-content/uploads/2021/11/PG-2-Fetal-Pain.pdf

Processing pain either through the cortex or via a reflex arc is associated with hormonal responses including epinephrine (also known as adrenaline) and cortisol, which represent the "physiological reactions" included in the above definition of pain.[6]

Non-Human Animals

In non-human animals, nervous systems are much simpler, with animals such as nematodes or octopi reacting to noxious stimuli with only nerves and ganglia.[8,9] *Activism surrounding animal pain (termed "pain") is evidence-based and related to vertebrates,*[10,11] *fetal ver— tebrates,*[12] *and insects,*[13,14] *some of which lack functional cerebral cortices.*

Embryology and Fetal Development

Nociceptive signaling differs throughout human development. Neonates use different structures than adults.[15]

In fetuses, mature configurations for pain processing do not exist, but this does not rule out the possibility of using other structures to perceive pain as defined in this document.[16,17] *Fetuses process pain using subcortical and peripheral centers*[18-20] *while they develop final structures, just as they use an immature set of functioning renal structures before mature kidneys are complete.*[21]

Decades of histologic research has illustrated that sensory receptors, including nociceptors, are present throughout the fetus between 10 and 14 weeks gestational age, starting as early as 7 weeks.[18,22-26] *This begins in the perioral area at 7 weeks, followed by the palms and soles at 11 weeks, and the remainder of the integument by 20 weeks.* [27,28]

Superficial nociceptors, followed later by nociceptors in viscera, are connected by afferent fibers from the spinal column to the thalamus and from the thalamus to the subcortical plate between 16 and 20 weeks gestational age [16,29-32] *These afferent fibers are mature enough to cause a central response to noxious stimuli as early as 16 weeks' gestational age.*[30,33]

There is also evidence of the necessary components for a reflex arc in the fetus. Sensory fibers are present from 7-14 weeks, a spinal cord is present from 5-7 weeks, and peripheral fibers that control movement grow into the spinal cord at 8 weeks gestation.[28] *These are the three tissue components of a mature reflex arc.*

Physiologic Responses

Fetuses have a neurohormonal response similar to adults when faced with noxious stimuli.[20,34,35] *While the role of the fetal cortex is still under discussion, it is clear that cortical tissue receives this hormonal response as early as 16-18 weeks gestational age, along with other end-organs such as the fetal heart and skeletal muscle.*[9,15] *Identical hormonal responses in neonates are*

associated with noxious stimuli and produce adverse long-term outcomes, much like adult human pain.36,37

Fetal Surgical Experience
Experience of fetal surgeons and other physicians performing invasive procedures matches these histologic findings. As early as 7.5 to 8 weeks' gestational age, a fetus moves in response to stimuli .32,38-40

Language varies in reports of fetal responses but Giannakoulopoulos et al. describe this response as "vigorous body and breathing movements"20 and Williams reports "coordinated responses signaling the avoidance of tissue injury.'[41] No later than 22 weeks' gestational age, the fetus responds to what an adult would consider painful, such as a needle penetrating the skin.[32] Trials have been performed to optimize opiates for fetal anesthesia,[42] which lower the hormonal response to stimuli as in adults.[43]"

It is scientifically undeniable that fetuses who are capable of surviving outside of the mother's womb feel pain. Yet the Department's IFR allows for the dismemberment and disarticulation of living human beings in the womb at gestational ages when the fetus is undeniably capable of intense suffering. Such cruelty is unprecedented in the history of the US Armed Forces, who have been trained to minimize human suffering even in warfare. Yet the Department by this IFR mandates such cruelty.

Summary

In this IFR, the Department is forcing a radical pro-abortion political agenda onto the VA Hospital system, requiring VA healthcare employees not only to commit felonies in certain states, but also to violate the most important basic tenet of medical ethics by forcing health care employees to kill human beings in utero.

The Department has no meaningful conscience protections for medical professionals who do not want to participate in the killing of human beings.

The Department has no gestational age limit, allowing for the killing of human beings who could survive outside of the womb.

The Department is forcing the performance of elective abortions in the VA system, despite known increases in risk for suicide, drug abuse and major depression requiring hospitalization as adverse mental health outcomes after abortion as compared with birth. The Department has irresponsibly made no effort at all to analyze either the financial cost of this increased need for

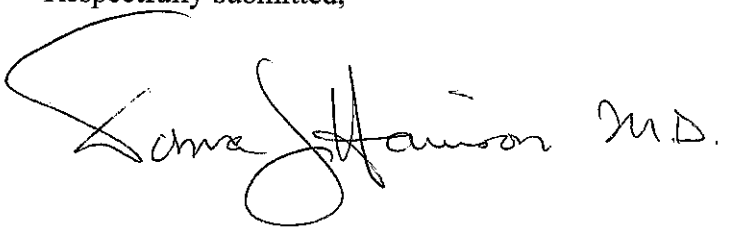
mental health treatments nor the personal suffering which will follow the Department's imposition of elective abortion in the military.

The Department is forcing the performance of elective abortions in the VA system, despite known increases in risk for preterm birth in subsequent pregnancies after abortion as compared with birth. The Department has irresponsibly made no effort at all to analyze either the financial cost of this increased need for preterm birth treatments nor the personal suffering which will follow the Department's imposition of elective abortion in the military.

This IFR forces integrity violations, is an egregious overreach and must not be implemented.

AAPLOG requests answers in writing to the questions raised in bold underline in this submission.

Respectfully submitted,



Donna J. Harrison M.D. C.E.O
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AAPLOG
PRACTICE GUIDELINE

Number 5, November 2019, Updated November 2021

The Association between Surgical Abortion and Preterm Birth: An Overview

Evidence in peer-reviewed literature from 168 studies over fifty years points to a causal, dose-response relationship between surgical abortion and subsequent preterm birth. This document provides an overview of this literature, discusses mechanisms for this effect, demonstrates the strength of evidence for causality, and offers guidance for informed consent prior to surgical abortion. This document does not provide detailed statistical analysis or a high-resolution assessment of the quality of studies on surgical abortion and preterm birth (covered in Practice Guideline 11).

Background

Preterm Birth

Preterm birth (PTB), defined as birth before 37 weeks of pregnancy, plagues modern society. There are over 3 million annual deaths worldwide due to PTB, and PTB is estimated to cost over 100 million disability-adjusted life-years, when combined with low birth weight (LBW).[1] The incidence of PTB ranges from 6 to 8% in Europe, Australia, and Canada[2-3] to 9 to 12% in Asia, Africa, and is currently 10.1% in the United States, a decrease since the push to eliminate non-indicated PTB.[7, 8]

The literature has shown for some time the increasing risk for PTB with surgical abortion. In 2018, 92% of abortions were before 13 weeks, with about half of them being surgical.[64] Researchers of varying countries and political bent have found that surgical abortion confers an increased risk for PTB, which may be mediated by infection risk.[32, 34-36]

Evidence for Increased Preterm Birth after Abortion

As of November 2021, 168 studies have been published on the association between abortion and PTB. A complete review of the literature is provided in Practice Bulletin 11, but this document reviews key studies at a foundational level. The landmark meta-analyses on PTB after abortion are:

- Swingle et al., a 2009 meta-analysis
- Shah et al., a 2009 meta-analysis
- Oppenraajj et al., a 2009 review
- Lowit et al., a 2010 meta-analysis
- Saccone et al., a 2016 meta-analysis

AAPLOG Practice Guideline. This document was developed by three authors on the Research Committee. Practice Guidelines are evidence-based documents informing pro-life providers with high-quality, peer-reviewed literature.

The first landmark study is Swingle et al., which examined studies published between 1995 and 2007 and found that women with a prior abortion had increased odds of delivery before 32 weeks (1.64, 95% CI 1.38-1.91).[44]

A few comments are helpful to understand these results. The increased odds ratio (OR) published by Swingle et al. was 1.64, and it was statistically significant as denoted by the 95% confidence interval (95% CI) of 1.38 to 1.91, which does not include 1.0. A confidence interval denotes 95% certainty that the true difference in odds resides between the two values; if the 95% CI includes 1.0, we cannot be certain that there is no difference from the control group (here, the group with no prior abortion), denoted by their odds of 1.0. Odds are different than relative risk, or absolute risk difference, and require some computation to derive a clinically memorable percent risk. An odds ratio of 1.64 translates to an increase in risk from 1.5% (the United States baseline rate of delivery before 32 weeks) to about 2.4%. Importantly, this is not a 64% increase. That would be reported in a study as a relative risk (RR) of 1.64, different from odds.

The second landmark study from 2009 is Shah et al, which found increased odds of delivery before 37 weeks (OR 1.35, 95% CI 1.20-1.52).[38] These odds mean the rate of birth before 37 weeks after one abortion is 13%, compared to the baseline 10%. This study also reported the odds of PTB after two or more abortions, OR 1.72 (95% CI 1.45-2.04). This translates to an increase in risk from 10% to about 18%, nearly doubling. Shah et al.'s results also show the important epidemiological principle of a *dose effect*: the more abortions prior to first delivery, the higher the risk for PTB.

Oppenraaij et al. combined 13 studies and found increased risk of delivery before 32 weeks and delivery before 37 weeks after one abortion, and that effect was more dramatic after two or more induced abortions (a dose effect).[45]

Lowit et al. reported data from seven systematic reviews (including four meta-analyses) and eighteen primary studies found increased risk of delivery before 32 weeks and before 37 weeks, concluding that "[c]urrent evidence … suggest an association between IA [Induced abortion] and pre-term birth."[46]

Saccone et al. included 36 studies in a systematic review and meta-analysis. This study found that women with one prior abortion had a significantly increased risk of PTB (OR 1.52, 95% CI 1.08-2.16), a significant increase in odds that translates to a risk increase from 10% to 14%.[47]

Pathophysiology of Induced Abortion and Preterm Birth

The putative mechanisms by which surgical induced abortion may increase the risk for PTB may include the following:

1. Cervical trauma from surgical dilation.

2. Predisposition to inflammation, or subclinical inoculation from the procedure.
3. Chronic increased production of maternal stress hormones.

Regarding mechanical trauma, dilation and curettage (D&C) is independently associated with an increased risk of PTB based on the investigation of neutral researchers.[33] The mechanical injury from the surgical procedure itself is the most likely reason that surgical abortion increases PTB risk.[27]

Regarding infection, this hypothesis emerges from the association of infection and inflammation with PTB,[31] coupled with data about the risk of chorioamnionitis during a subsequent delivery. The risk of chorioamnionitis in a pregnancy after abortion is threefold[37] or fourfold[38] higher compared to live birth (OR 4.0, 95% CI 2.7-5.8).

Causality in Medicine: Bradford Hill Causation Criteria

There is substantial evidence for an association between surgical abortion and PTB—more evidence than for the relationship between tobacco use and preterm birth. (This is not to belittle the association between tobacco and PTB, but to show that a neutral observer who acknowledges that association would also acknowledge an abortion-PTB association.)

But before insisting on a response like that to tobacco, we must discuss criteria for determining *causality*, whether one thing is actually *causing* another, or simply associated with it.

The Bradford Hill criteria have been used since the 1960s for this purpose (see Box 1). Dr. Hill cautioned, however:

> I do not believe [there are] hard-and-fast rules … that must be observed before we accept cause and effect. None of my [criteria is] indisputable evidence for or against the cause-and-effect hypothesis and none can be required as a *sine qua non*. What they can do [is] help us to make up our minds on [whether] there any other answers equally, or more, likely than cause and effect? All scientific work is incomplete [and] liable to be…modified by advancing knowledge. That does not confer … a freedom to ignore the knowledge we already have, or to postpone … action.[38]

Thus, while the Bradford Hill criteria are a good foundation, the lack of any particular criterion is not grounds for dismissal of a causal relationship.

Applying the Bradford Hill Criteria to Abortion and Preterm Birth

Here, the comparison between surgical abortion and tobacco use is helpful. In 1964, the US Surgeon General applied the emerging Bradford Hill criteria for causality to studies evaluating the association between tobacco use and PTB, and chose to warn the public of a potential causal effect of tobacco use on risk of PTB.

Box 1. The Bradford Hill Criteria for Causality	
Strength of the association	Does the effect meet statistical and/or clinical significance?
Consistency	Does the effect provide consistent results or outcomes?
Specificity	Is the effect specific to the outcome or result?
Temporality	Does the effect occur prior or during the given item under study?
Dose Response	Does the effect increase with increasing exposure?
Plausibility	Does the effect meet criteria for biologically reasonableness?
Coherence	Does the effect make sense with the outcome specified or found?
Experiment	Is the effect experimentally reproducible in multiple experiments with diverse authors and/or populations?
Analogy	Is the effect similar (analogous) to other effects found experimentally or clinically?
AAPLOG Practice Bulletin 5, Nov 2021.	

With regard to *timing*, surgical abortion occurs before a subsequent pregnancy at risk of PTB. There is a known *dose effect* demonstrated for the risk of PTB and very pre-term (VPTB) birth increasing with a greater number of induced surgical abortions.[31,39] (No such increased risk has been demonstrated with smoking and PTB.)

The *experiment* for surgical abortion has been repeated dozens of times, in over 168 studies on the topic. There is also *consistency* of the effects of prior surgical abortion, and no study shows a protective effect of prior surgical abortion. There is inconsistency on tobacco use and PTB,[40] since some studies show a protective effect of tobacco.[39]

Induced abortion has a very *strong effect* on the rate of subsequent PTB and very preterm birth (delivery before 32 weeks).[32,39] Biologic *plausibility* for prior surgical abortion as a cause for future preterm birth is thought to be the result of either trauma or inflammation mediated, as mentioned above.[29-32] This leads to *coherence* with subsequent evidence of cervical insufficiency or chorioamnionitis. This is *analogous* to the risk of preterm birth from other surgeries that affect cervical integrity (e.g. cervical conization) or on other procedures that may result in intrauterine inflammation.

While the effect of abortion on PTB is not unique (there are other factors that increase risk of PTB), this lack of the criterion of

specificity is common in clinical outcomes. Tobacco is also not the only factor associated with increased risk of PTB, and this non-specificity does not disqualify either tobacco use or surgical abortion as causal in the pathophysiology of PTB.

The logical conclusion drawn from the published literature that linked tobacco use and lung cancer is almost exactly the same as the logical conclusion drawn from the published literature linking induced surgical abortion and PTB: there is a causal relationship.

Clinical Questions and Answers

Q *This practice bulletin doesn't address some of my concerns about the quality of the evidence available on this purported "link." Who does?*

Practice Bulletin 11 is designed to delve into the quality of evidence available on this link and investigates the statistical and methodological merit of many of the studies on this topic.

Q *What about medication abortion?*

There has not been much data on medication abortion yet, in comparison to the decades of data on surgical abortion. Bhattacharya et al., 2012 found that women with previous abortion (medication or surgical) had increased risk of PTB (adjusted relative risk of 2.3, 95% CI 2.27-2.33). This study had some missing data on tobacco use and type of abortion (not listed in 25% of cases), which are weaknesses in a study of abortion and PTB.[11]

Q *What do other medical experts say about the relationship between surgical abortion and PTB?*

AAPLOG is the only organization in the United States has formally acknowledged the risk with induced abortion for PTB, but is not alone in its assessment of the evidence.

Dr. Jay Iams is an Associate Editor of the *American Journal of Obstetrics and Gynecology* and editor of a major maternal-fetal medicine textbook. He served as president of the Society for Maternal-Fetal Medicine from 2003-04 and of the American Gynecological and Obstetrical Society in 2013. Dr. Iams is one of the leading researchers in PTB and wrote in 2010,

> Contrary to common belief, population-based studies have found that elective pregnancy terminations in the first and second trimester are associated with a very small but apparently real increase in the risk of subsequent spontaneous preterm birth.[41]

Dr. Phil Steer, editor of the *British Journal of Obstetrics and Gynecology* wrote an editorial comment on a major meta-analysis of surgical abortion and PTB,

> A key finding is that compared to women with no history of termination, even allowing for the expected higher incidence of socio-economic disadvantage, women with just one [termination of pregnancy] had an increased odds of subsequent

> preterm birth. However, finding that even one termination can increase the risk of preterm birth means that we should continue to search for ways of making termination less traumatic.[42]

The Royal College of Obstetrics and Gynaecology (RCOG) acknowledges the association of surgical abortion and PTB. In a 2011 guideline entitled "The Care of Women Requesting Induced Abortion," RCOG advises:

> Women should be informed that induced abortion is associated with a small increase in the risk of subsequent preterm birth, which increases with the number of abortions. However, there is insufficient evidence to imply causality.[43]

Despite 168 peer-reviewed publications documenting an increased risk for PTB with surgical abortion, the leading medical organizations for women's healthcare including the American College of Obstetricians and Gynecologists (ACOG) refuse to acknowledge the increased associated risk for PTB or acknowledge the substantial body of literature raising this concern, as of their 2016 reaffirmation of Practice Bulletin 130.[25]

Planned Parenthood, the largest provider of abortion in the U.S., does not inform patients of the association of surgical abortion with PTB, instead stating that

> [s]afe, uncomplicated abortion does not cause problems for future pregnancies such as birth defects, premature birth or low birth weight babies …or infant death.[44]

Q *What are the effects of abortion-related preterm birth?*

A conservative estimate for the last 43 (1973-2018) years is approximately 102,056 deaths associated with delivery before 32 weeks related to prior abortion.[23] Of these deaths, 46,268 (45%) are estimated to be of Black infants, an over-representation given that Black Americans represent 15-16% of the total population.[25] As noted by one author, this is "equal to the number of lives…lost if 88 fully loaded 747 airliners crashed."[25]

With regard to cerebral palsy, Calhoun et al 2007 calculated an estimated 1,096 cases of cerebral palsy each year attributable to induced surgical abortion and very preterm birth.[23]

Effects of abortion are not just neonatal: Gissler et al. 2004 found that pregnancy-related maternal mortality was three times as high for women within one year of abortion, compared to women after a live birth (83.1/100,000 compared to 28.2/100,000).[27] While this is likely related to many factors, it is important not to forget the maternal patient when thinking about the effects of abortion.

Q *What are the physician's ethical obligations regarding this information?*

Ethical medical care requires informing women of the most recent and compelling evidence regarding the increased risk of subsequent PTB after a surgical abortion.

Informed consent remains a bedrock of ethical care for surgical and medical interventions. Patients deserve to know about of the risks associated with any procedure.

Summary of Recommendations and Conclusion

The following recommendations are based on good and consistent scientific evidence (Level A):

1. Women who have a history of surgical abortion are at increased risk for preterm birth (delivery before 37 weeks).
2. Women who have a history of surgical abortion are at increased risk for very preterm birth (delivery before 32 weeks).
3. Multiple surgical abortions are associated with a "dose effect," meaning more abortions confer more risk.

The following recommendations are based on limited and inconsistent scientific evidence (Level B):

1. Black Americans are disproportionately affected by abortion-related preterm birth.
2. The increased rate of preterm birth after surgical abortion is likely related to the surgical procedure itself.
3. There may be an inflammatory or subclinically infectious pathology associated with abortion-related preterm birth.
4. Women who have undergone medication abortions may be at increased risk for preterm birth, especially if this was completed surgically.

The following recommendations are based primarily on consensus and expert opinion (Level C):

1. The relationship between abortion and preterm birth meets the Bradford Hill criteria for causality.
2. Abortion-related preterm birth has effects on neonates, mothers, and society at large.
3. Women with a previous history of termination of pregnancy should be informed of the increased risk for preterm birth.
4. Authors of studies and statements on preterm birth and abortion occasionally do not report their findings accurately.

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AAPLOG
PRACTICE GUIDELINE

Number 11, November 2021

A Detailed Examination of the Data on Surgical Abortion and Preterm Birth

Overwhelming evidence from 168 studies over fifty years points to a clear dose-response relationship between surgical abortion and subsequent preterm birth. The 2018 National Academy of Sciences report considered only five of these 168 studies and represents a biased sample that underreports a significant association between surgical abortion and subsequent preterm birth. The purpose of this document is to review the quality of the data on this effect, review the size of this effect, and portray an accurate assessment of the data to improve informed consent prior to surgical abortion.

Background

Preterm Birth

An overview of preterm birth (PTB) and its relationship with abortion is provided separately (see Practice Guideline 5). However, the incidence of PTB is important to establish for the statistics presented in this deeper review.

PTB is defined as delivery before term, i.e. before 37 weeks and affects about one in ten deliveries in the United States. The majority (70%) of babies born before 37 weeks are born at 34 to 36 weeks. About 10% of PTB (1-2% of all U.S. deliveries) occur before 32 weeks and are termed "very preterm births." Very preterm births pose greater risks to the neonate and greater costs to the family and system. For this reason, some studies analyze deliveries before 37 weeks and deliver before 32 weeks (or even lower gestational ages) separately in order to give nuanced meaning to their results. In this document, very preterm birth will be specified as delivery before 32 or 28 weeks, and when PTB and these deliveries are discussed in quick succession, PTB may be spelled out specifically as delivery before 37 weeks.

The NAS Report

The National Academy of Sciences (NAS) recently released a report on the safety of abortion.[1] This report addressed the purported association between induced abortion and PTB, but limited the studies they used to assess this link. Their criteria for studies included:

- Objective documentation of prior abortion (excluding spontaneous abortion, i.e. miscarriage)

AAPLOG Practice Guideline. This document was developed by three authors on the Research Committee. Practice Guidelines are evidence-based documents informing pro-life providers with high-quality, peer-reviewed literature.

- Comparison of women with prior abortion (the study group) with women with no abortion history (a control group)
- Statistical methods that control for mental health prior to the abortion (if mental health is an outcome)
- Published in 2000 or later, including abortions performed in 1980 or later (studying current abortion methods)
- Similar clinical settings and care delivery to the United States

The authors further stated that the studies meriting attention and discussion should control for confounding variables, such as smoking status, maternal age at abortion, type of abortion (surgical or medication), weeks of gestation at abortion, and number of previous abortions.

The authors posited that, of 168 studies linking PTB to surgical abortion, only five met their criteria for inclusion. Even if the criteria set forth are appropriate, there over 70 studies that meet these criteria (see Appendix A). However, no explanation is provided for omitting such a large portion of the medical literature. While the report did admit that multiple abortions increase the risk for PTB, their conclusions about overall safety misrepresent the data.

The majority of the data on this topic is on surgical abortion, and that is the focus of this document is the association between PTB and surgical abortion, even though some medication abortion outcomes are included in the studies discussed. Here, for simplicity's sake, surgical abortion for termination of pregnancy is referred to as "abortion" Miscarriage and medication abortion will be specifically described as *spontaneous abortion* (SAB) and *medication abortion* respectively. "Induced abortion" is a term that appears in the literature on this topic because there is often mixing of outcomes between elective and spontaneous abortion. However, this document will simply use "abortion," and contrast it with SAB.

Woolner et al. (2014) is the major study that the NAS relies on to conclude there is no association between abortion and PTB in a subsequent pregnancy.[2] Woolner et al. 2014 includes data from a single site in Scotland from 1986 to 2010. However, this paper's conclusion *contradicts* the findings of other studies by two of its own coauthors. One of these studies (Battacharya et al. 2012) uses the same Scottish database examined by Woolner et al., but find an increased risk of preterm birth (PTB) among women after surgical abortion, compared to women with no abortion, with a relative risk (RR) of 1.37 (95% CI 1.32-1.42). [3] This increase in risk is statistically significant, meaning it is unlikely due to chance, as can be seen from the 95% confidence interval that does not cross 1.0 (1.0 represents no change from the baseline risk). The 95% confidence interval means we can be 95% sure that the true result falls between 1.32 and 1.42, and if it included 1.0, we could not be sure that abortion had any effect on PTB. This specific RR means that women with a prior abortion are 37% more likely to experience a subsequent PTB, increasing their rate from 10% to about 14%.

Battacharya et al. had several strengths over Woolner et al. First, it included a larger number of women (457,477 women without a prior abortion and 120,033 with a history of

abortion). Second, Bhattacharya et al. 2012 adjusted their analysis for smoking, but Woolner et al. was unable to adjust for this known confounder in PTB studies. Third, Bhattarya et al. also controlled for the type of abortion performed (medication or surgical). In contrast, Woolner et al. included failed medication abortions that required subsequent surgical completion with the total surgical abortion numbers. Fourth, Bhattarya et al. utilized known gestational age (i.e. < 13 weeks) to evaluate for risk of PTB on a national level, not a single site as had Woolner et al.[3] For these reasons, Woolner et al. is a poorer study to rely upon, given that a similar but larger dataset exists and contradicts the smaller, less well-designed study.

Early Evidence of an Association

Papers that examined multiple smaller studies (reviews) on abortion and PTB first emerged in the United States in 2003.[10,11] Rooney and Calhoun (2003) reviewed studies from 1966-2003 and found 49 studies with a statistically significant risk for PTB after abortion.[11]

Meanwhile, the association between abortion and PTB has been known in the international community since at least 1973.[21] The Hungarian government was warned about the evidence of a link between abortion and PTB thanks to work by Dr. Jeno Sarkany.[12] As a result, Hungary passed restrictive legislation regarding elective abortion, citing increased social and medical burden from PTB. This legislation reduced the abortion rate in Hungary from 57% of all pregnancies in 1969 to 38% in 2000.[13]

Evidence in the Early 21st Century

The meta-analysis by Swingle et al. (2009) was performed authors who held different political beliefs on abortion, to reduce bias.[16] This team reviewed 7,891 titles, 349 abstracts, and 130 manuscripts, finally identifying 12 papers about the risk of PTB after abortion and 9 papers on PTB after spontaneous abortion (SAB) with data available for analysis.

Four of the 12 studies on abortion had data available for common odds ratios (OR) to calculate the odds of PTB less than 32 weeks associated with surgical abortion. The common OR for these studies was 1.64 (95% CI 1.38-1.91).[16] Odds ratios are different from relative risk, but this result is equivalent to a change in the rate of delivery before 32 weeks from about 1.5% (the U.S. baseline rate before 32 weeks), to about 2.3% after one abortion.

This study also found an increased risk of PTB after SAB. Out of the 9 studies available to pool a common odds ratio for PTB after SAB, 7 had data for use in calculations. The authors found that the odds of PTB less than 37 weeks after one SAB was 1.43 (95% CI 1.05-1.66), and with more than 2 SABs, 2.27 (95% CI 1.98-2.81).[16]

Of note, PTB after abortions is not related to PTB after SAB. The causes of SAB are internal to the woman or embryo, and may also predispose the mother to preterm birth, especially after recurrent SAB. However, this is different from the cause of abortion, which is a mechanical dilation and removal of the fetus despite the mother's capacity to carry him. Further, abortion is an avoidable

epidemiological risk factor for PTB; SAB, on the other hand, is an unfortunate, often unpreventable, outcome of a desired pregnancy for most women.

Shah et al. conducted a separate analysis in the same year as Swingle et al. (2009).[17] These authors screened 834 papers and identified 22 studies on PTB after abortion, which included 268,379 women.[17]

Shah et al. found a significantly increased risk for PTB after one abortion (OR 1.36, 95% CI 1.24-1.50).[17] These odds mean the rate of birth before 37 weeks after one abortion is 13%, compared to the baseline 10%. Seven of these 22 studies reported rates of PTB after two or more abortions, including 158,421 patients. Among these women, there was an increased risk for PTB (OR 1.93, 1.38-2.71).[17] This translates to an increase in risk from 10% to about 18%, nearly doubling the risk. These ORs and related increases in rate of PTB to between 13% and 18% demonstrate a dose effect of abortion: the more abortions, the higher the subsequent risk of PTB.

Oppenraaij et al. (also 2009) combined 13 studies and found increased risk of very PTB (birth before 32 weeks) as well as PTB before 37 weeks with one abortion. They also detected a dose effect with more than 2 abortions.[18] The authors conclude

> a history of TOP [termination of pregnancy] is associated with an increased risk for PPROM, PTD, and VPTD. These risks depend on the number of TOP.[18]

Lowit et al. (2010) also found an increased risk of PTB before 37 and 32 weeks in an analysis that combined 7 systematic reviews (including 4 meta-analyses), one prospective study, 12 retrospective studies, and five case-control studies.[19] The authors conclude that "[c]urrent evidence … suggest an association between IA [induced abortion] and pre-term birth."[19]

More Recent Evidence

Saccone et al. (2016) included 36 studies in a systematic review and meta-analysis; 31 of these looked at abortion, and 5 looked at dilation and curettage (D&C) after SAB. A total of 1,047,683 women were included among all these studies.[20] The authors controlled for bias with best practices including planning analyses before selecting included studies, having two authors select studies, using the Methodological Index for Non-Randomized studies, and performing the Higgins test for heterogeneity across studies. Women with one prior abortion had a significantly increased risk of PTB (OR 1.52, 95% CI 1.08-2.16), translating to a risk increase from 10% to 14%.[20] The authors concluded that "prior surgical evacuation of the uterus may be an independent risk factor for PTB."[20]

In 2020, Laelago et al. performed a systematic review and meta-analysis of abortion and PTB in East Africa. Their study included 58 studies with 134,801 participants. Pooled analysis of four studies found that prior abortion or stillbirth was significantly associated with PTB. The adjusted odds ratio of PTB in this study was 3.93 (95% CI 2.70-5.60), which is dramatically different from other ORs on this topic. This may be a result of the mixing of stillbirth (and possible SAB) and abortion, which are different physiological entities and result in different management. This is a weakness of this study. The strength

of this study consists of the inclusion of eleven East African countries finding similar increased PTB risks with abortion.[22] While this study needs confirmation, it suggests that affects from abortion on PTB may span across ethnicities and geographic regions.

Another Approach to Preterm Birth

Since the NAS report is missing significant parts of the available body of data, another attempt at listing and assessing the quality of studies is provided in this document. A rubric was utilized to evaluate the quality of the studies linking abortion history with PTB (see Table 1). This rubric included nine criteria: sample size, generalizability, consent to participate rate, abortion concealment, control for potentially confounding variables, inclusion of a control group, strength of measures or preterm birth, prospective data collection, and attrition rate (longitudinal studies only). Each criterion was worth 0-4 points for a total of 36 points.

Studies on surgical abortion and delivery before 37 weeks are laid out in Table 2, and studies on very preterm birth are laid out in Table 3. A few are worth describing in more detail.

Freak-Poli, et al. (2009) used data from South Australia from 1998-2003 and included maternal smoking history. This study encompassed 42,269 deliveries with 39,191 term births and 3,078 PTBs.[23] They also demonstrated a dose effect: after one abortion, the adjusted odds ratio (aOR) for PTB was 1.35 (95% CI 1.08-1.68), and after two or more abortions, this jumped to 1.63 (95% CI 1.28-2.08).[23] These odds ratios translate to an increase in risk from the baseline 10% to

Voigt, et al. (2009) evaluated 8 German federal states in a retrospective cohort study of 247,593 women delivering their first child preterm.[24] The rate of PTB for women with one prior abortion was 7.8% and for more than 2 abortions, 8.5%. In contrast, only 6.5% of the control group, who had no prior abortion, delivered preterm, a statistically significant difference ($p = 0.015$).[24] A weakness of this study is that the data on prior abortion was self-reported, and some patients may have concealed this. However, concealment tends to weaken associations, because the women concealing their history distribute any effect of abortion into the control group, making the groups behave more uniformly. Thus, concealment in this case might be hiding an even larger effect of PTB. The evaluation of the quality of this study was 29 out of a possible 36 points.

Ancel et al. (2004) is a case control study of 2,938 PTBs and 4,781 controls at term from 10 European countries. This study found increased odds of preterm birth before 28 weeks after one abortion (OR 1.34, 95% CI 1.08-1.68), and even higher odds of delivery before 28 weeks with two or more abortions (OR 1.82, 95% CI 1.34-2.49).[25] These odds ratios are similar to those from other studies, but the corresponding elevation in risk of PTB will vary based on the baseline rate of PTB in each included country. The evaluation of the quality of this study was 21 out of a possible 36 points.

about 13% after one abortion, and about 15% with two or more abortions, which is consistent with other studies described earlier. One of the key strengths of the study was the internal validation of the database with patient records regarding

Table 1. Rubric for Evaluating the Scientific Merit of Studies on Abortion History and Subsequent Preterm Birth					
Score	**0**	**1**	**2**	**3**	**4**
Sample size	50 or fewer	51-199	200-399	400-999	1000 or more
Generalizability	Restricted to 1 city *or* self-selected *or* clinical *or* convenience sample	2-4 cities within 200 miles of each other	≥5 cities over 200 miles apart with no evidence the sample represents the population	≥5 cities over 200 miles apart with evidence that the sample approximates the population	≥5 cities over 200 miles apart with nationally representative sample *or* international study including 3 or more nations.
Consent to participate rate	Not available or < 20%	20 - 39%	40 - 59%	60 - 79%	≥80% *or* population-based
Abortion concealment	Includes women prone to concealment*	Concealment rates equivalent to typical studies on abortion	Methodology employed some effort to reduce concealment	Methodology employed extensive strategies to reduce concealment	No concealment *or* record-based data *or* data secured at an abortion clinic
Control for potentially confounding variables	No controls for potential confounders	≤5 demographic control variables	≥6 controls not restricted to demographic factors	≥6 controls, not restricted to demographic factors and including prior PTB	≥6 controls, not restricted to demographic factors and including prior PTB and pregnancy intendedness
Control group	No control group *or* control group had different abortions (medication/surgical or early/late) *or* control is partner	Women with no reproductive event or women from the general population	Women who gave birth without intendedness identified	Other form of perinatal loss (miscarriage, stillbirth, adoption placement)	Unintended pregnancy delivered with or without women having actively considered abortion
Strength of measures or preterm birth	Use of fewer than 10 self- reported measures of outcomes.	Use of fewer than 10 self-report measures with some evidence of PTB association	Use of ≥10 self-reported measures with established association with PTB	Use of ≥10 self-reported measures with established association with PTB *plus* another form of data other than self report.	PTB diagnosed by a trained professional using a well- developed linkage of data or protocol
Prospective data collection	One post-abortion assessment or retrospective	Two or more post-abortion assessments	Two or more assessments, with the first occurring between the time of abortion or within 6 month of the procedure	Pre and post- abortion assessments with ≥1 post- abortion assessment(s) < 1 year post- procedure	Pre-abortion assessment(s) and extensive assessments from ≥1 month before to ≥ 1 year post- procedure
Retention rate (longitudinal studies only)	≤ 44%	45 - 59%	60 - 74%	75 - 89%	90-100%
* Women at increased risk of concealment include minors, victims of domestic violence, highly religious or conservative background					

demographics, previous pregnancy outcomes, gestational age, hypertension, IUGR, and antepartum hemorrhage (see Table 2).[23] The evaluation of the strength of this study was 33 out of 36.

There were 3 informative studies on PTB (before 37 weeks) and abortion in 2011.[23,26,27] The Di Renzo et al. database-linked study was a multicenter cross-sectional evaluation of preterm vaginal delivery in 9 centers in Italy.[27] The authors eliminated cesarean deliveries from their analysis due to the inability to control for the varying trends in indication for these deliveries. The records were linked to outcomes at each center within the central database. The investigators performed a power analysis prior to beginning the research. They determined that 6,000 women would be necessary in their population to see a statistically significant difference in the PTB rate in their population. Their sample included 7,634 vaginal deliveries. The authors performed a multivariable regression to assess confounding variables, but did not differentiate between number of prior abortions or types of obstetric history (e.g. did all prior pregnancies end in abortion, or was there one abortion after prior full-term deliveries).

Di Renzo et al. found an increased odds of PTB of (OR 1.954, 95% CI 1.162-3.285), which corresponds to an increase from their baseline PTB of 5% to about 9%. The evaluation of the quality of this study was 33 out of a possible 36 points.

The evaluation of the quality of Bhattacharya et al. (2012) previously discussed, was 27 out of 36 points.

Finally, Malosso et al. (2018) studied the rate of PTB compared to abortion between 2003 to 2012 in U.S. databases (which are not linked).[38] Specifically, this study used data from National Vital Statistics Reports and Center of Disease and Prevention. This study found the progression toward more medication abortion and fewer surgical abortions was significantly associated with the decrease in PTB in the U.S. since 2001 ($p < 0.05$).[38] The study suffered from lack of linkage of the data and correlation coefficients as a quantitative assessment. The correlation coefficient only assesses the co-variation as opposed to causation. Also, the authors did not address the magnitude of the secular trend to decrease iatrogenic preterm births during the study period. This could bring bias into the data collected as a result of changes in general practice not related to induced abortion. The evaluation of the quality of this study was 22 out of a possible 36 points.

A comprehensive list of studies on surgical abortion and preterm birth is provided in Appendix A.

Another Approach to Very Preterm Birth

Just as delivery before 37 weeks needed a comprehensive approach, so too does very preterm birth, or delivery before 32 weeks (in some studies, 28 weeks). Very preterm birth only represents about 1-2% of PTB in the U.S. but results in significant cost and morbidity due to infant prematurity. The same rubric was utilized to evaluate studies on very preterm birth (see Table 3).

Levin et al. (1980) compared pregnancy loss and PTB before 28 weeks with those who

Table 2. Application of Criteria to Published Studies from 2004 to 2018 Preterm Birth < 37 weeks

Citation and Synopsis	Sample size	Generalizability	Consent to participate rate	Abortion concealment	Attrition (Retention)	Control for confounders	Control group	Strength of PTB measures	Prospective data collection	**Total**
Liao et al., 2011 Cohort study from 7 hospitals in Chendu, China including 4 years of study from January 2006-December 2009. OR 1.4 (95% CI 1.1-1.8) of PTB after 1 surgical abortion. OR 1.62 (95% CI 1.27-3.42) of PTB after 3 or more surgical abortions (dose effect). OR 2.18 (95% CI 1.51-4.42) of PTB with medication and surgical abortions	4	0	4	2	1	3	1	2	4	21
Di Renzo et al., 2011 Database-linked study; multicenter, observational, cross-sectional study of PTB and vaginal deliveries in 9 centers in Italy. OR 1.95 (95% CI 1.16-3.29) of PTB after any previous abortion(s) no matter when the abortions occurred in the patients' reproductive history.	4	4	4	3	4	3	4	3	4	33
Freak-Poli et al., 2009 Data from South Australia about preterm birth < 37 weeks and with induced abortion with adjusted (aOR) of 1.63 (95% CI 1.28-2.08) of PTB after one abortion, aOR 1.35 (95% CI 1.08-1.68) of PTB after 2 or more abortions (dose effect).	4	4	4	4	4	3	4	2	4	33

Table 2, continued

Citation and Synopsis	Sample size	Generalizability	Consent to participate rate	Abortion concealment	Attrition (Retention)	Control for confounders	Control group	Strength of PTB measures	Prospective data collection	**Total**
Voigt, et al 2009 Evaluation of 8 German federal states in a retrospective cohort study with increased risk of PTB < 36 weeks and < 31 weeks.	4	4	4	2	3	3	3	3	3	29
Ancel, et al 2004 Case control study from 10 European countries OR 1.34 (95% CI 1.08-1.68) PTB before 28 weeks with 1 abortion and OR of 1.82 (95% CI 1.34-2.49) after two or more abortions.	4	4	0	2	2	1	3	1	4	21
Laelago, et al 2020 Systematic review and meta-analysis of East African countries finding aOR of 3.93 (95% CI 2.70-5.70) for PTB before 37 weeks after abortion/stillbirth.	4	4	1	2	3	2	3	1	1	21

delivered at term (after 37 weeks).[28] Women who had two or more induced abortions had a 2- to 3-fold risk of very preterm birth. The evaluation of the quality of this study was 25 out of a possible 36 points.

Lumley (1998) provided the RR of very preterm birth of a woman's first singleton according to her prior obstetric history (no prior pregnancy, prior abortion, or prior miscarriage).[29] The paper includes 243,679 deliveries between 1983 to 1992 in Australia. Women who had an abortion had a higher risk of delivery before 28 weeks and before 32 weeks compared to women with no prior pregnancy. This demonstrated a dose effect.[29] Weaknesses of the study included possible confounding with regard to maternal age, marital status, birth defect, tobacco, socioeconomic status, and alcohol use. In spite of this, the author notes:

> The data meet four of the criteria for causality. The temporal sequence is clear: the abortions preceded the preterm birth. The association is a strong one. There is a dose-response relationship: the greater the number of prior pregnancies the higher the relative risk. The association is plausible: possible mechanisms exist.[29]

The evaluation of the quality of this study was 33 out of a possible 36 points.

Moreau et al. used data from the EPIPAGE study, which evaluated delivery between 22 and 32 weeks in nine French regions.[30] The study included 1,943 deliveries before 33 weeks, 276 deliveries between 33 and 34 weeks, and 618 unmatched term controls (39-40 weeks). After abortion, women had increased odds of delivery between 22 and 27 weeks (OR 1.8, 95% CI 1.1-2.8) and between 28 and 32 weeks (OR 1.7, 95% CI 1.0-2.8). The study's strength was its control for confounding variables. The evaluation of the quality of this study was 28 out of a possible 36 points.

Smith et al. (2006) analyzed risk with induced abortion and spontaneous PTB in 84,391 first births in Scotland between 1992 and 2001.[31] A strength of this study is the use of Cox proportional hazards modeling to determine the association between abortion and the increase in risk of PTB. The authors found an increased risk of PTB at 24-32 weeks with a hazard rate of 1.19 (95% CI 1.06–1.34) with one abortion and a 1.9 (95% CI 1.44–2.49) with two or more abortions, demonstrating a dose effect with a positive trend test ($p < 0.001$).[31] The evaluation of the quality of this study was 33 out of a possible 36 points.

Klemetti et al. (2012) compared 300,858 women experiencing their first delivery between 1996 and 2008 and used the Finnish abortion registry between 1983 and 2008 to understand which women had undergone abortions prior to this delivery.[32] 31,083 women had one abortion before their first continued pregnancy, 4513 had two abortions, and 93 had three or more abortions. Women with one prior abortion had nonsignificantly increased odds of delivery before 28 weeks (aOR 1.19, 95% CI 0.98-1.44), but this became significant after 2 abortions (aOR 1.69, 95% CI 1.14-2.51) and for more than 3 abortions (aOR 2.78, 95% CI 1.48-5.24).[32] The study's strength was its completeness of records (excludes recall bias or concealment), and their exhaustive adjustment for confounders. The evaluation of the

Table 3. Application of Criteria to Published Studies from 1980 to 2018 for Very Preterm Birth <28-32 weeks

Citation and Synopsis	Sample size	Generalizability	Consent to participate rate	Abortion concealment	Attrition (Retention)	Control for confounders	Control group	Strength of PTB measures	Prospective data collection	**Total**
Levin, et al 1980 Compared pregnancy loss/preterm birth < 28 weeks with those who delivered at term. Women who had 2 or more induced abortions had 2-3 fold risk of PTD < 28 weeks.	2	0	4	3	3	4	3	3	3	25
Lumley, 1998 Data from Victoria, Australia demonstrating increased risk of delivery < 28 weeks and delivery < 32 weeks after surgical abortion. Demonstrated a dose effect noted with increasing risk of PTB with increasing numbers of induced abortions.	4	4	4	4	4	3	3	3	4	33
Moreau, et al 2005 Evaluated delivery between 22-32 weeks of gestation in 9 French regions. OR for PTB was 1.8 for 22-27 week delivery and 1.7 for 28-32 week delivery after surgical abortion.	4	4	1	3	3	3	3	3	4	28
Smith, et al 2006 Analyzed risk of spontaneous PTB after surgical abortion. Risk of PTB at 24-32 weeks increased of PTB with hazard ratio (HR) of 1.19 after one surgical abortion, 1.90 with two or more surgical abortions.	4	4	4	4	4	3	3	3	4	33

Table 3, continued

Citation and Synopsis	Sample size	Generalizability	Consent to participate rate	Abortion concealment	Attrition (Retention)	Control for confounders	Control group	Strength of PTB measures	Prospective data collection	**Total**
Klemetti et al., 2012 Registry study from Finland comparing birth outcomes after surgical abortion. Found increased risk of delivery < 28 weeks with OR 1.22 for PTB after one abortion, OR 1.86 after two abortions, and 3.38 after 3 or more abortions. Adjusted ORs found increased risk with two or more abortions.	4	4	4	4	3	3	4	4	4	34
Bhattacharya et al., 2012 Registry study from Scotland which found that women with previous medication or surgical abortion adjusted RR or PTB of 2.30 (95% CI 2.27-2.33). Missing smoking data on 50% patients and 25% of abortion type not listed (i.e. surgical/medication).	4	4	4	3	2	2	3	3	2	27
Scholten et al., 2013 National registry study from the Netherlands, interview-based. OR 1.52 (1.26-1.85) for delivery < 32 weeks. OR 1.67 (95% CI 1.30-2.15) for delivery < 28 weeks after abortion.	4	4	4	2	4	3	4	2	4	27
Hardy et al., 2013 Registry from Canadian database looking at deliveries <32, <28, and <26 weeks after abortions. Adjusted ORs after abortion were 1.45 (95% CI 1.11-1.90) for delivery < 32 weeks, 1.71 (95% CI 1.21-2.42) for delivery < 28 weeks, and 2.17 (95% CI 1.41-3.35) for delivery < 26 weeks.	4	1	4	2	3	2	2	3	4	25

Table 3, continued.

Citation and Synopsis	Sample size	Generalizability	Consent to participate rate	Abortion concealment	Attrition (Retention)	Control for confounders	Control group	Strength of PTB measures	Prospective data collection	**Total**
Zhou et al., 2014 Population–based prospective study in 14 cities in China that found OR 2.75 (95% CI 1.66-4.56) of pre-term premature rupture of membranes (PPROM) < 28 weeks after abortion.	4	4	4	4	4	3	4	3	4	34
Usynina et al., 2016 Registry of all births in a Russian county, found that after abortion, the adjusted OR was 1.96 (1.32-2.91) for delivery < 28 weeks and of 1.36 (95% CI 1.06-1.76) for delivery between 28 and 32 weeks.	4	4	4	3	3	3	4	3	4	32
Situ et al., 2017 Study from Finland demonstrating OR 1.51 (95% CI 1.03-2.23) of extremely preterm birth < 28 weeks after abortion.	4	4	4	4	3	3	4	4	4	34
Malosso et al., 2018 Study of abortion from 2003-2012 from National Vital Statistics Reports and Center of Disease and Prevention which found increased risk for PTB with surgical abortion and decreased PTB rates with medical abortion.	4	4	2	2	3	2	2	1	2	22

quality of this study was 34 out of a possible 36 points.

Scholten et al. (2013) investigated PTB after abortion using national registry study from the Netherlands.[33] In 16,000 women with a prior abortion, there were increased odds of delivery before 32 weeks (aOR 1.52, 95% CI 1.26-1.85) and before 28 weeks (aOR 1.67, 95% CI 1.30-2.15). A weakness of the study was its use of self-report of abortions, rather than registry data. The authors concluded that

> [w]omen who have had a termination of pregnancy have an increased risk of preterm delivery, cervical incompetence treated by cerclage, placental problems, and PPH [postpartum hemorrhage]

The evaluation of the strength of the quality of the study was 27 out of a possible 36 points.

Hardy et al. (2013) used a Canadian database (the McGill Obstetric and Neonatal Database) to examine deliveries before 26, 28, and 32 weeks after a prior abortion.[34] The study included 17,916 women between 2001 and 2006, of whom 2,276 (13%) had undergone one prior abortion, and 862 had undergone two or more abortions. The study described increased adjusted odds of delivery before 32 weeks (aOR 1.45, 95% CI 1.11-1.90), before 28 weeks (aOR 1.71, 95% CI 1.21-2.42), and before 26 weeks (aOR 2.17, 95% CI 1.41-3.35).[34] A limitation of the study was self-report to disclose a history of induced abortion. However, self-reporting tends to favor the null hypothesis if women do not disclose abortion. This would sort themselves incorrectly into the control group, equalizing the effects in both groups. A second limitation was the failure to differentiate whether the abortions were medication or surgical abortion, and whether they were done in the first or second trimester. The evaluation of the quality of this study was 25 out of a possible 36 points.

Zhou et al. (2014) performed a population–based prospective study of preterm prelabor rupture of membranes (PPROM) in 14 cities in China from 2001 to 2012.[35] 112,439 women were included in the analysis, of whom 3,077 (2.7%) had PPROM. Women were at increased odds of PPROM before 28 weeks after abortion (OR 2.75, 95% CI 1.66-4.56). The strength of the study is the ability to control for smoking, alcohol, medical history comorbidities, a family history of medical diseases, history of spontaneous miscarriage, fetal death, and fetal anomalies. The evaluation of the quality of this study was 34 out of a possible 36 points.

Usynina et al. (2016) using registry data from all 52,806 live births in a Russian county from 2006 to 2011.[36] Women who had undergone surgical abortion were at increased odds for delivery before 28 weeks (aOR 1.96, 95% CI 1.32-2.91) and delivery between 28 and 32 weeks (aOR 1.36, 95% CI 1.06-1.76). The strengths of this study were the ability to control for the morbidities of educational level, marital status, alcohol abuse, and diabetes and the large size. Limitations include possible under-reporting of alcohol abuse, pre-pregnancy BMI, and the lack of separation of induced and spontaneous miscarriages. The evaluation of the quality of this study was 32 out of a possible 36 points.

Situ et al. (2017) reported on 419,879 first deliveries with a singleton between 1996

and 2003.[37] Women who had a prior abortion had increased odds of delivering before 28 weeks (OR 1.51, 95% CI 1.03-2.23). Strengths of the study include the large number of first-time mothers with singleton births over an 18-year time frame, use of national registry linked data, and ability to analyze for induced abortions in multiple categories. Limitations of the study include lack of data on interpregnancy intervals and socioeconomic status. The authors attempted use smoking as a proxy for socioeconomic status. The evaluation of the quality of this study was 34 out of a possible 36 points.

A comprehensive list of studies on abortion and very preterm birth is provided in Appendix B.

Clinical Questions and Answers

Q *What about the increased risk of PTB due to D&C alone, regardless of abortion?*

Lemmers et al. (2016) confirmed the association between PTB and D&C. This meta-analysis reviewed 21 studies, including a total of 1,853,017 women who had undergone D&C for abortion or SAB.[21] Compared to women with no history of D&C, women with a prior D&C for any reason had an adjusted odds ratio of 1.29 for PTB (95% CI 1.17-1.42), and an adjusted odds ratio of 1.69 for PTB before 32 weeks (95% CI 1.20-2.38). This translates to an increased rate of birth before 37 weeks of 13% (from 10%) or birth before 32 weeks of 2.5% (from 1.5%). These results for very preterm birth are consistent with 31 other studies demonstrating a significantly increased risk of PTB with surgical abortion and D&C in general. (See Appendix B.)

Women with a history of multiple D&Cs compared with those with no D&C had an OR of 1.74 for PTB (95% CI 1.10-2.76), meaning an increase from 10% to 16%.

Lemmers concluded, "D&C is associated with an increased risk of subsequent preterm birth. The increased risk in association with multiple D&Cs indicates a causal relationship. Despite the fact that confounding cannot be excluded, these data warrant caution in the use of D&C for miscarriage and termination of pregnancy, the more so since less invasive options are available."[21]

This conclusion also concurs with Malosso et al., which finds that the rate of PTB has declined as medication abortions replace some surgical abortions.[38]

Rather than allowing us to dismiss the association between surgical abortion and PTB as "just due to D&C," this data confirms that the very procedure we are using to end pregnancy is the cause of increased risk of PTB. We, as women's healthcare professionals, must critically hold ourselves and our profession accountable for counseling women about risks related to the procedure or intervention.

Q *What about the increased risk of PTB due to short interval pregnancy after abortion?*

Short interval pregnancy, or short interpregnancy interval, is defined as a new pregnancy less than six months after the end of the prior pregnancy. The NAS report investigated whether the increased risk of

PTB after abortion is due to short interval pregnancy. That report concluded that the association between PTB and short interval pregnancy is inconsistent and may be related to other factors found in other studies.[6]

A recent examination of short interpregnancy interval using a better statistical model (within-mother analysis vs. between mother analysis) is thought to better assess confounding risk factors, like abortion. When within-mother analysis is used, the risk of PTB attributed to short interpregnancy interval alone is not significant (OR 1.07, 95% CI 0.86-1.34). This means that the higher ORs seen for abortion and PTB cannot be due to short interpregnancy interval alone.[7] The same result was shown with the use of conditional logistic regression, another technique meant to assess for confounding factors: short interpregnancy interval was not associated with PTB in 38,178 Canadian deliveries.[8]

Interestingly, the interval between pregnancies tends to be longer after abortions as shown in a 2017 analysis of 173,205 U.S. birth certificates. The same study showed that the number of previous abortions was not correlated with interpregnancy interval.[9]

Q *Observational studies cannot prove causality by definition, so how can the association between abortion and PTB ever be proven as causal?*

Prospective controlled studies cannot be done on autonomy-related behaviors such as abortion or tobacco use, since this would be unethically coercive.

The authors of some studies on abortion and PTB openly assert that their study cannot aid in proving causality because they are observational,[32] but the same assertion may be made regarding tobacco's association with lung cancer. Clinicians must act on the statistically sound observational data to establish reasonable certitude in clinical practice with regard to causation and guide their recommendations accordingly.

Q *Does the increased rate of PTB after abortion concur with low birth weight outcomes?*

Low birth weight (LBW) is defined as birth weight less than 2500 grams and occurs in 8% of deliveries in the United States. Out of the 18 studies on LBW analyzed by Shah et al. (2009), there were 280,529 patients available to compare at the level of individual patient data. The authors compared women with no abortions prior to their first delivery to women with one abortion prior to their first delivery. There was a significantly increased risk for LBW after one abortion (OR 1.35, 95% CI 1.20-1.52).[17] This means that from a baseline rate of 8%, the rate of LBW rises to about 11% after one abortion. Only 5 of 18 studies included LBW findings after two or more abortions, representing 49,347 patients. Using these patients, the pooled OR for LBW after two or more abortions was 1.72 (95% CI 1.45-2.04), meaning an increased rate from 8% to 13%. This difference in the rate of LBW after one (11%) and two or more (13%) abortions shows a dose

effect: the more abortions a woman undergoes prior to her first delivery, the higher the risk that her first neonate will have LBW.[17]

Saccone et al. (2010) also looked at LBW, and found an OR of 1.41 (95% CI 1.22-1.62) after one abortion. While Shah et al. did not find a statistically significant increase in small for gestational age (SGA) infants after abortion, Saccone et al. found a significant increase, with an odds ratio of 1.19 (95% CI 1.01-1.42).

Q *Most of the above data is about first trimester surgical abortion. What is the evidence for second trimester abortion and preterm birth?*

The NAS authors used the study by Woolner et al. 2014[2] and the study by Jackson et al. 2007[4] to evaluate the risk of PTB following medication and surgical abortion done later than 13 weeks. Both studies are unable to state whether later abortions are associated to an increase risk for PTB, but the NAS report does not include this disclaimer. Mirmilstein et al. 2009, a small study of 77 women who underwent second-trimester abortion with misoprostol, did find that this type of second trimester abortion was an independent risk factor for PTB.[5]

Q *What is the cost of abortion-related prematurity?*

A 2007 analysis reviewed studies done through 2005 on this topic, finding 59 studies that demonstrated an increased rate of PTB after abortion and translated the costs of abortion-related prematurity to $1.2 billion annually.[14, 23] Ten years later, McCaffrey (2017) estimated there had been a total of $52-57 billion in abortion-related hospital costs due to very preterm birth between 1973 and 2016.[15] These calculations did not include any of the costs after discharge related to the morbidity of prematurity, including cerebral palsy, retinopathy, bronchopulmonary dysplasia, deafness, and early intervention programs. As of December 2021, no one has yet to dispute these estimates of the impact on healthcare dollars by abortion.

Q *Have authors on this subject minimized their positive findings?*

Oppenrajj et al. (2009) attempts to attribute the increased rate of PTB after surgical abortion to confounders (smoking, unemployment, socioeconomic status, short interpregnancy interval), but later admit that there is an association.[18]

Lowit et al. (2010) write that the "effects of IA [induced abortion] on subsequent reproduction is sparse and conflicting" despite their review of 7 systematic reviews (including 4 meta-analyses), one prospective study, 12 retrospective studies, and five case-control studies, and their own conclusion that abortion is associated with PTB.[19]

Liao et al., (2011) buried an important clinical and statistical findings in their paper about medication abortions. Medication abortion before 7 week that requires D&C for completion was associated with increased odds of preterm birth (OR 1.69, 95% CI 1.02-3.16) and very preterm birth (OR 3.61, 95% CI 1.43-4.93). Combined, these outcomes occurred in 1 out of 10

patients who needed D&C after medication abortion, but this finding did not make it into the abstract.

Finally, the NAS report itself ignores the substantial body of literature regarding induced abortion and its association with PTB. About 77 studies meet their stated criteria, but are ignored in their analysis, while other studies (e.g. Woolson et al 2014) are included, despite not fulfilling these criteria perfectly.

Q *If the NAS Report admits that abortion is getting safer, shouldn't we expect to see some increased risk of PTB in past studies?*

Yes, an increased rate of PTB in past studies and a disappearance of this effect in more recent studies would be consistent with an improvement in the technique of abortion, making it less risky to women's future reproductive health.

There are a very few old studies (e.g. Levin et al. 1980) which demonstrate a very high increase in the rate of PTB after surgical abortion, but these are outliers. The majority of the meta-analyses and individual studies from the 1970s through the 2020s have demonstrated a significant, consistent increase in the risk of PTB after surgical abortion, regardless of the purported modernity of the method.

Summary of Recommendations and Conclusion

The following recommendations are based on good and consistent scientific evidence (Level A):

1. The report on abortion safety by the National Academy of Sciences does not reflect the majority of the literature on the increased risk of preterm birth after abortion.
2. One prior surgical abortion is associated with a statistically significantly higher odds of subsequent preterm birth (PTB), corresponding to a 13-14% risk, compared to the baseline rate of 10% in the United States.
3. Surgical abortions are associated with a "dose effect," meaning an increased number of abortions confer increasing risk of PTB.
4. Two or more prior surgical abortions is associated with significantly higher odds of subsequent preterm birth, corresponding to a 18% risk of subsequent preterm birth, compared to the baseline rate of 10% in the United States.
5. One prior surgical abortion is associated with significantly higher odds of having a subsequent very preterm birth (either 32 or 28 weeks' gestation), corresponding to a 2.3% risk, compared to the baseline rate of 1.5% in the United States.
6. One prior surgical abortion is associated with significantly higher odds of low birth weight (LBW), corresponding to an 11% risk of subsequent LBW

compared to the baseline rate of 8% in the United States.

7. Two or more prior surgical abortions is associated with is associated with significantly higher odds of low birth weight (LBW), corresponding to a 13% risk of subsequent LBW compared to the baseline rate of 8% in the United States.
8. The odds and corresponding risk of delivery before 37 weeks and before 32 weeks after D&C for any reason, are similar to the respective rates of delivery before 37 weeks and before 32 weeks after surgical abortion: 13% for one procedure, and 16% for multiple procedures.

The following recommendations are based on limited and inconsistent scientific evidence (Level B):

1. The etiologies of subsequent preterm birth after surgical abortion, compared to miscarriage or stillbirth, are different and should be approached differently.
2. Abortion-related prematurity has cost the United States more than $50 billion dollars since *Roe v. Wade.*
3. The increased rate of preterm birth after surgical abortion is likely related to the surgical procedure itself.

The following recommendations are based primarily on consensus and expert opinion (Level C):

1. The increased risk of preterm birth after surgical abortion should be included in informed consent for surgical abortion.

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Appendix A: Studies on Surgical Abortion and Preterm Birth

☒ *Denotes studies that included miscarriages and stillbirths as well as surgical abortions but did not report separate PTB/LBW risks*

🗠 *Denotes studies that found dose/response (the more abortions, the higher the risk)*

2010-2020

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Appendix B: Studies on Surgical Abortion and Very Preterm Birth

☒ *Denotes studies that included miscarriages and stillbirths as well as surgical abortions but did not report separate PTB/LBW risks*

🖂 *Denotes studies that found dose/response (the more abortions, the higher the risk)*

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ProLife OB|GYNS
AAPLOG American Association of Pro-life Obstetricians & Gynecologists

PRACTICE BULLETIN

EVIDENCE DIRECTING PRO-LIFE OBSTETRICIANS & GYNECOLOGISTS

Number 7 December 30, 2019

Abortion and Mental Health

There are few issues related to abortion as controversial as the potential link between abortion and mental health complications. Of course, mental health risks can be difficult to decipher, because often poor social support and difficult life circumstances can factor into a woman's decision to have an abortion, and these can affect her mental health as well. Most pro-choice advocates recommend abortion to a woman in crisis under the assumption that it will resolve the crisis and lead to better mental health outcomes for the woman. They may interpret the "relief" a woman feels with the resolution of the pregnancy crisis to mean that there could be no mental harm from the procedure.[1] *Pro-life advocates, particularly those who work with women who have had mental health crises that they attribute to their abortion, argue the opposite, that intentionally ending the life of an unborn child leads to much guilt and regret for a woman, triggering symptoms of anxiety, depression, substance abuse and potentially suicidal thoughts. An honest evaluation of the literature is imperative for those who care for women.*

Background

The Pro-abortion Advocacy of Professional Society Reports

National Academy of Science (NAS)

From 1993 to 2018, there were 75 studies examining the abortion-mental health link, of which 2/3 showed an increased risk of mental health complications after abortion. Yet, recently, the National Academies of Science, Engineering and Medicine (NAS) published a widely reported book, *The Safety and Quality of Abortion Care in the United States*, which concluded that induced abortion is extremely safe.[2] It concluded that serious complications or long term physical or mental health effects are virtually non-existent. It stated that abortion is so safe that the only deterrent to its safety is legislative restrictions enacted by the states that may prevent a woman from accessing an abortion immediately, "creating barriers to safe and effective care". Abortions can be performed safely in an office-based setting or by telemedicine without the need for hospital admitting privileges. No special equipment or emergency arrangements are required for medical abortions. It is so safe, in fact, that it does not need to be performed by physicians; it can safely be performed by trained certified nurse midwives, nurse practitioners, and physician assistants. The NAS concluded that abortion has no long-term

adverse effects, and it specifically does not increase the risk of preterm delivery, mental health disorders or breast cancer.

The National Academy of Sciences has a prestigious professional reputation, so at first glance this statement appears to settle the issue. The NAS is a private nonprofit foundation comprised of scholars in operation since the presidency of Abraham Lincoln. It currently consists of 2100 members, and its past membership has included over 500 Noble Prize winners. The organization was founded to be free from bias. From their best practice's guidelines, "On Being a Scientist," the NAS states:

> *The scientific research enterprise is built on a foundation of trust. Scientists trust that the results reported by others are valid. Society trusts that the results of research reflect an honest attempt by scientists to describe the world accurately and without bias. But this trust will endure only if the scientific community devotes itself to exemplifying and transmitting the values associated with ethical scientific conduct.*[3]

Does today's National Academy of Sciences still adhere to this ethical standard? In 2006, the Center for Science in the Public Interest stated in their watchdog report: *Are the National Academies Fair and Balanced?: One in Five Scientists on NAS Issue Panels Tied to Firms Involved in the Issue*. "We found serious deficiencies in the NAS committee's selection process… The NAS has allowed numerous scientists and others to sit on committees… These conflicts of interest are usually not disclosed to the public."[4] It appears that there are a number of financial or institutional conflicts which have not been disclosed by the current academy members.

The origin of the NAS Abortion Safety report demonstrates these biases. The NAS report acknowledges:

> *Funding for this study was provided by The David and Lucile Packard Foundation, The Grove Foundation, The JPB Foundation, The Susan Thompson Buffett Foundation, Tara Health Foundation, and William and Flora Hewlett Foundation.*

In 2016, these six outspoken pro-choice organizations (Packard, JBD, Grove, Buffett, Tara Health and Hewlett Foundations) all have donated liberally to promote abortion. The Susan T Buffett Foundation is the largest non-governmental funder of abortion worldwide, with a total of $1.2 billion donations, including $300 million to Planned Parenthood and $88 million to UCSF Bixby Center for Global Reproductive Rights. It is clear that these organizations hoped the NAS would create a report exonerating abortion of the implications that it could result in adverse effects, and that is exactly what they got for their money.

Regarding the abortion-mental health link specifically, the NAS simply ignored most of the 75 published studies and chose only seven studies to review. Five of these seven studies were derived from the same group of women, the Turnaway cohort[5] and the remaining two were reviews by professional organizations: the American Psychological Association (APA)[6] and the Royal College of Psychiatrists.[7]

Problems with the Turnaway cohort.

The Turnaway cohort is a database accumulated by Advancing New Standards in Reproductive Health (ANSIRH). Led by longtime abortion activist Dr. Daniel Grossman,[8] who has extensive financial ties to the abortion industry, ANSIRH accumulated a

database to rebut any association between abortion and adverse mental health outcomes. This database is the Turnaway cohort, which has resulted in numerous publications all based on the same database.

The Turnaway cohort has been extensively criticized for its poor participation rate and high attrition. Only 37% of the women approached agreed to participate, and an additional 44% dropped out before the study's completion. This leaves a cohort of only 17% of those originally surveyed.[9] This extremely low participation rate calls into question whether a self-selection bias occurred, since women more deeply wounded would reasonably be less likely to participate in such a study, falsely lowering the final incidence of mental health problems.

Other important details regarding this cohort were also missing, such as how many women in late gestational ages were included, since a known risk factor for adverse mental health consequences is advanced gestational age. The six mental health measures considered in the study were very simplistic. Yet, five of the total seven studies that the NAS relied on came out of this flawed cohort, performed by a known pro-abortion organization.

In summary, the NAS examined only seven papers coming from only three study groups out of the then existing 75 published studies to make their determination of no effect of abortion on subsequent mental health. Worse, one of those study groups, the Turnaway study which formed the basis of five of the seven total studies reviewed, was deeply flawed by an extremely low participation rate and extremely low follow up rate. Not surprisingly, considering the NAS preexisting bias, the answer the NAS produced for its funders was "no link" between abortion and mental health complications.

American Psychological Association (APA) Bias

There are other professional organizations in medicine and psychology that also have a pro-choice bias which affects their interpretation of the literature. Prior to Roe v. Wade, the APA had previously advocated for abortion on demand, stating in 1969, "Termination of pregnancy should be considered a civil right of a pregnant woman".[10] In 2008, the APA published: "There is no credible evidence that a single, elective abortion of an unwanted pregnancy, in and of itself, causes mental health problems for the adult woman."[11]

It should be noted, however, that most women who present to an abortion clinic in real life are **not included** by this statement, since:

- 40-50% of American women have had multiple abortions.[12]
- 20-60% of women may desire their pregnancy but experience pressure or coercion to terminate. (14% lack support from husband or partner; 19% not sure about relationship; 25% don't want others to know about pregnancy; 14% husband or partner wants the abortion; 6% parents want the abortion)[13]
- Others may terminate a desired pregnancy due to perceived health risks for themselves (12%), or perceived abnormalities in the baby (13%).[14]
- 15-30% of abortions occur in minor women, and at least two studies showed that these young women have a significantly higher suicide rate than their peers.[15,16]

- 20-50% of women have preexisting mental health conditions that may be triggered or aggravated by the abortion.[17,18]
- A late-term abortion is also a significant risk factor for psychiatric distress after an abortion.[19]

In fact, if the 14 risk factors for adverse mental health outcomes published in the APA statement[20] are applied to the cohort of women who present to the abortion clinic, then the overwhelming majority of women have at least one of the 14 risk factors. That means a majority of women who actually abort are at risk for adverse mental health outcomes.

Royal College of Psychiatrists Report

Similarly, a 2011 Systemic Review on Induced Abortion and Mental Health from the Royal College of Psychiatrists of all the scientific literature on the topic from 1990 onward found no evidence of adverse mental health consequences after abortion.[21] However, as in the NAS study, many studies were excluded without explanation. Only three reviews of the literature were included but 19 were "missed". Twenty-seven empirical studies identifying risk factors were included, but 20 were ignored without explanation. One of the given explanations for exclusion was if the follow-up was 90 days or less. But surely, we should care if a woman has significant adverse mental health effects within the first 3 months. That would still be important. Not surprisingly, many of the excluded studies demonstrated adverse post-abortion consequences.[22]

Evaluating Existing Studies for Quality

Coleman Scoring Rubric

Dr. Priscilla Coleman, who has extensively studied the association between abortion and mental health, developed an assessment tool with a rubric consisting of nine scientific factors, each of which is scored from 0 to 4. Total scores range from 0 to 36, with higher scores indicative of a stronger overall scientific methodology. The factors incorporated into the assessment tool are listed as:

1. **Sample size**
2. **Generalizability**--does the sample adequately represent the population?
3. **Consent to participate or initial response rate**
4. **Concealment**--many don't want to reveal abortion
5. **Confounding control**--variables likely to be systematically related to the choice to abort
6. **Control group**--those who have not experienced an abortion
7. **Measures-assessment of validity and reliability** of instruments used
8. **Prospective**
9. **Attrition rate**

Dr. Coleman has now applied this assessment tool to a literature review, examining all studies published world-wide from 1993 to 2018. The paper will be submitted for publication early in 2020. Coleman's preliminary findings were presented at the Matthew Bulfin Educational Conference in 2019. Coleman's presentation included data which showed that of the 75 published studies reviewed, 49 (65%) showed a positive correlation between abortion and adverse mental health consequences, and 26 (35%) showed no correlation. The majority of highly reliable studies demonstrated an association.

Reardon Composite Descriptions

Dr. David Reardon, in an insightful paper,[23] acknowledges that many pro-choice advocates will

concede that some women have adverse mental health consequences after abortion, but they feel the procedure itself has minimal impact and the adverse consequences are more likely to be related to the situation that drove them to the abortion. He splits the ideologic camps into abortion-mental health "minimalists" and "proponents", mirroring the controversy often seen regarding climate change. He described two composite young women who had abortions:

"**Allie All-Risk"** *is a 15-year-old abuse victim with a history of anxiety and depression. She was raised in church and believes that abortion is the killing of a human being. She has always wanted to be a mother and when she becomes unintentionally pregnant with her older boyfriend, she is excited. However, her boyfriend and her parents do not want her to have a child and coerce her into an abortion.*

"Betsy Best-Case" *also becomes pregnant. She is 32 years old, was raised in a secular home, does not desire to become a mother, and is very focused on her career. She easily chooses to have an abortion because she believes the value of a "person" is not based on biological features, but on the individual capacity to have a fulfilling life.*

It is easy to see that these two different women have far different risks for suffering adverse mental health consequences after their abortions. Honest pro-choice advocates should acknowledge this if they truly care for the well-being of women. The 96% of Planned Parenthood's pregnancy services which are abortions fit the perceived needs of Betsy Best Case. However, it is clear that offering abortion as the only option does not fit individual psychological needs of women like Allie All Risk.

Clinical Considerations and Recommendations

What risk factors may place a woman at increased risk for mental health complications after abortion?

The world literature on abortion and women's mental health has grown considerably over the past several decades and the scientific rigor of the published studies has increased substantially. Identification of risk factors for adverse outcomes and exploration of a wide range of negative psychological consequences have been the focus of most of this research. [24,25,26]

Numerous studies have identified the demographic, individual, relationship, and situational characteristics that place women at risk for psychological disturbance in the aftermath of abortion. Up to 146 risk factors have been identified. Among the most thoroughly substantiated risk factors are the following:

1. Perceptions of the inability to cope with the abortion.[27]
2. Low self-esteem.[28]
3. Difficulty with the decision.[29,30]
4. Emotional investment in the pregnancy.[31,32]
5. Perceptions of one's partner, family members, or friends as non- supportive.[33]
6. Timing during adolescence or being unmarried. [34 35,36]
7. Pre-existing emotional problems or unresolved traumatization.[37]
8. Involvement in violent relationships.[38,39]
9. Traditional sex-role orientations.[40]
10. Conservative views of abortion and/or religious affiliation.[41]
11. Pregnancy is intended.[42,43,44]
12. Second trimester.[45]

13. Pre-abortion ambivalence or decision difficulty.[46]
14. When women are involved in unstable partner relationships.[47]
15. Feelings of being forced into abortion by one's partner, others, or by life circumstances.[48]

Studies done with nationally representative samples and a variety of controls for personal and situational factors that may differ between women choosing to abort or deliver indicate abortion significantly increases risk for the following mental health problems:

1. Depression.[49,50,51,52,53]
2. Anxiety.[54,55]
3. Substance abuse.[56,57,58,59]
4. Suicide ideation and behavior.[60,61]

Abortion is associated with a higher risk for negative psychological outcomes when compared to other forms of perinatal loss and with unintended pregnancy carried to term.[62,63,64]

There is consensus among most social and medical science scholars that a minimum of 20 to 30% of women who abort suffer from serious, prolonged negative psychological consequences,[65,66] yielding at least 260,000 new cases of mental health problems each year.

Adjustment to abortion is a highly individualized experience as Goodwin and Ogden noted: "women's responses to their abortion do not always follow the suggested reactions of grief but are varied and located within the personal and social context."[67]

Women who perceived pre-abortion counseling as being inadequate were more likely to report relationship problems, symptoms of intrusion, avoidance, and hyperarousal and to meet diagnostic criteria for Posttraumatic Stress Disorder (PTSD). Women who disagreed with their partners concerning the decision to abort were more likely to report symptoms of intrusion and to meet the diagnostic criteria for PTSD.[68]

Women who have abortions after the first trimester may be at greater risk for experiencing trauma symptoms than those who have an abortion during the first 12 weeks of pregnancy.[69]

Women who suffer from mental health problems associated with abortion may find a path to healing through conventional therapeutic interventions or through faith-based counseling. Unfortunately, very little research has been conducted to assess the efficacy of various treatment protocols.

Summary of Recommendations and Conclusion

The following recommendations are based on good and consistent scientific evidence (Level A):

1. Women who have abortions after the first trimester may be at greater risk for experiencing trauma symptoms than those who have an abortion during the first 12 weeks of pregnancy.
2. All women who present for elective abortion should be screened for risk factors for adverse mental health outcome and these risk factors discussed with the patient as part of informed consent.

The following recommendation is based on limited and inconsistent scientific evidence (Level B):

Women experiencing adverse mental health outcomes after abortion may benefit from mental health interventions.

The following recommendation is based primarily on consensus and expert opinion (Level C):

More research on short and long term mental health outcomes after abortion should be a priority for researchers.

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The MEDLINE database, bibliographies of relevant guidelines, and AAPLOG's internal sources were used to compile this document with citations from 1985 to the publication date. Preference was given to work in English, to original research, and to systematic reviews. When high-quality evidence was unavailable, opinions from members of AAPLOG were sought.

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ProLifeOB|GYNS

American Association *of* Pro-Life
Obstetricians *&* Gynecologists

Committee Opinion 1

Professional Ethics Committee of AAPLOG

Hippocratic Objection to Killing Human Beings in Medical Practice

"On some positions, cowardice asks the question: Is it safe? Expediency asks the question: Is it politic? Vanity asks the question: is it popular? But conscience asks the question: Is it right?

And there comes a time when one must take a position that is neither safe, nor politic nor popular, but he must take it, because conscience tells him it is right"[1]

Introduction:

Fundamental to the unique physician-patient relationship is the concept of a fiduciary relationship - the trust that the patient has in her physician, who has greater knowledge, to do the best for her. This trust is based on the patient's belief that her physician will act at all times on her behalf to make professional judgements about treatments and recommendations which will, in the doctor's best judgement, bring her the least harm. That trust stems from the patient's belief that the physician has taken a professional vow, by all that the physician holds sacred, to first do her no harm. That vow, the Hippocratic Oath, is the basis of the doctor-patient relationship.

Recent concerted attempts to use punitive legal coercion to force health care professionals to participate in or perform the killing of their patients has resulted in a need to clearly again articulate the fundamental tenets of Hippocratic Medicine, which explicitly separates medical care from the intentional killing of human beings. It is because the health care professional has bound herself or himself to do and not to do certain things prescribed or prohibited in the Hippocratic Oath, that the patient can trust that the professional will at all times act on her behalf. These tenets have formed the foundation of Western medical ethics for over 2000 years.

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1 King, Martin Luther Jr. "A Proper Sense of Priorities" Feb 6, 1968. Washington D.C. Available at: https://sul-swap-prod.stanford.edu/20141218230011/http://mlk-kpp01.stanford.edu/kingweb/publications/inventory/inv_11.htm

Hippocratic Oath

Hippocratic medical professionals do not perform certain actions which may be legal in a particular society, but which cause irreparable harm to patients. There are six tenets in the Hippocratic Oath which pertain to physician practice, tenets which set the Hippocratic physician apart from his non-Hippocratic medical colleagues:

1. **To act only for the benefit of the patient**.

   "… I will use those … regimens which will benefit my patients according to my greatest ability and judgment, and I will do no harm or injustice to them…Into whatever homes I go, I will enter them for the benefit of the sick…"

2. **To never assist in suicide or practice euthanasia, nor suggest it.**

   "… I will not give a lethal drug to anyone if I am asked, nor will I advise such a plan…"

3. **To never perform an abortion.**

   "… and similarly, I will not give a woman a pessary to cause an abortion…"

4. **To refer to physicians of sufficient expertise.**

   "… I will not use the knife, even upon those suffering from stones, but I will leave this to those who are trained in this craft…"

5. **To never have sex with patients**.

   "… Avoiding any voluntary act of impropriety or corruption, including the seduction of women or men, whether they are free men or slaves…"

6. **To maintain patient confidentiality**.

   "… Whatever I see or hear in the lives of my patients, whether in connection with my professional practice or not, which ought not to be spoken of outside, I will keep secret, as considering all such things to be private…"

These ethical limitations historically formed the boundaries of the social contract defined in the doctor-patient relationship. Yet, the first three tenets of the Oath are currently being criticized by pro-abortion and pro-euthanasia legal activists, not on the basis of science or medicine, but on the basis of an opposing philosophical framework.

Two philosophical frameworks: Eudaimonism and Hedonism

Ryan and Deci[2] describe the two competing ethical frameworks currently colliding in the conflict over Hippocratic conscientious objection:

> **Hedonism/Utilitarianism** (Consequentialism/Teleological Ethics) simplified holds that the morality of an action is contingent on the outcome. "The end justifies the means." This view is intrinsically utilitarian, and in simplified terms holds that happiness (pleasure) is the chief end and substance of "well-being", and **maximizing happiness and minimizing suffering is the end toward which humans should strive**.
>
> **Eudaimonism** (Virtue Ethics) simplified holds that acting in a way consistent with the nature of being human results in "well-being". Happiness (pleasure) is a byproduct of right action for right reasons**. Doing the right thing according to virtue and reason is the substance of "well-being". Doing the right thing is the end toward which humans should strive.**

Hippocratic vs Utilitarian Medical Ethics

The Hippocratic Oath assumes that certain actions are intrinsically wrong and that physicians have a duty to act rightly toward their patients (deontological assumption). The oath also assumes that acting rightly toward a patient results in well-being for the patient as well as well-being for the physician (virtue ethics assumption). The Hippocratic Oath becomes incomprehensible when working within a Hedonic/Utilitarian philosophical framework, since a utilitarian philosophical framework denies that any actions are intrinsically right or wrong. Contrasts between Utilitarian and Hippocratic philosophy in medicine can be understood more simply by asking the question "What is a good physician?"

For a Hippocratic physician, a "good" physician acts out of sacred duty to perform those intrinsically right acts to protect and save the life and functioning of her/his patient(s) and relieve their pain, and avoids doing those acts which are intrinsically wrong.

For a Utilitarian physician, the "good" is determined in relationship to who is in control. In a patient controlled medical system, a "good" physician is one who does whatever the patient asks her/him to do in order to maximize patient defined goals. In a state-controlled medical system, a "good" physician is one who acts as an agent of the state to implement state-defined health goals. Thus, in a utilitarian system, the physician becomes an "agent" of those in control.

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2 ON HAPPINESS AND HUMAN POTENTIALS: A Review of Research on Hedonic and Eudaimonic Well-Being Richard M. Ryan and Edward L. Deci Annu. Rev. Psychol. 2001. 52:141–66.

Clearly, the crux of the disagreements between Hippocratic and Utilitarian medical philosophies rests not on scientific or medical disagreements, but rather on philosophical disagreements about the purpose of medical care. The disagreements reach a crescendo around the question: "What should a medical professional do when what a patient wants requires a medical professional to perform an action which, in the professional judgement of that health care professional, is intrinsically harmful?"

The American College of Obstetricians and Gynecologists (ACOG) Ethics Statement # 385 is a philosophical, not medical statement, which allows only a Utilitarian philosophical position excluding any other philosophical point of view.

The term "conscience" is defined as "The awareness of a moral or ethical aspect to one's conduct together with the urge to prefer right over wrong." [3] ACOG's Ethics Statement #385 mocks the responsibility of the Hippocratic physician to care and not to kill, reducing "conscience" to a "personal moral problem". Without any analysis, the statement then calls Hippocratic doctors who will not participate in the killing of their unborn patients "unethical". This impoverished understanding of conscience is what the concept of conscience reduces to in Utilitarian philosophy. ACOG's definition demonstrates both the underlying utilitarian framework of the ACOG Ethics Committee, as well as a remarkable paucity of either respect for, or ethical comprehension of, the medical professional with conscientious objections to killing human beings.

ACOG Ethics Statement #385 is designed to eliminate Hippocratic professionals from medical practice.

In testimony before the President's Council on Bioethics, Professor Robert George made the following critique of ACOG Ethics Statement 385:

> ***"The first thing to notice about the ACOG Committee report is that it is an exercise in moral philosophy. It proposes a definition of conscience, something that cannot be supplied by science or medicine. It then proposes to instruct its readers on, "...the limits of conscientious refusals describing how claims of conscience should be weighed in the context of other values critical to the ethical provision of health care."***
>
> ***Again, knowledge of these limits and values, as well as knowledge of what should count as the ethical provision of health care, are not and cannot possibly be the product of scientific inquiry for medicine as such. The proposed instruction offered here by those responsible for the ACOG Committee report represents a philosophical and ethical opinion - their philosophical and ethical opinion."***

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3 The American Heritage® Stedman's Medical Dictionary Copyright © 2002, 2001, 1995 by Houghton Mifflin Company. Available at http://www.dictionary.com/browse/conscience

…The special authority the report is supposed to have derives from their standing and expertise as physicians and medical professionals, yet at every point that matters, the judgments offered reflect their philosophical, ethical, and political judgments, not any expertise they have by virtue of their training and experience in science and medicine.

At every key point in the report their judgments are contestable and contested. Indeed, they are contested by the very people on who[se] consciences they seek to impose, the people whom they would, if their report were adopted and made binding, force into line with their philosophical and ethical judgments or drive out of their fields of medical practice. And they are contested, of course, by many others. And in each of these contests a resolution one way or the other cannot be determined by scientific methods, rather the debate is philosophical, ethical, or political.

… The committee report reflects and promotes a particular moral view and vision and understandings of health and medicine shaped in every contested dimension and in every dimension relevant to the report's subject matter, namely the limits of conscientious refusal, by that moral view and vision.

The report, in other words, in its driving assumptions, reasoning, and conclusions is not morally neutral. Its analysis and recommendations for action do not proceed from a basis of moral neutrality…Indeed, …, the partisanship of the report is its most striking feature.

…The assumption here, of course, is the philosophical one that deliberate feticide is morally acceptable and even a woman's right.

… the physician or the pharmacist who declines to dispense coerces no one…. He or she, that physician or pharmacist, simply refuses to participate in the destruction of human life or human life in utero.

By contrast, those responsible for the report and its recommendations evidently would use coercion to force physicians and pharmacists who have the temerity to dissent from their philosophical and ethical views to either get in line or go out of business.

…the report proposes to impose its morality, the morality of those responsible for the report, on others if these were accepted as binding norms of ethics in the field.

It won't do, …, to say that what is being imposed for imposition on dissenters here is not a morality, but merely good medical practice for it is not science or medicine itself that is shaping the report's understanding of what is to count as good medical practice. It is philosophical and ethical judgments, judgments brought to medicine, not judgments derived from it.

> ***Whether an elective abortion or an in vitro procedure … counts as health care as opposed to a decision about what one desires or what lifestyle choices one wishes to make cannot be established or resolved by the methods of science or by any morally or ethically neutral form of inquiry or reasoning. One's view of the matter will reflect one's moral and ethical convictions either way - either way.***
>
> ***So, the report's constant use of the language of health and reproductive health in describing or referring to the key issues giving rise to conflicts of conscience is at best - at best - question begging.***
>
> ***. . . what justification could there possibly be for the exercise of coercion to require thoughtful, morally sincere physicians who believe that abortion is a homicidal injustice that they either make a referral for it, a procedure that they reasonably regard as the killing of a child in utero, or leave the practice of medicine as the other alternative?***
>
> ***The report's "my way or the highway" view of the thing is anything but an acknowledgement of the widespread and thoughtful disagreement among physicians and society at large and the moral sincerity of those with whom one disagrees. Indeed, it is a repudiation of it."***[4]

Ethical analysis and rebuttal of ACOG Ethics Statement #385 has also been extensively undertaken elsewhere [5] [6] [7]

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4 Testimony of Professor Robert George, Presidents Council on Bioethics Sept 2008 available at http://www.consciencelaws.org/ethics/ethics112-005.aspx

5 Catholic Medical Association letter to ACOG regarding Ethics Statement 385 available at: http://www.consciencelaws.org/ethics/ethics079-005.aspx

6 American Association of Pro-Life Obstetricians and Gynecologists Letter to ACOG regarding Ethics Statement 385 available at: http://www.consciencelaws.org/ethics/ethics079-004.aspx

7 Christian Medical Dental Association letter to ACOG regarding Ethics Statement #385 available at http://www.consciencelaws.org/ethics/ethics079-003.aspx

ACOG Ethics Statement #385 in the context of other legal initiatives

ACOG Ethics Statement #385, and recent legal initiatives in Illinois and elsewhere form part of a concerted legal effort[8] [9] to force Hippocratic medical practitioners to participate in the killing of their patients or else be forced out of the practice of medicine altogether. It is interesting that these articles are authored by pro-abortion lawyers, not by physicians.

The legal strong-arming calls for punitive measures against those who refuse to kill patients: "*Conscientious objection should be dealt with like any other failure to perform one's professional duty, through enforcement and disciplinary measures…. Counteracting institutional conscientious objection may require governmental or international intervention.*" [10]

The prevailing utilitarian view is that when the state issues a license to practice medicine or pharmacy, the practitioner becomes an agent of the state. Charo argues:

> *"In granting [physicians] a monopoly [on the provision of health care], they turn the profession into a kind of public utility, obligated to provide service to all who seek it."*[11]

This "agent of the state" rationale was used by the State of Washington[12] in 2015 to require a privately-owned pharmacy to sell Ella (ulipristal, a second-generation RU-486 with the capacity to kill embryos both before and after implantation). Critics of those Hippocratic medical professionals who refuse to kill their patients, cite a "duty" to the state as though a practitioner's conscience is subject to, and can be controlled by the state. Such viewpoints may be compared to those promoted in Nazi Germany. This constriction of conscience arises from a utilitarian worldview which cannot tolerate the assertion of conscience rights by medical professionals, and is seen in the efforts of utilitarian medical associations who attempt to force members to perform acts which are unjust and evil. The claim that a physician or other medical professional is primarily an agent of the state is in direct conflict with the Hippocratic Oath, which places the primary allegiance of the physician to be the patient, not the state. ACOG Ethics

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8 Charo A. "The celestial fire of conscience-refusing to deliver medical care" N Engl J Med. 2005 Jun 16;352(24):2471-3.

9 Fiala C and Arthur J. "Dishonorable disobedience-why refusal to treat in reproductive healthcare is not conscientious objection. Woman-Psychosomatic Gynaecolog and Obstetrics, March 2014.

10 Fiala C and Arthur J. "Dishonorable disobedience-why refusal to treat in reproductive healthcare is not conscientious objection. Woman-Psychosomatic Gynaecolog and Obstetrics, March 2014.

11 Charo A. "The celestial fire of conscience-refusing to deliver medical care" N Engl J Med. 2005 Jun 16;352(24):2471-3.

12 http://cdn.ca9.uscourts.gov/datastore/opinions/2015/07/23/12-35221.pdf

Statement #385 mirrors the current forced compliance by the Royal College of Obstetrics and Gynecology in the UK[13] where Hippocratic physicians cannot become certified in reproductive medicine.

Most obstetricians and gynecologist do not perform abortions in practice and do not reflect ACOG's pro-abortion advocacy.

The legal efforts and agenda driven statements on the part of ACOG and others are a reaction to the reality that most physicians do not want to kill their patients and will not voluntarily participate in elective abortion. In a nationwide representative survey of 1800 practicing obstetricians and gynecologists, "… 97% encountered patients seeking abortions, while 14% performed them." [14] ACOG's pro- abortion advocacy does not reflect either science or consensus of its membership. ACOG misuses its position as a voluntary physician organization to promote a social and political agenda at odds with its membership, boasting of the top-down imposition of a pro-abortion stance on its membership without open discussion.[15]

Elective induced abortion is not medical care and is not the same as emergency parturition to save the life of the mother.

ACOG's promotion of elective induced abortion is done under the guise that elective induced abortion is primarily a medical procedure. Yet, by definition, there is no medical indication for elective induced abortion, since it cures no medical disease. In fact, there is no medical indication for elective induced abortion.[16] **Pregnancy is not a disease, and the killing of human beings in utero is not medical care**. In reality, elective induced abortion is an attempt to resolve a perceived social or political problem by killing human beings in utero. Killing human beings as a solution to political and social problems- such as elite eugenic organizations attempting to decrease the population of unwanted racial groups by location

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13 https://www.fsrh.org/documents/.../mediastatemenconsientiousobjection.pdf

14 Stulberg DB, Dude AM, Dahlquist I, Curlin F. "Abortion provision among practicing obstetricians-gynecologists" Obstet Gynecol . 2011 September; 118(3): 609–614

15 Aries N. "The American College of Obstetricians and Gynecologists and the Evolution of Abortion Policy 1951-1973: The Politics of Science. Am J Public Health 2003 Nov ;93 (11): 1810-1819.

16 Dublin Declaration on Excellence in Maternal Health Care available at: https://www.dublindeclaration.com/ DUBLIN DECLARATION ON MATERNAL HEALTHCARE

"As experienced practitioners and researchers in obstetrics and gynaecology, we affirm that direct abortion – the purposeful destruction of the unborn child – is not medically necessary to save the life of a woman.

We uphold that there is a fundamental difference between abortion, and necessary medical treatments that are carried out to save the life of the mother, even if such treatment results in the loss of life of her unborn child.

We confirm that the prohibition of abortion does not affect, in any way, the availability of optimal care to pregnant women."

of Planned Parenthood clinics in predominantly Black or Hispanic neighborhoods, or the Chinese government enforcing forced abortion to ensure their "one child" or "two child" policy- has no place in Hippocratic medical care.

In their amicus briefs, publications and public testimony, ACOG purposefully obscures the difference between elective induced abortion procedures – which are designed specifically to produce a dead fetus, and emergency parturition procedures -which are designed to rapidly separate the mother and the fetus in order to preserve the life of both patients, or at least to preserve the life of one, while maximizing the likelihood that the life of the other will be preserved.

Elective induced abortion procedures are fundamentally different in their intent as well as practice from emergency parturition procedures. Since the goal of elective induced abortion is to guarantee a dead fetus, destructive procedures or feticide is used to ensure fetal demise before parturition. And, in order to escape the scrutiny and accountability inherent in hospital based parturitions, elective abortion procedures are designed to be done in physician offices, in procedures that can involve days of cervical ripening.

In contrast, emergency parturitions are done in hospitals where the medical needs of both the mother and her neonate can be addressed immediately. The procedures themselves are done in a manner to maximize survival of both, and include emergency cesarean section as well as emergency deliveries.

Despite the clear differences in procedures and intent between elective induced abortions and emergency parturitions, ACOG's legal arguments promoting elective induced abortion deceptively center around cases involving emergency parturition, which have nothing to do with elective induced abortion. The reason for this deception is clear: when people clearly understand that the "choice" involved in elective induced abortion is a choice to electively kill a living human being *in utero* for no medical reason, then the majority of Americans will not support elective induced abortion, and the majority of obstetrician-gynecologists will not perform it.

The medical and scientific reality is that a human being is killed during elective induced abortion. The Supreme Court in Roe v. Wade stated that "abortion is the deliberate destruction of human life". As an indication of the changes in medical professional organizations' positions on abortion, an AMA publication in 1859 stated that abortion was the "unwarrantable destruction of human life"[17]. It is clear that those persons who carry out elective induced abortion are using their medical skills to kill human beings. Hippocratic medical professionals recognize that both the pregnant woman and her unborn child are patients, and having vowed not to harm their patients, the Hippocratic medical professional will not use their medical skills to kill the human beings entrusted to their care.

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17 American Medical Association Resolution 1859 Source: Dyer, Frederick. "Horatio Robinson Storer M.D.and the Physicians Crusade Against Abortion" Life and Learning IX 1998 www.uffl.org/vol%209/dyer9.pdf)

Examples of actions which were legal but heinous crimes against humanity

Proponents of both abortion and euthanasia are currently attempting to use the bludgeon of legal and professional punishment to force Hippocratic medical professionals to kill patients at the behest of the state, or of the patient. But making a procedure legal does not make the procedure right or just. In the United States, freedom of conscience, one of the foundations on which our country was founded, has led to the reformation of serious social evils; evils which were in their time, legal.

The Nazi physicians were among the best and brightest minds in the West at the time. Under the guise of their professional organizations, they performed abortions on, and killed, sterilized, tortured and experimented upon political dissidents, Jewish persons and Eastern Europeans.[18] They also expelled, persecuted and ultimately hunted down and killed (or sent to concentration camps) physicians who opposed these acts. Hippocratic physicians in Germany at the time were systematically eliminated[19] from the medical profession in order to implement "The Final Solution", designed to treat the "cancer" in society.[20] This state-sponsored murder of human beings in the concentration camps in Nazi Germany was perfectly legal, and clearly heinous.

The "execrable practice" of the "peculiar institution" of African slavery is an example of a corrosive social evil, under which humans of African descent were subjected to widespread, horrific experiments during slavery.[21] These experiments were perfectly legal, but clearly unjust. In 1932, the United States Public Health Service conducted the Tuskegee syphilis experiments, which withheld treatment from 399 black men with syphilis for forty years, in order to study the natural history of the disease.[22] This government experiment was perfectly legal, and similarly heinous. The eugenics movement of the early to mid-1900s, which resulted in the sterilization and castration of tens of thousands of Americans, was legal but also unjust.

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18 Lifton RJ. "The Nazi Doctors: Medical Killing and the Psychology of Genocide." First edition Oct 1986 ISBN-13: 978-0465049059. Available at: https://www.amazon.com/Nazi-Doctors-Medical-Psychology-Genocide/dp/0465049052

19 Drobniewski F. "Why did Nazi doctors break their 'Hippocratic' oaths?" J R Soc Med. 1993 Sep; 86(9): 541–543. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1294106/?page=1

20 Lifton RJ. "The Nazi Doctors: Medical Killing and the Psychology of Genocide." First edition Oct 1986 ISBN-13: 978-0465049059. Available at: https://www.amazon.com/Nazi-Doctors-Medical-Psychology-Genocide/dp/0465049052

21 Kenny SC "Power, opportunism, racism: Human experiments under American slavery" Endeavour. 2015 Mar;39(1):10-20. doi: 10.1016/j.endeavour.2015.02.002. Epub 2015 Mar 29.

22 https://www.cdc.gov/tuskegee/timeline.htm

These abuses, which we regard with revulsion, were done with the full knowledge and complicity of physicians and medical professional societies. Their legality, and whether there was any benefit to an individual or society or to medical knowledge, was and is irrelevant to the fact that these are crimes against humanity. It also follows that the killing of vulnerable human beings in the womb or at the end of life is a similar crime against humanity, regardless of its legality. All of these actions are a direct violation of the Hippocratic Oath.

Notably, the appeal to the legal authority of the state is only invoked by utilitarian medical organizations such as ACOG when the law supports the beliefs of that organization. For example, capital punishment is legal in several states, yet there is no outcry from any of the utilitarian professional organizations to compel physician participation in that legal activity. So, it is not the law, but the underlying agenda which these utilitarian organizations support. Utilitarian organizations lobby intensively for new laws which support their underlying agenda, then attempt to use the procedure's legality to argue for a binding obligation attempting to force medical professionals to perform or refer for such procedures. They ignore the previous examples of legal, but horrendous actions noted above.

ACOG and other voluntary political action medical organizations have no authority to compel physicians to kill human beings.

Medical organizations such as ACOG began as primarily medical and scientific bodies, but have undergone a metamorphosis into voluntary political action organizations which serve now the interests of their leadership and a small minority of their members. They exist to promote their views in medicine and in politics, as illustrated by ACOG's formation of "*The American Congress of Obstetricians and Gynecologists"* a 501c4 organization[23] in 2008 to focus on pro-abortion lobbying. ACOG members are *automatically* enrolled, and cannot withdraw from the Congress. Thus, ACOG forces its membership into lobbying which is not primarily scientific, but rather political.

ACOG admits the political content and lack of scientific foundation in the transformation of ACOG to a pro-abortion position:

> *"A case study of abortion related policymaking by the American College of Obstetricians and Gynecologists (ACOG) from 1951 to 1973 demonstrates that despite the theoretical model of science-driven medical care, science was the ideological veneer for the profession's political position. While its leadership sought to appeal to a familiar, professionally dominant, scientifically justified foundation in support of abortion guidelines for practicing physicians, a close reading of the history demonstrates that the policymaking process was deeply politicized and forced to respond to social demands beyond the medical establishment. The contours and details of ACOG's story regarding abortion before Roe v Wade provide guidance for explaining the current framework for health care policymaking. This history challenges the notion that the*

23 https://www.acog.org/-/media/Departments/Committees-and-Councils/Bylaws-Congress.pdf?la=en&hash=1FC391002FCEA309642031296D4D02A32201CD45

> *scientific foundation of the profession can lead to policy decisions that are devoid of political content and points to the profession's political interest in maintaining its autonomy."*[24]

Medical professional organizations such as ACOG cannot make rules binding on medical professionals who are not part of that organization. Even within these organizations, ACOG has no authority to force a medical profession to violate their conscience. ACOG's pro-abortion policies are in practice not even agreed upon by its members, since, as noted in a 2011 study from the journal *Obstetrics and Gynecology*, 86% of obstetrician-gynecologists do not perform abortions[25]. ACOG's pro-abortion policies have resulted in a large number of obstetrician- gynecologists rescinding their ACOG membership.

Physicians and other medical professionals such as midwives, advanced practice nurses, nurses and pharmacists are not just automatons, or slaves of the state, hospitals or medical professional organizations. They are human beings who are motivated by a desire to help their fellow man with their time and intellectual talents. Part of this vocational motivation is the integrity of their conscience which causes them to act in ways to help, not harm their fellow man. To force any human being to violate their conscience- their own integrity, their own knowledge of right and wrong- is to violate their person. To force cooperation or complicity with actions which are considered evil is to enslave the one being forced to perform this action as well as debasing the one who attempts to force it. The end result will not only destroy the physician-patient relationship, but also destroy trust in the healing arts. Ultimately forcing violation of conscience will transform the profession of medicine (and health professions) into a grotesque caricature of its Hippocratic Ideal, as evidenced by the experience in Nazi Germany, when Hippocratic physicians were systematically eliminated from medical practice altogether.

This systematic elimination of Hippocratic physicians from medical practice also does violence to patient autonomy. Most patients do not want a physician who is willing to kill them or to kill their unborn child. Over half of the citizens of the United States identify themselves as pro-life. The attempted elimination of Hippocratic medical professionals and practice is morally wrong. It does injustice to the medical profession and also to those patients who do not want to be cared for by physicians or other medical professionals whom they cannot trust - physicians who do not adhere to the Hippocratic Oath. It promotes the exploitation of the weak by the strong, and the killing of the most vulnerable members of society. For this reason, the right of conscientious objection and conscientious refusal of medical professionals to perform euthanasia or abortion must be upheld and vigorously defended. The conscience of Hippocratic providers may be the final protection against gross violations of patient's rights, autonomy and bodily integrity.

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24 Aries N. "The American College of Obstetricians and Gynecologists and the Evolution of Abortion Policy, 1951-1973: The Politics of Science." Am J Public Health 2003 Nov 93(11) 1810-1819.

25 Stulberg DB, Dude AM, Dahlquist I, Curlin F. "Abortion provision among practicing obstetricians-gynecologists" Obstet Gynecol . 2011 September; 118(3): 609–614

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PRACTICE GUIDELINE
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Fetal Pain

Pain is defined by biologists as aversive behavioral and physiological reactions in response to noxious stimuli, and does not require an intact cerebral cortex. There is significant evidence that fetuses can perceive noxious stimuli and demonstrate physiological and behavioral reactions to them—fetuses are not numb to invasive or harmful interaction. The purpose of this document is to present the available evidence for fetal pain, discuss implications for procedures in pregnancy, and to provide relevant recommendations for termination of pregnancy.

Background

Definition of Pain

The definition of "pain" is intensely debated among embryologists, family planning professionals, ethicists, and politicians. Certainly, the adult person's perception of pain is a complex physical and psychological interplay with long-term consequences for society.[1] Without a developed psychology and without behavior to analyze, discussion of this type of pain is difficult in fetuses.

In biology, pain is defined as "aversive behavioral and physiological reactions and…suspension of normal behavior in response to noxious stimuli."[2] This definition applies to non-human organisms, whose pain is increasingly and rightly recognized publicly. Typical human adult neurological function is not required for suffering. This broad definition of pain will be used in this guideline.

Pain with a Cerebral Cortex

In mature humans, painful stimuli are received by nociceptors in the skin and viscera; these communicate impulses via afferent sensory neurons through the spinal cord, are processed in the thalamus, and are received by the sensory cortex before a motor response is elicited. These motor responses are part

AAPLOG Practice Guideline. This document was developed by [number] authors on the Research Committee. Practice Guidelines are evidence-based documents informing pro-life providers with high-quality, peer-reviewed literature.

of the "aversive behavioral [reactions and] suspension of normal behavior" in the definition of pain above. Humans also have reflex arcs that operate through motor neurons in the spinal cord's dorsal root ganglia, allowing the body to cause behavioral changes without the cortex for the sake of speed.[3] Cognition, memory, and other higher functions can add to behavioral changes, but a response to pain does not require them: pain during sleep changes behavior even if consciousness adds more behavioral changes.[4,5]

Processing pain either through the cortex or via a reflex arc is associated with hormonal responses including epinephrine (also known as adrenaline) and cortisol, which represent the "physiological reactions" included in the above definition of pain.[6,7]

Non-Human Animals

In non-human animals, nervous systems are much simpler, with animals such as nematodes or octopi reacting to noxious stimuli with only nerves and ganglia.[8,9] Activism surrounding animal pain (termed "pain") is evidence-based and related to vertebrates,[10,11] fetal vertebrates,[12] and insects,[13,14] some of which lack functional cerebral cortices.

Embryology and Fetal Development

Nociceptive signaling differs throughout human development. Neonates use different structures than adults.[15]

In fetuses, mature configurations for pain processing do not exist, but this does not rule out the possibility of using other structures to perceive pain as defined in this document.[16,17] Fetuses process pain using subcortical and peripheral centers[18-20] while they develop final structures, just as they use an immature set of functioning renal structures before mature kidneys are complete.[21]

Decades of histologic research has illustrated that sensory receptors, including nociceptors, are present throughout the fetus between 10 and 14 weeks gestational age, starting as early as 7 weeks.[18,22-26] This begins in the perioral area at 7 weeks, followed by the palms and soles at 11 weeks, and the remainder of the integument by 20 weeks.[27,28]

Superficial nociceptors, followed later by nociceptors in viscera, are connected by afferent fibers from the spinal column to the thalamus and from the thalamus to the subcortical plate between 16 and 20 weeks gestational age.[16,29-32] These afferent fibers are mature enough to cause a central response to noxious stimuli as early as 16 weeks' gestational age.[30,33]

There is also evidence of the necessary components for a reflex arc in the fetus. Sensory fibers are present from 7-14 weeks, a spinal cord is present from 5-7 weeks, and peripheral fibers that control movement grow into the spinal cord at 8 weeks gestation.[28] These are the three tissue components of a mature reflex arc.

Physiologic Responses

Fetuses have a neurohormonal response similar to adults when faced with noxious stimuli.[20,34,35] While the role of the fetal cortex is still under discussion, it is clear that cortical tissue receives this hormonal response as early as 16-18 weeks gestational age, along with other end-organs such as the fetal heart and skeletal muscle.[9,15]

Identical hormonal responses in neonates are associated with noxious stimuli and produce adverse long-term outcomes, much like adult human pain.[36,37]

Fetal Surgical Experience

Experience of fetal surgeons and other physicians performing invasive procedures matches these histologic findings. As early as 7.5 to 8 weeks' gestational age, a fetus moves in response to stimuli.[32,38-40]

Language varies in reports of fetal responses but Giannakoulopoulos *et al.* describe this response as "vigorous body and breathing movements"[20] and Williams reports "coordinated responses signaling the avoidance of tissue injury."[41] No later than 22 weeks' gestational age, the fetus responds to what an adult would consider painful, such as a needle penetrating the skin.[32] Trials have been performed to optimize opiates for fetal anesthesia,[42] which lower the hormonal response to stimuli as in adults.[43]

Conclusions

Although language and subjective experience of pain is hotly debated, if "pain" is taken simply as a perception and response to noxious stimuli, it is clear that fetuses are capable of pain by 22 weeks' gestational age at the latest, and likely earlier, as fetuses respond to touch as early as 7 to 8 weeks.

Clinical Questions and Answers

Q *Should the word "pain" be used when speaking of organisms which may not have consciousness?*

"Pain" is used in other fields of biology to mean the perception and response to noxious stimuli that would be considered painful by a human person. It is

irrelevant to many disciplines, such as marine biology, whether fish or crustaceans are conscious; advocates for these organisms see fit to use the word "pain" to refer to a mutually understood concept of evolutionary response to adverse external stimuli.[2,44] It is difficult to look at the evidence of histology (fully formed structures resembling those found in adults) and the experience of physicians operating on fetuses and conclude that the fetus is not sensitive to adverse external stimuli.

Q *Does the ability to experience pain depend on the cerebral cortex and afferent thalamocortical fibers?*

The response to pain in mature humans can be induced simply with the imagination,[45] and it clearly utilizes the cerebral cortex. Experienced (not imagined) pain requires afferent fibers from the thalamus (thalamocortical fibers).[46]

Afferent thalamocortical fibers develop closer to the third trimester, and some neuroscientists assume that the cortex as primary for pain perception.[30,47] If this is true, and cortical activity is required for fetal pain, then fetuses do not feel pain until closer to 23-30 weeks gestation.[30,48,49] This assumption and corollary is best articulated by authors of a systematic review and meta-analysis on fetal pain:

> Pain perception requires conscious recognition or awareness of a noxious stimulus. Neither withdrawal reflexes nor hormonal stress response to invasive procedures prove the existence of fetal pain, because they can be elicited by non-painful stimuli and occur without conscious cortical processing.[30]

However, recent studies suggest that cortical activity is not necessary for the experience of pain in humans after birth. This is largely from experience with decorticate children, lacking functional cortex due to congenital anomalies, perinatal brain damage, or comissurotomy.[50-59] These children respond to pain and also interact socially in simple ways, such as to faces and music.[60]

Moreover, it appears that if the cortex is not strictly speaking required for basic perception of pain, the thalamus is the next level of neurological centralization. The thalamus, as noted above, is connected to peripheral nociceptors between 16 and 20 weeks' gestational age.[26,30,33] This would match what occurs in adults: cortical input does not alter pain perception, but thalamic input does.[61-63] Even more dramatically, in the adult with loss of significant amount of cerebral cortex, consciousness can be preserved.[64]

These studies challenge whether pain in simpler organisms, including human

fetuses, requires a functional cortex. The conclusion that fetuses are unable to feel pain because they lack complete cortical inputs is unproven and should not be the default hypothesis given their histology, neuroscience in other animals, and the evidence available from fetal intervention.[17]

Q *Are fetuses awake in utero?*

It has been asserted that the fetus never experiences a state of true wakefulness in utero and is kept in a sleep-like unconscious or sedated state, due to elevated levels of neuroinhibitors like adenosine and pregnanolone.[49,65,66]

This hypothesis is not rigorously tested. Given the lack of evidence that these hormones predominate and produce sleep, these hormones should not be subjectively viewed as more important than the cortisol and epinephrine.

Further, fetuses are unlikely to be asleep because they require paralytic drugs for fetal surgery. Sleep includes suppressed motor function especially during rapid-eye movement (REM) sleep,[67] but fetuses demonstrate "vigorous" movements and need drugs that adults also need for muscle paralysis.[41]

And, as has been highlighted above, even if fetuses were asleep, pain felt in sleep still impacts human organisms.[4,5]

Q *How should fetuses undergoing surgery be anesthetized?*

Following the lead of fetal surgeons, analgesia should be provided for procedures that affect fetal tissue with nociceptors, such as repair of open neural tube defects. This analgesia is in addition to paralytics, since paralytics cannot modify the physiologic response to aversive stimuli.[68] Further or more specific assertions regarding fetal surgery are beyond the scope of this document.

Q *Should abortion by dismemberment or cranial decompression be performed after gestational ages when fetal susceptibility to pain is documented?*

There is mounting evidence that fetuses perceive noxious stimuli on a spectrum beginning at 7-10 weeks' gestational age. As a result, careful consideration should be given at increasing gestational ages regarding abortion by dismemberment.

Piercing or dividing fetal tissue with instruments constitute noxious stimuli, which is why fetal surgery requires opioid analgesia. Dismemberment should be seen as especially noxious, since there is evidence that dividing afferent tracts has similar effects to painful stimuli in adults (long-term effects demonstrated in an animal model).[10]

Evacuating cranial contents may lead to more rapid cessation of pain (due to direct destruction of the thalamus) but is still a noxious stimulus and does not affect reflex arcs.

Q *Can dilation and curettage (D&C), dilation and evacuation (D&E), or dilation and extraction (D&X) be performed for deceased fetuses?*

Dilation and removal of products of conception causes no pain if an embryo or fetus is deceased. There are no ethical issues with these procedures, although psychological difficulties for the maternal patient and her family may arise when piecemeal removal of a desired fetus is performed.

Q *Should termination of pregnancy by any other method be performed after gestational ages when fetal susceptibility to pain is documented?*

Saline induction leads to constriction of capillaries in skin, the gastrointestinal tract, the respiratory tract, and the placenta. Animal models suggest that the mechanism of death of these fetuses is suffocation, which is likely associated with a neurohormonal response associated with stress. Moreover, constriction of capillaries and tissue necrosis likely results in nociceptive feedback after nociceptors are present at 10-14 weeks gestational age.

Early induction of labor does lead to the end of pregnancy but results in delivery of an intact and possibly living fetus. Induction of labor without feticide is different from the previously described methods of termination of pregnancy because it does not directly aim at the death of the fetus.

If induction is initiated before viability, particularly fragile fetuses (e.g. those with growth restriction) may not be born alive; this does not change the nature of induction of labor. If born alive, parents of periviable infants may elect not to proceed with resuscitation; this also does not change the nature of induction of labor. Induction of labor remains fundamentally different in its moral object if it does not aim to end the life of the fetus.

Q *Should abortion by any other method be performed after the lowest age of viability?*

When there is need to separate the mother from the fetus at or greater than 22 weeks, delivery of a live fetus, followed by adequate neonatal analgesia (even when neonatal resuscitation is not planned) should be preferred to abortion by any method.

Q *Would legislation to prohibit abortions after 14 weeks gestational age ban all abortions? What about after 21s weeks?*

Bans on abortions after 14 weeks gestational age will ban a small minority of abortions. In 2019, the most recent year for which the CDC has provided data as of publication, 7.3% of abortions occur after 13 weeks.[69]

Bans on abortion after 21 weeks would prohibit only 1.1% of abortions.[69]

Q *Would legislation to prohibit abortions starting in the second trimester be dangerous for the maternal patient?*

Most abortion bans have an exception which allows the physician to legally use any method of separation of the mother and fetus when the life of the mother is at stake. A surgical abortion at this gestational age would typically take at least ten minutes, and potassium chloride or other feticide followed by induction of labor would take several hours (up to a number of days).

There are comparable alternatives which do not affect fetal body integrity: if there is need for immediate separation, cesarean section can be accomplished in as little as one minute from decision to separation. If more time is available, an induction of labor can be sought, which may take a number of days.

Q *Is preventing fetal pain proportionate to the present and future morbidity of a classical cesarean section?*

One in four women with a classical cesarean section will suffer morbidity, including uterine rupture, asymptomatic dehiscence, postpartum hemorrhage, and need for transfusion of blood products.[70] These risks should not be taken lightly, but they should be weighed against respect for the bodily integrity of the fetal patient.

It should be kept in mind, especially with cardiovascular threats such as pulmonary hypertension or peripartum cardiomyopathy, that vaginal delivery is preferable and most fluid shifts occur postpartum regardless of mode of delivery.

Q *Other professional organizations have noted that fetuses cannot feel pain. What are the sources for their conclusions?*

The Society for Maternal-Fetal Medicine (SMFM) and the Society of Family Planning (SFP) published a joint guideline on fetal pain.[71] This guideline heavily relies on interpretations of physiology and behavior that overlay adult human

responses and ignore terminology from other mammalian biology. One of these pieces openly agrees with the neuroscience and embryology laid out in this document, but describes that these cannot be interpreted to mean pain:

> Neurobiological features that develop at 7, 18 and 26 weeks gestation suggest an experience of pain in utero. Pain, however, cannot be inferred from these features because they are not informative about the state of consciousness of the fetus and cannot account for the content of any presumed pain experience.[72]

The author of this piece and others like it is a coauthor in the Royal College of Obstetricians and Gynaecologists' guideline on fetal pain, which comes to similar conclusions.[66] This same author has since reconsidered his own position, citing that fetal pain can be truly experienced "without the capacity for self-reflection." While remaining pro-choice, this author wrote as of 2020 that

> neuroscience cannot definitively rule out fetal pain before 24 weeks.... [F]etal pain does not have to be equivalent to a mature adult human experience to matter morally....[17]

Moreover, the definition of pain in the joint SMFM-SFP document is from the International Association for the Study of Pain (IASP), which describes pain as "[a]n unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage."[73] IASP is largely an organization for human pain, but does have a special interest group for non-human pain, and one of its members defined pain as "the aversive sensation that comes from higher processing of something that starts out as tissue damaging."[74] This broader definition, validated by the special interest group of IASP, imports less of the adult human experience and matches the definition of the present document.

Summary of Recommendations and Conclusion

The following recommendations are based on good and consistent scientific evidence (Level A):

1. Fetuses as early as 7 weeks' gestational age respond with an increasing spectrum of aversive behavioral and physiological reactions to noxious stimuli that cause pain in mature humans.
2. The zygote expresses adrenergic receptors, which have a role in response to noxious stimuli.

The following recommendations are based on limited and inconsistent scientific evidence (Level B):

1. A human fetus may feel pain as early as 12 weeks' gestation.
2. Fetal pain perception is mediated by structures that develop by 12 to 24 weeks.
3. Subjecting an un-anesthetized fetus to noxious stimuli is associated with long-term adverse neurodevelopmental effects such as hypersensitivity to pain.

The following recommendations are based primarily on consensus and expert opinion (Level C):

1. Pain in human fetuses, as in nonhuman animals, do not need to be equivalent to adult human pain in order to change practice.
2. Abortions involving noxious stimuli, such as dismemberment, should be avoided after 14 weeks' gestational age.
3. When necessary, pregnancy should be ended after 14 weeks' gestational age only by induction of labor or cesarean section, depending on the gestational age and clinical circumstances.
4. Analgesia should be considered in neonates delivered after 14 weeks, even if resuscitation is not planned.

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Committee Opinion 6

Professional Ethics Committee of AAPLOG

Induced Abortion & the Increased Risk of Maternal Mortality

After years of failure to obtain accurate statistics on maternal mortality, the United States has noted a sharp increase in its maternal mortality rate, with widening racial and ethnic disparities. While some of this increase 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. In order to implement effective strategies to improve pregnancy outcomes, this must be investigated in an unbiased manner, and novel contributing factors need to be considered.

Background

A pregnancy question was added to the United States standard death certificate in 2003 in order to improve the identification of maternal deaths. The individual states were initially inconsistent in implementing a pregnancy checkbox on death certificates, rendering data so useless that the United States (U.S.) did not published an official maternal mortality report between 2007 and 2016.[1]

Using novel correction factors to standardize death certificate data, a 2016 report shocked the nation by documenting a 26 % increase in maternal mortality from 18.8/100,000 live births in 2000 to 23.8 in 2014. Suggested etiologies of the rise included: artifact as a result of improved maternal death surveillance,[2] incorrect use of ICD-10 codes,[3] health care disparities,[4] lack of family support and other social barriers, substance abuse and violence,[5] depression and suicide,[6] inadequate preconception care, patient noncompliance, lack of standardized protocols for handling obstetric emergencies,[7] failure to meet expected standards of care,[8] aging of the pregnant patient cohort with associated increase in chronic diseases and cardiovascular complications,[9] lack of a comprehensive national plan and defunding women's healthcare by "demonizing Planned Parenthood."[10,11] State maternal mortality committee review committees suggested that 60 % of these deaths may be preventable.[12]

Maternal Mortality Definitions

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 42 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.[13]
- "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.

The World Health Organization reports only deaths occurring during pregnancy or within 42 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. Both report maternal mortality rate as the number of maternal deaths/1000 women of reproductive age.[14]

An ideal mortality rate would be achieved by calculating the number of maternal deaths/100,000 pregnancies. That is not feasible because the number of spontaneous pregnancy losses are difficult to record and induced abortion data is not shared. 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.[15] They developed a measure of disease known as the maternal mortality ratio and define it as the number of pregnancy-related deaths/100,000 live births. This is a mortality ratio, not a rate.

Similar to the total "number of pregnancies" needed in the denominator, the number of "pregnancy-related deaths" in the numerator is not known. Two out of three maternal deaths occur in conjunction with a live birth.[16] The rest may be separated from the end of pregnancy by days, weeks or even months and includes spontaneous and induced end of pregnancy events. The U.S. does a poor job of accurately detecting maternal deaths,[17] and studies show as many as 50 % of maternal deaths may be missed on death certificates.[18,19]

Racial and ethnic disparity

Maternal mortality in minority women, particularly non-Hispanic Black women, has skyrocketed. Black women have maternal mortality rates 3.3 times higher than white women.[20] Unfortunately,

there have been accusations that this is a result of implicit racism held by health care providers – 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.

Poverty is certainly a risk factor for failure to obtain appropriate medical care and might be expected to contribute to the excess maternal mortality rates in Black women (20 % of whom live in poverty, compared to 16 % Hispanics and 8 % whites). Domestic violence and mental health disorders are also seen more commonly in impoverished communities. In 2011, Illinois reported that 13% of its maternal deaths were the result of homicide. Black mothers bore the greatest risk, accounting for 43% of the maternal homicide deaths while composing only 14% of the population.[21] Texas has been noted to have extremely high maternal mortality rates, and an examination of deaths in 2011-2012 found that the overdoses, homicide and suicide accounted for almost 20% of the maternal deaths.[22] Poverty and poor social and family support are causes of the disparity noted in maternal mortality rates.[23]

Giving birth and caring for a child without a partner places a woman at an obvious disadvantage. She is more likely to live in poverty without the resources she may need to seek health care. If she should become ill during or after pregnancy, she may not seek emergency care due to lack of social support, child-care or transportation. It should be noted that only 5% of married couples live in poverty. In 2017, 67% of black women were unmarried when they gave birth to children, compared with 39% of Hispanic women, and 27% of white women.[24] Prior to 1950, a black woman was more likely to be married than a white woman, with marriage rates nearing 80%, but marriage rates for Black women have since plummeted.[25] Could the breakdown of the Black family be a root cause of the disparity in maternal mortality rates?

It is noteworthy that there are significant differences in birth outcomes in Black women compared with non-Hispanic white women. The rates of natural losses are similar (16%), but 34% of pregnancies in black women end in induced abortion, compared to 11% for white women. Less than half of pregnancies in black women result in the birth of a live baby (48%). Induced abortion is 3.7 times more common in Black than in non-Hispanic white women, and Black women more commonly have later abortions (13%) compared with white women (9%).[26] It is known that the risk of death increases by 38% for every week after eight weeks gestation.[27] It is possible that the higher rate of legal induced abortion may account for most of the racial disparity noted in pregnancy mortality.

Genetic determinants of health are important. For example, thrombophilia is more prevalent in non-Hispanic Black women and this is a risk factor for pulmonary embolus or thrombotic strokes, both causes of maternal mortality.[28] Social determinants of health are paramount: poverty is linked to obesity, diabetes and hypertension. Obesity is more prevalent in Black women (46.8 %) and Hispanic

(47 %) than white women (37.9 %).[29] Diabetes is higher in Black (12.7 %) and Hispanic (12.1 %) than in non-Hispanic white women (7.4 %).[30] The rates of hypertension are higher among Black (40.4 %) compared to non-Hispanic white (27.4 %) or Hispanic women (26.1 %).[31] If a woman is predisposed to hypertension, the likelihood that she will develop preeclampsia or eclampsia increases substantially. Obesity, diabetes and hypertension predispose women to early obstetrical interventions and Cesarean sections, both of which are linked to increased maternal mortality.

A ten-year Harvard study completed in 2016 found that implicit bias based on race decreased by 17 %, and explicit bias decreased by 37 %.[32] If racial bias reported in the Harvard study was the sole cause of maternal mortality, pregnancy-related mortality in the non-Hispanic Black community should have decreased. It has not. To discuss the effects of years of legalized racism without identifying antecedent enslavement is implicit bias and it promotes the idea that Black and non-Black women start on an equal playing field. It confirms the stereotype that Black women, through their reckless behavior, place themselves far behind the rest of the population. Victim-blaming subtly diverts attention from racism, discrimination, segregation and the powerlessness of the ghetto.[33] Victim-blaming leads to inappropriate adventures, such as placing abortuaries in Black neighborhoods. Abortionists are like carpetbaggers,[34] nonresidents seeking gain by taking advantage of communities of color. Compounding structural inequality, abortion advocates effectively perpetuate Jim Crow era suppression.

The effects of family disruption by enslavement's forced displacement followed by a long history of voluntary migration due to legalized racism are still apparent in the separation of family units, structural inequality and the resultant high prevalence of poverty. Poverty is a cause of physical disease, emotional stress and mental health distress. Victim-blaming abortion advocacy organizations have a long history of targeting minority communities. Inflicting abortion, often in advanced pregnancy, is documented to lead to increased risk-taking behavior that results in death from drug overdose, suicide or homicide. Induced abortion may be a root cause of the racial and ethnic pregnancy-related mortality disparity. Addressing contextual-level social determinants of health could eliminate this disparity.

Determining pregnancy-related deaths

The Centers for Disease Control and Prevention (CDC) relies heavily on death certificates to determine maternal deaths, but death certificates have been proven unreliable in accurately identifying all maternal deaths. Deaths due to live births are likely to be 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.[35] 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 ICD-10 obstetric-specific codes for abortion-related deaths thwart this documentation.[36] For example, the Texas Maternal Mortality Task Force discovered that more

than 50 % of the maternal deaths identified by ICD-10 obstetric codes showed no evidence of pregnancy and another 10 % had insufficient information to determine whether a pregnancy had occurred.[37] Either these deaths were erroneously coded as pregnancy-related, or the deaths were subsequent to spontaneous or induced losses early in pregnancy and not able to be correlated with fetal birth or fetal death certificates. Independent providers perform almost all abortions in Texas and these records are not be available. In Finland 73 % of maternal deaths were not identified on death certificates, demonstrating the clear inadequacy of death certificate data alone.[38] The quality of U.S. pregnancy-related mortality data is poor.

Determining induced-abortion deaths

Published abortion mortality rates are inaccurate because the total number of legal abortions performed in the U.S. is not known.[39] 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.[40] The Guttmacher Institute also tracks these numbers, and it consistently reports higher numbers than the CDC. For example, the CDC reported 652,639 abortions in 2014 while the Guttmacher Institute reported 926,000.[41,42] Twenty-seven states require abortion providers to report complications but there are no enforcement penalties for noncompliance. Only 12 states require coroners, emergency rooms and other health care providers to report abortion-related complications or deaths for investigation.[43]

If an abortion initiates a cascade of events resulting in death, only the closest antecedent events may be listed on the death certificate due to space limitations and provider time constraints. Since most abortion providers lack hospital-admitting privileges, other health care providers are required to provide 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.[44,45] Due to the social stigma surrounding abortion, families of women dying from complications are unlikely to initiate malpractice lawsuits. Correlating public documentation of malpractice cases with autopsy reports, an investigative reporter was able to document 30 % more abortion-related deaths nationwide than the CDC. The reported death rate from abortion represents only the tip of the iceberg, a problem much larger than it appears.

There has been widespread misinformation about abortion. It seems as if deaths rarely occur and abortion is perceived to be a very safe procedure. When discussing maternal and induced abortion-related mortality, consideration is often given only to complications that can occur in a term, gravid uterus rather than recognizing 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. Historically, surgical dilation and sharp curettage (utilizing a sharp curette rather than a suction catheter) had been used in the first trimester of pregnancy, but this more frequently resulted in uterine trauma.[46]

Significant complications may occur with a surgical abortion, so it is not surprising that women opt to have mifepristone-induced pregnancy terminations (medical abortions) performed instead. Accounting for 31 % of U.S. abortions, medical abortions are performed until 10 weeks gestation by administering mifepristone and misoprostol. A medical abortion disrupts hormones that maintain the pregnancy and cause uterine contractions that eventually expel the baby and the placenta. Yet, most women are unaware that the complication rate is four times higher with this procedure than with surgical abortion. The most common complication is hemorrhage with almost 8 % of women experiencing incomplete abortions requiring surgical completion. Other serious complications of medical abortions include uterine perforation (0.2-0.5 %) and uterine rupture (0.28 %) in women who have had prior Cesarean sections.[47] Animal models of medical abortion warn of the potential for long-term negative well-being indicative of depression and anxiety.[48] Both mifepristone and misoprostol disrupt innate immunity and fatal cases of septic shock following medical abortion have occurred.[49,50] In 2003, 40 % of legal induced abortion deaths occurred following medical abortions.[51]

Beginning in the second trimester, dilation and evacuation (D&E) is the surgical method necessary because the pre-born baby has grown large enough that it cannot be removed through a suction cannula.[52] The risks of D&E abortions include hemorrhage and cervical laceration (3.3%) and retained body parts and/or placental tissue (1 %). Non-intact D&E (9 %) is commonly referred to as a "dismemberment" abortion because the pre-born baby is removed in a piecemeal fashion with instruments. Intact D&E, also known as dilation and extraction (D&X) or "partial birth" abortion, has been illegal in the U.S. since 2003.[53] During that procedure the pre-born baby's feet first appear which the abortionist grabs and pulls until the body delivers. Once the bottom of the baby's head is exposed, the abortionist evacuates its brain with a vacuum causing its large skull to collapse which finally enable delivery. The increased size of the pre-born baby and increased amount of placental tissue requires a greater degree of cervical dilation while the thin relaxed uterine myometrium is more likely subject to mechanical perforation and resulting catastrophic hemorrhage.[54,55]

Historically, saline or prostaglandin was infused into the amniotic sac in late-term abortions to kill the pre-born baby and induce labor. Maternal deaths occurred due to fluid imbalances and infections. Hysterotomy abortion (performing a Cesarean section to complete a late-term abortion) is rarely used because it is a major surgical procedure.

Labor induction is the method used to perform extreme late-term abortions. Labor-induction abortions are often complicated by immediate maternal hemorrhage, requiring an invasive surgical procedure to extract retained placental tissue. A large European study documented that more than half of the babies survived delivery in post-viability induced abortions.[56] If a baby is born alive, the abortionist may complete the abortion by performing active or passive infanticide.[57] Many abortionists perform feticide via intracardiac or intra-amniotic injections to avoid this dreaded complication.

Severe physical 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.[58,59] Injury to adjacent major blood vessels and/or gynecologic, genitourinary or gastrointestinal organs requires emergency abdominal surgical exploration to perform a hysterectomy, bowel resection, bladder repair, or other repair.[60,61] Death from induced abortion can occur due to vaginal and intra-abdominal hemorrhage, sepsis, thrombotic emboli, intravascular amniotic or air emboli, complications of anesthesia and cardiac or cerebrovascular events.

Forcibly opening a cervix that is designed to remain closed until natural childbirth may result in cervical trauma and cervical incompetence in future pregnancies. This weakened cervix may dilate early in a subsequent pregnancy, predisposing the woman to premature rupture of membranes, intrauterine infections and possible sepsis. Statistically significant studies show a connection with preterm birth. One meta-analysis found that there was a 25 % increased risk of premature birth in a subsequent pregnancy after one abortion, 32 % after more than one, and 51 % after more than two abortions.[62] Another meta-analysis found a 35 % increased risk of delivery of a very low birth weight infant after one abortion, and 72 % after two or more abortions.[63] Obstetrical interventions for the management of preterm birth raise the risk of maternal mortality.

Instrumental trauma to the endometrium may result in faulty placentation in subsequent pregnancies. The Placenta Accreta Spectrum (PAS) is abnormal placentation in which the placenta invades into the cervix, uterine wall, or other adjacent organs; it 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.[64] 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.[65] PAS can cause massive hemorrhage. Deaths occur even in high-level hospitals, and the fortunate survivors often require transfusion of scores of units of blood to save their lives.[66]

The frequency of abortion complications increases as the pregnancy advances due to greater technical complexity related to the anatomical and physiologic changes that occur.[67] Compared to early abortions, the relative risk of death was 76.6 times higher beyond 21 weeks (rate 8.9/100,000). It is known that the risk of death from abortion increases by 38 % for each additional week beyond 8 weeks.[68,69,70] The American Board of Medical Specialties recognizes the inherent danger of late-term abortions. In 2018 it approved the new American Board of Obstetrics & Gynecology subspecialty "Complex Family Planning" to train abortionists to perform late-term abortions.[71]

In addition to the immediate physical risks to a woman from an abortion, there are long-term complications that increase a woman's risk of death. Stress accompanying voluntary or spontaneous pregnancy loss may adversely impact a woman's health and wellness.[72] Delivering a baby may have a protective emotional effect whereas induced abortion may have a deleterious emotional effect.[73] A

large meta-analysis found that women experienced an 81 % increased risk of mental health problems after induced abortions: 34 % increased risk of anxiety, 37 % increased depression, 110 % increased alcohol abuse, 230 % increased marijuana abuse, and 155 % increased suicidal behavior.[74] An eight-year retrospective study showed that those who aborted had significantly higher age-adjusted risks of death from suicide (254 %) compared to those who delivered a baby.[75] A comprehensive record linkage study from Finland found that following an abortion, a woman was two to three times as likely to die within a year, six times as likely to commit suicide,[76] four times as likely to die from an accident, and fourteen times as likely to be murdered,[77] compared with a woman who carried to term.[78] Finnish studies also revealed that 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).[79] Mental health issues may contribute to drug overdoses, suicides, homicides or even accidents due to risk-taking behavior, but our current system of data collection is not capable of linking these events to induced abortion.

Due to the paucity of complication data available in the U.S., the actual abortion-related mortality rate is undoubtedly much higher than reported.[80] Legal or ideological motivation can obscure the initiating event that led to death. In addition, the failure of most abortion providers to maintain hospital privileges forces a different hospital-based health care provider to treat the resulting complications.[81] 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 exceptional data linkage, 94 % of abortion-related deaths are not identified on death certificates.[82] Due to restricted data access, poor record keeping and lack of mandatory complication reporting, the actual induced abortion-related mortality rate in the U.S. cannot be determined.

Report of the National Academies of Science, Engineering and Medicine (NAS)

In spite of these documented risks of abortion-related mortality, the NAS published a book that stated that induced abortion is extremely safe.[83] They concluded that serious complications or long-term physical or mental health effects are virtually non-existent; specifically they denied that abortion increases the risk of preterm delivery or mental health disorders. They did not consider the increased risk of hemorrhage due to PAS that can occur with subsequent pregnancies. Abortion is so safe, they wrote, that it does not need to be performed by physicians. 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.

Selection bias against the existence of delayed morbidity is obvious in the literature chosen by the NAS. A meta-analysis revealed a curious lack of interest by most investigators in the question of whether abortion is safer than childbirth. They purposefully excluded 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.[84] Compared with those who delivered a baby, those who underwent induced abortion had significantly higher age-adjusted risks of death from all causes (162 %), from suicide (254 %), as well as from natural causes (144 %).[85] 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.[86]

Danish studies reported that the risk of death within 180 days after a first trimester abortion was 244 % higher than the risk of death after childbirth; the risk of death after a late term abortion was 615 % higher than that after childbirth.[87] Stringent selection criteria allowed the NAS to disqualify these and other valid reports due to "study defects." For immediate morbidity, they 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.[88] In California, Planned Parenthood aborts an alarming number and 317,000 of these abortions were reviewed.[89,90] Severe complications and deaths, particularly from nonaligned late-term abortion providers, have been reported in the media.[91] The refusal of California to report and the paucity of voluntary reporting nationwide yield 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.

Abortion v 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 that may result in mortality that are excluded from the denominator "100,000 induced abortions." 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. The abortion death rate must be higher than published because deaths from abortion are underreported and the numbers of abortions are inflated.

A widely reported study concluded that abortion was 14 times safer than childbirth.[92] Abortion advocates even argue that since childbirth is so dangerous, abortion should be readily available so women can "opt out" of being pregnant. Is abortion really safer than childbirth? Abortion-related deaths were compared to the number of legal abortions, whereas pregnancy deaths were compared to the number of live births. One cannot compare the abortion-related mortality *rate* to the pregnancy-related mortality *ratio* – this is meaningless exercise. Of the four variables used in the abortion-related mortality rate and the pregnancy-related mortality ratio, the number of live births is only

variable that can be accurately determined. The study used three impossible-to-quantify variables to compare two disparate outcomes: a false equivalence.

Finland has universal health and data linkage allowing it to use "ended pregnancies" as a common denominator when studying abortion-related v childbirth-related mortality. They reported that 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).[93]

This data is not available in the U.S. so one must implement different methodology to compare outcome-specific rates of abortion-related and childbirth-related mortality. Since abortion and most childbirth deliveries are done vaginally and since abortion may increase the percent of women undergoing Cesarean section in subsequent pregnancies due to preterm birth and abnormal placentation, Cesarean deliveries should be excluded when comparing the safety of childbirth and abortion. To make a valid comparison, an outcome-specific rate for maternal mortality must be used: mortality associated with vaginal childbirth. The vaginal delivery maternal mortality rate is calculated as the number of vaginal-childbirth-maternal deaths/100,000 vaginal deliveries.[94] Using outcome-specific rates, the mortality rate for vaginal delivery is 3.6 deaths/100,000 vaginal deliveries,[95] while the rate for abortion performed at 18 weeks or later is 7.4 deaths/100,000 abortions.[96] Put another way, the risk of death from these abortions is more than double that for women who deliver vaginally.

Recommendations:

1. Advocate for better data collection, especially correlating current outcomes and historic early pregnancy events. Since the risk of death within 180 days of the end of pregnancy is over twice as high following induced abortion compared to childbirth, death certifiers must document early pregnancy events in order to increase the accuracy of mortality data. Access to study all deaths occurring within one year of the end of pregnancy will allow unbiased researchers to correlate current pregnancy outcome with early pregnancy and prior pregnancy adverse events, including legal induced abortion.

2. Enforce mandatory reporting of abortion complications and abortion-related deaths, with strict noncompliance penalties, to improve data collection and more accurately reflect abortion-related deaths.

3. Direct attention to the association of legal induced abortion with subsequent pregnancy complications requiring obstetrical interventions that increase risk of maternal mortality – sepsis and catastrophic hemorrhage.

4. Raise awareness that induced abortion is also associated with very preterm deliveries in subsequent pregnancies, forcing obstetrical interventions that could increase the risk of maternal mortality.

5. Be aware that a woman's mental health status following legal induced abortion may be associated with increased risk-taking behavior leading to becoming a victim of homicide, suicide or drug overdose.

6. Encourage additional research of the abortion-linked complications that have not been inadequately studied, such as the abortion and breast cancer link.

7. Consider social determinants of health disparities, particularly as they contribute to the increased mortality of ethnic/racial minority mothers. Particular emphasis should be given to encouraging paternal engagement and increasing familial support.

Conclusion

Biased academic physicians have led the discussion on maternal mortality. Having economic ties to the abortion industry, 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 frequently have conflicts of interest,[97] and readers are not assured that independent reviewers have critically evaluated submissions by academic abortion advocates before publication. People were not content to blindly believe the tobacco industry when reassured that smoking was safe and did not cause cancer. People must refuse to 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.

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