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REVIEW ARTICLE

Is Induced Abortion Evidence-Based Medical Practice?

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ABSTRACT

Leaders of medical schools and health professional associations in the United States have affirmed their commitment to induced abortion by persistently asserting that the procedure is evidence-based medical practice. There is an objective structured process by which the status of "evidence-based" is attained. It requires a detailed description and documentation of the patient's disease, illness or condition; an explanation for how the treatment intervention ameliorates the problem; the outcomes by which the effectiveness of the treatment is measured; and the comparison of the treatment with other alternative interventions available. We provide historical context which indicates that staunch abortion advocate thought leaders considered the right to abortion on demand to be inconsistent with the concept of evidence-based practice. We summarize the research on the reasons why women choose abortion, and we review the questions, designs and findings available in the relevant Cochrane Library systematic reviews. Our conclusion is that the quality of abortion science in general is quite weak, that the data necessary for valid research is scarce, and that the claims of evidence-based induced abortion are unsupported by the existing body of published knowledge.

Introduction

"To really know is science; to merely believe you know is ignorance." – Hippocrates

The decision to have an abortion has frequently been considered an ethical dilemma influenced by conflicting moral values about what is good or bad, right or wrong. More recently, as the result of decisions and deliberations by the U.S. Supreme Court, induced abortion is increasingly promoted as an effective medical procedure. In this policy essay, using a historical perspective provided by both the published science and the statements of abortion thought leaders, we assess the claim that induced abortion is evidence-based medical practice.

When the deans of prestigious medical schools and elite professional medical associations refer to induced abortions as "evidence-based" this seems to provide a persuasive argument that the intervention is meeting the compelling medical needs of women. Increasingly, since the *Dobbs* decision to overturn *Roe v. Wade*, members of the medical establishment leadership in the United States have persistently and vocally affirmed their commitment to abortion by claiming that the procedure is evidence-based medical care, a critical public health practice, and the model standard-of-care option for the resolution of an unwanted pregnancy.[i,ii,iii,iv] Coincident with this assertion has come a series of expert pronouncements contending that "regardless of reason, the proper label for all abortion is healthcare," that "all abortions are medically necessary," and that providers should stop differentiating between therapeutic and elective abortion.[v,vi,vii]

The Pathway to Proof

To assert that an intervention is "evidence-based" indicates that the treatment has been proven by rigorous research to be both efficacious and effective, or conversely, ineffective or possibly dangerous. That is, it has been tested under controlled trial circumstances, and also in real-world clinical settings. Earning this coveted status is by no means a trivial task for any medical intervention. There is a structured and disciplined method by which a medical intervention is evaluated. The mnemonic "PICO" represents the four elements necessary to determine treatment effectiveness, by assessing each intervention and the quality of research upon which its therapeutic effectiveness has been decided. The **patient (P)** must have an illness, injury, disease, or manageable condition which is the explicitly defined target of the **intervention (I)**. This target illness is typically documented through an extensive medical history, physical examination, laboratory evaluation and formal diagnosis. This accurate and thorough documentation of the patients' disease or condition enables the healthcare researcher to evaluate the effectiveness of the therapeutic intervention or treatment as measured by specifically defined and measurable **outcomes (O)** in **comparison (C)** with other treatments available for the target illness.[viii]

Additionally, the relative strength of the available body of research used to assess these interventions is evaluated and assigned to a hierarchy of "levels of evidence." The very best evidence, the "gold standard," comes from prospective randomized controlled trials (RCTs) where carefully selected patients are matched by important characteristics, then

randomly assigned to experimental and control groups. The experimental group receives the treatment being evaluated and the control group receives an alternative treatment (often the treatment considered the "standard of care"), or no treatment at all (placebo), and the outcome differences between groups are determined and tested for statistical significance. Often, multiple RCTs are combined to create a larger database (systematic reviews or meta-analyses), strengthening the conclusions even more. The lowest, or poorest, level of evidence in this hierarchy are expert opinions, surveys, and case studies, since those designs are regarded to be the most susceptible to bias.[ix] When a rigorous process is applied across the range of all treatments, there is a formidable gap between the entirety of clinical practices and those which actually demonstrate effectiveness. Archie Cochrane, the Scottish physician and epidemiologist, considered by many to be the father of evidence-based medicine, once publicly proclaimed that "no more than 10% of physician interventions are proven to do more good than harm."[x]

Now we come to the essential question. What is the scientific evidence for the effectiveness of an induced abortion in addressing a defined problem? Pregnancy is a normal physiological function of a healthy woman. Certainly, complications may arise, but the diagnosis of pregnancy is not, a priori, a diagnosis of pathology. What is the problem being addressed by ending a healthy pregnancy? Is there available evidence to document that induced abortion solves any problems? In other words, how valid is the claim that abortion is an evidence-based intervention?

What We Know and What Thought Leaders Have Said

A crucial and salient reality is that the overwhelming majority of induced abortions are performed on healthy mothers carrying healthy babies. Only a few states report the reasons for abortion, and they document that more than 95% of all abortions are obtained for preferential, elective, usually social and financial reasons (rape/incest 0.3%, risk to a mother's life or substantial risk to her health 0.2%, other physical health concerns 2.5%, and abnormality in the baby 1.3%).[xi] Only two states record the reason for later abortions, and they document that 88% are also performed for elective, not medical, reasons.[xii] Major themes represented in surveys of women experiencing abortion are: financial problems or concerns; partner-related issues (relationship breakdown or an unsupportive or abusive partner); that raising a child would interfere with educational or vocational plans; or because of an inability to care for other children or family members.[xiii,xiv] There is no therapeutic rationale for induced abortion in these circumstances because there is no illness or disease to be addressed.

Former abortionist Dr. Bernard Nathanson described this as a normative bioethics problem because pregnancy "falls comfortably into none of the usual definitions of disease: it is not a state inimical to the way one is supposed to feel; it is not a condition in which body components and systems are acting inharmoniously … it is not a state of abnormality – for the pregnant woman functions satisfactorily within society, and the social and physical environment tolerates the pregnant woman perfectly. Pregnancy, then,

is not a disease by any normative definition."[xv] Stated simply, pregnancy rarely presents a risk to the mother, developing child, or society.

In a bizarre distortion of public health science, investigators from the Centers for Disease Control and Prevention (CDC), attempting to establish some therapeutic basis for abortion, suggested that pregnancy be considered a sexually transmitted disease like syphilis or gonorrhea, and that abortion was a treatment analogous to penicillin.[xvi] Despite this aberration, the fact that the typical induced abortion is nearly always unrelated to a clinically defined risk to either the mother or the developing child is, and has always been, widely acknowledged among health professionals – even if the utterance of such a statement is considered by many as blasphemy today in the public dialogue, where the claim of "evidence-based abortion" is made repeatedly without challenge.

Even prior to *Roe v. Wade*, this reality was well understood by doctors involved in abortion provision. In a conversation with fellow abortion advocates, Dr. Alan Guttmacher, who succeeded Margaret Sanger as President of Planned Parenthood and whose pro-abortion bona fides are well known, acknowledged the lack of any objective medical basis for abortion: "We are not religionists. Most of us are not psychiatrists. We are not social workers. We're just plain doctors. And on what basis are we going to say to a woman, 'Yes, you should' or 'No, you shouldn't have an abortion,' if this is going to be a decision between an individual and her physician?" [xvii] He followed this thought through to its logical conclusion. "Then, if a woman says she wants to be aborted…then we simply act as a rubber stamp and do it. That's a simple problem."

Dr. Robert E. Hall, a famous obstetrician who promoted liberal abortion legislation in New York state before *Roe v. Wade*, agreed, noting that "there are virtually no medical indications for abortion and there are virtually no contraindications for abortion. I would place the doctor in the role of a technician, simply wielding the curette…This may be humiliating to him. But it is his unavoidable plight if we are to grant women their inherent right to abortion." After a woman has received counseling, "if she still wants the abortion she should have it."

This exchange is noteworthy for its complete absence of any references to an illness or diagnosis, or to various treatment options and their resulting outcomes. The concept of an evidence-based clinical justification for an induced abortion is, thus, implicitly but emphatically repudiated.

Abortion advocates studiously avoid any discussion of the overwhelming numbers of purely preferential abortions and, instead, focus their attention on that tiny fraction of abortions which, in the words of the American College of Obstetricians and Gynecologists (ACOG) …"can be medically necessary."[iv] Rarely, a hypertensive crisis, cardiac dysfunction, serious infection, or aggressive cancer may require separation of a mother and her baby in order to protect the mother's life or prevent a serious risk to her health. Even in these circumstances, however, many physicians argue that it is almost never necessary to end the life of a child directly and intentionally by an abortion procedure. For example, when a pregnancy endangering the life of the mother requires termination, a direct "dismemberment" dilation and evacuation (D&E) abortion may be

unnecessary, as delivery can usually be performed with a standard obstetric intervention such as labor induction or cesarean section (if indicated). Beyond 22 weeks' gestation, the baby will often survive separation from the mother if given active medical intervention, and even if too young or sick to survive, the family can show the child love and express appropriate grief with the assistance of supportive perinatal palliative care. The important point to emphasize is that these rare and heartbreaking circumstances apply to a tiny fraction of all induced abortions. Almost all induced abortions demonstrate no therapeutic intent or medical necessity. The emotionally provocative scenario of a young adolescent girl seeking to abort a pregnancy conceived in rape or incest is repeated in the media at a rate which is grotesquely disproportionate to the rarity of its occurrence. The question of importance is whether an abortion in this circumstance improves the mental or physical health status of the victimized girl. Understandably, there have been no clinical trials addressing this question, so even an abortion in this tragic circumstance cannot be characterized as an evidence-based medical intervention.

Synthesis of the Systematic Reviews

An examination of the available systematic reviews addressing abortion in the Cochrane Library indicates that the studies typically provide no therapeutic rationale for the abortions; that is, no defined illness, condition, or disease is addressed by the abortion intervention. Instead, the major body of abortion research has been focused on how the procedure is performed, and which method or approach is safest (for the mother) or most effective in ending the unborn human's life. For example, one systematic review provided a comparison of chemical (mifepristone and misoprostol or misoprostol alone) versus surgical (dilation and suction or dilation and evacuation) abortions, examining the rates of adverse events and minor and major complications.[xviii] Another provided a comparison of chemical abortions administered either with or without in-person prescribing or supervision of a healthcare provider, examining outcome measures such as complications, likelihood that the abortion would fail to kill the unborn child, or fail to expel all of the products of conception.[xix] Others made comparisons between physician and non-physician (nurse practitioner, physician assistant or midwife) abortion providers, utilizing similar outcomes without addressing the condition being treated.[xx] It should be noted that this body of research is replete with concerns about the small number of studies, the need for more "robust data,"[xx] and a "scarcity of high-quality research."[XIX]

Only a single systematic review specified a clinically or medically defined reason for the abortion.[xxi] It was one of the exceedingly rare situations for which abortion is considered "medically necessary," that is, when a fetus has received a devastating prenatal diagnosis with the anticipation that, "if born alive would not survive or would have a permanent handicap."[xxi] The investigators also point to situations that do not meet the definition of induced abortion as when the fetus has died in utero, resulting in a "spontaneous abortion." Although the procedures for managing a miscarriage and induced abortion are often the same, they may be viewed as ethically different. In the situations when the

fetus, if born alive, would have a limited lifespan or a permanent disability the investigators beg the question of whether this intervention is the best choice, and by which choice of alternative interventions and specified outcomes this determination is made. This series of studies compared the administration of vaginal misoprostol against either no treatment (placebo) or other labor-inducing prostaglandins in the second or third trimesters. Overall, the intervention of vaginal misoprostol was determined to be as effective as the other prostaglandins as measured by the interval time from induction to birth, but the studies drew no conclusions about the necessity of the intervention in the first place.[XXI] To summarize, the conclusion that induced abortion is necessary for women whose unborn children have received a serious prenatal diagnosis is widely considered self-evident but has not been addressed in the existing body of science, let alone proven. No study has compared the well-being of a woman and family who end their child's life in these tragic circumstances to those who continue to allow their child to live until a natural death.

Even this cursory review is sufficient to indicate that there is no evidence to support the conclusion that an induced abortion performed on a healthy woman with a healthy developing child is medically necessary or delivers a positive therapeutic effect. In fact, it is not clear what the meaning of clinical effectiveness might actually be in these cases. In terms of the evidence-based medicine mnemonic previously mentioned ("PICO"), there is no defined connection between the patients' illness, condition or disease, because there is none identified, and the abortion intervention. The actual proximate measure of the effectiveness of induced abortion is the intended death of the developing child. There is no reference in the research literature to this intended outcome (i.e., fetal death) since there is no need to address it via a formal research protocol and study. Cochrane researchers would refer to this as an "All or None Study" conclusion since the intervention (i.e., the abortion) so completely alters the outcome (i.e., the life or death of the child) that no formal validation of the effect is necessary. Further, while evidence-based medicine purports to establish some consensus about the ratio of both the benefits and risks of any intervention, the intended fetal death is not considered as an adverse outcome for the women in any of these studies or, in fact, acknowledged in any way. The conduct of Cochrane's gold standard for clinical effectiveness research, the randomized controlled trial, faces serious ethical and consent barriers in the induced abortion domain. Women seeking abortion on demand with no defined medical necessity (i.e., the typical abortion) are unlikely to consent to assignment to a control (no abortion) group.

Inadequate Data and Limited Knowledge

We would be remiss if we neglected to comment on the disconnect between the abysmal status of abortion data collection and reporting in the U.S. and the persistent claims by many that abortion is evidence-based practice. Unlike some of the Scandinavian nations which maintain universal mandated pregnancy outcome registries linkable to death certificates and other health services information, the U.S. could easily be

characterized as an "abortion data desert." Reporting of abortion incidence by the states to the CDC continues to be incomplete and inconsistent. California, with the highest number of abortions of all the states, doesn't report at all. Maryland, with one of the highest abortion rates among the states, fails to report as well.[xxii] Since 2016, when it removed the mandatory complication reporting requirement, the Food and Drug Administration (FDA) has demonstrated it believes the only adverse event following abortion worth reporting is the mother's death.[xxiii] Government priority for spending on health is, at least to some extent, supposed to represent the illness burden represented by the disease or condition. The National Institutes of Health (NIH), with a 2023 budget approaching 50 billion dollars, spends essentially nothing on abortion science. Women are having chemical abortions without any examination or even seeing a medical provider. If they have a problem and end up in a hospital emergency room, they are often advised that it is acceptable not to reveal their recent abortion.[xxiv] This goal of the "demedicalization" of abortion has been openly pursued by abortion advocates in the U.S. for decades.[xxv] The same organizations and institutions which insist that there be absolutely no limits on access to induced abortion also consistently resist the basic collection and reporting of the information necessary to inform valid science and effective medical practice. As legendary abortion proponents Robert Hall and Alan Guttmacher observed half a century ago, the concepts of "abortion on demand" and "abortion as evidence-based practice" are irreconcilable.

Research intended to demonstrate some positive therapeutic effect of an induced abortion on a diagnostically defined illness or condition is essentially non-existent. The abortion science that does exist simply ignores the question of medical necessity and focuses largely on the various methods and safety of the abortion procedure itself. Of course, the rate at which women suffer a serious adverse event such as massive blood loss, pain, or infection following an abortion is important. However, those results alone provide no justification that the procedure was medically necessary in the first place or that it will deliver any predetermined therapeutic results. The existing abortion literature, therefore, deals primarily with the extent to which the procedure causes a risk of an adverse outcome to the woman; i.e., an iatrogenic (procedure-caused) outcome such as infection, bleeding, pain, an ER visit, hospitalization, or even, if rarely, death. For the typical induced abortion involving a healthy woman and healthy fetus, there is no research that demonstrates any predefined therapeutic effect.

Conclusion

Archie Cochrane also once said that "there are so many possible sources of error in this sort of data, and so many pitfalls in interpretation, that a slavish adherence to significance testing, if relevant, would give our results a spurious and perhaps misleading aura of precision."[xxvi] He could very easily have been referring to the status of abortion science today. The level of evidence related to abortion science, based upon the absence of controlled randomized trials and the poor quality and limited availability of valid research data, can only be characterized as weak. There is no disease, illness or condition

for which an induced abortion has been determined to be a standard of care for enabling a favorable outcome compared to other interventions. In extremely rare situations of a life-limiting fetal anomaly, impending maternal death or other dire circumstances, induced abortion represents one approach to amelioration—although comparisons of abortion to alternatives in these circumstances are lacking. The preponderance of abortion research is focused on the risks presented by the procedure itself (i.e., safety), ignoring completely the question of medical necessity or the actual therapeutic benefit of undergoing the procedure in the first place. Unlike the many euphemisms that abound in the political and ideological discussions on abortion (e.g., reproductive autonomy), the term evidence-based practice has an objective, explicit, and testable meaning which can be supported or unsupported by the data collected through observation or experimentation. The assertion that induced abortion is evidence-based medical practice is unsupported and, therefore, unverified by the body of existing knowledge.

Conflicts of Interest

The authors have no conflicts of interest to declare.

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