IN THE CIRCUIT COURT OF THE SECOND JUDICIAL CIRCUIT
IN AND FOR LEON COUNTY, FLORIDA

PLANNED PARENTHOOD OF SOUTHWEST AND CENTRAL FLORIDA, on behalf of itself, its staff, and its patients, *et al.*,

Plaintiffs,

v.

STATE OF FLORIDA, *et al.*,

Defendants.

Case No. 2022 CA 912

Judge Cooper

ORDER GRANTING PLAINTIFFS' MOTION FOR AN EMERGENCY TEMPORARY INJUNCTION AND/OR A TEMPORARY INJUNCTION, ENTERING A TEMPORARY INJUNCTION, AND SETTING BOND

Plaintiffs Planned Parenthood of Southwest and Central Florida; Planned Parenthood of South, East and North Florida; Gainesville Woman Care, LLC d/b/a Bread and Roses Women's Health Center; A Woman's Choice of Jacksonville, Inc.; Indian Rocks Woman's Center, Inc. d/b/a Bread and Roses; St. Petersburg Woman's Health Center, Inc.; Tampa Woman's Health Center, Inc.; and Shelly Hsiao-Ying Tien, M.D., M.P.H. (collectively, "Plaintiffs"), have moved this Court for a temporary injunction against the enforcement of Ch. 2022-69, §§ 3–4, Laws of Fla. ("HB 5" or "the Act") (to be codified at §§ 390.011, 390.0111, Fla. Stat.).

The Court held an evidentiary hearing on June 27, 2022, and the parties presented oral argument on June 30, 2022. Having considered the legal arguments

and the evidentiary record, and for the reasons that follow, the Court grants Plaintiffs' Motion for an Emergency Temporary Injunction and/or a Temporary Injunction ("the Motion"), enjoins the enforcement of HB 5 as set forth below, and orders Plaintiffs to post a bond of $5,000.

OVERVIEW

In 1980, Florida amended its Constitution to add an explicit right of privacy that is not contained in the U.S. Constitution. Art. I, § 23, Fla. Const. (the "Privacy Clause") ("Every natural person has the right to be let alone and free from governmental intrusion into his private life except as otherwise provided herein. . . ."). The Florida Supreme Court thereafter determined that this right to privacy is "clearly implicated in a woman's decision of whether or not to continue her pregnancy." *In re T.W.*, 551 So. 2d 1186 (Fla. 1989). The Florida Supreme Court also determined that women have a right, under the Privacy Clause, to decide whether to terminate a pregnancy at least until fetal viability, which is around the completion of the second trimester. *Id.* at 1194. In addition, the Florida Supreme Court has held that "[a]ny law that implicates the right of privacy is presumptively unconstitutional, and the burden falls on the State to prove both the existence of a compelling state interest and that the law serves that compelling state interest through the least restrictive means." *Gainesville Woman Care, LLC v. State*, 210 So. 3d 1243, 1256 (Fla. 2017). Here, the Act bans, with extremely limited exceptions,

pre-viability abortions that were previously allowed under Florida law, thus imposing a burden on the State to justify that law.

The Court's analysis in this Order is not affected by the U.S. Supreme Court's recent decision in *Dobbs v. Jackson Women's Health Organization*, No. 19-1392, slip op. (U.S. June 24, 2022). The right to privacy under the Florida Constitution is "much broader in scope" than any privacy right under the United States Constitution. *In re T.W.*, 551 So. 2d at 1192 (quotation and citation omitted). Concurring in part and dissenting in part in *In re T.W.*, Justice Grimes noted that, "[i]f the United States Supreme Court were to subsequently recede from *Roe v. Wade*, this would not diminish the abortion rights now provided by the privacy amendment of the Florida Constitution." 551 So. 2d at 1202 (Grimes, J., concurring in part and dissenting in part). And in 2003, the Florida Supreme Court wrote, "any comparison between the federal and Florida rights of privacy is inapposite in light of the fact that there is no express federal right of privacy clause." *N. Fla. Women's Health & Counseling Servs., Inc. v. State*, 866 So. 2d 612, 634 (Fla. 2003) (emphasis omitted) (hereinafter, "*North Florida*"). Thus, the Florida Supreme Court has rejected the pre-*Dobbs* federal standard that required a plaintiff to prove that a regulation regarding abortion has placed a substantial obstacle in front of a woman seeking to assert her right to an abortion. *Id.* at 635–36. Accordingly, Plaintiffs in this case do not have a threshold

requirement to show that the law imposes a significant restriction on the right to a pre-viability abortion.

HB 5 implicates the right to privacy and, as Defendants concede, is subject to a standard of review known as "strict scrutiny." Under *Gainesville*, 210 So. 3d 1243, any law that implicates the fundamental right of privacy is subject to strict scrutiny and presumed to be unconstitutional. In that situation, the burden is on the defendant to prove that the law in question advances a compelling state interest through the least restrictive means. *Id.* at 1256. Here, as set forth more fully below, the asserted interests identified by the State are not legally sufficient to justify HB 5's ban on abortions after 15 weeks, measured from the first day of a woman's last menstrual period ("LMP"). And, as set forth more fully below, the Court finds the testimony of Plaintiffs' witnesses to be more credible and to rebut that offered by the State's witnesses.

In short, the Court finds that Plaintiffs have demonstrated all of the required elements for a temporary injunction against HB 5.

PROCEDURAL BACKGROUND

1. Plaintiffs are six clinics that provide reproductive health care services across Florida, along with Dr. Shelly Hsiao-Ying Tien, a physician trained and board-certified in obstetrics and gynecology and maternal-fetal medicine who practices in Florida. *See generally* Compl.

2. On June 1, 2022, Plaintiffs filed a Complaint and the Motion, seeking, in part, a temporary injunction against HB 5 and the related definitions of Section 3(6) and 3(7). *See generally* Compl.; Mot. Plaintiffs named, as defendants, the State of Florida; the Florida Department of Health and its Secretary, Joseph Ladapo; the Florida Board of Medicine and its Chair, David Diamond; the Florida Board of Osteopathic Medicine and its Chair, Sandra Schwemmer; the Florida Board of Nursing and its Chair, Maggie Hansen; the Florida Agency for Health Care Administration and its Secretary, Simone Marstiller; and the State Attorneys for all 20 judicial circuits in Florida. Plaintiffs voluntarily dismissed the 20 State Attorneys from this suit without prejudice pursuant to a stipulation that this Court entered on June 17, 2022. The defendants who remain in this case are referred to herein as "the State."

3. The State filed a response to the Motion on June 20, 2022, and Plaintiffs filed a Reply on June 24, 2022. The parties also filed certain declarations and conducted certain depositions as noted in the Court's June 27, 2022 case management order.

4. On June 27, 2022, the Court held an evidentiary hearing at which counsel for Plaintiffs and counsel for the State appeared. The Court heard live testimony from three expert witnesses, and the parties consented to the admission of

written and deposition testimony from certain of those witnesses and an additional expert witness.

5. Specifically, Dr. Tien testified as an expert on behalf of Plaintiffs, both in Plaintiffs' case-in-chief and again in rebuttal to the State's evidence, and also provided fact testimony about the care she provides at one Plaintiff health center. Her sworn declaration dated May 27, 2022 and her curriculum vitae ("CV"), both of which were attached to the Motion, were admitted into evidence by consent of the parties. By consent of the parties, an additional expert witness for Plaintiffs, Dr. Antonia Biggs, Associate Professor at the University of California, San Francisco in the Department of Obstetrics, Gynecology, and Reproductive Sciences, submitted rebuttal testimony via her sworn declaration (and attached CV) dated June 23, 2022, and the transcript of her June 24, 2022 deposition taken by the State in this case. The Court references and cites to the declarations provided by Dr. Tien and Dr. Biggs throughout this Order. The CVs for each of these witnesses are attached in the Appendix to this Order.

6. The State presented live testimony from two experts, Dr. Ingrid Skop, an obstetrician and gynecologist and Senior Fellow and Director of Medical Affairs at the Charlotte Lozier Institute, and Dr. Maureen Condic, Associate Professor of Neurobiology and Anatomy at the University of Utah. By consent of the parties, a sworn declaration from Dr. Skop dated June 21, 2022 (and attached CV), a sworn

declaration from Dr. Condic dated June 22, 2022 (and attached CV), and the transcript from Plaintiffs' June 23, 2022 deposition of Dr. Skop in this case also were admitted into evidence. The Court cites to portions of that deposition transcript below. Also by consent of the parties, the three exhibits attached to the State's June 20 brief, and one exhibit attached to Dr. Skop's declaration, were also admitted into evidence.

7. On June 30, 2022, the Court heard argument from counsel on the Motion and issued a ruling from the bench, along with directions on factual findings and conclusions of law. The Court indicated at the end of the hearing that it intended to grant the injunction and set a bond of $5,000. At the Court's direction, Plaintiffs submitted a proposed order containing proposed findings of fact and conclusions of law. The State had until the morning of July 4, 2022, to respond to the proposed order. Based on these submissions and the Court's evaluation of the applicable law and the evidence, the Court enters the below findings of fact and conclusions of law.

FINDINGS OF FACT

I. HB 5's Provisions

8. On March 3, 2022, the Florida legislature passed House Bill 5, which prohibits the provision of abortions in Florida after fifteen weeks LMP. Fla. HB 5, § 4 (to be codified at § 390.0111(1), Fla. Stat.). Section 4 of HB 5 amends section 390.0111 to include the prohibition on abortions after fifteen weeks LMP. Fla. HB

5, § 4 (to be codified at § 390.0111(1), Fla. Stat.). Section 3 of HB 5 amends section 390.011 to provide definitions for Section 4's operative terms. Fla. HB 5, § 3 (to be codified at § 390.0111(6)–(7)), Fla. Stat.). Governor Ron DeSantis signed HB 5 on April 14, 2022, and it took effect on July 1, 2022. Fla. HB 5, § 8.

9. HB 5 contains two narrow exceptions. First, an abortion after 15 weeks LMP may be performed if "the termination of the pregnancy is necessary to save the pregnant woman's life or avert a serious risk of substantial and irreversible physical impairment of a major bodily function of the pregnant woman other than a psychological condition," and either two physicians certify this conclusion "in [their] reasonable medical judgment" in writing, or a single physician certifies that the risks are "imminent" and "another physician is not available for consultation." Fla. HB 5, § 4 (to be codified at § 390.0111(1)(a)–(b), Fla. Stat.).

10. Second, HB 5 permits an abortion after 15 weeks LMP when "[t]he fetus has not achieved viability under § 390.01112 and two physicians certify in writing that, in [their] reasonable medical judgement, the fetus has a fatal fetal abnormality." Fla. HB 5, § 4 (to be codified at § 390.0111(1)(c), Fla. Stat.). HB 5 defines "fatal fetal abnormality" to mean "a terminal condition that, in reasonable medical judgment, regardless of the provision of life-saving medical treatment, is

incompatible with life outside the womb and will result in death upon birth or imminently thereafter." Fla. HB 5, § 3 (to be codified at § 390.0111(6), Fla. Stat.).[1]

11. A violation of HB 5 by an abortion provider is a third-degree felony. Specifically, "any person" who "willfully performs" or "actively participates" in an abortion in violation of the law is subject to criminal penalties, including imprisonment of up to five years and monetary penalties up to $5,000 for a first offense. §§ 390.0111(10)(a), 775.082(8)(e), 775.083(1)(c), Fla. Stat.

12. Physicians and other health care professionals are subject to disciplinary action for violating HB 5, including but not limited to revocation of their licenses to practice medicine and administrative fines. §§ 390.0111(13), 390.018, 456.072(2), 458.331(2), 459.015(2), 464.018(2), Fla. Stat.

13. In addition, abortion clinics may be prevented from renewing their clinic licenses for violating HB 5. Fla. Admin. Code R. 59A-9.020.

14. Plaintiffs all currently provide abortions after 15 weeks LMP.

II. Abortions in Florida After 15 Weeks LMP

15. Abortion is the second most common reproductive intervention that physicians provide for women of reproductive age in the United States; only a Cesarean section is a more common procedure. Tien Decl. ¶ 17. Nearly one in four

[1] Florida law separately bans abortions after fetal viability. § 390.01112, Fla. Stat. That law is not at issue in this case.

U.S. women will have an abortion. *Id.* (citing Guttmacher Inst., Induced Abortion in the United States (Sept. 2019), https://www.guttmacher.org/fact-sheet/induced-abortion-united-states).

16. Florida law not at issue in this litigation already prohibits abortion after fetal viability. § 390.01112, Fla. Stat.; *see also* ¶ 19. No pregnancy is viable at 15 weeks LMP, which is early in the second trimester and approximately two months before viability. Tien Decl. ¶ 19. A patient's due date is 40 weeks and 0 days LMP, and a pregnancy is considered full term at or after 37 weeks LMP. *Id.* The majority of abortions in Florida and throughout the country occur in the first trimester. *See* Tien Decl. ¶ 18; Hr'g Tr. (Rough) 41:17-18, 74:8-16 [Tien].[2]

17. The parties agree that most abortions in Florida occur prior to 15 weeks LMP. However, approximately 6.1% of the abortions reported in Florida in 2021 (or nearly 5,000 abortions) occurred in the second trimester. Tien Decl. ¶ 18; State's Resp., Ex. A (Fla. Agency for Health Care Admin., Reported Induced Terminations of Pregnancy (ITOP) by Reason, by Trimester, 2021 – Year to Date (May 9, 2022), https://ahca.myflorida.com/mchq/central_services/training_support/docs/TrimesterByReason_2021.pdf. As Plaintiffs' expert Dr. Tien testified, patients seek abortion

[2] "Hr'g Tr. (Rough)" refers to the court reporter's rough draft of the transcript for the June 27, 2022, evidentiary hearing in this case. A final transcript was not yet available at the time this Order was entered.

in the second trimester, including after 15 weeks LMP, for many reasons, as discussed below.

A. Dr. Tien's Qualifications.

18. Dr. Tien is a board-certified obstetrics and gynecology ("OB/GYN") physician and maternal-fetal medicine ("MFM") specialist. Tien Decl. ¶ 1; Hr'g Tr. (Rough) 31:6–7. Maternal-fetal medicine is a subspeciality of OB/GYN focused on the care of women with high-risk pregnancies; MFM specialists undergo years of advanced training in addition to the training they received as OB/GYN physicians. Tien Decl. ¶ 9; *see* Hr'g Tr. (Rough) 32:17-24 [Tien]. After graduating from medical school, Dr. Tien was trained in a four-year residency in obstetrics and gynecology at Advocate Illinois Masonic Medical Center in Chicago, Illinois, and a three-year MFM fellowship at the University of Minnesota in Minneapolis. Tien Decl. ¶ 5; *see* Hr'g Tr. (Rough) 32:11–33:3 [Tien]. Dr. Tien has provided clinical care to pregnant patients for almost 15 years, including caring for patients with high-risk pregnancies and providing abortion and contraceptive care. Tien Decl. ¶¶ 5, 8–9; *see* Hr'g Tr. (Rough) 33:4–35:13 [Tien].

19. Dr. Tien testified that after her fellowship in MFM at the University of Minnesota, she worked for five and a half years as an MFM specialist at NorthShore University Health System in Evanston, Illinois, which is affiliated with University of Chicago. Hr'g Tr. (Rough) 36:13-21 [Tien]. There, she provided prenatal care to

high-risk pregnancies, delivered babies, and performed abortions. *Id.* at 36:19–37:1 [Tien]. She was an educator and trained medical students, residents, and fellows. *Id.* at 37:2-5 [Tien]. She testified that she has cared for thousands of patients, including patients who chose to terminate their pregnancies and patients who chose to continue their pregnancies. *Id.* at 37:6-13 [Tien].

20. Dr. Tien currently provides abortion care and other services at the Jacksonville clinic of Planned Parenthood of South, East and North Florida, including abortion care after 15 weeks LMP. *Id.* at 34:23–35:7 [Tien]. She also currently works as an MFM specialist at Genesis Maternal-Fetal Medicine in Tucson, Arizona, where she treats patients with high-risk pregnancies and has admitting privileges at four Tucson-area hospitals. *Id.* at 33:21–34:22 [Tien]. Dr. Tien previously provided abortion care at Planned Parenthood Southeast in Alabama and Trust Women in Oklahoma, until recent abortion restrictions took effect in those states. *Id.* at 35:8–13 [Tien]. Dr. Tien testified that she currently spends roughly 70% of her time providing abortion care and that she spends approximately 20–30% of her time providing abortion care after 15 weeks LMP. *Id.* at 35:17–36:2 [Tien].

21. The Court credits Dr. Tien's above-identified qualifications and finds her testimony in the areas of obstetrics and gynecology and MFM, including abortion care, to be persuasive.

B. Reasons Women Seek Abortions.

22. Patients terminate both wanted and unwanted pregnancies for many reasons. Tien Decl. ¶ 28. Those who decide to have an abortion consider many factors, including the health and well-being of their children and other family members; their financial ability to provide for a child or for a child in addition to their existing children; whether they are currently in a safe home environment; and their own health, including any pre-existing medical conditions that can make a pregnancy high risk or new medical conditions that arise directly from the pregnancy. *Id.*

23. The majority of women who obtain an abortion (approximately 60%) have had at least one child. *Id.* ¶ 29. Some patients with children are familiar with the enormous demands that parenting places on their time and resources, and decide to have an abortion based on what is best for them and their existing families. *Id.* Others are not ready to have children. *Id.* Some patients seek abortions because they decide they need to prioritize their education or economic or familial stability. *Id.* Some have elder care responsibilities. *Id.* Some are struggling with food or housing insecurity; homelessness; and/or alcohol, opioid, or other substance addictions, and decide not to become a parent while struggling with those challenges. *Id.* Some decide they do not have the emotional resources necessary to continue the pregnancy and become a parent. *Id.*

24. Other patients seek abortions because they have pre-existing medical conditions that make pregnancy risky for their own physical or mental health. *Id.* ¶ 29. For other patients, regardless of whether their pregnancies were planned or unintended, pregnancy itself creates new significant medical risks to their own health. *Id.* As a result of historical inequities to health care access and economic inequality, approximately 61% of patients seeking abortion care identify as Black, Indigenous, or women of color, and these same populations face disproportionately high rates of maternal mortality and comorbidities that increase the health risks associated with pregnancy. *Id.*

25. Patients also seek abortions after having experienced some form of violence. Some have experienced rape or incest, whether in the form of sexual abuse, sexual assault, gang rape, torture, or human trafficking-sexual slavery; notably, the Act contains no exception for these women and children. Tien Decl. ¶ 30. Access to abortions in this context is just one element of helping survivors of sexual violence regain some semblance of their physical and emotional health. *Id.* Other patients live with intimate partner violence and do not want to continue a pregnancy or raise a child in an abusive environment, or further tie themselves to an abusive partner. *Id.* Patients who are unable to access safe abortion are more likely to stay with a perpetrator of violence. *Id.*

C. Reasons Abortions May Be Sought After 15 Weeks LMP

1. Delay in Identifying the Pregnancy

26. Dr. Tien explained that, because of the way pregnancy is dated, a missed period occurs at the earliest at 4.5 to 5 weeks LMP. Hr'g Tr. (Rough) 50:23–51:7 [Tien]; Tien Decl. ¶ 33. Some patients, especially those with irregular menstrual cycles or who do not experience pregnancy symptoms, may not suspect they are pregnant for weeks or months, or may experience bleeding early in pregnancy that they mistake for a period. Hr'g Tr. (Rough) 51:8-22 [Tien]; Tien Decl. ¶ 33. Patients may be further delayed in confirming the pregnancy, researching and considering their options, contacting an abortion provider, and scheduling an appointment. Hr'g Tr. (Rough) 52:15–57:16 [Tien]; Tien Decl. ¶ 33.

2. Poverty and Financial Challenges

27. As Dr. Tien testified, many patients who seek abortions after 15 weeks LMP do so because they face difficulty in raising the necessary funds both for the procedure itself (as abortion is frequently not covered by insurance) as well as related expenses, including transportation and childcare. Hr'g Tr. (Rough) 53:7-22 [Tien]; Tien Decl. ¶¶ 34–35. Others have difficulty arranging time off from work or school, finding childcare, and arranging transportation. Hr'g Tr. (Rough) 53:7-22 [Tien]; Tien Decl. ¶ 34. The COVID-19 pandemic has increased these challenges. Hr'g Tr. (Rough) 54:6-19 [Tien]; Tien Decl. ¶ 34. These barriers are especially difficult for

the approximately 75% of abortion patients nationwide who live under or near the poverty line. Hr'g Tr. (Rough) 53:23–54:3 [Tien]; Tien Decl. ¶ 34.

28. Dr. Tien testified that Florida's mandatory delay law, which recently went into effect, adds to these challenges. Hr'g Tr. (Rough) 55:6-11 [Tien]; Tien Decl. ¶ 36. This law requires patients to make two trips to the health center instead of one; the first is to sign state-mandated forms at least 24 hours before the abortion, and the second is to have the abortion procedure. Hr'g Tr. (Rough) 54:6–55:1 [Tien]; Tien Decl. ¶ 36.

29. Dr. Tien testified that, in practice, this law can cause far more than a day's delay because many patients (and especially patients who have low incomes) are not able to make the trip to their abortion provider twice in close succession. Hr'g Tr. (Rough) 55:15-25 [Tien]; Tien Decl. ¶ 36. Many abortion patients are delayed in accessing care because of the need to find two appointments that accommodate their work schedules, because they cannot afford to take two days off from work in close proximity, or because doing so would jeopardize their jobs—especially if the patient does not want to share the reason for the time-off request. Hr'g Tr. (Rough) 55:6-25 [Tien]; Tien Decl. ¶ 37. Patients may need to delay an appointment by a week or several weeks for these reasons. Hr'g Tr. (Rough) 55:6-11 [Tien]; Tien Decl. ¶ 37. Other patients cannot arrange childcare for multiple days

or cannot do so without compromising the confidentiality of their pregnancy and abortion decision. Hr'g Tr. (Rough) 55:6-25 [Tien]; Tien Decl. ¶ 37.

30. For these reasons, it is not surprising that patients seeking second-trimester abortions are more likely to have low incomes, more likely to report difficulty financing the abortion, and more likely to rely on financial assistance to pay for the procedure. Tien Decl. ¶ 39; *see* Hr'g Tr. (Rough) 53:7–25 [Tien]. Women who are most likely to be delayed in abortion until after 15 weeks LMP are those already facing the challenges of poverty or near-poverty, food insecurity, and economic instability. Tien Decl. ¶ 39.

3. Intimate Partner Violence

31. Dr. Tien also testified that patients experiencing intimate partner violence are often delayed in seeking abortions. Hr'g Tr. (Rough) 56:21-25 [Tien]; Tien Decl. ¶ 40. It is common for women experiencing intimate partner violence to seek abortions. Tien Decl. ¶ 40. This is due to a number of factors, including that abusers frequently sabotage a partner's ability to use contraception, leading to more unintended pregnancies; that pregnancy is often a time of escalating violence; and that a person experiencing intimate partner violence may not wish to be further tethered to an abusive partner or to bring a child, or an additional child, into an abusive household. *Id.*; *see* Hr'g Tr. (Rough) 56:5–20 [Tien].

32. Dr. Tien testified that, in many abusive relationships, the abuser exerts control over every aspect of their partner's life. Hr'g Tr. (Rough) 56:5-20 [Tien]; Tien Decl. ¶¶ 40–41. Such abusive partners may try to control the patient's reproductive decisions. Hr'g Tr. (Rough) 56:5-10 [Tien]; Tien Decl. ¶¶ 40–41. The abuser's control can complicate a patient's ability to raise funds for the procedure and to schedule multiple appointments. Hr'g Tr. (Rough) 56:5-20 [Tien]; Tien Decl. ¶ 41. Often such patients must wait for a day that their abusive partner will be out of town or otherwise occupied. Hr'g Tr. (Rough) 56:11-17 [Tien]; Tien Decl. ¶ 41. With Florida's two-trip requirement, patients must be able to find two such days when they can attempt to elude an abusive partner. Hr'g Tr. (Rough) 56:11-17 [Tien]; Tien Decl. ¶ 41. The combined effect of these factors can significantly delay abortion access, causing patients in abusive relationships to be disproportionately likely to obtain an abortion after 15 weeks. Hr'g Tr. (Rough) 56:1–25 [Tien]; Tien Decl. ¶ 42.

4. Young Patients

33. Adolescent patients are also disproportionately likely to need abortions after 15 weeks, as they may be more likely to have irregular periods or less knowledgeable about reproductive biology and less likely to be able to access abortion services promptly once they have made a decision. Hr'g Tr. (Rough) 57:22-58:5 [Tien].

5. Substance Abuse

34. Patients struggling with substance abuse disorders face multiple challenges that can cause a delay in obtaining an abortion until after 15 weeks LMP. Hr'g Tr. 57:6–16 [Tien]. Such patients may be addressing their own medical conditions, or they may be trying to admit themselves to a rehab program to improve their lives, which can impede timely access to care. *Id.* Patients who are struggling with substance abuse are also more likely to be living in poverty or even be homeless, making it more difficult to make a clinical appointment and obtain care. *Id.*

6. Changed Life Circumstances

35. Other patients, including women who initially intended to carry their pregnancies to term, may decide to terminate a pregnancy because their life circumstances change: they lose a job, they break up with a partner, or a family member becomes ill.

7. Health Conditions Caused or Exacerbated by Pregnancy

36. Dr. Tien testified that other patients experience health conditions that are caused or exacerbated by pregnancy and often develop after 15 weeks LMP. Tien Decl. ¶ 43; Hr'g Tr. (Rough) 58:15–61:3, 67:8-10 [Tien]. Pregnancy is a stress test for human physiology, impacting multiple organ systems, such as the heart, cardiovascular system, and kidneys. Tien Decl. ¶ 43. And the hormones produced

during pregnancy make a woman more insulin resistant, making it more difficult to maintain blood glucose levels at a stable level. *Id.* Patients with autoimmune disorders such as lupus can experience exacerbation of their disease, as manifested by worsening hypertension and kidney disease. *Id.* Patients with preexisting decreased cardiac function can rapidly decompensate and lose additional heart function. *Id.* Pregnancy can also exacerbate mental health conditions. For instance, women with pre-existing mood disorders, like depression or anxiety, may experience a worsening of symptoms during pregnancy. *Id.* These risks disproportionately impact people with low incomes, who experience more comorbidities such as obesity, hypertension, and diabetes. *Id.* ¶ 45. A legacy of distrust of the healthcare system can deter people from seeking preventative health services and further compound medical comorbidities associated with poverty. *Id.*

8. Diagnoses of Serious Fetal Conditions

37. Many patients who have planned and celebrated their pregnancy with the intention of welcoming a child into their family may learn as the pregnancy progresses of a serious fetal condition, which can be genetic or structural (such as complex brain or heart defects). Tien Decl. ¶ 46; *see* Hr'g Tr. (Rough) 61:12-15 [Tien]. Definitive diagnosis of genetic fetal conditions requires amniocentesis, which can only be performed at 15 weeks LMP or beyond, or chorionic villi sampling ("CVS"), which can be performed between 10 and 13 weeks LMP;

however, many patients in rural or resource-limited areas do not have access to a subspecialist to provide CVS. Tien Decl. ¶ 46. For some genetic conditions, it can take several weeks for the results of either an amniocentesis or CVS to return, further delaying the patient's decision-making regarding these fetal conditions. *Id.* Structural fetal conditions may not be identified until an anatomical ultrasound survey, which occurs between 18 and 22 weeks LMP. *Id.*; Hr'g Tr. (Rough) 60:22–61:24 [Tien].

38. At least some of these serious fetal conditions do not fit squarely within the Act's very limited exceptions. Hr'g Tr. (Rough) 68:4-25 [Tien]. As Dr. Tien explained, many conditions may not be fatal but can have profound and lasting implications for the patient, the family, and the neonate if the pregnancy is carried to term. Hr'g Tr. (Rough) 68:10-13 [Tien].

39. Florida's reporting indicates that in 2021, at least 757 Florida abortions took place because of a serious fetal anomaly and that 484 of those took place in the second trimester. Tien Decl. ¶ 47; *see* State's Resp., Ex. A (Fla. Agency for Health Care Admin., Reported Induced Terminations of Pregnancy (ITOP) by Reason, by Trimester, 2021 – Year to Date (May 9, 2022), https://ahca.myflorida.com/mchq/central_services/training_support/docs/TrimesterByReason_2021.pdf. However, Florida's state-required, web-based abortion reporting system, which records patients' reasons for termination, has limitations, as

it allows for the selection of only one reason for having an abortion. *Id.* Patients frequently have multiple reasons for seeking an abortion, and their own health or a fetal condition may be only one of many considerations. *Id.* Therefore, the reported numbers are likely an under-representation of the instances in which these factors drive or help drive a patient's decision to have an abortion. *Id.*

40. Patients faced with a diagnosis of a fetal condition also need time to make the right decisions for themselves and their families, based on information from their prenatal care providers and from multiple sources with knowledge about the fetal anomaly at issue, discussion with family and other support systems, and consultation with their clergy, social workers, or other resources. Tien Decl. ¶ 48; *see* Hr'g Tr. 63:10–21.

9. Pregnancy Complications

41. Patients also may seek abortions later in pregnancy because their health is threatened by their ongoing pregnancy. Tien Decl. ¶ 55. In many cases, even patients with significant pregnancy-related health issues may not satisfy the Act's exception to prevent a "serious risk of substantial and irreversible physical impairment of a major bodily function . . . other than a psychological condition." *Id.*; *see* HB 5, § 4 (to be codified at § 390.0111(1), Fla. Stat.). Many disease processes present as a spectrum, and the Act would seem to require a physician to delay intervention until it is clear the patient is at serious risk of substantial and permanent

harm or death. Tien Decl. ¶ 55; Hr'g Tr. (Rough) 68:21–70:9 [Tien]. Dr Tien testified that this result is antithetical to quality patient care. *Id.*

42. As an example, some patients experience chronic bleeding throughout their pregnancies that can escalate at any point, requiring active intervention and treatment. Tien Decl. ¶ 56; *see* Hr'g Tr. (Rough) 68:25–69:11 [Tien]. For patients who do not respond to initial treatments, it is the standard of care, depending on the gestational age, to perform an abortion to protect the patient's life and health. Tien Decl. ¶ 56; *see* Hr'g Tr. (Rough) 69:4-11 [Tien]. Like many maternal health issues, bleeding can progress in unpredictable ways; having to assess at what stage a deteriorating patient's condition qualifies for the life or health exception—at risk of a prosecutor or jury disagreeing with that assessment—places physicians in an impossible situation. Tien Decl. ¶ 56; *see* Hr'g Tr. (Rough) 69:17-24 [Tien].

D. Likelihood Women Will Seek Earlier Abortions Under HB 5

43. Nearly 5,000 patients obtained abortion care in Florida in the second trimester in Florida in 2021. Tien Decl. ¶ 18; *see* State's Resp., Ex. A (Fla. Agency for Health Care Admin., Reported Induced Terminations of Pregnancy (ITOP) by Reason, by Trimester, 2021 – Year to Date (May 9, 2022), https://ahca.myflorida.com/mchq/central_services/training_support/docs/TrimesterByReason_2021.pdf. The Court credits the testimony of Dr. Tien and finds, based on the evidence, that under HB 5, many of these patients would be unable to obtain

abortions in Florida prior to 15 weeks LMP and therefore (unless they fell into one of HB 5's narrow exceptions) would be unable to obtain abortions through the medical system in Florida at all. Poverty, substance addiction, intimate partner violence, post-15-week diagnoses, and the other factors identified above that can delay patients in obtaining an abortion will not disappear simply because the law has changed. Hr'g Tr. (Rough) 58:6-14 [Tien]. In other words, the Court finds that HB 5 will not simply encourage all women seeking abortions to obtain them prior to 15 weeks.

44. The Court also credits the testimony of Dr. Tien regarding the limited options available to patients who would be barred from obtaining an abortion under HB 5. She explained that some patients may attempt to travel long distances to obtain care in another state in which such care is still available, Hr'g Tr. (Rough) 64:22, 67:18-24 [Tien], which will result in further delays in accessing an abortion. But doing so would impose substantial economic and logistical burdens, and simply would not be possible for many patients, 75% of whom are poor or have low incomes. *Id.* at 53:23–54:5 [Tien]. Some patients may decide to end their pregnancies on their own, outside the medical system. *Id.* at 66:23–67:3 [Tien]. Others will be prevented from obtaining abortion care entirely and thus will be forced to continue their pregnancies and have children against their will. *Id.* at 66:23–67:3 [Tien].

III. Abortion and Maternal Health

45. The State contends that HB 5 furthers a compelling state interest in protecting maternal health. State's Resp. at 18–20. The parties presented extensive evidence on the safety of abortion services at and after 15 weeks LMP. The Court makes the following findings concerning the safety of abortion. In doing so, it finds the testimony of Plaintiffs' experts, Dr. Tien and Dr. Biggs, more persuasive than the testimony of the State's expert, Dr. Skop.

46. As detailed more fully below, Dr. Skop's testimony failed to show that abortion is unsafe after 15 weeks LMP or that HB 5 would improve maternal health. The State presented no other evidence on abortion safety.

A. Safety of Abortion Procedures

47. Dr. Tien testified persuasively that, based on her experience and training, abortion is a very safe procedure and that serious complications are very rare, including when abortion is performed after 15 weeks LMP, regardless of the method of abortion that is used. Tien Decl. ¶ 27; *see also* Hr'g Tr. (Rough) 43:3–45:13 [Tien]. She further testified that the safety of abortion has been extensively studied and is well established, and that there is no dispute in mainstream medicine about the safety of abortion. *Id.* at 43:19-25, 45:14–47:19, 48:17–49:22 [Tien]. To the extent that abortion, like all medical procedures, has risks, there is no evidence

in the record that the risks of abortion have increased since the Privacy Clause was added to the Florida Constitution in 1980.

48. Dr. Tien testified that there are two methods of abortion commonly used in the United States: medication abortion and procedural abortion. Tien Decl. ¶ 20; Hr'g Tr. (Rough) 41:23–42:2 [Tien]. Medication abortion using a two-pill regimen is performed only in early pregnancy, prior to 11 weeks LMP, and involves the use of a two-drug medication regimen to induce a process similar to early miscarriage. Tien Decl. ¶ 21; Hr'g Tr. (Rough) 41:23–41:25 [Tien]. At the gestational age relevant here—after 15 weeks LMP—medication abortion is not performed, and procedural abortion is the only generally-available option. Tien Decl. ¶ 20; Hr'g Tr. (Rough) 41:23–42:6 [Tien]. Procedural abortion is sometimes referred to as a "surgical abortion" even though it involves no incisions, requires no operating room, and can be performed with no anesthesia or sedation. Tien Decl. ¶ 20; Hr'g Tr. (Rough) 42:7-12 [Tien]. It is performed by dilating (opening) the cervix and then using either aspiration (suction) alone, or after approximately 14 to 16 weeks in pregnancy, a combination of suction and instruments, to evacuate the contents of the uterus. Tien Decl. ¶ 20; Hr'g Tr. (Rough) 229:22–230:2 [Tien]. When instruments are used, the procedure is known as a dilation and evacuation ("D&E") procedure. Tien Decl. ¶ 22.

49. Dr. Tien testified that serious complications from legal abortion are extremely rare, occurring in less than 0.5% of cases. *Id.* at 44:1-7, 45:16–46:8 [Tien]; Tien Decl. ¶¶ 26–27 (citing Ushma D. Upadhyay et al., Incidence of Emergency Department Visits and Complications After Abortion, 125 Obstetrics & Gynecology 175, 178–79 tbl. 3 (2015)).

50. The Court accepts Dr. Tien's testimony that the risk of serious complications from abortion increases as a pregnancy progresses. Hr'g Tr. (Rough) 89:7-11 [Tien]; Tien Decl. ¶ 27. However, the Court also credits Dr. Tien's testimony that, even after 15 weeks LMP, the risk of serious complications from abortions remains less than 0.5%. Hr'g Tr. (Rough) 44:1-7 [Tien]. By contrast, every pregnancy-related complication is more common among women whose pregnancy results in a live birth than among women who have abortions. Tien Decl. ¶ 26.

51. Patients who seek abortions are pregnant, which itself carries risks. *Id.* ¶ 25. For pregnant patients, having an abortion is safer than carrying a pregnancy to term. *Id.*

52. The mortality rate from abortion procedures is 0.6 to 0.7 per 100,000 procedures. Hr'g Tr. (Rough) 44:8-17 [Tien]; Tien Decl. ¶ 25. Mortality rates are approximately 12 to 14 times higher for women undergoing childbirth than for women having abortions. Hr'g Tr. (Rough) 45:2-13 [Tien]; Tien Decl. ¶ 25. Dr. Tien further testified that maternal mortality rates are not only much higher than those for

abortion, but that the maternal mortality rates for childbirth also show significant racial disparities—the most recent mortality rates, from 2020, show approximately 19 deaths per 100,000 live births for white women, and 55 deaths per 100,000 live births for Black women. Hr'g Tr. (Rough) 44:23–45:1 [Tien]; Tien Decl. ¶ 25. These maternal mortality rates have continued to increase in the last 10 to 20 years, while the mortality rate associated with abortion has not. Hr'g Tr. (Rough) 44:21-23 [Tien]; Tien Decl. ¶ 25. The Court credits this testimony.

53. Dr. Tien further testified that the mortality risk from abortion is extremely low compared to other outpatient procedures, such as a colonoscopy, plastic surgery, or certain dental procedures. Hr'g Tr. (Rough) 47:20–48:7 [Tien]; Tien Decl. ¶ 23.

54. The Court finds that Dr. Tien's testimony as to the safety of abortion, including when performed after 15 weeks, based on her training and extensive clinical experience in the OB/GYN and MFM fields, is persuasive. In addition, and separately, the literature that Dr. Tien relied upon in formulating her opinions is credible, robust, supports her opinions, and is widely accepted in the scientific community. Hr'g Tr. (Rough) 43:19-25, 45:14–47:19 [Tien] (discussing studies and data supporting opinion as to the safety of abortion and explaining indicia of reliability). The Court therefore accords significant weight to Dr. Tien's testimony.

55. Dr. Tien's opinion on abortion safety differs from Dr. Skop's opinion. Dr. Skop has been an OB/GYN for 30 years, but she has never performed an abortion. *Id.* at 199:10-17 [Skop]. Until April 1, 2022, Dr. Skop was in private practice with a group for almost 26 years, but none of the physicians in that group performed abortions. Skop Dep. Tr. 14:7-11, 19:8-13, 22:3-4. She has never recommended an abortion to any of her patients. Hr'g Tr. (Rough) 199:18-20 [Skop]. She has never performed intrauterine fetal surgery. *Id.* at 200:7-16 [Skop].

56. Dr. Skop is a full-time, salaried senior fellow at the Charlotte Lozier Institute ("CLI"), a pro-life research institution. *Id.* at 179:20-21, 201:5-20 [Skop].

57. Dr. Skop testified that, based on her experience, she has "not found any medical reasons that women must have" an abortion, and that she thinks abortion "is used for social indications." *Id.* at 204:12-15 [Skop]. She disputes scientific findings that abortion is safer than childbirth based on her belief that the data is "compromised." *Id.* at 191:15-18 [Skop].

58. Dr. Skop conceded that her views on abortion safety are "inconsistent with the findings of [a] number of medical associations." *Id.* at 204:21-25. These institutions include mainstream medical associations in the U.S., such as the American College of Obstetricians and Gynecologists ("ACOG"), the American Psychological Association ("APA"), the National Academies of Sciences, Engineering, and Medicine ("NASEM"), the American Medical Association

("AMA"), as well as U.S. governmental agencies, such as the Centers for Disease Control and Prevention ("CDC"). *Id.* at 205:4-9, 207:16-25, 208:2-25, 209:2-8, 210:10-22, 212:6-20. Dr. Skop maintains that all these institutions have a "pro choice" bias. *Id.* at 205:1-3. However, Dr. Skop acknowledged that she reads and relies on ACOG for other information, and she conceded that the organization provides useful information on topics other than abortion. *Id.* at 206:6-9.

59. Dr. Skop testified that D&E abortion—*i.e.*, a procedural abortion method used in the second trimester—is unsafe, referencing a 20-year-old study as support for her position. *Id.* at 219:17-25, 220:1-7; Skop Decl. ¶ 24. However, the study Dr. Skop referenced showed only that mortality rates increased as a pregnancy progressed; those rates remained lower than maternal mortality rates are today, and Dr. Skop agreed that the study showed that mortality rates associated with abortion declined over time. Skop Dep. Tr. 154:1-16 (referencing Linda A. Bartlett, et al., *Risk Factors for Legal Induced Abortion–Related Mortality in the United States*, Tables 1 and 2). In her testimony at the hearing, Dr. Skop could not point to any current data to support the conclusion that D&E abortions are not safe. Hr'g Tr. (Rough) 220:16–221:21 [Skop].

60. Dr. Skop also testified that the mortality risk from D&E rises with gestational age. Skop Decl. at 5-6. However, she conceded that this opinion rested on one study from 1981, which "reflects 1970s data," and that she largely did not

know "the specific details" of how the D&E procedure has evolved since 1981. Skop Dep. Tr. 110:17–111:16, 113:15-20. She further acknowledged that she did not know "how accurate the mortality data" used in the 1981 study was. *Id.* at 118:8–13.

61. Dr. Skop testified that the abortion mortality rate of 0.7 percent per 100,000 procedures reported in a NASEM study was inaccurate because she believes all existing data on abortion mortality in the U.S. are inaccurate, due to pressure on abortion providers to undercount mortality. Skop Dep. Tr. 86:10–23, 172:25–175:9. However, she also testified that she thought "the data on colonoscopy, dental procedures, plastic surgery, [and] tonsillectomy" in the same study were "likely to be more accurate. . . than the data related to abortion." *Id.* at 173:20–24.

62. Dr. Skop maintained that the complication rate in the United States for D&E abortions is much higher than studies consistently report, but she could point to no data to support that belief. Skop Dep. Tr. 92:1-2. She testified that she believes the United States has poor data on complications from abortions because the United States does not mandate the reporting of complications. *Id.* at 76:12–78:5. Dr. Tien, however, testified that reporting on pregnancy-related complications is more robust than reporting in other areas of medicine, and that the literature showing low rates of complications from abortions rests on scientifically sound CDC data. *Id.* at

231:15-24, 233:12–235:23 [Tien]. The Court credits this testimony of Dr. Tien over Dr. Skop's conflicting testimony.

63. Dr. Skop testified that there is "good data"—which she did not specify—that D&E procedures cause placental abruption in future pregnancies, which leads to premature delivery and could lead to hemorrhage. *Id.* at 197:11-14 [Skop]. She also testified that later-term abortions can damage the cervix "as the uterus enlarges and the pressure inside increases that can cause a woman to go into preterm labor." *Id.* at 198:1-3 [Skop]. She also testified that the ACOG "reports the second trimester abortion risks of hemorrhage . . . are 3.3 percent" and risks of "0.5 percent [for] uterine perforation." Skop Decl. at 4.

64. The Court does not credit Dr. Skop's opinions on these points. Dr. Skop admitted that her statement in her declaration regarding ACOG's data on the abortion risks of hemorrhage and uterine perforation was inaccurate, and that ACOG instead reported the risks of hemorrhage at 0.1 to 0.6 percent, and uterine perforation at 0.2 to 0.5 percent. Skop Dep. Tr. 68:21–69:5, 70:6-22, 71:20-23. Dr. Skop also stated that the risk of abortion complications "is far higher than ACOG reports," but pointed to no evidence for this claim. *Id.* at 71:1–3.

65. Further, the Court found Dr. Skop's testimony to be unsupported, such as when she asserted that she had "no doubt" that abortion can create complications in future pregnancies yet also said that "at this time we don't have the ability to

detect those complications to prove that that is happening." Hr'g Tr. (Rough) 198:8-13 [Skop]. Dr. Skop also testified that she believed a NASEM study undercounted the risks of D&E-related hemorrhage requiring transfusion because, "based on [her] clinical experience and what [she] ha[s] seen, [she] think[s] the rates are higher." Skop Dep. Tr. 90:16–92:1. But she admitted that "there may not be a study that documents" her belief that the risks are higher than the NASEM study's reported risks. Skop Dep. Tr. 90:16–92:1.

66. By contrast, Dr. Tien testified persuasively that the risks from abortion that Dr. Skop identified either do not exist or are less serious than Dr. Skop suggests. Hr'g Tr. (Rough) 231:1-11 [Tien]. For example, while Dr. Skop testified that an abortion procedure that involves sharp uterine curettage could theoretically cause placental abruption in a future pregnancy, *id.* at 197:2-14 [Skop], she does not provide abortion care, and Dr. Tien, who does provide abortion care, testified that sharp curettage is not used in contemporary abortion practice, *id.* at 233:8-11 [Tien]. As to Dr. Skop's assertion that abortion procedures can damage the cervix, Dr. Tien testified that these concerns are not supported. Before performing a procedural abortion, it is standard procedure to ensure that the cervix is adequately dilated using gentle cervical ripening and dilation techniques. *Id.* at 232:7-16 [Tien]. And Dr. Tien testified that, although there is a weak association between abortion and a subsequent premature birth, other risk factors for premature birth, such as multiple gestation,

poverty, and prior pregnancies carried to term, present much higher risks for premature birth. *Id.* at 232:17–233:2 [Tien].

67. Dr. Skop also repeatedly contended that abortion providers are not regulated or are not regulated adequately. *Id.* at 211:24-25, 212:1-5 [Skop]. But Dr. Tien testified that abortion facilities in Florida must be licensed and inspected by a Florida state agency to maintain licensure. *Id.* at 226:18–23 [Tien]. Florida law also requires reporting of abortion complications; if the agency has a concern that an abortion facility is unsafe, it can revoke the facility's license. *Id.* at 227:3-10 [Tien]. An abortion provider's medical license also can be revoked if abortion patients treated by that provider experience an excessive number of complications; this is true for physicians in other areas of medicine as well. *Id.* at 228:1-11 [Tien].

68. Overall, Dr. Skop has no experience in performing abortions; admitted that her testimony on the risks of certain abortion complications was inaccurate and overstated, or based on data from decades ago; admitted that her views on abortion safety are out of step with mainstream medical organizations; and provided no credible scientific basis for her disagreement with recognized high-level medical organizations in the United States. The Court thus does not find Dr. Skop as credible on the risks of abortion complications and quality of abortion care as Dr. Tien, who has significant experience in performing abortions and the other qualifications set forth above.

B. Abortion and Mental Health

69. Dr. Skop also testified that abortion has a negative effect on the mental health of the woman who obtains the abortion. Hr'g Tr. (Rough) 193:11-14. However, Dr. Skop acknowledged that she has "no formal training in mental health counseling outside of [her] time in medical school," *id.* at 199:21-24, and she testified that she would not refer to herself as an expert in mental health, *id.* at 200:3-4.

70. By contrast, Plaintiffs' rebuttal expert, Dr. Antonia Biggs, is a social psychologist and researcher working in the Department of Obstetrics, Gynecology, and Reproductive Sciences within the Advancing New Standards in Reproductive Health program at the University of California, San Francisco. Declaration of Antonia Biggs ("Biggs Decl.") ¶ 1. She has conducted research on the association between abortion and mental health; has worked extensively in this field, both nationally and internationally, for over 20 years; and has 84 peer-reviewed publications and three book chapters. *Id.* Given her expertise on abortion and mental health, and Dr. Skop's comparative lack of expertise, the Court credits Dr. Biggs' declaration and adopts and incorporates it into this Order. *See* Appendix.

71. In her declaration, Dr. Biggs discusses evidence establishing that abortion does not result in negative mental health outcomes. Biggs Decl. ¶ 9. Dr. Biggs provided a thorough and persuasive analysis of the scientific literature on this

point. She cited, *inter alia*, the Turnaway Study, with which she was involved as a researcher. *Id.* ¶ 20. The Turnaway Study is "the largest study of women denied a wanted abortion, most of whom were beyond the first trimester of pregnancy, and the only one that follows women denied an abortion in the United States over time to track their mental, physical, and financial health and well-being." *Id.* ¶ 21. It has resulted in the publication of over fifty peer-reviewed articles and a book. *Id.* ¶ 20. NASEM has noted that the Turnaway Study was "designed to address many of the limitations of other studies" and "contributes unique insight into the consequences of receiving a desired abortion versus being denied the procedure and carrying the pregnancy to term." *Id.*

72. The Turnaway Study concluded that abortion is not associated with negative mental health outcomes, including abortions beyond the first trimester. *Id.* ¶ 22. Specifically, it concluded that abortion does not cause or increase a patient's risk of experiencing anxiety, depression, dysphoria, or posttraumatic stress symptoms or disorders, nor does it result in substance use disorders. *Id.* ¶ 24.

73. Rather, the Turnaway Study demonstrated that the denial of a desired abortion can negatively impact a patient's mental health and well-being. *Id.* ¶ 36. It showed that the denial of a desired abortion negatively impacts the mental health, socioeconomic status, and aspirations for the future of the patient in the short and long-term. *Id.* Patients denied an abortion are more likely to be pushed below the

poverty line, raise children alone, receive public assistance, and be unable to afford basic living needs, such as food, housing, and transportation. *Id.* They are less likely to make and achieve aspirational life plans, such as pursuing education, and to be able to exit an abusive relationship. *Id.* ¶ 37. Dr. Biggs concluded, based on her research, that HB 5 will not benefit the mental health of women who are denied abortions after 15 weeks LMP. *Id.* ¶ 38. Dr. Skop critiqued the Turnaway Study's participation rate, *id.* at 216:44-8, but the Court credits Dr. Biggs' explanation that the Turnaway Study's participation rate is within the expected range for a five-year study and similar to other prospective studies of this type, Biggs Decl. ¶ 23.

74. The Court finds the conclusions of this study to be instructive in its analysis of whether HB 5 benefits the mental health of patients seeking abortion after 15 weeks LMP. Based on the depth of Dr. Biggs' expertise and the quality of the evidence cited, the Court finds her declaration to be precise and persuasive and considers it the best evidence in this case regarding mental health and abortion. As such, the Court gives Dr. Biggs' opinion substantial weight.

C. The Act's Effect on Maternal Health

75. Dr. Skop's opinion that abortion is unsafe after 15 weeks LMP is contrary to the view of major professional organizations and is not supported by sound scientific evidence. Her opinion that HB 5 would benefit the mental health of patients seeking abortion after 15 weeks LMP is also unconvincing. Plaintiffs

presented substantial, persuasive evidence to the contrary. Thus, the Court finds that the State's claimed interest in protecting maternal health is not furthered by HB 5's ban on abortion after 15 weeks LMP.

76. Moreover, the Court finds that HB 5 will not actually cause all the women it targets to obtain their abortions earlier. Instead, the evidence shows that HB 5 will delay some patients in obtaining abortions because they are forced to travel out of state to access care, Hr'g Tr. (Rough) 67:18-68:2; will result in others attempting abortions outside the medical system, *id.* at 67:1-3; and will result in still others being forced to continue their pregnancies to term and give birth against their will, *id.* at 67:8-17, even though that is the medically riskier course. The Court credits Dr. Tien's testimony that, for these additional reasons, HB 5 is likely to undermine rather than advance maternal health. *Id.* at 67:4-70:9.

IV. Abortion and Fetal Pain

77. The State contends that HB 5's ban on abortions after 15 weeks LMP furthers a state interest in preventing fetal pain. State's Resp. at 20-22. The Court makes the following findings on fetal pain. In doing so, it credits the testimony of Plaintiffs' expert Dr. Tien based on her extensive experience as a medical doctor in the areas of maternal-fetal medicine, obstetrics, and gynecology, and gives the testimony of the State's expert, Dr. Maureen Condic, who is not a medical doctor

and whose opinion runs contrary to credible and scientifically supported evidence, little to no weight.

78. Dr. Condic's opinions regarding a fetus's ability to feel pain before 24 weeks LMP are not properly supported, and thus her testimony fails to establish that fetal pain perception is possible during the periods of gestation (after 15 weeks LMP) at issue here.[3] The State presents no evidence, other than Dr. Condic's declaration and live testimony, to try to establish that fetal pain perception exists during the gestational period in which HB 5 would ban abortions. Accordingly, the State fails to establish that HB 5 advances any interest the State may have in preventing fetal pain.

79. Dr. Tien, who (unlike Dr. Condic) has clinical experience with patients, testified that if a fetus could feel pain, it would be relevant to her role as an MFM specialist providing care to patients with high-risk pregnancies and that it would inform every discussion with these patients. Hr'g Tr. (Rough) 238:5-15 [Tien].

80. Dr. Tien credibly explained that perception of pain requires several components: the development of receptors to receive information from the external environment; neurologically developed pathways to deliver information between the

[3] Dr. Condic also testified about "when life begins." Hr'g Tr. 115:17-22. The Court finds evidence about when life begins irrelevant to the question of HB 5's constitutionality under controlling law.

spinal cord and portions of the brain; and a high level of cortical processing to interpret that information. *Id.* at 238:12–239:9 [Tien].

81. Dr. Tien testified that while the receptors that absorb environmental stimuli may be developed earlier in pregnancy, the "basic foundation building blocks" necessary for fetal pain perception are not in place until 24 to 26 weeks LMP. *Id.* at 90:5–91:11, 238:12–239:9 [Tien].

82. Dr. Tien also testified that as an MFM specialist, part of her role is to diagnose fetal structural defects, counsel patients on the findings, and coordinate the care team involved in intrauterine fetal surgery. *Id.* at 239:13–240:1 [Tien]. The care team for intrauterine fetal surgery also includes the required pediatric subspecialist(s) and an anesthesiologist. *Id.* at 241:4–242:7, 243:15–21 [Tien]. The purpose of anesthesia and analgesia used during intrauterine surgery is not to treat fetal pain, however, so the anesthesiologist does not act directly on the fetus (such as by delivering medication to the fetus by IV). *Id.* at 243:22–244:22 [Tien]. Instead, anesthesia and analgesia are used to maximize uterine relaxation, as a paralytic, to blunt fetal physiological responses (such as a drop in heart rate), and/or to monitor the maternal-fetal unit. *Id.* at II, 242:4–243:21 [Tien].

83. Moreover, Dr. Tien testified that when intrauterine procedures are performed on the fetus that do not involve an incision into the uterus (that is, those that do not constitute surgery as the term is commonly understood), these procedures

do not require anesthesia or analgesia, even though the procedure involves interventions to the fetus, and it is the standard of care not to provide such anesthesia unless it is specifically indicated for some reason other than pain (for example, to relax the uterus for the procedure). *Id.* at 242:20-243:9 [Tien]. The Court finds that such practices by physicians charged with providing care to women with high-risk pregnancies belie Dr. Condic's contention about fetal pain perception during the period of gestation affected by HB 5.

84. Dr. Condic is an "animal biologist" who "does not work on humans." Hr'g Tr. (Rough) 145:4-5 [Condic]. Dr. Condic has never provided clinical care to either adults or babies. *Id.* at 145:22-24 [Condic]. Like Dr. Skop, Dr. Condic is affiliated with CLI. *Id.* at 163:4-11 [Condic].

85. Dr. Condic testified that pain "has many different dimensions," the simplest of which, known as "nociceptive pain," is the ability to detect and respond to a potentially damaging or noxious stimulus. *Id.* at 120:20-121:8 [Condic]. She testified that circuitry responsible for nociceptive pain is in place between 10 to 12 weeks LMP. *Id.* at 121:3-8 [Condic]. Dr. Condic testified that the fetus develops the circuitry capable of supporting a conscious awareness of pain between 14 to 20 weeks LMP. *Id.* at 121:9-25 [Condic]. She provided a range of dates because, in her view, one cannot "set an absolute point for every individual where certain neurodevelopmental events will occur." *Id.* at 128:17-20 [Condic].

86. According to Dr. Condic's testimony—which the Court does not accept as more credible than Dr. Tien's—a fetus could feel and appreciate pain at 14 weeks LMP, which is before the 15-week LMP point after which HB 5 prohibits abortions. *See Id.* at 121:9-25 [Condic]. Therefore, while the Court does not find Dr. Condic's testimony that a fetus can experience conscious awareness of pain before 15 weeks LMP to be credible or supported by the evidence, even if it were, her testimony that such pain could exist *before* 15 weeks LMP does not support the State's contention that avoiding pain is a valid reason to reduce the abortion cut-off from viability to after 15 weeks LMP.

87. Dr. Condic acknowledged that there is a difference between "nociception" and the conscious perception of pain. *Id.* at 146:13-16 [Condic]. She testified that it is "generally [accepted]" that neural connections between the thalamus and the cortex do not develop until 24 to 26 weeks LMP. *Id.* at 147:7-10 [Condic]. Dr. Condic agreed that if the cortex were necessary to have a conscious awareness of pain, pain would not be possible until about 24 weeks LMP. *Id.* at 151:22-152:3, 151:12-17 [Condic].

88. Dr. Condic conceded that, at a September 2020 deposition in another case involving abortion restrictions, she testified that, even at 18 weeks LMP (three weeks after HB'5 cutoff), it is difficult to make a clear, unambiguous case that a fetus has the circuitry in place capable of having a conscious awareness of pain. *Id.*

at 148:16-150:1; 152:10-25 [Condic]. Dr. Condic further admitted that her opinions of fetal consciousness and self-awareness stem from "extrapolating . . . quite a bit." *Id.* at 127:23-25 [Condic].

89. Dr. Condic conceded that three leading authorities in obstetrics and gynecology and maternal-fetal medicine—ACOG, the Royal College of Obstetricians and Gynecologists, and the Society of Maternal-Fetal Medicine—all disagree with her view about the earliest point in gestation at which a fetus might be consciously aware of pain. *Id.* at 166:15-21.

90. For these reasons, the Court accepts Dr. Tien's testimony as credible and persuasive based on her experience as an MFM specialist, including her first-hand knowledge of fetal surgery and intrauterine fetal procedures. In contrast, the Court gives no weight to Dr. Condic's opinions because Dr. Condic has no clinical experience with humans and conceded that her estimation of when fetal pain perception occurs differs from the "generally [accepted]" view among mainstream medical organizations. *Id.* at 147:7-10 [Condic].

91. The Court finds that the scientific evidence supports the conclusion that, due to the lack of the necessary pathways, the earliest point at which a fetus could have the necessary components—or building blocks—to feel pain is 24-26 weeks LMP.[4] The Court finds that an asserted interest in preventing fetal pain is not

[4] Existing Florida law bans abortion after fetal viability. §§ 390.011(1), 390.01112, Fla. Stat.

supported by the most persuasive evidence in this case and thus does not support HB 5's ban on abortion after 15 weeks LMP.

V. Effects on Plaintiffs If HB 5 Is in Effect

92. The Court credits Dr. Tien's testimony that HB 5 directly impedes and interferes with the patient-physician relationship. Hr'g Tr. (Rough) 70:15-16 [Tien]. She testified that physicians have a duty to provide evidence-based and compassionate care, including counseling patients on all their options. *Id.* at 70:16-24 [Tien]. The Court finds that HB 5 would force abortion providers in this state to stop providing abortions past 15 weeks, even when that is contrary to their good-faith medical judgment and their patients' needs and wishes, unless one of the Act's limited exceptions applies.

93. With respect to those exceptions, the Court credits Dr. Tien's testimony that waiting until a patient's life is at risk, or until the patient deteriorates to the point that an abortion is needed to prevent substantial, irreversible physical impairment of a major bodily function, is antithetical to the provision of good medical care. *Id.* at 68:21-70:9 [Tien]. Dr. Tien testified that healthcare providers who are not aware of the nuances of the law may not intervene even when one of the narrow exceptions to HB 5 applies, for fear of fines, loss of their license, or imprisonment, and the Court finds that her testimony on this point was credible. *Id.* at 69:17-24 [Tien].

94. Plaintiffs and the State have stipulated as follows: "All Plaintiff facilities perform abortions after 15 weeks. If any Plaintiff facility performed such an abortion with HB 5 in effect, the facility and/or its employees would be subject to enforcement as provided in Florida law." Case Mgmt. Order, June 27, 2022, at ¶ 5. The Court finds that Dr. Tien also would be subject to the enforcement provisions of HB 5, including imprisonment, if HB 5 were in effect and she provided an abortion in Florida after 15 weeks LMP that did not fall within HB 5's narrow exceptions.

CONCLUSIONS OF LAW

I. Standing

95. The Court concludes that, under the applicable caselaw, Plaintiffs have third-party standing to bring this suit on behalf of their actual and potential patients.

96. This conclusion is consistent with the Florida Supreme Court's prior decisions reaching the merits of similar claims brought by abortion clinics and physicians, seeking relief on behalf of their patients. *See generally Gainesville Woman Care, LLC v. State*, 210 So. 3d 1243 (Fla. 2017) ("*Gainesville*") (suit filed by abortion provider and an abortion advocacy group); *State v. Presidential Women's Ctr.*, 937 So. 2d 114 (Fla. 2006) (suit filed by two abortion clinics and a doctor who performs abortions); *see also State v. N. Fla. Women's Health & Counseling Servs., Inc.*, 852 So. 2d 254, 259-60 (Fla. 1st DCA 2001) ("reject[ing]

the state's contention that" physician lacked standing to raise the rights of pregnant minor patients), *rev'd on the merits*, 866 So. 2d 612 (Fla. 2003); *accord Feminist Women's Health Ctr. v. Burgess*, 651 S.E.2d 36, 38-39 (Ga. 2007) ("Virtually every state court considering the issue has similarly held that abortion providers have standing to raise the constitutional rights of their patients," and collecting cases).

97. In all events, Plaintiffs satisfy the three-part inquiry for third-party standing.

98. Florida applies the federal standard for third-party standing, which requires a showing that (1) the plaintiff has suffered an injury in fact giving him or her a sufficiently concrete interest in the dispute; (2) the plaintiff has a close relation to the third party; and (3) there exists some hindrance to the third party's ability to protect his or her own interests. *Alterra Healthcare Corp. v. Estate of Shelley*, 827 So. 2d 936, 941–42 (Fla. 2002).

99. As to the first prong, the Court concludes that Plaintiffs have shown they will suffer an injury in fact arising from HB 5, giving them a sufficiently concrete interest in this dispute. HB 5 will force Plaintiffs either to stop providing abortions after 15 weeks LMP, or to face criminal prosecution, license revocation, and other penalties. *See State v. Benitez*, 395 So. 2d 514, 517 (Fla. 1981) ("A party subject to criminal prosecution clearly has a sufficient personal stake in the penalty which the offense carries."); *N. Fla. Women's Health & Counseling Servs., Inc.*, 852

So. 2d at 259 (physicians had third-party standing to challenge an abortion law because they were subject to license revocation and sanctions for violating the law); *cf. Craig v. Boren*, 429 U.S. 190, 196-97 (1976) (where law impairs third party's constitutional rights by directly imposing "legal duties and disabilities" on someone else, the party subject to those duties and penalties is "the obvious claimant").

100. The Court is not persuaded by the State's argument that Plaintiffs lack standing because they have indicated they will comply with HB 5 if it is in effect and thus will not be subjected to its penalties. State's Resp. at 6 & n.7. Coerced compliance is still an injury in fact. *See Lake Carriers' Ass'n v. MacMullan*, 406 U.S. 498, 508 (1972); *see also MedImmune, Inc. v. Genentech, Inc.*, 549 U.S 118, 119, 129 (2007) (standing exists even where plaintiffs intend to comply with a law where "the threat-eliminating behavior was effectively coerced" by the threat of prosecution). *San Diego Cnty. Gun Rights Comm. v. Reno*, 98 F.3d 1121 (9th Cir. 1996), cited by the State, does not apply here. Unlike Plaintiffs, who currently offer services that HB 5 will prohibit, the plaintiffs in *San Diego Cnty. Gun Rights Comm.* "merely assert[ed] that they wish[ed] and intend[ed] to engage in activities prohibited by'" the law at issue. 98 F.3d at 1127. And as Dr. Tien testified, HB 5 would directly interfere with her relationships with her patients because the law would force her to stop providing abortions past 15 weeks (unless one of the Act's limited exceptions applies), even when doing so would be contrary to her good-faith

medical judgment and her patients' needs and wishes. Hr'g Tr. 68:22-69:17, 70:15-71:1 [Tien]; Tien Decl. ¶¶ 57, 61. In addition, and also as Dr. Tien testified, HB 5 would create a real risk that healthcare providers, in fear of the potential loss of their licenses and potential criminal penalties, will struggle to evaluate whether one of HB 5's limited exceptions applies and whether they can intervene to provide abortion care covered by one of those exceptions after 15 weeks. Hr'g Tr. 69:17-70:9 [Tien]; Tien Decl. ¶¶ 56, 60-61.

101. The State conceded the second prong of the standing inquiry—that Plaintiffs have a sufficiently close relation to their patients for the purposes of third-party standing, State's Resp. at 5 n.6—and the Court agrees. *See* Hr'g Tr. (Rough) 70:15-71:1 (Dr. Tien testifying about the importance and closeness of the relationship between a patient considering an abortion and her healthcare provider). "The closeness of the relationship [between abortion provider and pregnant person seeking abortion care] is patent . . . . A woman cannot safely secure an abortion without the aid of a physician . . . ." *Singleton v. Wulff*, 428 U.S. 106, 117 (1976).

102. Finally, as to the third prong of the third-party standing inquiry, the Court concludes that Plaintiffs' patients would face a hindrance to suing to protect their own interests. The Court follows the many courts that have held that the time-limited nature of pregnancy, when compared to how long litigation can take, is an obstacle to the ability of pregnant women to sue to protect their own interests. *See*

Powers v. Ohio, 499 U.S. 400, 410–11 (1991); *Singleton*, 428 U.S. at 116–17; *Feminist Women's Health Ctr.*, 651 S.E.2d at 39; *N.M. Right to Choose/NARAL v. Johnson*, 975 P.2d 841, 847 (N.M. 1998); *Pro-Choice Miss. v. Fordice*, 716 So. 2d 645, 663-64, 665 (Miss. 1998); *N. Fla. Women's Health & Counseling Servs., Inc.*, 852 So. 2d at 259. None of the cases the State cites in which pregnant women did litigate challenges to abortion laws, *see* State's Resp. at 6–7, involved challenges to time-limited abortion bans, *see In re T.W.*, 551 So. 2d 1186 (parental consent for minor abortion); *Renee B. v. Fla. Agency for Health Care Admin.*, 790 So. 2d 1036 (Fla. 2001) (class action on exclusion of medically necessary abortions from Medicaid coverage); *Burton v. State*, 49 So. 3d 263, 264 (Fla. 1st DCA 2010) (non-abortion case involving involuntary confinement of a pregnant person). Thus, none of these cases suggest that pregnant patients would *not* face challenges in bringing individual lawsuits against HB 5.

103. Moreover, the Court is not persuaded by the suggestion that individual abortion patients (most of whom, according to the credible testimony of Dr. Tien, face difficult circumstances, including poverty, Hr'g Tr. (Rough) 52:12-58:14, would be able to litigate the complex matters at issue and in this case individually and on a compressed timeframe (*i.e.*, after 15 weeks LMP but before fetal viability). Those unable to secure relief in time will be forced to remain pregnant and give birth against their will.

104. Because Plaintiffs have standing, the Court will turn to the merits of their request for temporary relief.

II. Temporary Injunction Factors

A. Standard

105. To obtain a temporary injunction, Plaintiffs must demonstrate: "(1) a substantial likelihood of success on the merits, (2) the unavailability of an adequate remedy at law, (3) irreparable harm absent the entry of an injunction, and (4) that the injunction would serve the public interest." *Fla. Dep't of Health v. Florigrown, LLC*, 317 So. 3d 1101, 1110 (Fla. 2021); *see also Liberty Couns. v. Fla. Bar Bd. of Governors*, 12 So. 3d 183, 186 n.7 (Fla. 2009); *St. John's Inv. Mgmt. Co. v. Albaneze*, 22 So. 3d 728, 731 (Fla. 1st DCA 2009).

B. Substantial Likelihood of Success on the Merits

106. Plaintiffs have a substantial likelihood of success on the merits of their claim that HB 5 violates the right to privacy contained in the Florida Constitution.

107. The Privacy Clause of the Florida Constitution expressly grants Floridians a right to privacy. Art. I, § 23, Fla. Const. ("Every natural person has the right to be let alone and free from governmental intrusion into the person's private life except as otherwise provided herein."). This right of privacy protects the "fundamental right of self-determination," which is defined as "an individual's control over [and] the autonomy of the intimacies of personal identity" and "a

physical and psychological zone within which an individual has the right to be free from intrusion or coercion . . . by government . . . ." *In re Guardianship of Browning*, 568 So. 2d 4, 9–10 (Fla. 1990) (internal quotation marks omitted).

108. The Florida Supreme Court has held that the right conferred by the Privacy Clause is broader than any right to privacy the U.S. Constitution affords, and thus that the Florida right to privacy cannot be compared to the federal right. *Gainesville*, 210 So. 3d at 1253; *In re T.W.*, 551 So. 2d 1186, 1191–92 (Fla. 1989); *Winfield v. Div. of Pari-Mutuel Wagering*, 477 So. 2d 544, 548 (Fla. 1985).

109. This Court must follow the Florida Supreme Court's precedents on the right to privacy as those precedents currently exist, not as they might exist in the future. *See, e.g.*, *Ellis v. State*, 703 So. 2d 1186, 1187 (Fla. 3d DCA 1997) ("[W]hen confronted with binding precedent, trial judges are obliged to follow that precedent even if they might wish to decide the case differently."); *see also Scott v. Trotti*, 283 So. 3d 340, 343-45 (Fla. 1st DCA 2018) (finding reversible error in the circuit court's entry of injunction based on disregard of "binding precedent . . . [it] was obligated to follow").

110. The Florida Supreme Court has held that the Privacy Clause guarantees women the right to abortion prior to viability. Striking down a law that restricted minors' access to abortion in *In re T.W*, the Supreme Court explained that the Privacy Clause "is clearly implicated in a woman's decision of whether or not to

continue her pregnancy." 551 So. 2d at 1192. The Privacy Clause "embodies the principle that few decisions are more personal and intimate, more properly private, or more basic to individual dignity and autonomy, than a woman's decision . . . whether to end her pregnancy. A woman's right to make that choice freely is fundamental." *Id.* (internal citations and quotation marks omitted).

111. In several decisions since *In re T.W.*, the Supreme Court has reaffirmed that the Florida Constitution preserves for women the fundamental right to decide whether to end their pregnancies. *Gainesville*, 210 So. 3d at 1254 (the Privacy Clause "encompasses a woman's right to choose to end her pregnancy"); *North Florida*, 866 So. 2d at 621 ("[A] woman has a reasonable expectation of privacy in deciding whether to continue her pregnancy" that is protected by the Privacy Clause); *Renee B.*, 790 So. 2d at 1040 ("The right of privacy in the Florida Constitution protects a woman's right to choose an abortion."); *Jones v. State*, 640 So. 2d 1084, 1086 (Fla. 1994) (the Privacy Clause's "right to be let alone protects adults from government intrusion into matters related to marriage, contraception, and abortion"); *cf. In re Guardianship of Browning*, 568 So. 2d at 13 (the fundamental right of privacy "safeguard[s] an individual's right to chart his or her own medical course").

112. Accordingly, the Florida Supreme Court has instructed that "laws that place the State between a woman . . . and her choice to end her pregnancy clearly

implicate the right of privacy," *Gainesville*, 210 So. 3d at 1254, and are "presumptively unconstitutional," *id.* at 1246.

113. HB 5 implicates the right to privacy by banning abortions after 15 weeks LMP. Thus, under *Gainesville*, HB 5 is presumptively unconstitutional.

114. Because HB 5 is presumptively unconstitutional, the burden shifts to the State to show that it survives strict scrutiny review, a point the State conceded during the evidentiary hearing. Hr'g Tr. (Rough) 22:8-21. To survive strict scrutiny, the State must demonstrate "that the challenged regulation serves a compelling state interest and accomplishes its goal through the use of the least intrusive means." *In re T.W.*, 551 So. 2d at 1192 (quoting *Winfield v. Div. of Pari-Mutuel Wagering*, 477 So. 2d 544, 547 (Fla. 1985)); *see also North Florida*, 866 So. 2d at 620-22 (rejecting lower standard of scrutiny applicable under federal law).

115. The State does not dispute that 15 weeks LMP is prior to viability. Fifteen weeks LMP is approximately two months before the point in pregnancy at which fetal viability might occur. Hr'g Tr. (Rough) 50:5-11 [Tien].

116. The Court rejects the State's argument that HB 5 is not a ban but a regulation that encourages women to seek abortions earlier. State's Resp. at 19–20. HB 5 prohibits anyone who is seeking an abortion after 15 weeks LMP from obtaining one in Florida, unless they fall within the law's two limited exceptions. That is a ban on abortions after 15 weeks LMP. *See Isaacson v. Horne*, 716 F.3d

1213, 1226–27 (9th Cir. 2013) ("The availability of abortions earlier in pregnancy does not, however, alter the nature of the burden that [the ban] imposes on a woman once her pregnancy is at or after [the gestational cut-off] but prior to viability," in which case "the pregnant woman 'lacks all choice in the matter' of whether to carry her pregnancy to term." (citation omitted)). And, as detailed in its factual findings above, the Court credits Dr. Tien's testimony about the many reasons that patients may be unable to obtain abortions before 15 weeks LMP. Hr'g Tr. (Rough) 52:12-58:14 [Tien].

117. The State asserts that HB 5's ban on pre-viability abortion advances Florida's compelling interests in protecting maternal health and preventing fetal pain. State's Resp. at 18-22. The Court concludes that the State has not sustained its burden to prove that these interests justify HB 5's complete ban on abortion before viability, nor has it proven that HB 5 is the least restrictive means to achieve either interest.

118. "[T]he Florida Constitution requires a 'compelling' state interest in all cases where the right to privacy is implicated." *In re T.W.*, 551 So. 2d at 1195 (citing *Winfield*, 477 So. 2d at 547). The Florida Supreme Court has recognized two compelling state interests that *could* justify state regulation of abortion—the interest in promoting maternal health and the interest in protecting potential life. *Id.* at 1193–94. However, the Court has also recognized that neither of these interests can support

an outright *prohibition* on abortion before fetal viability. *Id.* HB 5 prohibits abortions between 15 weeks LMP and fetal viability.

119. The Florida Supreme Court has held that, although the State's interest in protecting maternal health becomes compelling at the beginning of the second trimester, *see In re T.W.*, 551 So. 2d at 1193, this interest can justify only a *regulation* of "the manner in which abortions are performed," provided the regulation is "the least intrusive [way] designed to safeguard the health of the mother." *Id.* This interest, however, cannot support a *ban* on abortion before viability, *id.*, but that is what HB 5 is.

120. Furthermore, the evidence demonstrates that HB 5's ban on abortions after 15 weeks LMP does not, as a factual matter, advance an interest in protecting maternal health because abortion after 15 weeks is safe, and is significantly safer than carrying a pregnancy to term.

121. As noted in its factual findings, the Court credits Dr. Tien's testimony that abortion is safe at all stages of pregnancy and is safer than carrying a pregnancy to term. Hr'g Tr. (Rough) 43:5–44:7 [Tien]; *cf. In re T.W.*, 551 So. 2d at 1193 (noting that, even as of 1989, based on "technological developments . . . the point [until] which abortions are safer than childbirth" had already been "extended" later into pregnancy than at the time *Roe* was decided).

122. As noted in its factual findings, the Court also credits Dr. Biggs' testimony that being denied a wanted abortion can have harmful effects on the woman's mental health. Biggs Decl. ¶ 36.

123. The State argues that HB 5 will advance an interest in maternal health by encouraging women to have abortions before 15 weeks LMP. State's Resp. at 19–20. Dr. Tien acknowledged that the risks of abortion increase with gestational age but testified that the overall risk of complications from abortion remains very low and that carrying a pregnancy to term is the medically riskier path. Hr'g Tr. (Rough) 44:8-45:6, 68:1-3 [Tien].

124. Furthermore, the State has not shown that HB 5 actually will encourage women to have earlier abortions. As discussed above in the Court's findings of fact, and as Dr. Tien testified, many patients seeking abortions after 15 weeks do so for reasons that would prevent them from simply obtaining abortions earlier. Even the State acknowledges that not all women seeking abortions after 15 weeks LMP would be able to obtain them earlier. *See* State's Resp. at 16–17 (asserting that patients "will *in most cases* have the option to schedule their abortion earlier" (emphasis added)). Thus, the Court concludes that HB 5 will lead to some women who would have obtained abortions after 15 weeks being required to carry their pregnancies to term instead. HB 5 would undermine maternal health for these women by subjecting them to the increased health risks presented by carrying their pregnancies to term.

125. Similarly, the evidence reflects that patients who are unable to obtain an abortion after 15 weeks in Florida may be forced to travel significant distances—including travel in excess of 1,000 miles, round-trip—to access those services out-of-state. Hr'g Tr. (Rough) 64:22-65:10 [Tien]. Arranging and paying for such travel takes time (for those patients who are able to do so at all). The evidence shows that while abortion is an extremely safe procedure at and after 15 weeks, unnecessary delays in access to abortion can increase the risk of the procedure. Accordingly, subjecting patients seeking abortions after 15 weeks to delayed care in other states disserves the State's asserted interest in maternal health and encouraging earlier abortions; patients delayed by their efforts to access care in distant states would be subject to greater risk than if they were able to obtain such services earlier in Florida. The Court concludes that HB 5 does not further the State's interest in maternal health, but instead undermines that interest.

126. Moreover, the State did not present evidence showing that a complete ban on pre-viability abortion is the least restrictive means of protecting maternal health. There are ways to encourage earlier abortions that are far less restrictive than a complete ban—the State, for instance, could provide information on abortion or other resources to women in Florida to make it easier to get abortions earlier. Thus, HB 5 is not the least restrictive means for achieving the State's asserted interest in maternal health.

127. The State's asserted interest in preventing fetal pain also does not justify HB 5's ban on abortion before viability. At the outset, the Court concludes that the State's asserted interest, which, in its own words, is "protecting children in utero," State's Resp. at 18, is not materially distinct from the governmental interest in protecting potential life. Although the State contests this, it does not explain how these interests are distinct. *Id.* at 21. The Florida Supreme Court has held that the State's interest in protecting potential life does not become compelling until *after* viability. *In re T.W.*, 551 So. 2d at 1193. Until that point, and not before, the interests of the pregnant person and the fetus are "inextricably intertwined." *Id.* Accordingly, as a matter of law, protecting potential life cannot justify banning abortion prior to viability. *Id.* at 1193 & n.6 ("Restrictions to protect the state's interest in the potentiality of life . . . also may be imposed, but only after viability"); *Burton v. State*, 49 So. 3d 263, 266 (Fla. 1st DCA 2010) (holding that "[o]nly after the threshold determination of viability has been made may the court weigh the state's compelling interest" in protecting the fetus against patient's constitutional rights). The Court is not persuaded by the State's claim that *In re T.W.*'s holding on the interest in protecting potential life was *dictum*. *See* State's Resp. at 21-22. The Florida Supreme Court reaffirmed this holding from *In re T.W.* in *Krischer v. McIver*. 697 So. 2d 97, 102 (Fla. 1997) ("[S]tate's interest in prohibiting abortion is compelling after fetus reaches viability" (citing *In re T.W.*, 551 So. 2d at 1194)); *see*

also N. Fla. Women's Health, 866 So. 2d at 636 (describing the lead opinion as "the majority opinion of the Court and . . . binding precedent")

128. Although the Court does not believe the existing law permits consideration of the State's asserted interest in preventing fetal pain before fetal viability, the Court also, and as a separate basis for its conclusion, is not persuaded by the State's evidence that HB 5 furthers this asserted interest at all or in the least restrictive manner. As Dr. Tien testified (and as the Court finds above), a fetus cannot feel pain at 15 weeks LMP because the neural connections necessary for a conscious experience of pain do not develop until at least 24-26 weeks LMP. Hr'g Tr. (Rough) 91:3-11 [Tien]. The Court is not persuaded by Dr. Condic's testimony to the contrary. As set forth in the Court's factual findings, Dr. Condic admits that mainstream medical organizations including ACOG, the Royal College of Obstetricians and Gynecologists, and the Society for Maternal-Fetal Medicine, disagree with her opinion that cortical connections are not necessary for the conscious experience of pain. *Id.* at 166:15-21 [Condic]. Other courts have rejected Dr. Condic's views as outside the mainstream and therefore concluded they deserve little weight. *See Whole Woman's Health All. v. Rokita*, 553 F. Supp. 3d 500, 581 (S.D. Ind. 2021) (describing Dr. Condic's opinions on fetal pain as a "'fringe view' within the medical community"); *EMW Women's Surgical Ctr. v. Meier*, 373 F.

Supp. 3d 807, 822–23 (W.D. Ky. 2019) (rejecting contention that fetal pain is possible before 24 weeks as contrary to the consensus of the medical community).

129. The Court further notes that Dr. Condic testified that a fetus can feel pain *before* 15 weeks LMP. *Id.* at 120:20-121:8. Accordingly, even if the Court did find Dr. Condic's testimony persuasive on this point (which it does not), that testimony would lead to the conclusion that HB 5's 15-week ban is underinclusive. The State's apparent disagreement with its own expert on this point further supports the Court's decision not to credit Dr. Condic's opinions on fetal pain.

130. Further, the State did not present any evidence that a ban on pre-viability abortion is the least restrictive means of preventing fetal pain. The Court, moreover, is persuaded that a complete ban is *not* the least restrictive means. Other States have sought to address the same asserted interest in protecting against fetal pain by passing restrictions on the method of abortion, rather than categorically banning it. *See, e.g.*, *Bernard v. Individual Members of Ind. Med. Licensing Bd.*, 392 F.Supp.3d 935, 942–45 (S.D. Ind. 2019); *EMW Women's Surgical Center*, 373 F. Supp. 3d at 812–13, 822–23. The Court does not offer an opinion on whether these restrictions would be constitutional under Florida law. But the Court concludes that HB 5's ban on abortions outright beginning at 15 weeks LMP is not the least restrictive means. The law thus likely violates the Florida Constitution.

131. The Court further concludes that HB 5 is likely unconstitutional on its face. The Court rejects the State's argument that HB 5 is not facially unconstitutional because it would still allow women to get abortions before 15 weeks LMP. A statute is facially unconstitutional if "no set of circumstances exists in which the statute can be constitutionally applied." *Abdool v. Bondi*, 141 So. 3d 529, 538 (Fla. 2014); *accord Cashatt v. State*, 873 So. 2d 430, 434 (Fla. 1st DCA 2004). HB 5 does not prohibit abortions prior to 15 weeks LMP, and thus does not apply to women seeking or obtaining abortions prior to 15 weeks LMP, as the State agrees. However, as to the women to whom HB 5 *does* apply—those women seeking or obtaining abortions beginning at 15 weeks yet before viability,[5] and as to whom HB 5's exceptions do not apply—there is no set of circumstances in which HB 5 can constitutionally be applied. In other words, without HB 5, women in Florida can obtain abortions for any reason up until fetal viability. With HB 5, women in Florida are unable to obtain an abortion between 15 weeks LMP and fetal viability unless one of HB 5's narrow exceptions applies.

132. Moreover, the State's argument that Plaintiffs cannot show HB 5 is facially unconstitutional is inconsistent with the Florida Supreme Court's decisions

[5] Florida law already prohibits abortions at and after fetal viability, which is defined as "the stage of fetal development when the life of a fetus is sustainable outside the womb through standard medical measures." §§ 390.011(13), 390.01112, Fla. Stat.; *see also* §§ 390.011 (6), (12)(c), 390.0111(1), Fla. Stat. (prohibiting abortion in third trimester). Plaintiffs are not challenging Florida's ban on abortion after viability nor the third-trimester ban. Mot. at 6.)

in *In re T.W.* and *North Florida*. In both those cases, the Supreme Court held the abortion statutes at issue there were facially unconstitutional even though those statutes would not have prevented all abortions in Florida. *In re T.W.*, 551 So. 2d at 551 So. 2d at 1193–95; *North Florida*, 866 So. 2d at 640. The State's reliance on *State v. Gainesville Woman Care, LLC*, 278 So. 3d 216 (Fla. 1st DCA 2019), is also misplaced because unlike HB 5, the law at issue there applied to all abortions performed at all stages of gestation. 278 So. 3d at 217-18 (law required 24 hours to pass between time patient informed of nature and risks of abortion and abortion performed). The First DCA did not hold that a plaintiff must show that a law like HB 5, which applies only to women seeking abortions after 15 weeks, violates the constitutional rights of women who are not pregnant or who do not seek abortions after 15 weeks LMP.

133. Thus, HB 5's ban on abortion prior to viability likely violates the right to privacy under the Florida Constitution because it implicates that right and likely cannot survive strict scrutiny. The Court will now consider the remaining temporary injunction factors.

C. Adequate Remedy at Law and Irreparable Harm

134. Plaintiffs have shown that HB 5 would cause irreparable harm for which no adequate remedy is available at law. As explained, HB 5 likely will violate the right to privacy in the Florida Constitution, and the threatened or actual loss of

constitutional rights, even temporarily, is *per se* irreparable harm. *Gainesville*, 210 So. 3d at 1263-64 ("presum[ing] irreparable harm when certain fundamental rights are violated," including right to privacy, and collecting cases); *Fla. Dep't of Health v. Florigrown, LLC*, 320 So. 3d 195, 200 (Fla. 1st DCA 2019) ("[T]he law recognizes that a continuing constitutional violation, in and of itself, constitutes irreparable harm."), *quashed on other grounds*, 317 So. 3d 1101 (Fla. 2021); *Bd. of Cty. Comm'rs, Santa Rosa Cty. v. Home Builders Ass'n of W. Fla., Inc.*, 325 So. 3d 981, 985 (Fla. 1st DCA 2021) (same).

135. The Court rejects the State's argument that Plaintiffs cannot establish irreparable harm based on HB 5's harm to their patients' constitutional right to privacy. As explained, Plaintiffs have third-party standing to represent their patients' right to privacy in this case and have shown that HB 5 would cause their patients to suffer irreparable harm. Plaintiffs thus do not have to show irreparable harm to themselves. *See, e.g.*, *Gainesville*, 210 So. 3d at 1264 (temporary injunction warranted based on irreparable harm to "women seeking to terminate their pregnancies in Florida" in challenge brought by abortion provider and non-profit organization).

136. Plaintiffs also have shown that HB 5 will cause them to suffer irreparable harm without an adequate remedy at law because Plaintiffs currently provide abortions after 15 weeks LMP, and HB 5 will force them to stop doing so in

likely violation of the Florida Constitution. *See Planned Parenthood of Wis., Inc. v. Van Hollen*, 738 F.3d 786, 795-96 (7th Cir. 2013) (abortion providers irreparably harmed by abortion restrictions that, absent preliminary injunction, would cause "disruption of the services" the clinics provide). In concluding that Plaintiffs will be irreparably harmed, the Court credits Dr. Tien's testimony that forcing abortion providers to stop providing abortions between 15 weeks LMP and fetal viability, as HB 5 does, will "directly impede[] and interfere[] on the physician-patient relationship." Hr'g Tr. (Rough) 70:11-16 [Tien]; *see also id.* 70:17–71:1 [Tien]. Plaintiffs cannot remedy this harm to their ability to provide healthcare to their patients through monetary damages or any other procedure available under Florida law.

137. The Court also rejects the State's argument that Plaintiffs cannot show irreparable harm because they purportedly waited too long to file this action. *See* State's Resp. at 13–15. Plaintiffs filed this action a month before HB 5 is set to take effect and have litigated their Motion before the law's effective date.

138. Thus, Plaintiffs have shown HB 5 will cause irreparable harm for which no adequate remedy is available at law.

D. Public Interest

139. The Court concludes that a temporary injunction of HB 5 will serve the public interest, because HB 5 likely violates the Privacy Clause of the Florida

Constitution. Enjoining a law that would "impose" upon Floridians' privacy rights "in violation of the Florida Constitution []would serve the public interest." *Gainesville*, 210 So. 3d at 1264; *accord Green*, 323 So. 3d at 254–55 (public interest factor satisfied when Plaintiffs demonstrate likelihood of success in showing the law is unconstitutional). The State argues that an injunction would not be in the public interest because HB 5 "promotes public health and welfare by protecting maternal health and children in utero." State's Resp. at 23. For the same reasons the Court concluded these asserted interests are legally insufficient and factually unsupported, the Court also concludes that these claimed interests do not overcome the public interest in preventing a likely violation of Floridians' constitutional rights.

III. Scope of Relief and Bond

140. The Court is not persuaded by the State's argument that this Court should limit any injunctive relief to these Plaintiffs, rather than enter a statewide injunction. State's Resp. at 23–24. As explained, HB 5 likely is facially unconstitutional, and under existing law, there is likely no set of circumstances in which the State can constitutionally apply it. This conclusion applies to any clinic or doctor in Florida, not just those named as plaintiffs in this suit, and the Court does not believe the law requires every affected person to sue to prevent a violation of the Florida Constitution. In addition, a statewide temporary injunction is consistent with the temporary injunctions the Florida Supreme Court and others have entered against

other abortion restrictions. *See Gainesville*, 210 So. 3d at 1264–65 (affirming trial court temporary injunction of abortion restriction "barring the application of the law in its entirety" on "all Florida women"). Accordingly, the injunction the Court orders, below, applies throughout the State of Florida.

141. The Court determines that an appropriate bond for this temporary injunction is $5,000. Fla. R. Civ. P. 1.610(b); *see AOT, Inc. v. Hampshire Mgmt. Co.*, 653 So. 2d 476, 478 (Fla. 3d DCA 1995) (amount of injunction bond is within the court's discretion). Although the purpose of an injunction bond is to "secure[] the enjoined party against any damages it may incur if the injunction turns out to have been wrongfully entered," *AOT, Inc.*, 653 So. 2d at 478, the State did not present evidence of anticipated damages. The Court is not persuaded by the State's argument that the bond must be $1 million, to account for the "more than $874 million" in lost tax revenue the temporary injunction will allegedly cause the State. State's Resp. at 25. Moreover, under the law, HB 5 is subject to a strict scrutiny analysis and a rebuttable presumption of unconstitutionality, and the Court believes its injunction complies with the law as it currently exists in Florida. *See Montville v. Mobile Med. Indus., Inc.*, 855 So. 2d 212, 216 (Fla. 4th DCA 2003) (in setting bond, court is "permitted to consider [other] factors," such as "the adverse party's chances of overturning the temporary injunction"). Accordingly, the Court holds that a $5,000 bond in this case is reasonable.

INJUNCTION & BOND ORDER

For all these reasons, it is hereby ORDERED and ADJUDGED that:

Plaintiffs' Motion is GRANTED. Defendants State of Florida, Florida Department of Health, Joseph Ladapo, M.D., in his official capacity as Florida Secretary of Health, Florida Board of Medicine, David Diamond, M.D., in his official capacity as Chair of the Florida Board of Medicine, Chair of Florida Board of Osteopathic Medicine, Sandra Schwemmer, D.O., in her official capacity as Chair of the Florida Board of Osteopathic Medicine, Florida Board of Nursing, Maggie Hansen, M.H.Sc., R.N., in her official capacity as Chair of the Florida Board of Nursing, Florida Agency for Health Care Administration, Simone Marstiller, J.D., in her official capacity as Secretary of the Florida Agency for Health Care Administration, and their officers, agents, servants, employees, appointees, or successors, as well as those in active concert or participation with any of them, are hereby temporarily enjoined from enforcement or threatened enforcement, operation, and execution, in any manner, of Section 4 of 2022-69, Laws of Florida (HB 5) and the related definitions in Section 3(6) and 3(7) of HB 5, in all their applications statewide, until further order of the Court. Defendants are also enjoined from filing or pursuing any future suit or prosecution that seeks to enforce HB 5 against conduct that takes place while this injunction is in effect.

Pursuant to Florida Rule of Civil Procedure 1.610(b), Plaintiffs are jointly ordered, within seven (7) days from the date of this Order, to post a bond in the amount of $5,000 as a condition for the temporary injunction remaining in effect.

So ORDERED in Tallahassee, Leon County, Florida, July 5, 2022.

JOHN COOPER
CIRCUIT COURT JUDGE

cc Attorneys of Record

APPENDIX

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IN THE CIRCUIT COURT OF THE SECOND JUDICIAL CIRCUIT
IN AND FOR LEON COUNTY, FLORIDA

PLANNED PARENTHOOD OF SOUTHWEST AND CENTRAL FLORIDA, on behalf of itself, its staff, and its patients, *et al.*, Plaintiffs, v. STATE OF FLORIDA, *et al.*, Defendants.	**Case No. 2022 CA 912**

DECLARATION OF ANTONIA BIGGS IN SUPPORT OF PLAINTIFF'S MOTION FOR A PRELIMINARY INJUNCTION

I, Antonia Biggs, am over 18 years of age, am competent, and make this declaration based on my own personal knowledge, unless otherwise noted:

I. SUMMARY OF OPINIONS AND THE REASONS AND BASES FOR THEM

1. Since 1998, I have worked at the University of California, San Francisco ("UCSF") and I am currently in the Department of Obstetrics, Gynecology and Reproductive Sciences within the Advancing New Standards in Reproductive Health ("ANSIRH") program. ANSIRH conducts rigorous, innovative, and multidisciplinary social science research on issues relating to reproductive health. I have personally conducted research examining the association of having an abortion and mental health outcomes and I have published extensively on that topic.

2. My current position at ANSIRH is Associate Professor. I received my B.A. in Psychology from the University of Wisconsin–Madison and my Ph.D. in Psychology from

Boston University. My education, training, responsibilities, and publications are set forth in greater detail in my *curriculum vitae*, a true and correct copy of which is attached as Exhibit A.

3. My opinions herein are based upon my education, training, experience, research, participation in conferences, and my ongoing review of the relevant medical and psychological literature. The literature that informs my opinions includes, but is by no means limited to, that identified in the text and footnotes of this report.

4. I submit this declaration in support of Plaintiffs' Motion for a Temporary Injunction to enjoin the enactment of Florida House Bill 5 ("HB 5"). I understand that, with very limited exceptions, HB 5 would ban abortion after 15 weeks gestation as dated from the patient's last menstrual period. I understand that a violation of this law could result in criminal penalties, disciplinary sanctions, and adverse licensing actions.

5. Specifically, I submit this declaration to rebut the claims set forth in the declaration of Dr. Ingrid Skop that: (1) abortion is associated with a risk of adverse mental health outcomes, ¶¶ 27, 28, 39, 41-49, particularly for those patients seeking abortion in the second trimester who face an elevated risk of psychological harms, ¶¶ 27, 39, 41; (2) patients who have abortions experience decisional uncertainty and regret regarding the decision to terminate their pregnancy, ¶ 43, 44; and (3) HB 5's mandate will provide mental health benefits to patients, ¶¶ 29, 47, 49.

6. *First*, Dr. Skop disregards the uniform conclusion of major professional associations and organizations and high-quality research demonstrating that there is no connection between abortion and adverse mental health outcomes, including among those who seek abortion beyond the first trimester. This lack of connection holds true even among people who seek abortion due to fetal diagnosis or among young people. Over a period of decades,

overwhelming evidence has demonstrated that abortion, including abortion past 15 weeks gestation, has no negative effect on mental health outcomes. One important contribution to this evidence is the multi-year Turnaway Study, with which I have been closely involved. The Turnaway Study found that women who obtained abortions near a facility's gestational limit were no worse off than those who had been denied them. In fact, the study demonstrated that being denied a desired abortion can *negatively* impact mental health in the short term. Studies concluding that abortion leads to adverse mental health outcomes, such as those Dr. Skop relies on to support her outlier opinions, have serious methodological shortcomings, as outlined below.

7. *Second*, reliable evidence shows that patients who obtain an abortion — regardless of their point in pregnancy, their reasons for doing so, or their age— have predominantly positive emotions about the abortion, have high levels of decisional certainty, feel the abortion was the right decision shortly after their abortion and in the years that follow, and cite "relief" as the most common emotion related to the abortion. Dr. Skop inappropriately conflates indecision with regret and negative mental health outcomes.

8. *Finally*, Dr. Skop's claim that HB 5's ban on abortions after 15 weeks gestation will improve and/or benefit patients' mental health or emotional well-being is unfounded. Rather, to the extent that HB 5 causes some patients to be denied a wanted abortion, the evidence indicates that such denial will have short-term negative impacts on their mental health and well-being, as well as increase their chances of staying tethered to an abusive partner, of experiencing serious pregnancy complications, of experiencing long-term physical health problems and economic hardship and insecurity, and has long-term consequences for the financial well-being and development of their children.

I. Rebuttal Opinion 1: Abortion Is Not Associated with Adverse Mental Health Outcomes.

9. There are decades of empirical research looking at the effects of abortion on mental health, including several rigorous scientific reviews on the topic. The highest quality evidence all reach the same conclusion: abortion does not have a negative impact on women's mental health. The most robust scientific reviews of the literature by trusted scientific and medical authorities—including reports by the American Psychological Association ("APA"); the National Academies of Sciences, Engineering, and Medicine ("NASEM"); and the Royal College of Psychiatrists in the United Kingdom—have all concluded that abortion does not have a negative impact on women's mental health.[1] The most methodologically rigorous individual studies—that is, those that take into account a woman's pre-pregnancy mental health and employ appropriate comparison groups—reach the same conclusion.

10. It is important to understand that all forms of evidence range in quality and should be ranked based on their strength and ability to contribute to knowledge, and weighed accordingly. There exist high quality, well-designed prospective cohort studies with good comparison groups examining the relationship between abortion and mental health outcomes. These studies clearly demonstrate that abortion does not negatively impact women's mental health. In the face of such high-quality evidence, it is scientifically unsound to rely upon lower quality cross-sectional studies, anecdotal statements and conjecture, as Dr. Skop does. If, for

[1] Brenda Major et al., Am. Psych. Ass'n, Report of the APA Task Force on Mental Health and Abortion 5 (2008) [hereinafter "APA Task Force Report 2008"]; Brenda Major et al., *Abortion and Mental Health: Evaluating the Evidence*, 64 Am. Psych. 863 (2009) (update to APA Task Force Report 2008, which included a review of six additional studies that met inclusion criteria but that were published after the completion of the 2008 Report); Nat'l Acads. of Scis., Eng'g & Med., *The Safety and Quality of Abortion Care in the United States* (2018) [hereinafter, "National Academies Report"]; Nat'l Collaborating Ctr. for Mental Health (NCCMH), Academy of Med. Royal Colls. (AMRC), Induced Abortion and Mental Health: A Systematic Review of the Mental Health Outcomes of Induced Abortion, Including Their Prevalence and Associated Factors (2011) [hereinafter "NCCMH Report"]; *see also* Vignetta E. Charles et al., *Abortion and Long-Term Mental Health Outcomes: A Systematic Review of the Evidence*, 78 Contraception 436 (2008).

example, a rigorously designed study yields result A, and a less-rigorously or poorly designed study on the same question yields result B, researchers looking at the literature do not conclude that the correct answer could be A *or* B; rather, the more rigorously designed studies are given greater weight. Similarly, it is important to utilize comparison groups that are as similar as possible to the abortion group in order to separate the factors that are associated with the wantedness of the pregnancy. The ideal comparison, it has been recommended, is between women who have an abortion and those who want an abortion but are unable to get one.[2]

a. Findings of scientific reviews

11. In February 1989, the APA, the largest and leading scientific and professional organization of psychologists in the United States, convened a panel of experts to review the available scientific literature on the effect of abortion on women's mental health. and found no evidence of a causal link between abortion and mental health outcomes.[3]

12. Almost two decades later, in 2006, the APA organized another task force to review new scientific literature examining whether abortion is associated with poor mental health outcomes. The Task Force initially identified 223 articles published since 1989 that were responsive to its search criteria, 73 of which it deemed worthy of closer review.[4] The 73 articles were selected based on four criteria: "(1) The study reported empirical data of a quantitative nature (qualitative studies were omitted). (2) The study was published in a peer-reviewed journal (dissertations, letters to editors, reviews, book chapters, and conference proceedings were omitted). (3) The study included at least one post-abortion measure related to mental health (those that considered only mental health prior to the abortion were omitted). (4)

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[2] Nada L. Stotland, *Induced Abortion and Adolescent Mental Health*, 23 Current Opinion. Obstetrics and Gynecology 340, 341 (2011a).
[3] APA Task Force Report 2008, at 5.
[4] *See id.* at 21–22.

The study focused on induced abortion [those that focused solely on 'spontaneous' abortions (miscarriages) or that did not differentiate miscarriage from induced abortion were omitted]."[5] Articles that failed to include a comparison group of women who did not have an abortion were excluded unless they were based on a U.S. sample.[6] After "careful evaluation," the Task Force determined that "the majority [of the studies it considered] suffered from methodological problems, sometimes severely so."[7]

13. The Task Force "conclude[d] that the most methodologically sound research indicates that among women who have a single, legal, first-trimester abortion of an unplanned pregnancy . . . , the relative risks of mental health problems are no greater than the risks among women who deliver an unplanned pregnancy"—a conclusion "generally consistent with that reached by the first APA task force."[8] In addition, the Task Force considered six studies of abortions beyond the first trimester, each of which concerned abortion for reasons of fetal anomaly, and found that they still told "a fairly consistent story": levels of negative psychological experiences subsequent to a second-trimester abortion of a wanted pregnancy for fetal anomalies were comparable to those of women who experienced a second-trimester miscarriage, stillbirth, or death of a newborn.[9]

14. In 2008, Vignetta Charles and colleagues at the Johns Hopkins Bloomberg School of Public Health evaluated the methodological quality of twenty-one studies that met their inclusion criteria.[10] Charles found that the highest quality studies had findings that were

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[5] *Id.* at 21.
[6] *Id.*
[7] *Id.* at 88.
[8] *Id.* at 92.
[9] Dr. Skop's critique of the APA Task Force Report's finding is unfounded. Skop Decl. ¶ 41. Her complaint that the Task Force should have made a broader conclusion ignores that it would have been inappropriate for the Task Force to do so given the state of literature at the time of the review.
[10] Charles et al. (2008), *supra* note 1.

mostly neutral, indicating few, if any, differences between women who had abortions and their respective comparison groups in terms of subsequent adverse mental health outcomes. Studies deemed of poor quality and using flawed methodology generally reported a relationship between having an abortion and experiencing worse mental health outcomes.

15. In 2009, the authors of the APA Task Force's 2008 report published an update that incorporated several new studies.[11] Their scientific review again concluded that abortion does not increase women's risk of experiencing mental health harm, a conclusion "consistent with that reached by the first APA task force."[12] Their review also concluded that other factors, such as pre-existing mental health conditions and other co-occurring risk factors, such as poverty or intimate partner violence, are highly correlated with both the experience of an unintended pregnancy and future mental health problems.[13] Indeed, multiple studies have found that having a previous history of mental health conditions and trauma is significantly associated with experiencing subsequent mental health problems.[14] They again pointed to the pervasive methodological problems in the existing literature, including "(a) use of inappropriate comparison or contrast groups; (b) inadequate control for co-occurring risk factors/potential confounders; (c) sampling bias; (d) inadequate measurement of reproductive history, under-specification of abortion context, and problems associated with underreporting;

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[11] Major et al. (2009), *supra* note 1.
[12] *Id.* at 885.
[13] *Id.* at 868–69, 884–85.
[14] Jenneke van Ditzhuijzen et al., *Psychiatric History of Women Who Have Had an Abortion*, 47 J. Psychiatric Res. 1737, 1741 (2013); Anne C. Gilchrist et al., *Termination of Pregnancy and Psychiatric Morbidity*, 167 Brit. J. Psychiatry 243, 247 (1995); Brenda Major et al., *Psychological Responses of Women After First-Trimester Abortion*, 57 Archives Gen. Psychiatry 777, 781 (2000); Julia R. Steinberg et al., *Psychosocial Factors and Pre-Abortion Psychological Health: The Significance of Stigma*, 150 Soc. Sci. & Med. 67, 73 (2016); Julia R. Steinberg & Nancy F. Russo, *Abortion and Anxiety: What's the Relationship?*, 67 Soc. Sci. & Med. 238, 245 (2008); Julia R. Steinberg et al., *Abortion and Mental Health: Findings from the National Comorbidity Survey-Replication*, 123 Obstetrics & Gynecology 263, 267 (2014); *see also* Jenneke van Ditzhuijzen et al., *Correlates of Common Mental Disorders Among Dutch Women Who Have Had an Abortion: A Longitudinal Cohort Study*, 49 Persp. on Sexual & Reprod. Health 123, 129 (2017); Trine Munk-Olsen et al., *Induced First-Trimester Abortion and Risk of Mental Disorder*, 364 N. Eng. J. Med. 332, 336 (2011).

(e) attrition; (f) poor measurement of mental health outcomes and failure to consider clinical significance; (g) statistical errors; and (h) interpretational errors."[15]

16. Similarly, in 2011, Dr. Nada Stotland, former president of the American Psychiatric Association and the author or co-author of several important papers on the topic,[16] published a paper reviewing the literature on the effects of abortion on the mental health of adolescent women.[17] In her paper, Stotland found that the most rigorous studies conclude abortion does not result in adverse mental health outcomes for adolescents.

17. A 2011 review of the evidence by psychologist and associate professor Dr. Julia Steinberg specifically examined the effects of having an abortion later in pregnancy on women's mental health outcomes.[18] The quality of each study reviewed was analyzed based on the appropriateness of its mental health assessment and comparison groups, and whether they accounted for other factors that might be associated with later abortion and mental health outcomes. Steinberg determined that some of studies on this topic, including studies cited by Dr. Skop, used inappropriate comparison groups, and all studies restricted their analyses to women seeking abortion due to a fetal diagnosis,[19] and did not take into account pre-pregnancy

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[15] Major et al. (2009), *supra* note 1, at 884.
[16] Gail Robinson et al., *Abortion and Mental Health: Guidelines for Proper Scientific Conduct Ignored*, 200 Brit. J. Psych. 78 (2012); Gail Robinson et al., *Is There an "Abortion Trauma Syndrome"? Critiquing the Evidence*, 17 Harv. Rev. Psych. 268 (2009); Nada L. Stotland, *The Myth of the Abortion Trauma Syndrome*, 268 JAMA 2078 (1992); Nada L. Stotland, *Assessing the Mental Health Impact of Induced Abortion*, 1 Medscape Women's Health 1 (1996); Nada L. Stotland, *Psychosocial Aspects of Induced Abortion*, 40 Clinical Obstetrics & Gynecology 673 (1997); Nada L. Stotland, *Abortion: Social Context, Psychodynamic Implications*, 155 Am. J. Psych. 964 (1998a); Nada L. Stotland, *Comments on Abortion*, 155 Am. J. Psych. 1305 (1998b); Nada L. Stotland, *Psychiatric Issues Related to Infertility, Reproductive Technologies, and Abortion*, 29 Primary Care: Clinics in Off. Prac. 13 (2002); Nada L. Stotland, *Abortion and Psychiatric Practice*, 9 J. Psych. Prac. 139 (2003); Nada L. Stotland, *Psychiatric Aspects of Induced Abortion*, 199 J. Nervous & Mental Disease 568 (2011b).
[17] Nada L. Stotland, *Induced Abortion and Adolescent Mental Health*, 23 Current Opinion, Obstetrics and Gynecology 340, 341 (2011a).
[18] Julia R. Steinberg, *Later Abortions and Mental Health: Psychological Experiences of Women Having Later Abortions—A Critical Review of Research*, 21 Womens Health Issues S44 (2011a).
[19] Lawrence B. Finer et al. *Timing of Steps and Reasons for Delays in Obtaining Abortions in the United States*, 74 Contraception 334, 335 (2006).

mental health conditions—the most significant predictor of experiencing future mental health problems.[20] It concluded that women seeking later abortion due to fetal anomaly have similar mental health outcomes as women who give birth to children with severe mental or physical conditions or who experience other types of later perinatal loss (*i.e.*, stillbirth or later miscarriage), suggesting that "policies based on the notion that later abortions (for reasons of fetal anomaly) harm women's mental health are misinformed."[21]

18. That same year, the National Collaborating Centre for Mental Health ("NCCMH") at the Academy of Medical Royal Colleges systematically reviewed the relevant literature, including studies of people obtaining second-trimester abortions. The Academy of Medical Royal Colleges is "the membership body for the UK and Ireland's 24 medical royal colleges and faculties," which "bring[s] together the views of [the Royal Colleges and Faculties'] individual specialties to collectively influence and shape healthcare across the four nations of the UK."[22] NCCMH was "established [in 2001] by the Royal College of Psychiatrists, in partnership with the British Psychological Society, to develop evidence-based mental health reviews and clinical guidelines."[23] NCCMH concluded that "[t]he rates of mental health problems for women with an unwanted pregnancy were the same whether they had an abortion or gave birth," and that "[t]he most reliable predictor of post-abortion mental health problems was having a history of mental health problems before the abortion."[24]

19. In 2018, the National Academies of Sciences, Engineering, and Medicine, a highly respected group of three national scientific organizations, was established to provide

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[20] Steinberg (2011a), *supra* note 14, at S46.
[21] *Id.* at S47.
[22] About Us, Academy of Medical Royal Colleges, https://www.aomrc.org.uk/about-us/ (last accessed June 23, 2022).
[23] National Academies Report at 150 (citing NCCMH Report).
[24] NCCMH Report at 8.

advice on scientific and medical issues to the public, published a report entitled "The Safety and Quality of Abortion Care in the United States." The report reviewed the research on abortion, including studies of people seeking abortion in the second trimester. It found no connection between abortion and negative mental health outcomes, including risk of depression, anxiety, or post-traumatic stress disorder (PTSD).[25] The report also pointed to the many methodological shortcomings in the existing research warning that the "utility of most of the published research on mental health outcomes is limited by selective recall bias, inadequate controls for confounding factors, and inappropriate comparators."[26] ("Confounding" factors are outside forces that affect both the independent and dependent variable—here, confounding factors may include the presence of pre-existing mental health disorders, poverty, or intimate partner violence, all of which affect both the likelihood of an abortion and the likelihood of negative mental health outcomes.) In particular, the report noted that several studies, including the

[25] Though Dr. Skop critiques NASEM at length in her declaration, her criticisms are meritless and irrelevant. Skop Decl. ¶¶ 20-22. First, Dr. Skop criticizes the report for "their stringent criteria," that resulted in the exclusion of lower quality studies, ignoring the fact that stringent standards for evaluating literature for inclusion in its report is a hallmark of a rigorous scientific review and not a weakness. *Id.* at ¶ 21. Second, Dr. Skop asserts that NASEM's study is biased by connections to pro-choice organizations, although NASEM is not composed by abortion advocates. Rather, it is composed of three national organizations (The National Academy of Sciences, the National Academy of Engineering, and the National academy of Medicine) that together "provide independent, objective analysis and advice to the nation." Contradicting her point, she herself cites articles from pro-life advocacy groups such as the National Right to Life News and the American Association of Pro-Life Obstetricians and Gynecologists. Third, Dr. Skop claims that NASEM's reliability has been called into question by the Center for Science in the Public Interest (CSPI) due to deficiencies in the committee selection process and conflicts of interest. However, she ignores the fact that CSPI is an organization focused on food safety, not reproductive health, and that their complaints have all been focused on food-related interests. *See* About Us, CSPI, https://www.cspinet.org/ (last accessed July 22, 2022). The 2006 CSPI report Dr. Skop cites makes clear in its preface that "NAS reports invariably earn high marks from the scientific community, and this study, which did not evaluate the quality of any particular NAS report, makes no effort to question that consensus view." Ensuring Independence and Objectivity at the National Academies (2006), https://www.cspinet.org/sites/default/files/media/documents/resource/nasreport.pdf (last accessed July 22, 2022). The 2017 CSPI report Dr. Skop cites in alleging a conflict of interest within NASEM specifically examined conflicts of interest only among the committee members who wrote the 2016 NASEM report on genetically engineered crops. Sheldon Krimsky and Tim Schwab, Conflicts of interest among committee members in the National Academies' genetically engineered crop study (2017), PLoS ONE, 12(2): e0172317. doi:10.1371/journal.pone.0172317. Neither article purports to examine or undermine either "The Safety and Quality of Abortion Care in the United States" report or the work of the NASEM reproductive health committee. Thus, the evidence she cites does not support her opinion and irrelevant to the NASEM report on abortion.

[26] National Academies Report at 149.

studies cited by Dr. Skop in her report to support the claim that abortion increases the risk of mental health problems,[27] "failed to control adequately for preexisting mental disorders."[28]

20. One important recent addition to the research in this area is the Turnaway Study, with which I have been intimately involved. As I explain below, this large-scale, national study—which has resulted in the publication of over fifty peer-reviewed articles and a book—was specifically designed to examine the relationship between abortion and subsequent mental health, and is one of the largest U.S. studies to examine the mental health outcomes of people seeking abortion beyond the first trimester of pregnancy. NASEM described the Turnaway Study as one "designed to address many of the limitations of other studies" and that "contributes unique insight into the consequences of receiving a desired abortion versus being denied the procedure and carrying the pregnancy to term."[29]

21. The Turnaway Study, which was launched in 2007, is a prospective longitudinal study examining the effects of unintended pregnancy on women's lives. From 2008 to 2010, we recruited 956 women from thirty abortion facilities in twenty-two U.S. states. We recruited women who received abortions because they presented for care under the facility's gestational limit and some who were "turned away" and carried to term because they were past the gestational limit. With a team of researchers, we followed both of these groups of women, through semiannual phone interviews over five years. The Turnaway Study's robust study design improves on many of the methodological shortcomings of the existing literature on this topic in that it: includes a unique comparison group (people seeking abortion but turned away because they are beyond the gestational age limit); is prospective (follows nearly 1,000 women

[27] Skop Decl. at ¶48.
[28] National Academies Report at 150.
[29] *Id.* at 150–51.

for five years); and controls for known confounding factors, including people's history of mental health conditions. It is the largest study of women denied a wanted abortion, most of whom were beyond the first trimester of pregnancy, and the only one that follows women denied an abortion in the United States over time to track their mental, physical, and financial health and wellbeing. It has published fifty papers in peer-reviewed journals specifically examining the long-term effects on women and their children related to abortion receipt or abortion denial due to gestational age limits.

22. There have been numerous findings from this study, including that, when we compared the mental health outcomes of women who had an abortion to women denied an abortion, women denied an abortion experienced more elevated levels of anxiety and stress symptoms in the short term than those who were able to get their wanted abortions. We found no differences between those who obtained and those who were denied an abortion with regard to depression, suicidal ideation, and post-traumatic stress.[30] We also found that having an abortion after the first trimester was not associated with more adverse mental health outcomes than obtaining a first-trimester abortion.

23. Dr. Skop's critiques of the Turnaway Study are without merit.[31] Although Dr. Skop criticizes the Turnaway Study's participation and attrition rates, these rates are within the expected range for a five-year study, and similar to other prospective studies of this type.

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[30] M. Antonia Biggs et al., *Mental Health Diagnoses 3 Years After Receiving or Being Denied an Abortion in the United States*, 105 Am. J. Pub. Health 2557, 2561 (2015); M. Antonia Biggs et al., *Does Abortion Increase Women's Risk for Post-Traumatic Stress? Findings from a Prospective Longitudinal Cohort Study*, 6 BMJ Open, e009698, e009707–08 (2016); M. Antonia Biggs et al., *Women's Mental Health and Well-Being 5 Years After Receiving or Being Denied an Abortion: A Prospective, Longitudinal Cohort Study*, 74 JAMA Psych. 169, 174–76 (2017); M. Antonia Biggs et al., *Five-Year Suicidal Ideation Trajectories Among Women Receiving or Being Denied an Abortion*, 175 Am. J. Psych. 845, 851 (2018); D.G. Foster et al., *A Comparison of Depression and Anxiety Symptom Trajectories Between Women Who Had an Abortion and Women Denied One*, 45 Psych. Med. 2073, 2080 (2015).

[31] Skop Decl. ¶ 48.

Indeed, our rate of attrition of about five percent from wave to wave represents excellent participant retention compared to other research in the field and is, in fact, a study strength. Furthermore, the lack of differential loss to follow-up[32] based on mental health history as well as our ability to control for history of mental health conditions, child abuse and neglect, and substance use mitigates concerns of bias. Concern about bias due to low study participation is further lessened by the consistent findings in our sensitivity analyses restricted to sites with more than 50% participation. To take into account missing observations that naturally occur from longitudinal designs, we used mixed effects regression models, which protect against bias owing to loss to follow up that is predictable from previously measured factors.

b. Findings of high-quality individual studies

24. Like the scientific reviews of the literature, the highest quality individual studies—*e.g.*, those that account for pre-pregnancy risk factors, including mental health history, and use appropriate comparison groups—have found that abortion does not lead to negative mental health outcomes. This remains true whether the mental health outcome is depression or anxiety disorders, suicidal ideation or attempts, or substance use. When women do develop disorders after obtaining an abortion, this is instead strongly related to their mental health history *prior* to the abortion and prior history of trauma, meaning that the post-abortion mental health symptoms are not due to the abortion, but due to other pre-pregnancy risk factors as summarized below.

- ***Mood and anxiety disorders.*** The most reliable and rigorous studies examining this issue, including the Turnaway Study, have concluded that having an abortion does not cause or increase a woman's risk of experiencing anxiety, depression, dysphoria, or

[32] Differential loss to follow-up means that people at risk of mental health problems were no more likely to be lost to follow-up than people without mental health problems.

post-traumatic stress symptoms or disorders (PTSD).[33] However, there is evidence that barriers to abortion access can have a *negative* impact on mental health with respect to short-term anxiety and stress.[34]

- ***Suicidal ideation and behaviors.*** Recent high-quality evidence shows that having an abortion does not increase women's risk of suicidal thoughts.[35] Nevertheless, Dr. Skop's assertion[36] that those who have had an abortion have an increased risk of death from suicide disregards the fact that the only studies showing that abortion increases the risk of suicide or suicidal ideation have neglected to account for pre-existing mental health conditions, thereby rendering their results meaningless.[37]
- ***Alcohol use.*** Prospective studies indicate that induced abortion is not associated with an increase in subsequent alcohol use or alcohol use disorders.[38] Moreover, analyses of Turnaway Study data find that having an abortion does not lead to increases in heavy episodic drinking or potentially problematic alcohol use over five years after having an abortion, and that women with more problematic alcohol use are in fact unable to reduce their drinking when they are unable to obtain an abortion.[39]
- ***Drug use.*** The strongest evidence suggests that having an abortion does not increase women's risk of using illicit drugs.[40] Although Dr. Skop suggests that mental health issues stemming from abortion "may contribute to drug overdoses," she provides no

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[33] Biggs et al., *Women's Mental Health and Well-Being 5 Years After Receiving or Being Denied an Abortion: A Prospective, Longitudinal Cohort Study*, 74 JAMA Psych. 169, 174–76 (2017); Steinberg & Russo (2008), *supra* note 19, at 245; Julia R. Steinberg & Lawrence B. Finer, *Examining the Association of Abortion History and Current Mental Health: A Reanalysis of the National Comorbidity Survey Using a Common-Risk-Factors Model*, 72 Soc. Sci. & Med. 72, 73 (2011); Steinberg et al. (2014), *supra* note 19, at 267; *see also* van Ditzhuijzen et al. (2017), *supra* note 19, at 129. Kimberly Kelly, *The Spread of 'Post Abortion Syndrome' as Social Diagnosis*, 102 Soc. Sci. Med. 18 (2014); Gail Robinson et al., *Abortion and Mental Health: Guidelines for Proper Scientific Conduct Ignored*, 200 Brit. J. Psych. 78 (2012).

[34] Biggs et al. (2017), *supra* note 30, at 174; Biggs et al. (2015), *supra* note 30, at 2561.

[35] Biggs MA, Gould H, Barar RE, Foster DG. Five-Year Suicidal Ideation Trajectories Among Women Receiving or Being Denied an Abortion. Am J Psychiatry. 2018 Sep 1;175(9):845-852. doi: 10.1176/appi.ajp.2018.18010091. Epub 2018 May 24. PMID: 29792049.

[36] Skop Decl. at ¶¶ 27, 41, 48.

[37] *See, e.g.*, Eerika Jalanko et al., *Increased Risk of Premature Death Following Teenage Abortion and Childbirth—A Longitudinal Cohort Study*, 27 Eur. J. Pub. Health 845 (2017) which uses an inappropriate comparator group; Mika Gissler et al., *Suicides After Pregnancy in Finland, 1987–94: Register Linkage Study*, 313 BMJ 1431 (1996); Mika Gissler et al., *Decreased Suicide Rate After Induced Abortion, After the Current Care Guidelines in Finland 1987–2012*, 43 Scandinavian J. Pub. Health 99 (2015); *see also* Biggs MA, Roberts SCM. Fatal flaws in recent analysis on the risk of premature death following teenage abortion and childbirth. Eur J Public Health. 2017 Oct 1;27(5):794. doi: 10.1093/eurpub/ckx101. PMID: 28957488.

[38] *See, e.g.*, Roberts SCM, Foster DG, Gould H, Biggs MA. Changes in Alcohol, Tobacco, and Other Drug Use Over Five Years After Receiving Versus Being Denied a Pregnancy Termination. J Stud Alcohol Drugs. 2018 Mar;79(2):293-301. PMID: 29553359.

[39] Sarah C.M. Roberts et al., *Receiving Versus Being Denied a Pregnancy Termination and Subsequent Alcohol Use: A Longitudinal Study*, 50 Alcohol & Alcoholism 477, 481 (2015); Sarah C.M. Roberts & Diana Greene Foster, *Receiving Versus Being Denied an Abortion and Subsequent Tobacco Use*, 19 Maternal & Child Health J. 438 (2015); Sarah C.M. Roberts et al., *Receiving Versus Being Denied an Abortion and Subsequent Drug Use*, 134 Drug & Alcohol Dependence 63 (2014a); Sarah C.M. Roberts et al., *Changes in Alcohol, Tobacco, and Drug Use over Five Years After Receiving Versus Being Denied a Pregnancy Termination*, 79 J. Stud. Alcohol & Drugs 293 (2018).

[40] Roberts SCM, Foster DG, Gould H, Biggs MA. Changes in Alcohol, Tobacco, and Other Drug Use Over Five Years After Receiving Versus Being Denied a Pregnancy Termination. J Stud Alcohol Drugs. 2018 Mar;79(2):293-301. PMID: 29553359.

evidence to support this baseless claim.[41] She herself states that "current systems of data collection are not capable of linking these events to induced abortion" even though rigorous data from the Turnaway Study refute her claim.[42]

II. Rebuttal Opinion 2: Reliable Evidence Shows That Patients Who Obtain an Abortion, Regardless of Their Point in Pregnancy, Their Age, or Their Reasons For Doing So, Have Predominantly Positive Emotions About the Abortion and Have High Levels of Decisional Certainty

25. High quality research shows both that (1) women are more likely to experience positive than negative emotions in response to abortion, including "relief," and (2) the vast majority of women seeking abortion have high levels of decision certainty and high levels of decision rightness after obtaining an abortion, including those who describe a primarily negative emotional response.[43] The most rigorous studies, including findings from the Turnaway Study,[44] demonstrate that positive emotions, including relief, are the most common emotions expressed in the short and long term and that the intensity of both positive and negative emotions decline over time.[45] The study also found that emotions did not differ

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[41] Skop Decl. ¶ 27.

[42] Skop Decl. ¶ 27. Studies attributing higher rates of drug use to the experience of having an abortion are rife with methodological problems such as use of inappropriate comparison groups (women who have never been pregnant or had an intended pregnancy) and failure to account for pre-pregnancy drug use and other risk factors. *See, e.g.*, Priscilla K.Coleman et al., *Substance Use Among Pregnant Women in the Context of Previous Reproductive Loss and Desire for Current Pregnancy*, 10 Brit. J. Health Psych. 255 (2005); Priscilla K. Coleman et al., *A History of Induced Abortion in Relation to Substance Use During Subsequent Pregnancies Carried to Term*, 187 Am. Obstetrics & Gynecology 1673 (2002a); Kaeleen Dingle et al., *Pregnancy Loss and Psychiatric Disorders in Young Women: An Australian Birth Cohort Study*, 193 Brit. J. Psychiatry 455 (2008); David M. Fergusson et al., *Abortion and Mental Health Disorders: Evidence from a 30-Year Longitudinal Study*, 193 Brit. J. Psychiatry 444 (2008); Willy Pedersen, *Childbirth, Abortion and Subsequent Substance Use in Young Women: A Population-Based Longitudinal Study*, 102 Addiction 1971 (2007); *see also* Major et al. (2009), *supra* note 1, at 874–75. Roberts SCM, Foster DG, Gould H, Biggs MA. Changes in Alcohol, Tobacco, and Other Drug Use Over Five Years After Receiving Versus Being Denied a Pregnancy Termination. J Stud Alcohol Drugs. 2018 Mar;79(2):293-301. PMID: 29553359.

[43] Corinne H. Rocca et al. *Emotions and Decision Rightness over Five Years Following an Abortion: An Examination of Decision Difficulty and Abortion Stigma*, 248 Soc. Sci. Med. 112704 (2020).

[44] Corinne H. Rocca et al., *Decision Rightness and Emotional Responses to Abortion in the United States: A Longitudinal Study*, 10 PLoS One e0218832, e028841 (2015).

[45] Brenda Major et al., *Psychological Responses of Women After First-Trimester Abortion*, 57 Archives Gen. Psychiatry 777, 778-79 (2000); Rocca et al. (2013), *supra* note 83, at 126; *see also* Anne Broen et al., *Psychological Impact on Women of Miscarriage Versus Induced Abortion: A 2-year Follow Up Study*, 66 Psychosomatic Med. 265, 269 (2004); A. Kero et al., *Wellbeing and Mental Growth— Long-Term Effects of Legal Abortion*, 58 Soc. Sci. & Med. 2559, 2564 (2004); Rocca et al. (2020), *supra* note 81.

between women having abortions beyond the first trimester and women having first-trimester abortions.[46] Regarding decisional rightness, the Turnaway study found that 95%-99% of women felt that the abortion was the right decision for them in the weeks, months, and up to five years after the abortion, regardless of their stage in pregnancy.[47]

26. In examining whether patients experience regret following an abortion, it is important to differentiate between situational regret and decisional regret, since women may regret their situation or the circumstances that led to their decision to have an abortion without regretting the decision to have an abortion. Situational regret is a common, expected, and normal reaction for an abortion patient. Having an unintended or unwanted pregnancy may be a stressful life event for some women. Some women may regret having an unintended pregnancy in the first place or regret situational factors such as lack of financially stability, other obligations or dependents that prevent her from being able to support another child at this time, or a lack of supportive partner. By contrast, decisional regret means precisely that – that a woman regrets her decision to have an abortion. Evidence consistently finds that women do not regret their decision to have an abortion. Nevertheless, Dr. Skop speculates that "[w]ith all this indecision, it is likely that another change of mind could occur for the woman after going through with the abortion, and that the choice could be regretted," but provides no support for her conjecture.[48]

27. Unlike decision rightness which assesses whether the abortion was the right decision after the abortion, as described above, decisional certainty is measured at the time of

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[46] *Id.*
[47] Rocca et al. (2015), *supra* note 44, at e0218841; Corinne H. Rocca et al., *Women's Emotions One Week After Receiving or Being Denied an Abortion in the United States*, 45 Persp. on Sexual & Reprod. Health 122, 128 (2013)., at 128; Major et al. (2000), *supra* note 43, at 781; Rocca et al. (2020), *supra* note 43.
[48] Skop Decl. ¶44.

seeking the abortion. A study of women seeking abortion in Utah measured women's decisional certainty using two separate scales, an abortion-specific scale and a scale widely used by researchers to measure attitudes and decision-making around other health care decisions.[49] Importantly, the study found that levels of decisional certainty around abortion were the same or even higher than those observed in studies of patients making decisions about various other treatments, such as mastectomy after a breast cancer diagnosis, prenatal testing after infertility, antidepressant use during pregnancy, reconstructive knee surgery, or prostate cancer treatment options.[50] Furthermore, in this study, decisional certainty did not differ based on pregnancy duration.

III. Rebuttal Opinion 3: The Studies Dr. Skop Cites Showing an Association Between Abortion and Adverse Mental Health Outcomes Are Unreliable Due to Methodological Flaws

28. Studies asserting an association between abortion and adverse mental health outcomes are misinterpreted and/or suffer from methodological limitations and have been consistently refuted by rigorous reviews on the topic. Nevertheless, Dr. Skop relies on such studies to support her assertion that abortion leads to negative mental health outcomes.

29. Dr. Skop relies on a metanalysis and other studies by Dr. Priscilla Coleman.[51] However, Dr. Coleman's analysis and conclusions have been widely criticized and uniformly rejected by the mainstream scientific community. After the publication of Dr. Coleman's 2011 meta-analysis, eight commentaries were published by reputable scientists refuting her findings

[49] Lauren J. Ralph et al., *Measuring Decisional Certainty Among Women Seeking Abortion*, 95 Contraception 269, 276 (2017)
[50] *Id.* at 276.
[51] Skop Decl. ¶¶ 27, 41, 42, 44, 48

and pointing to serious methodological concerns that rendered her conclusions meaningless.[52] [53]

30. Another serious methodological flaw with many of the studies Dr. Skop cites is use an inappropriate comparator group. As previously noted, in order to assess whether abortion impacts mental health outcomes, it is important to utilize comparison groups, and to ensure that they are as similar as possible to the group of women obtaining an abortion. It is scientifically unsound to rely on lower-quality studies that compare women who have abortions to women who have never been pregnant[54] or to women with intended pregnancies that are carried to term[55], as Dr. Skop does, when we have more rigorous studies with appropriate comparison groups, such as the Turnaway Study, available.

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[52] Kathryn M. Abel et al., *Abortion and Mental Health: Guidelines for Proper Scientific Conduct Ignored*, 200 Brit. J. Psychiatry 74 (2012); Ben Goldacre & William Lee, *Abortion and Mental Health: Guidelines for Proper Scientific Conduct Ignored*, 200 Brit. J. Psychiatry 77 (2012); Louise M. Howard et al., *Abortion and Mental Health: Guidelines for Proper Scientific Conduct Ignored*, 200 Brit. J. Psychiatry 74 (2012); Toine Lagro-Janssen et al., *Abortion and Mental Health: Guidelines for Proper Scientific Conduct Ignored*, 200 Brit. J. Psychiatry 78 (2012); Julia H. Littell & James C. Coyne, *Abortion and Mental Health: Guidelines for Proper Scientific Conduct Ignored*, 200 Brit. J. Psychiatry 75 (2012); Chelsea B. Polis et al., *Abortion and Mental Health: Guidelines for Proper Scientific Conduct Ignored*, 200 Brit. J. Psychiatry 76 (2012); Renzo Puccetti et al., *Abortion and Mental Health: Guidelines for Proper Scientific Conduct Ignored*, 200 Brit. J. Psychiatry 78 (2012); Gail Erlick Robinson et al., *Abortion and Mental Health: Guidelines for Proper Scientific Conduct Ignored*, 200 Brit. J. Psychiatry 78 (2012).

[53] Researchers have also pointed out several failures in Dr. Coleman's methodological approach, which violate principles and best practices for meta-analysis. *See* Chelsea B. Polis et al., *Abortion and Mental Health: Guidelines for Proper Scientific Conduct Ignored*, 200 Brit. J. Psychiatry 76 (2012);; Julia H. Littell & James C. Coyne, *Abortion and Mental Health: Guidelines for Proper Scientific Conduct Ignored*, 200 Brit. J. Psychiatry 75 (2012). In particular, numerous critiques have shown that it is inappropriate for Dr. Coleman's use of a Population Attributable Risk (PAR) statistic to estimate that "nearly 10% of the incidence of mental health problems [is] shown to be directly attributable to abortion." Priscilla K. Coleman, *Abortion and Mental Health: Quantitative Synthesis and Analysis of Research Published from 1995-2009*, 199 British J. Psychiatry 180, 183 (2011). This is because estimating PAR assumes a causal relationship between the risk factor (abortion) and the disease (mental ill health) and that the considered risk factor is independent of other risk factors. Because Dr. Coleman failed to fulfill either assumption, it represents one of the most important shortcomings of her analysis. Louise M. Howard et al., *Abortion and Mental Health: Guidelines for Proper Scientific Conduct Ignored*, 200 Brit. J. Psychiatry 74, 74 (2012)

[54] David M. Fergusson et al., *Abortion and Mental Health Disorders: Evidence from a 30-Year Longitudinal Study*, 193 Brit. J. Psychiatry 444, 447 (2008)

[55] Coleman et al. (2002a), *supra* note 42, at 1675; Priscilla K. Coleman et al., *State-Funded Abortions Versus Deliveries: A Comparison of Outpatient Mental Health Claims Over 4 Years*, 72 Am. J. Orthopsychiatry 141, 144 (2002b); Jesse R. Cougle et al., *Depression Associated with Abortion and Childbirth: A Long-Term Analysis of the NLSY Cohort*, 9 Med. Sci. Monitor CR157 138 (2003); Mika Gissler et al., *Injury Deaths, Suicides and Homicides Associated with Pregnancy, Finland 1987–2000*, 15 Eur. J. Pub. Health 459, 460 (2005).

31. Multiple studies cited by Dr. Skop also fail to take pregnancy intention or wantedness into account when comparing women who have abortions to women with intended pregnancies that are carried to term.[56] Thus, studies that don't account for pregnancy intentions are biased in favor of finding that women who have abortions will have more mental health problems than women who deliver as a result of this failure.[57] Other studies upon which Dr. Skop relies inappropriately control for pre-existing mental health conditions. [58] For example, although Dr. Skop cites the work of Fergusson and colleagues, their study was conducted in New Zealand, a country where, at the time of the study and according to the study authors, a patient could only legally obtain abortion if the patient was at risk of serious physical or mental health problems, the pregnancy was the result of incest, or the patient was severely mentally handicapped. [59] The study also uses an inappropriate comparator group and relies on the participants to disclose their own abortions, as their measure of abortion.[60] The authors of the study also acknowledged that there was underreporting of self-reported abortions.[61]

32. Women who have abortions usually have a higher incidence of pre-pregnancy mental health conditions than women without a history of abortion. The reasons women seek abortion—financial, partner-related, the desire to leave an abusive relationship or to avoid exposing children to an abusive relationship—can affect women's mental health outcomes post-abortion. Thus, when studies compare women who have abortions to those with intended

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[56] Coleman et al. (2002a), *supra* note 42, at 1674; Coleman et al. (2002b), *supra* note 55, at 144; Cougle et al. (2003), *supra* note 55, at 159; Gissler et al. (2005), *supra* note 55, at 459;.
[57] Major et al. (2009), *supra* note 1, at 868–69, 884–85.
[58] Fergusson et al. (2008), *supra* note 42..
[59] Fergusson et al. (2008), *supra* note 42. The study explains that at the time, abortion in New Zealand was only allowed if the following conditions were met: Two certifying consultants must then agree: 1) that the pregnancy would seriously harm the life, physical or mental health of the woman or baby; or 2) that the pregnancy is the result of incest; or 3) that the woman is severely mentally handicapped.
[60] *Id.*
[61] *Id.*

pregnancies that are carried to term or to people who have never given birth, they may erroneously attribute any differences in mental health outcomes to the abortion, when in fact these differences more likely stem from a woman's circumstances around the time she decides to have an abortion or carry to term, or even before she became pregnant.

33. Many of the studies cited by Dr. Skop also lack a prospective design and instead are cross-sectional or rely on retrospective measures, which are prone to biases. [62] National surveys that rely on patient reporting of abortion, such as those referenced by Dr. Skop, [63] are known to miss some people who have had abortions since stigmatized health events, such as abortion, are underreported.[64] Studies that use subsamples from nationally representative datasets that were collected for other purposes effectively destroy the rigorous sampling procedures of the original dataset and render any results not generalizable.[65]

34. Studies that use differential inclusion criteria in their study groups, such as those Dr. Skop relies upon, can lead to erroneous conclusions.[66] For example, studies that compare women who deliver their first pregnancy to women who have an abortion, yet exclude women with subsequent abortions from only the delivery group but not the abortion group,[67] eliminate women who may seek subsequent abortions due to mental health or other reasons from the

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[62] *See, e.g.*, Coleman et al. (2002a), *supra* note 42, at 1674; Coleman et al. (2005), *supra* note 42, at 260; Priscilla K. Coleman, *Resolution of Unwanted Pregnancy During Adolescence Through Abortion Versus Childbirth: Individual and Family Predictors and Psychological Consequences*, 35 J. Youth & Adolescence 903, 906 (2006); Cougle et al. (2003), *supra* note 55, at 159.
[63] Coleman (2006), *supra* note 55, at 906.
[64] Radha Jagannathan, *Relying on Surveys to Understand Abortion Behavior: Some Cautionary Evidence*, 91 Am. J. Pub. Health 1825 (2001).
[65] Coleman et al. (2002a), *supra* note 42, at 1674; Coleman (2006), *supra* note 62; Cougle et al. (2003), *supra* note 55.
[66] Skop Decl. ¶ 48.
[67] *See e.g.*, Coleman et al. (2002a), *supra* note 42; Coleman et al. (2002b), *supra* note 55; Cougle et al. (2003), *supra* note 55; Jesse R. Cougle et al., *Generalized Anxiety Following Unintended Pregnancies Resolved Through Childbirth: A Cohort Study of the 1995 National Survey of Family Growth*, 19 J. Anxiety Disorders 137 (2005).

delivery group, thus creating a bias toward finding that the delivery group has better mental health outcomes.[68]

35. Studies from countries where the legal status of abortion is quite different from the United States, such as Russia[69] and New Zealand,[70] cannot be presumed generalizable, although Dr. Skop nonetheless relies on such studies. This is especially important when studies include people from countries with significantly different cultural or legal contexts, or for example from countries where a person can only obtain an abortion for mental health reasons, thereby biasing conclusions.

IV. Rebuttal Opinion 5: Contrary to Dr. Skop's Opinion, HB 5 Will Not Benefit Women's Mental Health or Emotional Well-Being and Evidence Indicates It Could Have the Opposite Effect.

36. It is my understanding that under HB 5, many women who seek abortion after 15 weeks gestation will be unable to obtain an abortion altogether. In the Turnaway Study, we found that women who sought an abortion but were unable to obtain one suffered consequences to their mental health, socioeconomic status, physical health, and lowered their aspirations for the future. For example, women in the Turnaway Study who were denied an abortion were more likely to be pushed below the poverty line than women who were able to receive an abortion.[71] After being denied an abortion, they were also less likely to be employed full-time, more likely to be raising children alone, more likely to receive public assistance, and more likely to not have enough money to meet basic living needs, such as food, housing, and transportation, than women who received an abortion. For some outcomes (*i.e.*, subjective

[68] Julia R. Steinberg & Nancy Felipe Russo, *Evaluating Research on Abortion and Mental Health*, 80 Contraception 500, 502 (2009).
[69] *Id.* ¶ 41.
[70] *Id.* ¶ 48.
[71] Diana Greene Foster et al., *Socioeconomic Outcomes of Women Who Receive and Women Who Are Denied Wanted Abortions*, 108 Am. J. Pub. Health 407, 410 (2018).

poverty, receiving food assistance), the negative socioeconomic effects of being forced to carry their pregnancies to term due to gestational limits lasted for the entire five-year period we talked to these women.[72]

37. Findings from the Turnaway Study also demonstrated that women denied an abortion and who later miscarried or had an abortion elsewhere reported lower levels of life satisfaction at the time of being denied an abortion, when compared to women who obtained an abortion near a facility's gestational limit.[73] The Turnaway Study also showed that when women were denied an abortion, they lowered their future goals. They were less likely to have aspirational life plans, like getting a better job or finishing school, and six times less likely than women who received an abortion to achieve an aspirational plan in the year after being turned away.[74] Women who obtained abortions were also more likely to be able to exit abusive relationships and experienced a sharp decrease in violence from the man involved, whereas women who carried a pregnancy to term experienced no such decrease—they continued to be exposed to abuse.[75] These findings indicate that it is in fact denial of an abortion (something I understand to be an effect of HB 5's mandate) that will have a negative impact on women's well-being.

38. In sum, the best reliable evidence firmly demonstrates that abortion is not associated with an increased risk of negative mental health outcomes. It also shows that denying people access to a wanted abortion will not benefit their mental health or well-being.

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[72] *Id.*
[73] M. Antonia Biggs et al., *Does Abortion Reduce Self-Esteem and Life Satisfaction?*, 23 Quality Life Res. 2505, 2509 (2014); M. Antonia Biggs et al., *Women's Mental Health and Well-Being 5 Years After Receiving or Being Denied an Abortion: A Prospective, Longitudinal Cohort Study*, 74 JAMA Psych. 169, 179 (2017).
[74] Ushma D. Upadhyay et al., *The Effect of Abortion on Having and Achieving Aspirational One-Year Plans*, 15 BMC Women's Health 102, 108–9 (2015).
[75] Sarah C.M. Roberts et al., *Risk of Violence from the Man Involved in the Pregnancy After Receiving or Being Denied an Abortion*, 12 BMC Med. 144, 147 (2014b).

To the contrary, the evidence suggests that policies restricting people's access to abortion has the potential to exacerbate the burdens people experience seeking abortion care, increase their symptoms of stress and anxiety, and will have long-term consequences to the socioemotional, physical and financial well-being of women, their children, and families.

39. I declare under penalty of perjury that the foregoing is true and correct.

Dated: June 23, 2022.

Antonia Biggs, Ph.D.

Prepared: June 22, 2022

University of California, San Francisco

CURRICULUM VITAE

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EDUCATION

DATES	INSTITUTION	DEGREE	FIELD OF STUDY
1987 - 1991	University of Wisconsin-Madison	BA	Psychology
1989 - 1990	Universite Aix-en-Provence, France		Psychology
1994 - 1998	Boston University	PhD	Psychology

PRINCIPAL POSITIONS HELD

1998 - 2013	University of California, San Francisco	Analyst V	Bixby Center for Global Reproductive Health PRL Institute for Health Policy Studies
2013 - 2015	University of California, San Francisco	Associate Researcher	Advancing New Standards in Reproductive Health (ANSIRH)
2015 - 2020	University of California, San Francisco	Full Researcher	Advancing New Standards in Reproductive Health (ANSIRH)
2020 - present	University of California, San Francisco	Associate Professor	Advancing New Standards in Reproductive Health (ANSIRH)

OTHER POSITIONS HELD CONCURRENTLY

2008 - 2010	University of Chile, Santiago, Chile	Consultant	Center for Adolescent Reproductive Medicine and Development

Prepared: June 22, 2022

HONORS AND AWARDS

1994	Fellowship for graduate studies	Boston University
2014	2nd place poster award (co-author)	North American Forum on Family Planning
2015	Top 4 oral abstracts (lead author), presentation	North American Forum on Family Planning
2015	Outstanding article of the year award nomination (lead author)	International Society for Quality of Life Research
2017	1st place poster award (lead author)	North American Forum on Family Planning
2018	2nd place poster award (lead author)	North American Forum on Family Planning
2019	2nd place poster award (senior author)	North American Forum on Family Planning
2019	Sexual and Reproductive Health Section Poster award (senior author)	American Public Health Association
2020	2nd place poster award (lead author)	North American Forum on Family Planning
2021	The Distinguished Dozen: 2021 JAH Articles Making Distinguished Contributions to Adolescent and Young Adult Health (Senior author)	Journal of Adolescent Health

KEYWORDS/AREAS OF INTEREST

Abortion; abortion stigma; contraception; family planning; medication abortion; mental health.

PROFESSIONAL ACTIVITIES

Memberships

2000 - present American Public Health Association

2013 - present Society of Family Planning, Fellow

Service to Professional Organizations

2016 - 2018	Ibis Reproductive Health, OTC OC working group	Member
2019 - 2021	Society of Family Planning (SFP) grant review committee, Emerging Scholars in Family Planning	Grant reviewer
2020 - 2020	Latin American Consortium Against Unsafe Abortion (CLACAI): Evaluation committee: Initiatives to increase access to sexual and reproductive health services in the context of COVID-19	Grant reviewer

2021-2022	Society of Family Planning (SFP) Emerging Scholars in Family Planning	Mentor

SERVICE TO PROFESSIONAL PUBLICATIONS

2022 - 2022	Ad hoc referee: BMC Women's Health, Contraception, Journal Adolescent Health Perspectives on Sexual and Reproductive Health
2021 - 2021	Ad hoc referee: BMC Psychiatry; BMJ; BMJ Global Health; Clinical and Experimental Obstetrics and Gynecology; Contraception; The Lancet Regional Health Americas; Journal Adolescent Health; Perspectives on Sexual and Reproductive Health; Sexual and Reproductive Health Matters; Sexuality Research and Social Policy; Social Science and Medicine; Social Science Research; Women's Health Issues.
2019 - 2019	Ad hoc referee: American Journal of Public Health; BMC Pregnancy and Childbirth; Contraception; Journal of Adolescent Health; Journal of Affective Disorders; Perspectives on Sexual and Reproductive Health; The BMJ; Social Currents; Women's Health Issues; Women and Health
2020 - 2020	Ad hoc referee: BMC Medical Education; BMJ Open; BMJ Sexual & Reproductive Health; Contraception; Current Psychology; The European Journal of Contraception and Reproductive Health Care; Journal of Happiness Studies; Journal Health Care Poor and Underserved; Politics, Groups and Identities; Sexual and Reproductive Healthcare; Sexuality, Research and Social Policy; Women's Health Issues.
2018 - 2018	Ad hoc referee: Culture, Health and Sexuality; Journal of Reproductive and Infant Psychology; Journal of Psychiatric Research; Human Reproduction; Maternal and Child Health Journal; Perspectives on Sexual and Reproductive Health; Social Science and Medicine
2017 - 2017	Ad hoc referee: American Journal of Public Health; Demography; Human Reproduction; JAMA; JAMA-Psychiatry; Obstetrics and Gynecology; Social Science and Medicine
2016 - 2016	Ad hoc referee: American Journal of Transplantation; BJOG; BMC-Women's Health; Contraception; Journal of Adolescent Health; New England Journal of Medicine; Psychological Medicine; Obstetrics and Gynecology
2013 - 2016	Associate Editor: BMC Women's Health
2015 - 2015	Ad hoc referee: American Journal of Preventive Medicine; BMC-Health Services Research; BMC Women's Health; BMJOpen; International Journal of Health Policy and Management; Obstetrics Gynecology; Women's Health Issues
2013 - 2013	Ad hoc referee: American Journal of Public Health; BMC Women's Health; Health Services Research; Hispanic Health Care International; Journal of Immigrant and Minority Health; The Lancet; PlosOne; Social Science and Medicine; Stigma, Research, and Action; Women's Health Issues
2012 - 2012	Ad hoc referee: Contraception; Women's Health Issues
2011 - 2011	Ad hoc referee: Journal of Research on Adolescence; Journal of Women's Health

Prepared: June 22, 2022

INVITED PRESENTATIONS

INTERNATIONAL

2009	Cost-benefit analysis of California's family planning program, University of Chile, CEMERA, Santiago, Chile	Oral presentation, presenter
2009	Understanding the Reproductive Health of Latino Males, Congreso Chileno de Obstetricia y Ginecología Infantil y de la Adolescencia, Santiago, Chile	Oral presentation, presenter
2017	The effects of abortion on women's mental health outcomes. Provided expert testimony to a congressional commission to support lifting Honduras' complete ban on abortion, Tegucigalpa, Honduras	Provided expert testimony
2017	The effects of abortion on women's mental health outcomes. Provided expert testimony to Chile's constitutional tribunal to support lifting Chile's' complete ban on abortion, Santiago, Chile	Provided expert testimony
2017	Global Turnaway study, CLACAI, Lima, Peru	Oral presentation, presenter
2017	Does abortion increase women's risk of experiencing adverse mental health outcomes? National Abortion Federation, Lima, Peru	Oral presentation, presenter
2018	Medical and midwifery school faculty and student views about abortion and abortion provision, following legal reform in Chie, University of Diego Portales Medical School, Santiago, Chile.	Oral presentation, presenter
2020	Economic Outcomes of Women Who Receive and Women Who Are Denied Wanted Abortions in the United States, International Association for Feminist Economics, Annual Conference, Quito, Ecuador (Conference cancelled due to COVID-19).	Oral presentation, presenter
2021	Abortion and mental health, National Institute of Psychiatry and National Center on Gender Equity and Reproductive Health (Instituto Nacional de Psiquiatría y el Centro Nacional de Equidad de Género y Salud Reproductiva), Mexico City, Mexico (Remote presentation due to COVID-19)	Oral presentation, presenter
2021	Abortion and mental health: Findings from the Turnaway and Burden studies. National Institute of Psychiatry (Instituto Nacional de Psiquiatría), Annual Research Conference, Mexico City, Mexico.	Keynote oral presentation, presenter

NATIONAL

1996	Puerto Rican adolescents' stereotype awareness, ethnic pride, and feelings of self-worth, Society for Research on Child Development, Washington, DC.	Oral presentation, lead author
1996	Defining violence, aggression, and abuse in the context of family violence, New England Psychological Association, Wenham, MA	Oral presentation, lead author
1998	Understanding how Puerto Rican adolescents are worse off than mainstream adolescents? Gaston Institute, University of Massachusetts, Boston, MA	Oral presentation, lead author

1999	Maternal moods predict infant cognitive development in Barbados, Society for Research on Child Development, Albuquerque, NM	Oral presentation, lead author
2000	Community Challenge Grant: A successful teen pregnancy prevention model for high-risk youth? American Public Health Association, Boston, MA	Poster presentation, lead author
2001	Client satisfaction with California's Family PACT Program, American Public Health Association, Atlanta, GA	Oral presentation, lead author
2001	Reproductive Health Needs of the Latino Population, National Organization on Adolescent Pregnancy, Parenting and Prevention, Inc., Arlington, VA.	Oral presentation, co-author
2001	Acculturation and Latino Adolescent Sexual Behavior: Establishing a Research Agenda for the 21st Century, American Public Health Association, Atlanta, GA.	Oral presentation, co-author
2002	Combined pregnancy prevention approaches are associated with lower teen-birth rates at the zip code level, American Public Health Association, Philadelphia, PA	Oral presentation, lead author
2003	Meeting the reproductive health care needs of adolescents, American Public Health Association, San Francisco, CA	Oral presentation, lead author
2004	The Role of Community Based Organizations in Increasing Access to Family Planning/Reproductive Health (FP/RH) Services in California, American Public Health Association, Washington, DC	Oral presentation, lead author
2004	Adolescents' awareness of family planning policies and services in California's teen pregnancy hot spots, American Public Health Association, Washington DC.	Poster presentation (co-author)
2005	Public savings from averting unintended pregnancy: Cost-benefit analysis of California's family planning program presentation, American Public Health Association, New Orleans, LA	Oral presentation, co-author
2005	Meeting the reproductive health care needs of adolescents: California's Family PACT Program, Teen Pregnancy Prevention Annual Meeting, Burlingame, CA	Oral presentation, lead author
2006	American Evaluation Association Annual Conference, Portland, OR	Oral presentation, lead author
2007	Teens reaching teens, Use of peer outreach workers in family planning clinics, American Public Health Association, Washington, DC	Oral presentation, co-author
2008	Pregnancy intendedness and decision-making among young Latinas: Findings from a qualitative study, American Public Health Association, San Diego, CA	Oral presentation, lead author
2009	Discussing intrauterine contraception at the family planning visit: A (missed) opportunity for client education, American Public Health Association, Philadelphia, CA	Oral presentation, co-author
2009	They'll use it if it's free, Contraceptive choices among uninsured low-income women, with Rostovtseva, American Public Health Association, Philadelphia, CA	Oral presentations,co-author

2011	A Question of Hope, American Public Health Association, Washington, DC	Film screening
2012	Mental health and physical health consequences of abortion compared to unwanted birth, with Foster, Dobkin, Roberts, and Steinberg, American Public Health Association, San Francisco, CA	Oral presentation, lead author
2012	Misunderstanding the risk of conception from unprotected sex and contraceptive use, with Foster, American Public Health Association, San Francisco, CA	Poster presentation, lead author
2013	Emotional and mental health outcomes from the Turnaway study, National Abortion Federation, New York, NY	Oral presentation, lead author
2013	Pregnancies and Health Expenditures from Dispensing up to a One-Year Supply of Hormonal Contraception, Population Association of America, Annual Meeting, New Orleans, LA	Oral presentation, Co-author
2013	How many visits does it take to provide long-acting reversible contraception (LARC)? Provider perspectives from Colorado and Iowa; American Public Health Association, Boston, MA.	Oral presentation, , lead author
2014	California Family Planning Providers' Challenges to Same Day Long-Acting Reversible Contraception (LARC) Provision, American Public Health Association, New Orleans, LA.	Oral presentation, presenter
2014	A comparison of depression and anxiety symptom trajectories between women who had an abortion and women denied one, American Psychological Association, Annual Meeting, Washington, DC.	Oral presentation, presenter
2014	Potential Role of Family Planning in an Era of Health Care Reform, Patient Perspectives on Primary Care Needs and Insurance Eligibility, American Public Health Association, New Orleans, LA.	Paper presentation, co-author
2014	Where have all the teens gone? Decline in adolescent female participation in California's family planning program following cuts in outreach funding, American Public Health Association, New Orleans, LA.	Paper presentation, co-author
2014	Sexually Transmitted Infection Services and Adoption of Effective Contraceptive Methods, American Public Health Association, New Orleans, LA.	Poster presentation, co-author
2014	Is IUD and contraceptive implant use associated with the decline in abortions in Iowa? with Rocca, Brindis, Hirsch, and Grossman; The North American Forum on Family Planning, Annual Meeting, Miami, FL.	Oral Presentation, presenter
2015	Does abortion increase women's risk for post-traumatic stress disorder? with Rowland and Foster; The North American Forum on Family Planning, Annual Meeting, Chicago, IL.	Oral Presentation, presenter
2016	Does abortion increase women's risk for adverse mental health and well-being outcomes? Findings from a prospective 5-year longitudinal cohort study, American Public Health Association, Denver, CO.	Paper presentation, presenter

2016	Changes in alcohol, tobacco, and drug use over five years after receiving versus being denied an abortion, American Public Health Association, Denver, CO.	Paper presentation, co-author
2016	Effect of abortion receipt and denial on women's existing and subsequent children, American Public Health Association, Denver, CO.	Paper presentation, co-author
2016	Effects of Receiving vs. Being Denied an Abortion on Quality of Women's Intimate Relationships at 5 years, American Public Health Association, Denver, CO.	Paper presentation, co-author
2016	Effect of being denied a wanted abortion on women's socioeconomic wellbeing, with Foster, Gerdts, Korenman, Ralph, and Roberts; American Public Health Association, Denver, CO.	Paper presentation, co-author
2016	Role of Proctoring to Increase LARC Access in Community Health Centers, with Mays, Harper, Freedman, Kaller; American Public Health Association, Denver, CO.	Paper presentation, co-author
2016	IUD and implant counseling in Community Health Care Centers, American Public Health Association, Denver, CO.	Roundtable discussion, co-author
2016	'It takes the stars aligning': Challenges to providing the Copper IUD as emergency contraception (EC) and same-day IUD visits in community health care settings, North American Forum on Family Planning, Denver, CO	Poster presentation, presenter
2017	Does abortion increase women's risk for adverse mental health and well-being outcomes? UCSF Family Planning Conference, San Francisco, CA	Oral presentation, lead author
2017	Five-year suicidal ideation trajectories among women receiving versus being denied an abortion, North American Forum on Family Planning, Atlanta, GA (received the 1st place best poster award).	Poster presentation, lead author, first place award
2017	Distance travelled by young women accessing abortion services in the Midwest, North American Forum on Family Planning, Atlanta, GA	Poster presentation, lead author
2018	Interest and support for alternative models of medication abortion provision according to a U.S. national probability sample, North American Forum on Family Planning, New Orleans, LA (received the 2nd place best poster award).	Poster presentation, lead author
2018	Shifting abortion access in Latin America: advocacy, research, and service delivery efforts in the region, North American Forum on Family Planning, New Orleans, LA	Oral presentation, panelist
2018	Women's experiences with telemedicine for preabortion informed consent visits in Utah, North American Forum on Family Planning, New Orleans, LA	Poster presentation, co-author
2019	Young women's experiences with EC method choice and contraceptive counseling at the EC visit, American Society for Emergency Contraception, Washington, D.C.	Oral presentation, lead author

2019	Women's five-year anticipated abortion stigma trajectories after receiving or being denied an abortion', North American Forum on Family Planning, Los Angeles, CA	Poster presentation, lead author
2019	Attitudes about self-managed abortion legality in the United States: results from a nationally representative survey, North American Forum on Family Planning, Los Angeles, CA	Oral presentation, co-author
2019	Minors' reasons for and experience with obtaining judicial bypass for abortion in Illinois, North American Forum on Family Planning, Los Angeles, CA (received the 2nd place best poster award).	Poster presentation, senior author
2019	Understanding young women's preferences for lower-efficacy contraceptive methods: A mixed-methods study, America Public Health Association, Philadelphia, PA (received the SRH section poster award).	Poster presentation, senior author
2020	Young Women's Preferences for Lower Efficacy Contraceptive Methods: Balancing Reproductive Autonomy and Pregnancy Prevention Goals, Society of Adolescent Health and Medicine (SAHM) Annual Meeting, San Diego, CA (Conference cancelled due to COVID-19).	Oral presentation, senior author
2020	Barriers accessing abortion care and their association with psychological well-being, has been selected for oral presentation at the National Abortion Federation (NAF) Annual Meeting, Washington, DC (Conference cancelled due to COVID-19).	Oral presentation, lead author
2020	Consequences of abortion received and denied: The Turnaway study). American Public Health Association, Annual Meeting, Remote meeting due to COVID-19.	Oral presentation, co-author
2020	Consideration of self-managed abortion among people seeking facility-based care in three haven states. Society of Family Planning (SFP) Annual Meeting, Remote meeting due to COVID-19.	Poster presentation, senior author
2020	Abortion patients' interest in obtaining medication abortion over the counter (OTC). Society of Family Planning (SFP) Annual Meeting, Remote meeting due to COVID-19.	Poster presentation, lead author
2020	Development and validation of a new scale to measure the psychosocial burden of accessing abortion care. Society of Family Planning (SFP) Annual Meeting, Remote meeting due to COVID-19.	Poster presentation, lead author
2021	Feasibility, acceptability, and effectiveness of mail-order pharmacy dispensing of mifepristone for medication abortion. Society of Family Planning (SFP) Annual Meeting, Remote meeting due to COVID-19.	Poster presentation, co-author
2021	"Absolutely horrific." Attitudes towards self-managed abortion legality and criminalization: A qualitative study. Society of Family Planning (SFP) Annual Meeting, Remote meeting due to COVID-19.	Poster presentation, co-author

2021	Abortion terminology preferences among people accessing abortion care. Society of Family Planning (SFP) Annual Meeting, Remote meeting due to COVID-19.	Poster presentation, senior author

UNIVERSITY AND PUBLIC SERVICE

UNIVERSITY SERVICE

DEPARTMENTAL SERVICE

2018 - 2018	Core Funding Task Force, Advancing New Standards in Reproductive Health, University of California, San Francisco	Member
2018 - 2018	Resource Allocation Program (RAP), Request for Applications (RFA) planning team, Bixby Center for Global Reproductive Health, University of California, San Francisco	Member
2019 - 2020	Internal Collaboration Workgroup, Bixby Center for Global Reproductive Health, University of California, San Francisco	Member
2019 - present	Faculty DEI Hiring Workgroup, Advancing New Standards in Reproductive Health, University of California, San Francisco	Member
2019 - present	Culture and Inclusion Workgroup, Advancing New Standards in Reproductive Health, University of California, San Francisco	Member
2019 - present	Steering Committee for Research in Ob/Gyn at ZSFG, University of California, San Francisco	Member
2020 - present	DEI post-doctoral search committee, Advancing New Standards in Reproductive Health, University of California, San Francisco	Member
2020 - present	DEI liaison group, Advancing New Standards in Reproductive Health, University of California, San Francisco	Member
2021 - present	Research Strategy Committee, Department of Obstetrics, Gynecology and Reproductive Sciences, University of California, San Francisco	Member

PUBLIC SERVICE

2010 - 2018	Escuela Bilingüe Internacional, Emeryville, CA	Class Parent
2014 - 2019	Emeryville-4H Club	Co-Founder; Treasurer
2017 - 2017	Provided expert testimony to a congressional commission to support lifting Honduras' complete ban on abortion, Tegucigalpa, Honduras	Expert witness
2017 - 2017	Provided expert testimony to Chile's Constitutional Court in support of lifting Chile's complete ban on abortion, Santiago, Chile	Expert witness
2014 - 2019	Glide Memorial Church	Volunteer

2018 - 2019	Provided expert testimony challenging Tennessee's 48-hour waiting period and mandated counseling for abortions law	Expert witness

PEER REVIEWED PUBLICATIONS

1. Galler JR, Harrison RH, **Biggs MA**, Ramsey F, Forde V. Maternal moods predict breastfeeding in Barbados. Journal of Developmental and Behavioral Pediatrics, 1999 Apr, 20(2): 80-7.
2. Driscoll AK, **Biggs MA**, Brindis CD, Yankah E. Adolescent Latino Reproductive Health: A review of the literature. Hispanic Journal of the Behavioral Sciences, 2001 Oct, 23(3): 255-326.
3. Brindis CD, Llewelyn L, Marie K, Blum M, Biggs A, Maternowska C. Meeting the reproductive health care needs of adolescents: California's Family Planning Access, Care, and Treatment (Family PACT) Program. Journal Adolescent Health. 2003 Jun; 32(6 Suppl):79-90.
4. McConnell J, Packel L, **Biggs MA**, Chow JM, Brindis C. Integrating Chlamydia Trachomatis Control Services for Males in Female Reproductive Health Programs. Perspectives on Sexual and Reproductive Health. 2003 Sept/Oct, 35(5):226-228.
5. Foster DG, **Biggs MA**, Amaral G, Brindis C, Navarro S, Bradsberry M, Stewart F. Estimates of Pregnancies Averted Through California's Family Planning Waiver Program in 2002. Perspectives on Sexual and Reproductive Health. 2006 Sep;38(3):126-31.
6. Amaral G, Foster DG, **Biggs MA**, Jasik CB, Judd S, Brindis CD. Public Savings from the Prevention of Unintended Pregnancy: A Cost Analysis of Family Planning Services in California. Health Services Research 2007 Oct;42(5):1960-80.
7. Foster DG, **Biggs MA**, Ralph LJ, Arons A, Brindis CD. Family planning and life planning reproductive intentions among individuals seeking reproductive health care. Women's Health Issues. 2008 Sep-Oct;18(5):351-9.
8. Foster DG, Rostovtseva DP, Brindis C, **Biggs MA**, Hulett D, Darney PD. Cost-Savings from the Provision of Specific Methods of Contraception. American Journal of Public Health. 2009;99: 446-451.
9. **Biggs MA**, Ralph L, Minnis AM, Arons A, Marchi LS, Lehrer JA, Braveman PA, Brindis CD. Factors associated with delayed childbearing: from the voices of expectant Latina adults and teens in California. Hispanic Journal of Behavioral Science. 2010;32(1) 77–103.
10. Foster DG, Higgins JA, **Biggs MA**, McCain C, Holtby S, Brindis CD. Willingness to have unprotected sex. Journal of Sex Research. 2011;0(0), 1–8.
11. Schwartz SL, Brindis CD, Ralph LJ, **Biggs MA**. Latina adolescents' perceptions of their male partners' influences on childbearing: findings from a qualitative study in California. Cult Health Sex. 2011 Sep;13(8):873-86.
12. Foster DG, **Biggs MA**, Rostovtseva D, de Bocanegra HT, Darney PD, Brindis CD. Estimating the fertility effect of expansions of publicly funded family planning services in California. Women's Health Issues. 2011 Nov-Dec;21(6):418-24.
13. **Biggs MA**, Karasek D, Foster DG. Unprotected Intercourse among Women Wanting to Avoid Pregnancy: Attitudes, Behaviors, and Beliefs. Women's Health Issues. 2012 May;22(3):e311-8.
14. Minnis AM, Marchi K, Ralph L, **Biggs MA**, Combellick S, Arons A, Brindis CD, Braveman P. Limited socioeconomic opportunities and Latina teen childbearing: A qualitative study of family and structural factors affecting future expectations. J Immigr Minor Health. 2012 Jun 8.

15. Foster DG, **Biggs MA**, Grossman D, Schwarz EB. Interest in a pericoital pill among women in family planning and abortion clinics. Contraception. 2013;88(1):141–146. doi:10.1016/j.contraception.2013.01.004
16. **Biggs MA**, Combellick S, Arons A, Brindis CD. Educational barriers, social isolation, and stable romantic relationships among pregnant immigrant Latina teens. Hispanic Health Care International. 2013 Mar;11(1): 38-46.
17. **Biggs MA**, Foster DG. Misunderstanding the risk of conception from unprotected and protected sex. Women's Health Issues. 2013 Jan;23(1):e47-53.
18. Foster DG. **Biggs MA**, Malvin J, Bradsberry M, Darney PD, Brindis CD. Cost-savings from the provision of specific contraceptive methods in 2009. Women's Health Issues. 2013 Jul:23(4):e265-e271.
19. **Biggs MA**, Gould H, Foster DG. Understanding why women seek abortions in the US. BMC Women's Health. 2013, 13:29. DOI: 10.1186/1472-6874-13-29
20. **Biggs MA**, Arons A, Turner R, Brindis CD. Same-day LARC insertion attitudes and practices. Contraception. 2013 Nov;88(5):629-35.
21. Chibber K, **Biggs MA**, Roberts S, Gould H, Foster DG. The role of intimate partners in women's reasons for seeking abortion. Women's Health Issues. 2014 Jan-Feb;24(1):e131-8.
22. Harris LF, Roberts SC, **Biggs MA**, Rocca CH, Foster DG. Perceived stress and emotional social support among women who are denied or receive abortions in the United States: a prospective cohort study. BMC Women's Health. 2014; 14:76.
23. **Biggs MA**, Harper CC, Malvin J, Brindis C. California providers' attitudes and provision of long-acting reversible contraception? Obstetrics & Gynecology. 2014; 23(3):593-602.
24. **Biggs MA**, Upadhyay UD, Steinberg JR, Foster DG. Does abortion reduce self-esteem and life satisfaction? Quality of Life Research. 2014 Nov;23(9): 2505-13.
25. Roberts SCM, **Biggs MA**, Chibber KS, Gould H, Rocca CH, Foster DG. Risk of violence from the man involved in the pregnancy after receiving or being denied an abortion. BMC Medicine. 2014 Sep 29;12(1):144.
26. **Biggs MA**, Rocca CH, Brindis CD, Hirsch H, Grossman D. Did increasing use of highly effective contraception contribute to declining abortions in Iowa? Contraception. 2015 Feb;91(2):167-73.
27. Foster DG, Roberts S, Steinberg J, Neuhaus J, **Biggs MA**. A comparison of depression and anxiety symptom trajectories between women who had an abortion and women denied one. Psychological Medicine. 2015 Jan 28;1-10.
28. Foster DG, **Biggs MA**, Phillips KA, Grindlay K, Grossman D. Potential public sector cost-savings from over-the-counter access to oral contraceptives. Contraception. 2015 May;91(5):373-9.
29. **Biggs MA**, Neuhaus J, Foster DG. Mental health diagnoses after receiving or being denied an abortion in the US. American Journal of Public Health. 2015 Dec;105(12):2557-63.
30. **Biggs MA**, Harper CC, Brindis C. California family planning health care providers' challenges to same-day long-acting reversible contraception provision. Obstetrics & Gynecology. 2015 Aug; 126(2):338-45.
31. Foster DG, Barar R, Gould H, Gomez I, Nguyen D, **Biggs MA**. Projections and opinions from 100 experts in long-acting reversible contraception. Contraception. 2015 Oct 24.
32. Upadhyay UD, **Biggs MA**, Foster DG. The effect of abortion on having and achieving aspirational one-year plans. BMC Women's Health 2015 Nov 11;15(1):102.
33. **Biggs MA**, Rowland B, McCulloch CE, Foster DG. Does abortion increase women's risk for post-traumatic stress? Findings from a prospective longitudinal cohort study. BMJ Open 2016 Feb 1;6(2):e009698.
34. **Biggs MA**, Upadhyay UD, McCulloch CE, Foster DG. Women's mental health and well-being 5 Years after receiving or being denied an abortion: A prospective, longitudinal cohort study. JAMA Psychiatry. 2017 Feb 01; 74(2):169-178.

35. **Biggs MA**, Upadhyay UD, Foster DG. Mental health outcomes after having or being denied an abortion-Reply. JAMA Psychiatry. 2017 Jun 01; 74(6):654.
36. Cockrill K, **Biggs MA**. Can stories reduce abortion stigma? Findings from a longitudinal cohort study. Culture, Health, and Sexuality. 2017 Jul 14; 1-16. PMID: 28705119
37. **Biggs MA**, Roberts SCM. Fatal flaws in recent analysis on the risk of premature death following teenage abortion and childbirth. European Journal of Public Health. 2017 Oct 01; 27(5):794. PMID: 28957488
38. Block A, Dehlendorf C, **Biggs MA**, McNeil S, Goodman S. Postgraduate experiences with an advanced reproductive health and abortion training and leadership program. Family Medicine. 2017 Oct;49(9):706-713.
39. Yarger J, Daniels S, **Biggs MA**, Malvin J, Brindis CD. The role of family planning program sites in health insurance enrollment. Perspectives on Sexual and Reproductive Health 2017 Jun;49(2):103-109.
40. **Biggs MA**, Taylor D, Upadhyay UD. Role of insurance coverage in contraceptive use after abortion. Obstetrics and Gynecology. 2017 Dec;130(6):1338-1346.
41. Mirzazadeh A, **Biggs MA**, Viitanen A, Horvath H, Wang LY, Dunville R, Barrios LC, Kahn JG, Marseille E. Do school-based programs prevent HIV and other sexually transmitted infections in adolescents? A systematic review and meta-analysis. Prevention Science 2018 May; 19(4):490-506. PMID: 28786046
42. **Ralph** LJ, King E, Belusa E, Foster DG, Brindis CD, **Biggs MA**. The impact of a parental notification requirement on Illinois minors' access to and decision-making around Abortion. Journal of Adolescent Health. 2018 Mar; 62(3):281-287. PMID: 29248391
43. McCarthy M, Upadhyay U, **Biggs MA**, Anthony R, Holl J, Roberts SCM. Predictors of timing of pregnancy discovery. Contraception. 2018 Apr;97(4):303-308.
44. Foster DG, **Biggs MA**, Ralph L, Gerdts C, Roberts S, Glymour MM. Socioeconomic outcomes of women who receive and women who are denied wanted abortions in the United States. American Journal of Public Health. 2018 Mar; 108(3):407-413. PMID: 29345993. PMCID: PMC5803812
45. Marseille E, Mirzazadeh A, **Biggs MA**, Miller AP, Horvath H, Lightfoot M, Malekinejad M, Kahn JG. Effectiveness of school-based teen pregnancy prevention programs in the USA: A systematic review and meta-analysis. Prevention Science. 2018 May;19(4):468-489. PMID: 29374797
46. Battistelli MF, Magnusson S, **Biggs MA**, Freedman L. Expanding the abortion provider workforce: a qualitative study of organizations implementing a new California policy. Perspect Sex Reprod Health. 2018 Feb 14. PMID: 29443434
47. **Biggs MA**, Kaller S, Harper CC, Freedman L, Mays AR. "Birth control can easily take a back seat": Challenges providing IUDs in community health care settings. Journal Health Care Poor and Underserved. 2018 Feb; 29(1): 228-244.
48. Roberts SCM, Foster DG, Gould H, **Biggs MA**. Changes in alcohol, tobacco, and drug use over five years after receiving versus being denied a pregnancy termination. Journal of Studies on Alcohol and Drugs. 2018 Mar;79(2):293-30.
49. Woodruff K, **Biggs MA**, Gould H, Foster DG. Attitudes toward abortion after receiving vs. being denied an abortion in the U.S. Sexuality Research and Social Policy. 2018; 15: 452.
50. **Biggs MA**, Barar, R, Gould H, Foster DG. Five-year suicidal ideation trajectories among women receiving versus being denied an abortion. American Journal of Psychiatry. 2018 Sep 1;175(9):845-852.
51. Foster DG, **Biggs MA**, Raifman S, Gipson J, Kimport K, Rocca CH. Comparison of Health, Development, Maternal Bonding, and Poverty Among Children Born After Denial of Abortion vs After Pregnancies Subsequent to an Abortion. JAMA Pediatr. 2018 11 01; 172(11):1053-1060. PMID: 30193363. PMCID: PMC6248140

52. Foster DG, Raifman SE, Gipson JD, Rocca CH, **Biggs MA**. Effects of carrying an unwanted pregnancy to term on women's existing children. J Pediatr. 2019 02; 205:183-189.e1. PMID: 30389101
53. **Biggs MA**, Casas L, Ramm A, Baba CF, Correa SV, Grossman D. Future health providers' willingness to provide abortion services following decriminalisation of abortion in Chile: a cross-sectional survey. BMJ Open. 2019 Oct 30; 9(10):e030797.
54. **Biggs MA**, Kimport K, Mays A, Kaller S, Berglas NF. Young women's perspectives about the contraceptive counseling received during their emergency contraception visit. Women's Health Issues. 2019;29(2):170-175.
55. **Biggs MA**, Ralph L, Raifman S, Foster DG, Grossman D. Support for and interest in alternative models of medication abortion provision among a national probability sample of U.S. women. Contraception. 2019 Feb;99(2):118-124.
56. Ralph L, Mauldon J, **Biggs MA**, Foster DG. A prospective cohort study of the effect of receiving versus being denied an abortion on educational attainment Women's Health Issues. 2019 Nov-Dec;29(6):455-464.
57. Baba CF, Casas L, Ramm A, Correa S, **Biggs MA**. Medical and midwifery student attitudes toward moral acceptability and legality of abortion, following decriminalization of abortion in Chile, Sexual & Reproductive Healthcare, 2020 Jun;24:100502.
58. **Biggs MA**, Brown K, Foster DG. Perceived abortion stigma and psychological well-being over five years after receiving or being denied an abortion. PLoS One. 2020; 15(1):e0226417. PMID: 31995559. PMCID: PMC6988908
59. Kaller S, Mays A, Freedman L, Harper CC, **Biggs MA**. Exploring young women's reasons for adopting intrauterine or oral emergency contraception in the United States: a qualitative study. BMC Women's Health. 2020;20(1):15.
60. **Biggs MA**, Casas L, Ramm A, Baba CF, Correa SP. Medical and midwifery students' views on the use of conscientious objection in abortion care, following legal reform in Chile: a cross-sectional study. BMC Med Ethics. 2020 May 24; 21(1):42.
61. Cheeks M, Kaller S, Mays A, **Biggs MA**. Provider practices and young women's experiences with provider self-disclosure during emergency contraceptive visits. Women's Health Issues. 2020 Jul - Aug; 30(4):277-282. PMID: 32507617
62. McCarthy MA, Upadhyay U, Ralph L, **Biggs MA**, Foster DG. The effect of receiving versus being denied an abortion on making and achieving aspirational 5-year life plans. BMJ Sexual & Reproductive Health. 2020.
63. Ramm A, Casas L, Baba CF, Correa S, **Biggs MA**. "Obviously there is a conflict between confidentiality and what you are required to do by law": Chilean university faculty and student perspectives on reporting unlawful abortions. Social Science & Medicine. 2020 09; 261:113220.
64. Jones RK, Foster DG, **Biggs MA**. Fertility intentions and recent births among US abortion patients. Contraception. 2020 Nov 21:S0010-7824(20)30417-0.
65. **Biggs MA**, Tome L, Mays A, Kaller S, Harper CC, Freedman L. The Fine Line Between Informing and Coercing: Community Health Center Clinicians' Approaches to Counseling Young People About IUDs. Perspectives on Sexual and Reproductive Health. 2020, 52(4):TK, doi:10.1363/psrh.12161
66. Ralph L, Foster DG, Raifman S, **Biggs MA**, Samari G, Upadhyay U, Gerdts C, Grossman D. Prevalence of Self-Managed Abortion Among Women of Reproductive Age in the United States. JAMA Netw Open. 2020 Dec 01; 3(12):e2029245. PMID: 33337493. PMCID: PMC7749440
67. **Biggs MA**, Neilands TB, Kaller S, Wingo E, Ralph LJ. Developing and validating the Psychosocial Burden among people Seeking Abortion Scale (PB-SAS). PLoS One. 2020; 15(12):e0242463. PMID: 33301480. PMCID: PMC7728247
68. Casas L, Freedman L, Ramm A, Correa S, Baba CF, **Biggs MA**. Chilean Medical and Midwifery Faculty's Views on Conscientious Objection for Abortion Services. Int Perspect Sex Reprod Health. 2020 Dec 14; 46(Suppl 1):25-34. PMID: 33326397

69. Berglas NF, Kimport K, Mays A, Kaller S, **Biggs MA**. "It's Worked Well for Me": Young Women's Reasons for Choosing Lower-Efficacy Contraceptive Methods. J Pediatr Adolesc Gynecol. 2020 Dec 23.
70. Wingo E, Ralph L, Kaller S, **Biggs MA**. Abortion method preference among people presenting for abortion care. Contraception. 2020 Dec 26. PMID: 33373612
71. Ralph LJ, Chalten L, Werth E, Daniel S, Brindis CD, **Biggs MA**. Reasons for and Logistical Burdens of Judicial Bypass for Abortion in Illinois. J Adolesc Health. 2021 Jan; 68(1):71-78. PMID: 33041202
72. Ehrenreich K, **Biggs MA**, Grossman D. Making the case for advance provision of mifepristone and misoprostol for abortion in the United States. BMJ Sex Reprod Health. 2021 Dec 03. PMID: 34862207
73. Grossman D, Baba CF, Kaller S, **Biggs MA**, Raifman S, Gurazada T, Rafie S, Averbach S, Meckstroth KR, Micks EA, Berry E, Raine-Bennett TR, Creinin MD. Medication Abortion with Pharmacist Dispensing of Mifepristone. Obstet Gynecol. 2021 04 01; 137(4):613-622. PMID: 33706339. PMCID: PMC7984759
74. Kaller S, Daniel S, Raifman S, **Biggs MA**, Grossman D. Pre-Abortion Informed Consent Through Telemedicine vs. in Person: Differences in Patient Demographics and Visit Satisfaction. Women's Health Issues. 2021 May-Jun; 31(3):227-235. PMID: 33832830
75. Raifman S, Ralph L, **Biggs MA**, Grossman D. "I'll just deal with this on my own": a qualitative exploration of experiences with self-managed abortion in the United States. Reprod Health. 2021 May 4;18(1):91.
76. Raifman S, **Biggs MA**, Ralph L, Ehrenreich K, Grossman D. Exploring Attitudes About the Legality of Self-Managed Abortion in the US: Results from a Nationally Representative Survey. Sexuality Research and Social Policy. 2021 Apr 1:1-4.
77. Berglas NF, Kaller S, Mays A, **Biggs MA**. The Role of Health Care Providers in Young Women's Attitudes about and Willingness to Use Emergency Contraceptive Pills. Women's Health Issues. 2021 May-Jun;31(3):286-293.
78. Kaller S, Morris N, **Biggs MA**, Baba CF, Rafie S, Raine-Bennett TR, Creinin MD, Berry E, Micks EA, Meckstroth KR, Averbach S, Grossman D. Pharmacists' knowledge, perspectives, and experiences with mifepristone dispensing for medication abortion. J Am Pharm Assoc (2003). 2021 Jun 18:S1544-3191(21)00285-5.
79. Foster DG, Gould H, **Biggs MA**. Timing of pregnancy discovery among women seeking abortion. Contraception. 2021 Aug 4:S0010-7824(21)00344-9.
80. Ehrenreich K, **Biggs MA**, Grossman D. Making the case for advance provision of mifepristone and misoprostol for abortion in the United States. BMJ Sex Reprod Health. 2021 Dec 3:bmjsrh-2021-201321.
81. Ralph LJ, Ehrenreich K, Barar R, **Biggs MA**, Morris N, Blanchard K, Kapp N, Moayedi G, Perritt J, Raymond EG, White K, Grossman D. Accuracy of self-assessment of gestational duration among people seeking abortion. Am J Obstet Gynecol. 2021 Dec 17:S0002-9378(21)02683-1.
82. Grossman D, Raifman S, Morris N, Arena A, Bachrach L, Beaman J, **Biggs MA**, Hannum C, Ho S, Schwarz EB, Gold M. Mail-order pharmacy dispensing of mifepristone for medication abortion after in-person clinical assessment. Contraception. 2022 Mar;107:36-41. doi: 10.1016/j.contraception.2021.09.008. Epub 2021 Sep 20. PMID: 34555420.
83. **Biggs MA**, Ralph L, Morris N, Ehrenreich K, Perritt J, Kapp N, Blanchard K, White K, Barar R, Grossman D. A cross-sectional survey of U.S. abortion patients' interest in obtaining medication abortion over the counter. Contraception. 2022 Jan 23:S0010-7824(22)00007-5.
84. **Biggs MA**, Ehrenreich K, Morris N, Blanchard K, Bustamante C, ...Grossman D. Comprehension of an over-the-counter drug facts label prototype for a mifepristone and misoprostol medication abortion product. Obstet Gynecol. 2022 Jun 1;139(6):1111-1122. doi: 10.1097/AOG.0000000000004757. Epub 2022 May 2.PMID: 35675608

Prepared: June 22, 2022

BOOK CHAPTERS

1. Balter L and McCall RB. Parenthood in America: An Encyclopedia ABC-CLIO, Incorporated, 2000. Book Contributor.
2. Driscoll AL, **Biggs MA**, Brindis C. The influence of acculturation on Latino adolescent childbearing. NOAPPP Network. 2003, 22(4):14-15.
3. **Biggs MA**, Brindis CD, Ralph L, Santelli J. The Sexual and Reproductive Health of Young Latino Men Living in the US, In Molina-Aguirre M. (Ed) Social and Structural Factors Affecting the Health of Latino Males in the US. Published by Rutgers University Press, Newark, New Jersey (2010).

OTHER PUBLICATIONS

1. **Biggs MA**. "Women's Mental Health Suffers When They are Denied an Abortion," Op-ed featured in Cosmopolitan, Dec 15, 2016, http://www.cosmopolitan.com/politics/a8504673/womens-mental-health-suffers-if-denied-abortion/
2. "A Review of the Scientific Literature on the Effects of Abortion on Women's Mental Health and Emotional Outcomes", Amicus Brief, (lead author), submitted to Chile's constitutional tribunal to support lifting Chile's complete ban on abortion.
3. **Biggs MA**. "Chile Has Relaxed Its Abortion Ban, But Does That Go Far Enough?" Op-ed featured in Rewire magazine, Aug 29, 2017, https://rewire.news/article/2017/08/29/chile-relaxed-abortion-ban-go-far-enough/
4. **Biggs MA**, Roberts SCM. Fatal flaws in recent analysis on the risk of premature death following teenage abortion and childbirth. European Journal of Public Health. 2017;27:794.
5. **Biggs MA** & Grossman D. "With abortion clinic restrictions tightening, women want more access at home", Op-ed featured in Salon, Nov 28, 2018, https://www.salon.com/2018/11/28/with-abortion-clinic-restrictions-tightening-women-want-more-access-at-home/

OTHER CREATIVE ACTIVITIES

1. **Biggs MA**. Puerto Rican adolescents' cultural orientation: Contextual determinants and psychosocial outcomes. Doctoral dissertation. 1998.
2. Brindis CD, Cagampang H, Biggs A, McCarter V. 2000. Report of the Evaluation Enhancement: The Community Challenge Grant Program. Prepared for the U.S. DHHS, Office of the Assistant Secretary for Planning and Evaluation, Grant 98ASPE296A.
3. Brindis CD, Driscoll AK, **Biggs MA**, Valderrama LT. 2002. Issue Brief on Latino Youth: Reproductive Health. University of California, San Francisco, Center for Reproductive Health Research and Policy, Department of Obstetrics, Gynecology and Reproductive Health Sciences and the Institute for Health Policy Studies, San Francisco, CA.
4. Brindis CD, Driscoll AK, **Biggs MA**, Valderrama LT. 2002. Series of Fact Sheets on Latino Youth: Education, Families, Health Care Access, Income and Poverty, Immigrant Generation, Sexual Behavior, & Population. University of California, San Francisco, Center for Reproductive Health Research and Policy, Department of Obstetrics, Gynecology and Reproductive Health Sciences and the Institute for Health Policy Studies, San Francisco, CA.
5. Driscoll, AK, Brindis, CD, **Biggs, MA**, & Valderrama, LT. 2004. Priorities, Progress and Promise: A Chartbook on Latino Adolescent Reproductive Health. San Francisco, CA: University of California, San Francisco, Center for Reproductive Health Research and

Policy, Department of Obstetrics, Gynecology and Reproductive Sciences, and the Institute for Health Policy Studies.
6. Driscoll A, **Biggs MA**, Brindis CD. 2003. The Influence of Acculturation on Latino Adolescent Childbearing. Cultural Dimensions of Teen Pregnancy Prevention and Parenting, 22(4): 14-15.
7. Amaral G, **Biggs MA**, et al. Bixby Center for Global Reproductive Health. UCSF. April 2005. Family PACT Program evaluation: Provider referral study, San Francisco, CA. Submitted to California Department of Public Health, Office of Family Planning.
8. Berglas N, **Biggs A**. Key findings from the survey of organizations serving populations in need of low-cost health services, UCSF: San Francisco, CA. June 2005. Submitted to the California Department of Public Health, Office of Family Planning.
9. **Biggs A**, Brown, A and Brindis C. 2005. Family PACT Program evaluation: Summary findings from client exit interviews, UCSF: San Francisco, CA, June 2005. Submitted to the California Department of Public Health, Office of Family Planning.
10. **Biggs A**, Foster DG, Evaluation of the Cost-Effectiveness of Chlamydia Testing Among Women and Men Seeking Care in Family PACT, CY 2005. UCSF: San Francisco, CA, June 2007.
11. Braveman P, Brindis C, **Biggs A**, Marchi K, Minnis A, Ralph L, Arons A. Latina Voices: Findings from a Study of Latina Teen Childbearing in the Fresno and Los Angeles Areas. UCSF: San Francisco, CA, July 2007. http://bixbycenter.ucsf.edu/publications/files/Latina_Teen_Childbearing_March_2011
12. Berglas N, **Biggs A**. Clinical Linkages between Family PACT Providers and Teen Pregnancy Prevention (TPP) Programs: Increasing youth-friendliness, understanding successes and challenges, and measuring impact on youth client enrollment. UCSF: San Francisco, CA. June 2008.
13. Berglas N, Ralph L, Schwartz S, **Biggs A**, Brindis CD. Innovative Outreach: Findings from the TeenSMART Outreach Evaluation. San Francisco, CA: Bixby Center for Global Reproductive Health. University of California, San Francisco. April, 2008.
14. A Question of Hope: Reducing Latina Teen Childbearing in California, Video produced and directed by Lynn Adler and John Rogers of Ideas In Motion, based on a report by Braveman P, Brindis C, **Biggs A**, Marchi K, Minnis A, and Ralph L. University of California, San Francisco. September 2008. http://bixbycenter.ucsf.edu/videos/video-lo-1.html
15. Takahashi ER, Florez CJ, **Biggs A**, Ahmad S, Brindis CD. Teen Births in California: A Resource for Planning and Policy. Sacramento, CA: California Department of Public Health, Maternal, Child and Adolescent Health Program and the Office of Family Planning, and the University of California, San Francisco, CA. January 2009. http://www.cdph.ca.gov/programs/mcah/Documents/MO-TeenBirthsinCalifornia.pdf
16. **Biggs MA**, Rostovtseva D, Brindis CD. Bixby Center for Global Reproductive Health. UCSF. Findings from the 2007 Family PACT Client Exit Interviews, San Francisco, CA. Submitted to CA Department of Public Health, Office of Family Planning Division. July 2009. http://bixbycenter.ucsf.edu/publications/files/FPACT_ClientExitInterview_2007
17. **Biggs MA**, Foster DG, Hulett D, and Brindis C. Series of Cost-Benefit Fact Sheets: Is California's Family PACT Program a good investment? Findings from the 2007 Family PACT Cost-Benefit Analysis; Prevention of Unintended Pregnancies in California: California State Senate and Assembly Districts; California's Family PACT Program: County Successes & Challenges. University of California, San Francisco, Bixby Center for Global Reproductive Health, University of California, San Francisco, San Francisco, CA. October 2010.
18. **Biggs MA**, Foster DG, Hulett D, and Brindis C. Cost-Benefit Analysis of the California Family PACT Program for Calendar Year 2007. Submitted to the California Department of

Public Health, Office of Family Planning Division. Bixby Center for Global Reproductive Health, University of California, San Francisco: San Francisco, CA. April 2010.

19. Obach King A, Sadler Spencer M, Luengo Charath MX, **Biggs MA**. Adolescent Barriers to Accessing Pregnancy Prevention Services in Chile. Submitted to the Ministry of Health, Chile, March 2010. http://www.minsal.gob.cl/portal/url/item/ace74d077631463de04001011e011b94.pdf
20. Foster DG, Malvin J, **Biggs MA**, Bradsberry M, Brindis C and Darney P. Cost Benefits from the Provision of Specific Methods of Contraception in 2009. Submitted to the California Department of Public Health, Office of Family Planning Division. Bixby Center for Global Reproductive Health, University of California, San Francisco: San Francisco, CA. April 2012. http://www.familypact.org/Research/reports/FINAL_CBA-SM_ExecSummary_508.pdf
21. **Biggs MA**, Brindis C and Darney P. Delivery of Long-Acting Reversible and Permanent Contraception (LAC) Among Female Family PACT Clients.Submitted to the California Department of Public Health, Office of Family Planning Division. Bixby Center for Global Reproductive Health, University of California, San Francisco: San Francisco, CA. June 2012.
22. **Biggs MA**, Daniel S, Lewis S, Chow J, Malvin J, Brindis CD. Findings from the 2012 Family PACT Client Exit Interviews, San Francisco, CA: Bixby Center for Global Reproductive Health, University of California, San Francisco, CA, 2014. http://www.familypact.org/Research/reports/10-27-15-CEI%20Report_ADA.pdf
23. Yarger J, Daniel S, **Biggs MA**, Malvin J, & Brindis CD. Family PACT Providers and Health Care Reform Implementation, San Francisco, CA: Bixby Center for Global Reproductive Health, University of California, San Francisco, 2015. http://www.familypact.org/Research/reports/10-29-15HealthCareReformImplementationReport.pdf
24. **Biggs MA**. Effects of Abortion on Women's Mental Health, as part of UCSF's Bixby Center Explained video series. http://innovating-education.org/2017/01/explained-series-topics/

Shelly Hsiao-Ying Tien, M.D./M.P.H.
[redacted]

Genesis Maternal-Fetal Medicine, Tucson, Arizona
04/2022 – current, part-time physician

Planned Parenthood – South, East and North Florida
03/2021 – current, part-time physician

Trust Women, Oklahoma city, Oklahoma
02/2021 - current, contract physician

Planned Parenthood – Southeast, Alabama
12/2021 - current, contract physician

NorthShore University Health System/University of Chicago
07/2015 – 12/2020

Fellowship, Maternal-Fetal Medicine
University of Minnesota, Minneapolis
07/2012 – 06/2015

Residency, Obstetrics and Gynecology
Advocate Illinois Masonic Medical Center, Chicago, Illinois
07/2008 – 06/2012

Medical Education
Tufts University School of Medicine, Boston, Massachusetts
08/2003 - 05/2008
M.D./M.P.H.

Education
Undergraduate - University of Illinois, Champaign/Urbana
Biology
08/1999 - 06/2003
B.S.

Board certification
Maternal-Fetal Medicine 2018
Obstetrics and Gynecology 2013

Memberships
Society for Maternal-Fetal Medicine
2012 – current
American College of Obstetricians and Gynecologists
2008 – current

Committees

Northshore University Health System Obstetric Practice Committee - Chair, 2016 – 2020
- Educational committee that creates physician guidelines and nursing protocols for obstetric care for Evanston and Highland Park hospitals.

Northshore University Health System Epic Physician builder, 2018 – 2020
- Developed and implemented obstetric clinical workflows for our Epic electronic medical record system.

Illinois Perinatal Quality Collaborative (ILPQC) - Clinical lead for the Immediate Postpartum Long Acting Reversible Contraception initiative, 2018 – 2020
- Implementation of immediate postpartum LARCs for patients at Evanston and Highland Park hospitals.
- Provision of educational support for other birthing hospitals in the state.

Maternal-Fetal Medicine Clinical Competency Committee, 2018 - 2020
- Biannual meeting and evaluation of educational progress for maternal-fetal medicine fellows.

Volunteer Experience

Medical Students for Choice (MSFC), Massachusetts, 09/2003-04/2008
Student coordinator
- Facilitated multiple lectures and workshops on reproductive education and contraception.
- Organized the 2005 regional student conference for MSFC.

Cross Cultural Solutions, Ghana, 06/2003-07/2003
Medical Volunteer
- Volunteered through the organization Cross Cultural Solutions.
- Provided immunizations to children, assisted in the local health center pharmacy, and taught women's health education in the maternity ward.

Provena Mental Health, Illinois, 04/2001-05/2002
Suicide Hotline Volunteer
- Volunteer counselor on the suicide hotline.

- Provided mental health interventions to clients in crisis, and general health resources and information for family members and support persons.

Rape Crisis Services, Illinois, 05/2000-05/2003
Medical Advocate and Hotline Volunteer

- Hotline volunteer providing counseling, support and resources to survivors of sexual violence.
- Medical advocate for patients – provided education and support during the emergency room visits for patients who presented after an assault.

Publications

Tien SH, Crabtree JN, Gray HL, Peterson EJ. Immunologic response to vaccine challenge in pregnant PTPN22 R620W carriers and non-carriers. PLoS One. 2017 Jul 19;12(7):e0181338.

Tien S and Yamamura Y. Cervical ectopic pregnancy: persistence despite a serologically negative ß-hCG. J Reprod Med 2015;60(5-6):257-60.

Tien S, Villines D, Parilla B. Gestational Weight Gain in Obese Patients and Adverse Pregnancy Events. Health 2014;6:1420-1428.

Grimes K, Schulz M, Cohen S, Mullin B, Lehar S, Tien S. Pursuing Cost-Effectiveness in Mental Health Service Delivery for Youth with Complex Needs. J Ment Health Policy Econ 2011;14:73-86.

Publications, non-peer reviewed

Rugino A, Tien SH. Strip of the Month: Complete Heart Block Masquerading as a Reactive Nonstress Test. NeoReviews November 2018, Volume 19/Issue 11.

Rodriguez-Kovacs J, Tien SH, Plunkett BA. Selective Serotonin Reuptake Inhibitor Use in Pregnancy: Repercussions on the Oblivious Passenger. NeoReviews March 2018, Volume 19/Issue 3.

Cockrum RH, Tien SH. Strip of the Month: August 2016. NeoReviews August 2016, Volume 17/Issue 8.

Schneider P, Tien SH. Strip of the Month: February 2016. NeoReviews February 2016, Volume 17/Issue 2.

Presentations

Tien S, Crabtree J, Gray H, Peterson E. (2015, February). "Immunologic response to vaccine challenge in PTPN22 gene variants in pregnancy." Poster presentation at: the Society for Maternal-Fetal Medicine, San Diego, CA.

Tien S, Aguilera M. (2014, October). "Monochorionic Monoamniotic Twin Gestation: A review of antenatal management at three tertiary care centers." Poster presentation at: Central Association of Obstetricians and Gynecologists, Albuquerque, NM.

Tien S, Gray H, Jacobs K, Giacobbe L, Wagner W, Aguilera M. (2013, October). "A review of ten years' experience with placenta accreta at a single tertiary care center." Poster presentation at: Central Association of Obstetricians and Gynecologists, Napa Valley, CA.

Tien S, Gray H, Jacobs K, Giacobbe L, Swartout J, Aguilera M. (2013, October). "Spinal anesthesia converted to general anesthesia for cesarean hysterectomy is associated with improved neonatal Apgar scores versus general anesthesia alone." Poster presentation at: Central Association of Obstetricians and Gynecologists, Napa Valley, CA.

Tien S, Casserly K, Rauk P. (2013, April). "A right atrial thrombus in the setting of puerperal coagulopathy." Poster presentation at: Society for Obstetric Anesthesia and Perinatology, San Juan, Puerto Rico.

Tien S, Gray H, Jacobs K, Giacobbe L, Swartout J, Aguilera M. (2013, April). "Maternal obesity associated with clinically increased blood loss and postoperative hospital stay in patients undergoing peripartum hysterectomy." Poster presentation at: Society for Obstetric Anesthesia and Perinatology, San Juan, Puerto Rico.

Tien S, August C, Fernandez C, Dini M. (2012, October). "Metastatic colon cancer presenting as an adnexal mass." Poster presentation at: the Advocate Research Forum, Advocate Illinois Masonic Medical Center, Chicago, IL.

Tien S, Villines D, Parilla B. (2012, October). "Gestational Weight Gain in Obese Patients and Adverse Pregnancy Events." Oral presentation at: Central Association of Obstetricians and Gynecologists, Chicago, IL.

Tien S, Popper F. (2009, October). "A Retrospective Review of Misoprostol Efficacy for the Treatment of Early Pregnancy Failure." Poster presentation at: Central Association of Obstetricians and Gynecologists, Maui, HI.

Grimes K, Mullin B, Lehar S, Schulz M, Creeden M, Tien S. (2008, February). "Strength in Numbers: Using Concurrent Measurement to Guide Quality." Poster presentation at: Research and Training Center for Children's Mental Health, Tampa, FL.