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Article 3

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FORGET PRO-LIFE AND PRO-CHOICE: REFOCUS TRANSVAGINAL ULTRASOUND ABORTION LAWS ON MEDICINE

Casey Hughes*

INTRODUCTION

Imagine this: a couple discovers they are pregnant. Immediately, they picture the future: diapers, first laughs, bottles, and strollers. They impatiently await the day they get the first look at their new addition to the family.

Some weeks pass until, finally, the day is here: their first ultrasound appointment. They report to their obstetrician.[1] She performs an internal transvaginal ultrasound.[2] The couple consents to the ultrasound without hesitation, and they are astounded by how the test captures real-time images[3] of their new addition so early in their pregnancy.[4] The images depict a gestational sac, a fetal pole, and most notably, a heartbeat.[5] The expecting parents are ecstatic and walk away with keepsake photos to share with family and friends.

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1 An obstetrician is a "physician who specializes in the branch of medicine concerned with pregnancy and childbirth." MOSBY'S MEDICAL DICTIONARY (9th ed. 2012).

2 *See* Jaime Herndon & Valencia Higuera, *What Is a Transvaginal Ultrasound?*, HEALTHLINE, https://www.healthline.com/health/transvaginal-ultrasound (last visited Apr. 20, 2020).

3 Real-time imaging portrays the subject you are imaging live on a screen prior to taking a picture making it "easier to examine the fetus." *See generally* WILLIAM D. MIDDLETON, ALFRED B. KURTZ & BARBARA S. HERTZBERG, ULTRASOUND: THE REQUISITES 3 (2d ed. 2004).

4 Signs of pregnancy are detected as early as 28 days after conception. *See* A. Richardson et al., *Accuracy of first-trimester ultrasound in diagnosis of intrauterine pregnancy prior to visualization of the yolk sac: a systemic review and meta-analysis*, 46 ULTRASOUND OBSTET GYNECOL. 142, 142 (2015).

5 The gestational sac and fetal pole will be explained in further detail. *See infra* Part I. At this juncture it is important only to note that these are the earliest signs of pregnancy on ultrasound. *See infra* Part I. Ultrasounds capture detailed fetal images, but ultrasound has the further capability of capturing detailed images of any soft tissue structure; this will be highlighted throughout this Note. *See infra* Part I.

Now picture a different scenario: a twenty-two-year-old female on birth control takes a home pregnancy test. It is positive. She is surprised, alone, and distraught. Despite taking precautions, she is pregnant.[6] She is a graduate student.[7] She is single. She is financially struggling.[8] After weighing her options, she makes the difficult decision to end her pregnancy.

However, when she goes to her doctor, she is not afforded a transvaginal ultrasound prior to terminating her pregnancy because her state does not require a transvaginal ultrasound prior to a first trimester abortion.[9] She does not want the test anyway: why endure an invasive procedure and suffer psychologically by visualizing a fetus that will not be born?[10] Instead, her doctor orders blood work, performs a quick "over-the-belly" ultrasound, and sees an early sign of pregnancy, a gestational sac, in her uterus.[11]

6 No birth control method is perfect in preventing unwanted pregnancy in sexually active women; abstinence is the only 100% effective means of preventing unwanted pregnancy. *See Birth Control*, PLANNED PARENTHOOD, https://www.plannedparenthood.org/learn/birth-control (last visited Mar. 22, 2020).

7 "Female graduate students and postdoctoral fellows who have babies while students or fellows are more than twice as likely as new fathers or than childless women to turn away from an academic research career. They receive little or no childbirth support from the university and often a great deal of discouragement from their mentors." Mary Ann Mason, *In the Ivory Tower, Men Only*, SLATE (June 17, 2013, 5:30 AM), https://slate.com/human-interest/2013/06/female-academics-pay-a-heavy-baby-penalty.html.

8 On average in 2015, the total yearly expenses for a child under 2 years old was $12,680. *See* Mark Lino et al., *Expenditures on Children by Families, 2015*, U. S. DEP'T OF AGRIC. 1, 12 (2017). For a student in a graduate program—which on average costs between $30,000 to $120,000—it is extremely difficult to afford school and a child. *See How much does a master's degree cost?*, BEST MASTER'S DEGREES, https://www.bestmastersdegrees.com/best-masters-degrees-faq/how-much-does-a-masters-degree-cost; *see also* Kara Romick, *Surviving the Insanity of Grad School as a Single Mom*, HUFFPOST, https://www.huffpost.com/entry/surviving-the-insanity-of-grad-school-as-a-single-mom_b_9482182 (last updated Mar. 19, 2017).

9 In fact, most states do not require abortion providers to offer any type of ultrasound—transvaginal or otherwise—or provide information on ultrasound services in first trimester abortions. *See State Ultrasound Requirements in Abortion Procedure*, KAISER FAM. FOUND. (May 1, 2019), https://www.kff.org/womens-health-policy/state-indicator/ultrasound-requirements/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D.

10 Some argue transvaginal ultrasounds serve no medical purpose in abortion and only "subjects [patients] to agony in their most vulnerable moments." *See* Mark Joseph Stern, *Trump-Appointed Judge Upholds Anti-Abortion Law That Often Mandates Transvaginal Ultrasound*, SLATE (Apr. 4, 2019, 6:29 PM), https://slate.com/news-and-politics/2019/04/john-bush-trump-appointee-upholds-kentucky-anti-abortion-law-that-requires-transvaginal-ultrasounds.html. This common misconception will be debunked throughout this Note.

11 A gestational sac is one of the earliest—though not unequivocal—signs of pregnancy detectable with ultrasound at approximately five weeks gestational age. MIDDLETON ET AL., *supra* note 3, at 347; *see also* Richardson et al., *supra* note 4.

Her doctor performs additional tests, provides the medication and instructions for the abortion, and sends her home.[12]

The next week she experiences severe pain and heavy bleeding.[13] She returns to her doctor who performs a transvaginal ultrasound—only because there is a problem[14]—and learns her pregnancy is abnormal. The presumed gestational sac was a false positive *pseudo*gestational sac, which mimics the appearance of a normal early pregnancy on ultrasound.[15] Additionally, the transvaginal ultrasound demonstrates an ectopic pregnancy, a pregnancy incorrectly located in the right fallopian tube, which has ruptured and requires surgery to treat.[16] She will lose her

[12] During a medical abortion with the abortion pill, a patient meets with a health care provider for an exam and lab tests, and then the health care provider instructs the patient on how to prepare for the abortion. *See How Does the Abortion Pill Work?*, PLANNED PARENTHOOD, https://www.plannedparenthood.org/learn/abortion/the-abortion-pill/how-does-the-abortion-pill-work (last visited Mar. 23, 2020).

[13] Experiencing these symptoms one week after taking the abortion pill may indicate serious, life-threatening complications requiring prompt medical attention. *See How Safe is the Abortion Pill?*, PLANNED PARENTHOOD, https://www.plannedparenthood.org/learn/abortion/the-abortion-pill/how-safe-is-the-abortion-pill (Apr. 4, 2020). This will be discussed further in Part I of this Note. *See infra* Part I.

[14] Ultrasounds are not legislatively required in first trimester abortions absent certain indications such as bleeding or pelvic pain because of their added cost, inconvenience, and alleged futility. *See Requirements for Ultrasound*, GUTTMACHER INST. (Nov. 1, 2019), https://www.guttmacher.org/state-policy/explore/requirements-ultrasound; *see also* AMERICAN INSTITUTE OF ULTRASOUND IN MEDICINE, AIUM PRACTICE GUIDELINE FOR THE PERFORMANCE OF OBSTETRIC ULTRASOUND EXAMINATIONS, 1083, 1085-86 (2013). However, most women continuing pregnancies are afforded at least one ultrasound during their first trimester as part of the nuchal translucency screening test, which uses ultrasound measurements to test for fetal chromosomal abnormalities. *See* PETER W. CALLEN, ULTRASONOGRAPHY IN OBSTETRICS AND GYNECOLOGY, 18, 60-62 (Saunders, 5th ed. 2007). Should insurance be footing the bill to screen baby's health while saying it is too expensive to screen for the health of the woman carrying the baby?

[15] A pseudogestational sac looks like an early gestational sac but lacks defining features of a normal pregnancy including an embryo or yolk sac; a pseudogestational sac is "associated with an ectopic pregnancy." MIDDLETON ET AL., *supra* note 3, at 307.

[16] *See* Vanitha N. Sivalingam, et. al., *Diagnosis and Management of Ectopic Pregnancy*, J. FAM. PLAN. REPROD. HEALTH CARE 231, 231-37 (2011). While early, intact ectopic pregnancies—or pregnancies located outside the proper location in the uterus—can be treated with an injection of a drug known as methotrexate, an ectopic pregnancy that has grown large needs to be surgically treated. *See id.* Fallopian tube removal is preferred if the woman's other fallopian tube is still healthy and intact because it is more effective in eliminating the ectopic pregnancy. *See id.* While clearing the fallopian tube is a less effective treatment, it is sometimes necessary to preserve fertility for someone who does not have another healthy fallopian tube. *See generally id.*

fallopian tube.[17] Her future ability to have children decreases.[18] The potential for future gynecological problems increases.[19]

These hypotheticals are not uncommon and demonstrate the severe disparities in how we treat women who continue pregnancies and choose to become mothers, while we mistreat women who terminate pregnancies and choose not to be mothers. After *Planned Parenthood v. Casey*, which restricted abortion regulations that placed an undue burden on women's access to abortion,[20] courts struggle to define undue burden.[21] Specifically, courts are split as to whether or not ultrasounds as prerequisites to first trimester abortions are undue burdens on women's access to abortion (hereinafter the "TV US debate") and as such, legislatures struggle to create laws that pass muster.[22]

17 *See id.* at 231, 235.

18 *See id.* at 235-38. "Studies suggest that around 60% of women affected by an ectopic pregnancy go on to have a viable [pregnancy]." *Id.*; *see also* I. Briceag et al., *Fallopian tubes—literature review of anatomy and etiology in female infertility*, 8 J. MED. & LIFE 129, 129, 131 (Apr. 2015) (attributing 30% of infertility to fallopian tube disease). Eggs are released monthly and travel from the ovary through the fallopian tube to the uterus where fertilization occurs; transport of the egg to the uterus is impossible when fallopian tubes are absent. *See id.*

19 *See* Sivalingam et al., *supra* note 16, at 231, 235, 238; *see also* Stephen J. Robson & Robert T. O'Shea, *Undiagnosed Ectopic Pregnancy: A Retrospective Analysis of 31 'Missed' Ectopic Pregnancies at a Teaching Hospital*, 36 AUST. NZ J. OBSTET. GYNAECOL. 182, 182-85 (May 1996) (discussing how late diagnosis of ectopic pregnancies results in higher rates of fallopian tube removal which reduces future fertility).

20 *See* Planned Parenthood v. Casey, 505 U.S. 833, 846, 874-76 (1992).

21 Put simply, an undue burden exists if "a state regulation has the purpose or effect of placing a substantial obstacle in the path of a woman seeking an abortion of a nonviable fetus." *See id.* at 877. However, in practice, the standard is not applied consistently. In one case, a regulation resulting in "an increase of travel of less than 150 miles for some women [was] not an undue burden under *Casey*." *See* Planned Parenthood of Greater Tex. Surgical Health Servs. v. Abbott, 748 F.3d 583, 598 (5th Cir. 2014). In a subsequent case, a regulation resulting in increased travel for abortion was an undue burden. *See* Whole Woman's Health v. Hellerstedt, 136 S. Ct. 2292, 2310-18 (2016).

22 Texas' current Woman's Right to Know Act, HB 15, requires doctors to perform an ultrasound 24 hours prior to an abortion. *See Texas Bill Amending Woman's Right to Know Act to Include Mandatory Sonogram and Waiting Period (HB 15)*, REWIRE NEWS, https://rewire.news/legislative-tracker/law/texas-womans-right-to-know-act/ (last updated Nov. 7, 2013). Indiana's ultrasound provision of Indiana Omnibus Abortion Bill, HB 1337, requires doctors to perform an ultrasound 18 hours prior to an abortion. *See Indiana Omnibus Abortion Bill (HB 1337)*, REWIRE NEWS, https://rewire.news/legislative-tracker/law/indiana-omnibus-abortion-bill-hb-1337/ (last updated May 28, 2019). Further discussion on this law appears later in this Note. *See infra* Part II.C. Ultrasound abortion requirements do not specifically mandate transvaginal ultrasounds be performed, but often a transvaginal ultrasound is the only way to achieve the detail required to satisfy the requirements of the law; thus, the ultrasound laws, in effect, often require a transvaginal ultrasound be performed. *See Forced Ultrasound*, REWIRE NEWS, https://rewire.news/legislative-tracker/law-topic/forced-ultrasound/ (last updated Sept. 12, 2018).

Both sides of this debate concentrate on pro-life and pro-choice opinion-based perspectives but forget the concrete medical implications of their positions and the goals of *Casey* to protect women and their right to privacy in intimate decision-making.[23] One side opposes transvaginal sonograms prior to abortion, arguing the test is a forced, expensive, invasive procedure that disregards women's autonomy and psychological well-being.[24] The other side supports transvaginal sonograms prior to abortion, masking its fetus-focused position under the guise that the test ensures informed decisions, without ever actually backing that position on concrete medical evidence.[25] Is either side capturing the spirit of *Casey*'s undue burden test in these arguments? This Note argues they are not because both sides gloss over the true medical benefits of performing a transvaginal ultrasound prior to abortion.

Abortion, like other medical procedures,[26] is heavily regulated for an important reason: it protects patients from harm.[27] Early court decisions regulating abortion, like *Roe v. Wade*, were necessary, not to outlaw abortion altogether, but to protect women who were being seriously abused and dying from back alley abortions.[28]

[23] *See* Casey, 505 U.S. at 869, 878, 927 (holding that "[r]egulations designed to foster the health of a woman are valid," but "it is a constitutional liberty of the woman to have some freedom to terminate her pregnancy.").

[24] *See* Chelsey Marsh, *Requiring A Transvaginal Ultrasound Prior To Abortion: An Undue Burden On The Freedom To Choose*, 60 WAYNE L. REV. 915, 926-31 (2015) (arguing transvaginal ultrasounds are undue burdens because they physically invade a woman's body, create additional cost for the abortion procedure, and result in psychological harm hindering rational decision-making).

[25] *See* Kate Sheppard, *Wham, Bam, Sonogram! Meet the Ladies Setting the New Pro-Life Agenda*, MOTHER JONES, (Sept. 2012), http://www.motherjones.com/politics/2012/08/americans-united-for-life-anti-abortion-transvaginal-ultrasound/ (showing how legislatures draft abortion bills under the guise that a woman has a right to know what is going on inside her body to give her informed consent). However, pro-life advocates have not addressed true women's health concerns transvaginal ultrasounds safeguard against, which will be addressed throughout this Note.

[26] *See, e.g.*, S. Robert Lathan, *Caroline Hampton Halsted: The First to Use Rubber Gloves in the Operating Room*, 23 BAYLOR U. MED. CTR. PROC. 389, 391 (Oct. 2010) (using gloves during hernia operations reduced the infection rate by 100%).

[27] *See* Roe v. Wade, 410 U.S. 113, 155-56 (1973) (holding that criminalizing abortion is unconstitutional, but states must protect the health of the woman and the potentiality of human life).

[28] For instance, in the 1960s it was not uncommon for women to be given bleaches and detergents to take orally or even have foreign objects and chemicals put into the vagina to induce abortion. *See* David A. Grimes, *The Bad Old Days: Abortion in America Before Roe v. Wade,* HUFFINGTON POST, https://www.hufpost.com/?err_code=404&err_url=http%3A%2F%2Fwww.huffingtonpost.com%2Fdavid-a-grimes%2Fthe-bad-old-days-%2520abortion_b_6%2520324610.html&guccounter=1 (last updated Mar. 17, 2015).

Despite *Roe*'s original intent to protect women, the TV US debate's pro-choice and pro-life perspectives misdirect their focus on women's autonomy and unborn fetuses respectively—why are women's physical health and safety being forgotten?[29]

This Note reconciles the divide between the TV US debate and the original intent of abortion regulations to protect women's health. By first analyzing the medicine and then applying it to the law, this Note proves transvaginal ultrasound regulations are not undue burdens on women's access to abortion. Part I of this Note discusses transvaginal ultrasounds and their medical use in obstetrics, demonstrating they are not undue burdens, but rather beneficial to women and often necessary to support women's health prior to abortions. Part II of this Note discusses abortion and ultrasound-related legal decisions and how they apply to transvaginal ultrasound regulation. Finally, Part III of this Note proposes a potential legislative approach to solving the TV US debate, intertwining the medicine with the law to conform to *Roe* and *Casey*. Part III also addresses potential issues with this legislation and how they can be overcome.

I. MEDICAL BACKGROUND

When legal issues arise in medicine, lay people traditionally look to doctors and medical literature to understand the medicine before tackling the legal issues. However, literature surrounding transvaginal ultrasound abortion law rarely takes this approach.[30] Instead, critics delve immediately into law and opinion, forgetting to understand the ultrasound procedure itself.[31] Before rushing into the law here, let's first consider what ultrasound is, how ultrasound is used as a diagnostic tool in obstetrics, and why it is dangerous not to perform ultrasounds in early pregnancies.

[29] *See generally* Roe, 410 U.S. at 155-56.

[30] *See* Dahlia Lithwick, *Virginia's Proposed Ultrasound Law Is an Abomination*, SLATE (Feb. 16, 2012, 6:57 PM), https://slate.com/human-interest/2012/02/virginia-ultrasound-law-women-who-want-an-abortion-will-be-forcibly-penetrated-for-no-medical-reason.html.

[31] *See id.*

A. Introduction to Transvaginal and Transabdominal Ultrasound

Ultrasound has been used for decades to image soft tissue structures, including organs, blood vessels, and muscles, in the human body.[32] An instrument called a transducer transmits sound waves that reflect off soft tissue in the body to produce an image on a screen.[33] Ultrasound is a popular imaging tool in medicine because it does not expose patients to radiation, it is cost effective, it allows for real-time imaging of moving subjects, and it is a portable exam.[34] For these reasons, ultrasound is commonly used in obstetrics, the branch of medicine dealing with pregnancy, childbirth, and recuperating from pregnancy.[35] Specifically, ultrasound is used to date pregnancies, study fetal anatomy, and otherwise monitor fetal development.[36] Less commonly known is that ultrasound is a popular tool used in gynecology, "the study of diseases of the female reproductive organs," for assessing women's pelvic organs to discover the cause of pelvic pain or irregular vaginal bleeding and detect and characterize pelvic masses.[37]

In obstetrical and gynecological sonography, two types of transducers are used for different aspects of these exams.[38] The transvaginal transducer is used for internal transvaginal ultrasounds where it is inserted into the vagina to generate detailed images of pelvic structures.[39] The curved transducer is used for "over-the-

[32] *See generally* MIDDLETON ET AL., *supra* note 3, at 4-8.

[33] *See generally id.*

[34] *See id.* at 3-4.

[35] *See obstetrics*, MOSBY'S MEDICAL DICTIONARY (9th ed. 2009).

[36] *See generally* MIDDLETON ET AL., *supra* note 3, at 305-10.

[37] *See gynecology*, MOSBY'S MEDICAL DICTIONARY (9th ed. 2009); *see generally* MIDDLETON ET AL., *supra* note 3, at 540-57, 565-84. A transvaginal ultrasound prior to abortion serves several incidental gynecological purposes beyond those related to pregnancy, such as incidental findings of pelvic masses and infections, but this is outside the scope of this Note. *See* Carnovali v. Sher, No. 800148/2010, 2014 N.Y. Misc. LEXIS 51, at *1-2 (N.Y. Sup. Ct. Jan. 2, 2014) (highlighting an instance where doctors failed to perform a transvaginal ultrasound prior to commencing a woman's fertility treatment which would have revealed a cancerous pelvic mass); *see also* Kristen Kennedy, *University of Kentucky spreads awareness of importance of ovarian cancer screenings*, WKYT (Sept. 10, 2019, 6:28 PM), https://www.wkyt.com/content/news/UK-hospital-spreads-awareness-of-the-importance-of-ovarian-cancer-screenings—559966401.html (discussing how transvaginal sonography detects ovarian cancer earlier than pelvic exams).

[38] *See* MIDDLETON ET AL., *supra* note 3, at 530.

[39] *See id.* at 530-531. The patient must have an empty bladder for this exam. *See id.* at 530.

belly" transabdominal ultrasounds, where it is rubbed on top of a person's stomach with gel to generate images depicting an overview of the pelvis.[40]

While both transducers are useful in obstetrical and gynecological imaging, transvaginal transducers have several benefits when compared to transabdominal transducers.[41] First, transabdominal ultrasounds can be difficult for those with urinary incontinence because they are performed with an extremely full bladder, whereas transvaginal ultrasounds are performed with an empty bladder.[42] Additionally, transvaginal ultrasounds provide better imaging for obese patients or patients with a large amount of bowel gas causing sound waves to travel; the internal nature of a transvaginal exam provides a bypass to transabdominal limitations.[43]

Studies have tested the efficacy of transvaginal sonograms in comparison to transabdominal sonograms.[44] In one study, 90 pregnant women had both transvaginal and transabdominal ultrasounds.[45] In all cases, transvaginal imaging was either better or equal diagnostically to transabdominal imaging.[46] In another study, 67 women had transvaginal and transabdominal ultrasounds.[47] More diagnostic information about pelvic masses was gained from transvaginal ultrasounds in 76% of the women

40 *See id*. The patient must have a full bladder for this exam. *See id*.

41 *See, e.g.*, Arthur C. Fleischer et al., *Ectopic Pregnancy: Features at Transvaginal Sonography*, 174 RADIOLOGY 375, 375-78 (1990) (finding transvaginal imaging better for visualizing ectopic pregnancy); *see also* A. Jill Leibman et al., *Transvaginal Sonography: Comparison with Transabdominal Sonography in the Diagnosis of Pelvic Masses*, 151 AM. J. ROENTGENOLOGY 89, 89-92 (1988) (finding transvaginal imaging better for detecting and characterizing pelvic masses).

42 *See* Leibman et al., *supra* note 41, at 89-90, 92.

43 *See id.* Making accommodations for obese patients is essential in medical care today because obesity affects approximately 36.5% of Americans aged 20 years and older. *See Adult Obesity Facts*, CENTERS FOR DISEASE CONTROL & PREVENTION, https://www.cdc.gov/obesity/data/adult.html (last updated Sept. 1, 2016) [https://web.archive.org/web/20170817233520/https://www.cdc.gov/obesity/data/adult.html].

44 *See, e.g.*, Kiran A. Jain, Ulrike M. Hamper & Roger C. Sanders, *Comparison of Transvaginal and Transabdominal Sonography in the Detection of Early Pregnancy and Its Complications*, 151 AM. J. ROENTGENOLOGY 1139, 1139-43 (1988) (demonstrating that transvaginal ultrasounds detect normal and abnormal pregnancies better than transabdominal ultrasounds).

45 *See id.* at 1139.

46 See *id.* at 1139-43. Transvaginal imaging either visualized pregnancies earlier or detected abnormal pregnancies better than transabdominal imaging in most of the women studied. *Id.*

47 *See* Leibman et al., *supra* note 41, at 89.

studied, and transabdominal ultrasounds were not more diagnostic than transvaginal ultrasounds in any of the women studied.[48] In a third study, 309 pregnancies were evaluated with both transabdominal and transvaginal ultrasounds.[49] Transvaginal sonography was superior in detecting cardiac motion and the presence of an embryo before either were visualized using the transabdominal approach.[50]

B. Transvaginal Ultrasound in Obstetrics

The benefits of transvaginal sonography can be further appreciated because of its role in obstetrical evaluations.[51] Typically during a pregnancy, a patient will receive a transvaginal ultrasound in the first trimester and a transabdominal ultrasound after the first trimester.[52] The first trimester includes the first twelve weeks measured from the first day of a woman's last menstrual period.[53] It is an important time during pregnancy because the first few weeks determine whether or not a pregnancy is viable or abnormal.[54]

An early gestational sac can be visualized in the uterus as early as four weeks into pregnancy using transvaginal ultrasound.[55] An early normal pregnancy, or an intrauterine pregnancy ("IUP"), can be confirmed on ultrasound by detecting a small round structure, known as a yolk sac, within the gestational sac at 35 days gestation.[56] Abnormal pregnancies, including ectopic pregnancies, molar pregnancies, and failed pregnancies, can also be detected early

48 *See id.*

49 *See* Rebecca G. Pennell et al., *Prospective Comparison of Vaginal and Abdominal Sonography in Normal Early Pregnancy*, 10 J. ULTRASOUND MED. 63, 63-64 (1991).

50 *See id.* at 63-66.

51 *See generally* MIDDLETON ET AL., *supra* note 3, at 305-28.

52 *See id.* at 342.

53 *See id.* While abortions can take place in the second trimester, this is outside the scope of this Note which focuses solely on first trimester abortions.

54 *See* Richardson et. al., *supra* note 4, at 142.

55 *See id.*

56 *See id.* ("The yolk sac, visible from 35 days gestation, is the first structure to appear within the gestational sac, and indicates an intrauterine pregnancy with a positive predictive value of 100%."). An intrauterine pregnancy is a normal pregnancy located in the correct position in the endometrium of the uterus. *See* generally MIDDLETON ET AL., *supra* note 3, at 342-70.

though transvaginal ultrasound.[57] Ectopic pregnancies can be seen within the first seven weeks of pregnancy.[58] Molar pregnancies can be imaged by week eight.[59] And failed pregnancies can be confirmed at around seven weeks.[60] Therefore, characterizing a pregnancy as normal or abnormal can be accomplished around the eighth week of pregnancy.[61] So why is it even important that a pregnancy be classified prior to abortion? Let us define each different type of pregnancy to answer this question.

i. Intrauterine Pregnancies

An intrauterine pregnancy (IUP) is a normal pregnancy. It is implanted in the correct location within the endometrial cavity of the uterus, and signs of an early pregnancy are present.[62] An IUP can be confirmed by detecting both a gestational sac and a yolk sac within the uterus.[63] An even more convincing indicator of a normal IUP is the detection on ultrasound of an embryo with a heartbeat.[64] The gestational sac, yolk sac, embryo, and heartbeat are seen best and earliest by using transvaginal ultrasound.[65]

57 *See* Anne-Marie Lozeau & Beth Potter, *Diagnosis and Management of Ectopic Pregnancy*, 72 AM. FAM. PHYSICIAN 1707, 1707 (2005) (discussing the use of ultrasound evaluations in diagnosing ectopic pregnancies); *see also Molar pregnancy*, DRUGS.COM, https://www.drugs.com/mcd/molar-pregnancy (last updated Dec. 14, 2017) (discussing the benefits of using a transvaginal ultrasound to diagnose a molar pregnancy).

58 *See* Lozeau & Potter, *supra* note 57, at 1707. An ectopic pregnancy is a pregnancy located in an incorrect position outside of the endometrium of the uterus. *See Salpingostomy*, ENCYCLOPEDIA SURGERY, https://www.surgeryencyclopedia.com/Pa-St/Salpingostomy.html (last visited Nov. 25, 2019).

59 *See Molar pregnancy*, *supra* note 57. A molar pregnancy is an abnormal pregnancy where a tumor grows in the uterus and has the potential to lead to cancer. *See id.*

60 *See* Catherine Pearson, *Miscarriage Causes, Rates Widely Misunderstood, Study Shows*, HUFFPOST (Oct. 17, 2013, 2:53 PM), https://www.huffingtonpost.com/2013/10/17/miscarriage-cause_n_4116712.html ("The majority of miscarriages occur within the first seven weeks of pregnancy."). Failed pregnancies include miscarriages where a pregnancy fails to grow to the point of viability. *See id.*

61 *See* Lozeau & Potter, *supra* note 57, at 1707 (finding ectopic pregnancies at seven weeks); *see also Molar pregnancy*, *supra* note 57 (discussing molar pregnancies confirmed at week eight); *see also* Pearson, *supra* note 60 ("The majority of miscarriages occur within the first seven weeks of pregnancy.").

62 *See* MIDDLETON ET AL., *supra* note 3, at 342-45.

63 *See* Richardson et. al., *supra* note 4, at 142.

64 *See* MIDDLETON ET AL., *supra* note 3, at 344.

65 *See id.* at 343-44, 354 (establishing that gestational sacs, embryo and cardiac motion are "definitive for proving a living IUP"); *see also id.* at 354 (noting that "with [transvaginal] imaging, embryonic anatomic detail is seen earlier and more completely").

By confirming an IUP, the possibility of a pregnancy problem, requiring an alternative approach to managing it, is diminished.[66] Without confirming an IUP, it is difficult to rule out failed pregnancies and improperly located pregnancies.[67] Failing to properly diagnose early pregnancy problems poses a danger to women's health, which will be discussed in the context of ectopic pregnancies, molar pregnancies, and failed pregnancies.[68]

ii. Ectopic Pregnancies

An ectopic pregnancy is any pregnancy outside its normal location in the endometrium of the uterus.[69] These are non-viable pregnancies and must be timely diagnosed and treated, as, despite occurring in two percent of the pregnant population in the United States, they are the leading cause of death for women in their first trimester.[70] Women with ectopic pregnancies can present with symptoms of vaginal bleeding, abdominal pain, syncope, and hypotension, but sometimes they have no symptoms.[71] In fact, "30 percent of patients with ectopic pregnancies have no vaginal bleeding, 10 percent have a palpable adnexal mass, and up to 10 percent

66 There are extremely rare scenarios where a normal IUP will be seen where other early pregnancy problems exists. For instance, the likelihood of a heterotrophic pregnancy—where an ectopic pregnancy coexists with an IUP—is 1 in 30,000 naturally conceived pregnancies. *See* M.J. Govindarajan & R. Rajan, *Heterotopic pregnancy in natural conception*, 1 J. HUM. REPROD. SCI. 37, 37-38 (2008). While heterotopic pregnancies are another abnormal type of pregnancy, they are more common among women using assisted reproductive technology, which those considering abortion presumably are not undergoing. *See* Han Li-Ping, Zhang Hui-Min, Gao Jun-Bi, Tan Chao-Yue & Han Xiao-Xiao, *Management and Outcome of Heterotopic Pregnancy*, ANNALS CLINICAL & LABORATORY RES. (Apr. 2018). Thus, this has been mostly ignored throughout this Note.

67 Irregular pregnancy hormone levels can signal an issue with a pregnancy, but will not reveal what the problem is. *See* Sivalingam et al., *supra* note 16, at 233-35. For instance, a low level may signal an early stage of pregnancy, a miscarriage, or an ectopic pregnancy. *See also* Lozeau et al., *supra* note 58, at 1707, 1709.

68 This list is under-inclusive but accounts for common early pregnancy problems.

69 *See* Togas Tulandi, *Ectopic pregnancy: Epidemiology, risk factors, and anatomic sites*, UPTODATE, https://www.uptodate.com/contents/ectopic-pregnancy-incidence-risk-factors-and-pathology (last updated Aug. 13, 2019).

70 *See Salpingostomy*, ENCYCLOPEDIA SURGERY, https://www.surgeryencyclopedia.com/Pa-St/Salpingostomy.html (last visited Nov. 25, 2019); *see also* Lozeau et al., *supra* note 58, at 1707. "Ruptured ectopic pregnancy accounts for 10 to 15 percent of all maternal deaths." *Id.* This number has grown "from less than 0.5 percent of all pregnancies in 1970 to 2 percent in 1992." *See id.*

71 *See generally id.* at 1707-08. Thus, transvaginal ultrasounds, while appropriate for detecting pathology in symptomatic patients, are also necessary for ruling out pathology in asymptomatic patients. *See id.* at 1710.

have negative pelvic examinations."[72] Regardless of how a person presents with an ectopic pregnancy, transvaginal ultrasound is key to its diagnosis and has markedly reduced the serious harms of ectopic pregnancy.[73] Transvaginal ultrasounds are typically used in combination with a blood test to check for the presence of the pregnancy hormone, beta subunit of human chorionic gonadotropin (ß-hCG), because this blood test alone cannot confirm an ectopic pregnancy.[74]

Typical medication and management for ectopic pregnancies is different from abortion treatment.[75] An ectopic pregnancy will be treated based on the location of the ectopic, the size and gestational age of the ectopic, and whether or not the ectopic has ruptured; all of which can be visualized through transvaginal sonography.[76] The typical medication for treating an ectopic pregnancy is methotrexate, while surgical treatment for ectopic pregnancy is a salpingectomy or salpingostomy.[77] The typical medication given for an abortion is mifepristone or misoprostol, while in surgical abortions, a suction aspiration is performed; neither of these abortion methods will affect a pregnancy outside the uterus.[78]

Failing to diagnose an ectopic poses a significant risk to the health of the woman, which alternatively, when detected, "permit[s] earlier, and potentially less invasive, intervention for

[72] *Id.* at 1708. Also, these symptoms can be characteristic of other pregnancy related problems, including miscarriage. *See id.* at 1707.

[73] *See id.* at 1707-08. "[A]fter the advent of transvaginal ultrasonography and beta subunit of human chorionic gonadotropin (ß-hCG) tests, the incidence of rupture and case-fatality rates declined from 35.5 deaths per 10,000 ectopic pregnancies in 1970 to 3.8 per 10,000 in 1989." *Id.* at 1707.

[74] *See id.* at 1709. ß-hCG levels vary widely in ectopic pregnancies ranging from less than 100 mIU per mL to over 50,000 mIU per mL; normal ß-hCG levels are included within this range. *See id.* Additionally, even when ß-hCG levels increase irregularly, they "are only 36 percent sensitive and approximately 65 percent specific for detection of ectopic pregnancy." *See id.* However, when used in conjunction with transvaginal sonography these detection rates can raise to 96% sensitivity and 97% specificity. *See id.* at 1707, 1710.

[75] Therefore, an argument that, in both cases, women are being treated to end their pregnancies is not sufficient to defeat the necessity of diagnosing ectopic pregnancy through transvaginal ultrasound.

[76] *See* Sivalingam et al., *supra* note 16, at 233-35.

[77] *See* Lozeau et al., *supra* note 58, at 1707, 1710, 1713. A salpingostomy involves draining the fallopian tube to get rid of fluid or collections within the tube. *See salpingostomy*, MOSBY'S MEDICAL DICTIONARY (9th ed. 2012).

[78] *See* Stephanie Watson, *What Are the Different Types of Abortion?*, HEALTHLINE (Aug. 3, 2018), https://www.healthline.com/health/types-of-abortion#types.

women with ectopic pregnancies."[79] When detected early, ectopic pregnancies can be treated without surgical intervention.[80] Even when early treatment is ineffective, conservative surgery that clears the fallopian tube—rather than removing it entirely—can be employed to preserve the female's reproductive anatomy.[81] When not detected, however, ectopic pregnancies can grow, cause bleeding in the fallopian tube, and rupture.[82] Once a fallopian tube ruptures, prompt surgical intervention is necessary to avoid infection, shock, and/or maternal death.[83]

iii. Molar Pregnancy

A molar pregnancy can develop within the uterus upon fertilization where there is a genetically abnormal egg or sperm.[84] A molar pregnancy can cause invasive trophoblastic disease or choriocarcinoma.[85] Gestational trophoblastic disease is when tissues that should become the placenta grow abnormally.[86] Choriocarcinoma is a type of cancer that develops as a complication of conception.[87] A tumor develops in the uterus and can be detected with a combination of unusually high levels of ß-hCG in the blood and an unusual appearance on transvaginal ultrasound.[88] It is essential to diagnose molar pregnancies so the uterus can be appropriately treated, and uterine tissue sampling can rule out malignancy early.[89]

79 *See* Richardson et. al., *supra* note 4, at 142.

80 *See generally* Sivalingam et al., *supra* note 16, at 233, 238.

81 *See supra* notes 16-19 and accompanying text.

82 *See* Sivalingam et al., *supra* note 16, at 232-33, 235. Ectopic pregnancies can grow to a size a fallopian tube cannot accommodate and cause the fallopian tube to rupture, which cannot be repaired. *See id.* at 235.

83 *See id.* at 232-33, 235, 237.

84 *See* Turandot & Jocelyn Sonson, *Molar Pregnancy*, 40 J. EMERGENCY MED. e39, e39-e40 (2011).

85 *See id.* at e40.

86 *See Gestational trophoblastic disease (GTD)*, CANCER RES. UK (June 2016), https://www.cancerresearchuk.org/about-cancer/gestational-trophoblastic-disease-gtd.

87 *See choriocarcinoma*, MOSBY'S MEDICAL DICTIONARY (9th ed. 2012).

88 *See* MIDDLETON ET AL., *supra* note 3, at 351, 355.

89 *See* Saul, et al., *supra* note 84, at e39, e40.

A molar pregnancy can be treated through drug treatment and minor surgery that removes the molar tissue from the uterus.[90] However, choriocarcinoma is a rare complication of pregnancy that needs to be detected and treated promptly to avoid metastasis and disease progression.[91] Chemotherapy treats choriocarcinoma.[92] If it is not treated promptly, a woman may need a hysterectomy and more aggressive cancer treatment for metastasized choriocarcinoma.[93] These treatments would ruin her future ability to get pregnant and threaten her life if ineffective.[94]

iv. Failed Pregnancy

The phrase "failed pregnancy" encompasses spontaneous abortions.[95] A spontaneous abortion is the technical name for a miscarriage and occurs whenever a pregnancy does not survive to the point of viability outside the uterus.[96] About twenty to twenty-five percent of pregnancies result in spontaneous abortions.[97]

In spontaneous abortions, the pregnancy is not viable. With a blighted ovum, which is a type of spontaneous abortion,[98] there is no fetal pole within the uterus,[99] but rather just an empty gestational sac that never had a fetal pole.[100] Furthermore, some miscarriages result because the developing embryo had some

90 *See Types of treatment for molar pregnancy*, CANCER RES. UK (May 2019) http://www.cancerresearchuk.org/about-cancer/gestational-trophoblastic-disease-gtd/molar-pregnancy/ treatment/types. These treatments are different from abortion procedures.

91 *See About persistent trophoblastic disease and choriocarcinoma*, CANCER RES. UK (May 2019), https://www.cancerresearchuk.org/about-cancer/gestational-trophoblastic-disease-gtd/persistent-trophoblastic-disease-ptd-choriocarcinoma/about.

92 *See id.*

93 *See Surgery for persistent trophoblastic disease and choriocarcinoma*, CANCER RES. UK (May 2019), https://www.cancerresearchuk.org/about-cancer/gestational-trophoblastic-disease-gtd/persistent-trophoblastic-disease-ptd-choriocarcinoma/treatment/surgery.

94 *See generally id.*

95 *See* MIDDLETON ET AL., *supra* note 3, at 342, 349.

96 *See spontaneous abortion*, MOSBY'S MEDICAL DICTIONARY (9th ed. 2012).

97 *See* MIDDLETON ET AL., *supra* note 3, at 352.

98 *See blighted ovum*, MOSBY'S MEDICAL DICTIONARY (9th ed. 2012).

99 *See* Alexandra Stanislavsky et al, *Fetal pole*, RADIOPAEDIA, https://radiopaedia.org/articles/fetal-pole (last visited Jan. 2018). A fetal pole is the "first direct imaging manifestation of the fetus and is seen as a thickening on the margin of the yolk sac during early pregnancy." *See id.*

100 *See* Lindsay Meisel, *Blighted Ovum: What it Means if You Have This Type of Miscarriage*, AVA (Nov. 20, 2017), https://www.avawomen.com/avaworld/blighted-ovum/.

abnormality that prevented it from developing properly.[101] Therefore, when a woman presents for an abortion, a transvaginal ultrasound may show that her pregnancy is non-viable, eliminating the need for the abortion.[102] If a fetal pole never had a heartbeat, or if the pregnancy was a blighted ovum, the patient could avoid the traumatic experience of an abortion because her body will likely eliminate the pregnancy without intervention.[103] By not screening through transvaginal ultrasounds, women may be experiencing unnecessary psychological and physical harm from unnecessary abortions.

C. Other Obstetrical Considerations

Transvaginal ultrasounds are helpful when women request abortions for other reasons besides characterizing a pregnancy. One is that a woman may not recall when her last menstrual period was, or her menstrual cycle may fall outside a typical 28-day period.[104] As such, the dating of her pregnancy, which is typically calculated from the last menstrual period, may be inaccurate.[105] In this scenario, it is imperative to perform an ultrasound to determine the gestational age, as it will decide what method of abortion is appropriate.[106] Early in pregnancy, transvaginal ultrasound provides the most accurate dating.[107]

101 *See Miscarriage*, MAYO CLINIC, https://www.mayoclinic.org/diseases-conditions/pregnancy-loss-miscarriage/symptoms-causes/syc-20354298 (last visited Mar. 23, 2020).

102 *See Ultrasound Diagnosis Of Early Pregnancy Miscarriage*, INST. OBSTETRICIANS & GYNAECOLOGISTS, ROYAL C. PHYSICIANS IR. (Dec. 2010), https://rcpi-live-cdn.s3.amazonaws.com/wp-content/uploads/2016/05/1.-Ultrasound-Diagnosis-of-Early-Pregnancy-Loss.pdf.

103 Even in the event she requires a dilation and curettage to clear the pregnancy, she may have peace of mind in knowing she did not purposely induce a termination. A dilation and curettage involve "widening of the uterine cervix and scraping of the endometrium of the uterus." *See dilation and curettage (D&C)*, MOSBY'S MEDICAL DICTIONARY (9th ed. 2012).

104 *See* MIDDLETON ET AL., *supra* note 3, at 342-43. Around 30 percent of women have irregular periods. *See* Jan Sheehan, *The Facts About Irregular Periods*, EVERYDAY HEALTH, https://www.everydayhealth.com/pms/irregular-periods.aspx (last updated Feb. 17, 2010).

105 *See generally* MIDDLETON ET AL., *supra* note 3, at 343.

106 *See id.* Early pregnancies can be terminated using a pill whereas pregnancies further along need surgical management to terminate. *See Abortion (Termination Of Pregnancy)*, HARV. HEALTH PUB. (Jan. 2019), https://www.health.harvard.edu/medical-tests-and-procedures/abortion-termination-of-pregnancy-a-to-z.

107 *See* MIDDLETON ET AL., *supra* note 3, at 343.

A second consideration is that transvaginal ultrasound allows abortions to be performed early, which is favorable.[108] By confirming a pregnancy as early as possible, a woman is more likely to be offered a medical abortion rather than a surgical abortion.[109] A surgical abortion is more dangerous for women because, as with any surgical procedure, infection risk is high and complications are more likely than with a medical abortion.[110]

D. Harms Resulting from Failing to Perform Transvaginal Ultrasounds

Failing to perform a transvaginal ultrasound prior to an abortion is dangerous because pregnancy problems go undetected. When pregnant women get an ultrasound, abnormal pregnancies are detected and are promptly and properly treated.[111] However, when a pregnant woman does not get an ultrasound, abnormal pregnancies may not be detected.[112] The woman does not receive prompt or proper diagnosis and treatment, and suffers fallopian tube loss, uterine loss, infertility, unnecessary abortions, hemorrhage, infections, emotional trauma, or, in extreme cases, death.[113]

Furthermore, abnormal pregnancies and their complications are not rare.[114] Statistics on pregnancies show that one out of every fifty pregnancies is an ectopic pregnancy,[115] and "[b]etween 1980 and 2007, ectopic pregnancies killed 876 women in the U.S."[116] One out of every 1,000 pregnancies is a molar pregnancy,[117] and

108 *See* Sivalingam et al., *supra* note 16, at 233, 234.

109 *See id.* at 233.

110 *See id.* at 235, 236.

111 *See* Healthwise Staff, *Pregnancy: Should I Have an Early Fetal Ultrasound*, MICH. MEDICINE, https://www.uofmhealth.org/health-library/aa22092 (last updated Sept. 5, 2018).

112 *See id.*

113 *See supra* Part I.B.

114 *See Ectopic Pregnancy*, AM. PREGNANCY ASS'N, https://americanpregnancy.org/pregnancy-complications/ectopic-pregnancy/ (last updated Oct. 11, 2019).

115 *See id.*

116 *See* Erika Nichols-Frazer, *I Got Pregnant Despite Having an IUD and It Almost Killed Me*, HUFFPOST (May 28, 2019, 9:00 AM), https://www.huffpost.com/entry/iud-ectopic-pregnancy_n_5ce6c259e4b05c15dea86856.

117 *See Molar Pregnancy*, AM. PREGNANCY ASS'N, https://americanpregnancy.org/pregnancy-complications/molar-pregnancy (last updated Oct. 10, 2019).

choriocarcinoma occurs in one in 40,000 pregnancies.[118] Up to thirty percent of all pregnancies end in miscarriage.[119] Non-detection poses a threat to women's health because as these statistics prove, thousands of women suffer abnormal pregnancies.[120]

In one case, a woman was experiencing cramping and bleeding for weeks.[121] She had an intrauterine device (IUD), and initially thought she was just having a painful, heavy period.[122] As the pain and bleeding worsened, she got concerned and made an appointment with her doctor.[123] Before she could see her doctor, she had an intense episode of fainting, dizziness, weakness, and pain.[124] Finally, when she had her appointment with her OB-GYN, she learned she was pregnant, but the next available ultrasound appointment was eight weeks away.[125] She was sent home.[126] Luckily, the next day an ultrasound slot opened, and when she finally had her ultrasound, it showed an ectopic pregnancy.[127] In the operating room, surgeons discovered her ectopic pregnancy had ruptured.[128] She lost her fallopian tube, suffered physical and emotional pain, and gained three new scars on her abdomen.[129]

In *Simmons v. West*, a woman reported to her doctor with vaginal bleeding and a positive pregnancy test.[130] At her first obstetrical appointment, no ultrasound was performed; at her next appointment, only a transabdominal ultrasound was performed.[131] This woman was incorrectly diagnosed and treated for a miscarriage when she actually had an ectopic pregnancy that was not visualized by transabdominal ultrasound.[132] By the time the

118 *See Molar Pregnancy*, DRUGS.COM, www.drugs.com/health-guide/molar-pregnancy.html (last updated May 23, 2019).

119 *See* Pobby, *Miscarriage Statistics Week-By-Week: When Does Miscarriage Risk Drop?,* CHECK PREGNANCY (Dec. 23, 2018), https://www.checkpregnancy.com/miscarriage-statistics/.

120 *See id.*

121 *See* Nichols-Frazer, *supra* note 116.

122 *See id.*

123 *See id.*

124 *See id.*

125 *See id.*

126 *See id.*

127 *See id.*

128 *See id.*

129 *See id.*

130 *See* Simmons v. West, 697 So. 2d 688, 689 (La. App. 1997).

131 *See id.*

132 *See id.* at 689, 690.

ectopic pregnancy was discovered, she was in hypovolemic shock, and required emergency surgical removal of her fallopian tube, a one-week hospital stay, and psychological treatment for post-traumatic stress disorder.[133]

In *Sepulveda v. Stiff*, healthcare providers failed to timely diagnose a woman with a molar pregnancy.[134] As a result, she developed gestational trophoblastic disease that further progressed to choriocarcinoma.[135] The woman developed cognitive impairments and strokes that required surgery and therapy to treat.[136]

In *Gaydar v. Sociedad Instituto Gineco-Quirurgico y Planificacion Familiar*, a woman went to an abortion clinic for a surgical abortion, but the clinic did not perform any laboratory tests or an ultrasound prior to the abortion.[137] Several days later, while still experiencing pregnancy symptoms, the woman returned to the clinic, but they attributed her symptoms to her recent abortion and sent her home without performing an ultrasound.[138] She wound up in the emergency room with severe abdominal pain and septic shock.[139] Finally, a sonogram was performed.[140] It showed a ruptured ectopic pregnancy, which resulted in emergency surgery, blood transfusions, loss of her right fallopian tube, a five-day intensive care unit stay, and a scar on her abdomen.[141] Performing transvaginal ultrasounds likely could avoid these traumatic results.[142]

133 *See id.* at 690.

134 *See* Sepulveda v. Stiff, No. 4:05cv167, 2006 U.S. Dist. LEXIS 82885, at *6-9 (E.D. Va. Nov. 13, 2006). The woman had a history of irregular pregnancy hormone levels and even an abnormal ultrasound, but healthcare providers ignored these findings allowing her injuries to worsen. *See id.* This situation, where abnormal results are ignored, mirrors what happens when blood work and an ultrasound are not performed. By ignoring results or not performing tests, the woman will not be diagnosed or treated. *See id.*

135 *See id.* at *7.

136 *See id.*

137 *See* Gaydar v. Sociedad Instituto Gineco-Quirurgico Y Planificacion Familiar, 345 F.3d 15, 18-22 (1st Cir. 2003).

138 *See id.* at 18.

139 *See id.* at 18-19.

140 *See id.*

141 *See id.*

142 *See generally* Dr. Monica Pahuja, *Transvaginal Ultrasound*, INSIDE RADIOLOGY, https://www.insideradiology.com.au/transvaginal-ultrasound/ (last visited Nov. 7, 2019). "The insertion of the transducer into the vagina allows a very close and clear view of the pelvic organs, and very clear ultrasound images to be taken of the area. This will help to guide the discussion between you and your doctor about any further investigation or treatment that might be needed." *Id.*

When legislators draft abortion law, they ignore these harms. Those engaged in the TV US debate fail to acknowledge the medical reality that transvaginal ultrasounds are important diagnostic tools.[143] And by failing to acknowledge this role, the TV US debate turns into a misguided clash pinning women's autonomy (where women have the power to decline an invasive test) against unborn fetal life (where informed consent requires viewing the fetus).[144] Neither of these positions are dispositive. Transvaginal ultrasounds in early pregnancy are medically necessary; this theme should guide the legal consideration of the TV US debate.

II. LEGAL HISTORY

Turning now to the law: how did abortion law come into being? In America in the 1800s, states outlawed abortion due to maternal fatalities and injuries.[145] Varying medical, religious, ethical, cultural, and societal justifications also backed this ban.[146] Regardless of the justification, one thing was clear: abortion was not medically safe for women terminating their pregnancies in the 1800s.[147]

Even when medicine became safer, abortion remained illegal.[148] Under the Comstock Act, birth control was illegal in many states

143 *See* Tracy Weitz, *What We Are Missing in the Trans-vaginal Ultrasound Debate*, REWIRE.NEWS (Mar. 1, 2013), https://rewire.news/article/2013/03/01/challenges-in-the-trans-vaginal-ultrasound-debate/.

144 *See, e.g.*, David Kroll, *State-Mandated Transvaginal Ultrasounds: Where Are The Medical Societies?*, FORBES (Jul. 7, 2013), https://www.forbes.com/sites/davidkroll/2013/07/07/state-mandated-transvaginal-ultrasounds-where-are-the-medical-societies.

145 *See generally* Katha Pollitt, *Abortion in American History*, ATLANTIC (May 1997), https://www.theatlantic.com/magazine/archive/1997/05/abortion-in-american-history/376851/.

146 *See generally History of Abortion*, NAT'L ABORTION FED'N, https://prochoice.org/education-and-advocacy/about-abortion/history-of-abortion/ (last visited Nov. 7, 2019); *see also* Jone Johnson Lewis, *Abortion History in the U.S.*, THOUGHTCO., https://www.thoughtco.com/history-of-abortion-3528243 (last updated May 4, 2019).

147 *See History of Abortion*, *supra* note 146. In the 1800s antiseptics were unknown and infection was common in medical procedures. *See id.* As such, medical procedures posed enormous risks. *See id.* Studies show thousands of women were injured from abortion in the pre-Roe era. Rachel Benson Gold, *Lessons from Before Roe: Will Past be Prologue?*, GUTTMACHER POL'Y REV. (Mar. 1, 2003), https://www.guttmacher.org/gpr/2003/03/lessons-roe-will-past-be-prologue.

148 *See History of Abortion*, *supra* note 146.

and thus widely unavailable.[149] Desperate women turned to back-alley abortions, and as a result, thousands either died or suffered lasting bodily harm.[150] Regardless of the risk or the legality, another thing was clear: abortion was not going to stop.[151]

Abortion regulation seemed better suited to curb the havoc illegal abortion was reeking on women's health and safety. Slowly in the 1960s, states began legalizing abortion, until finally, the Supreme Court in *Roe v. Wade* struck down all state laws banning abortion—effectively making abortion a legal right.[152] The decision provoked harsh criticism and gave way to a slew of litigation aiming to curtail the right.[153] This litigation has led to the current framework for abortion restrictions.[154] Yet the current abortion framework continues to yield crowded court dockets, and the issues erupt into heated political debates.[155] But this political jargon strays from the original purpose of *Roe*—to regulate abortion to safeguard women's health.[156] And legislation over transvaginal ultrasounds is at the forefront of some of this discussion today.[157] But before delving into that arena—let us take a step back and see how we got here.

A. History of the Undue Burden Standard

The due process clause of the Fourteenth Amendment declares that no state "shall . . . deprive any person of life, liberty, or

149 *See Anthony Comstock's "Chastity" Laws*, PBS, https://www.pbs.org/wgbh/americanexperience/features/pill-anthony-comstocks-chastity-laws/ (last visited Nov. 7, 2019). Even with contraception legal and readily accessible today, many women suffer unintended pregnancies. *See Unintended Pregnancy in the United States*, GUTTMACHER INST. (Jan. 2019), https://www.guttmacher.org/fact-sheet/unintended-pregnancy-united-states.

150 *See* David A. Grimes, *The Bad Old Days: Abortion in America Before Roe v. Wade,* HUFFPOST, https://www.huffingtonpost.com/david-a-grimes/the-bad-old-days- abortion_b_6 324610.html (last updated Mar. 17, 2015).

151 *See generally* Gold, *supra* note 147. Abortions numbered in the hundreds of thousands in the years preceding *Roe v. Wade*, despite their illegality. *See id.*

152 *See* Roe v. Wade, 410 U.S. 113, 164-67 (1973).

153 *See Abortion*, L. LIBR. – AM. L. & LEGAL INFO., https://law.jrank.org/pages/448/Abortion-Roe-v-Wade-its-aftermath.html (last visited Nov. 7, 2019).

154 *See id.*

155 *See, e.g.*, *Abortion*, REWIRE.NEWS, https://rewire.news/primary-topic/abortion/ (last visited Nov. 7, 2019).

156 *See Roe*, 410 U.S. at 154, 164-67.

157 *See Forced Ultrasound*, REWIRE.NEWS (Sept. 12, 2018), https://rewire.news/legislative-tracker/law-topic/forced-ultrasound/.

property, without due process of law."[158] In *Meyer v. Nebraska*, the Court gives examples of the liberty interest under the Fourteenth Amendment.[159] Included are the rights "to marry, establish a home and bring up children . . . and generally to enjoy those privileges long recognized at common law as essential to the orderly pursuit of happiness by free men."[160] Later, *Griswold v. Connecticut* added a right of privacy to this liberty interest.[161] Under this precedent, *Roe v. Wade* was decided.[162]

The plaintiffs in *Roe* challenged the constitutionality of laws restricting and criminalizing abortion, arguing the statutes were vague and abridged their right of privacy under the Fourteenth Amendment.[163] The Court in *Roe* essentially found the "right of privacy [under the liberty interest of the Fourteenth Amendment]. . . is broad enough to encompass a woman's decision whether or not to terminate her pregnancy."[164] The Court implemented a balancing test that recognized the right to abortion was not absolute, but could not be completely denied: the Court weighed a woman's right to abortion against the State's interest in regulating abortion.[165] The Court found the State could not justifiably restrict abortion outright because this decision has potential medical, psychological, physical, financial, and sociological repercussions.[166] However, where there are threats to women's health and prenatal life, the State has an interest in regulating abortion.[167]

The Court analyzed abortion restrictions during each trimester: (1) in the first trimester, where abortion was allegedly safer than childbirth, the mother and her physician could make the ultimate

158 U.S. CONST. amend. XIV, § 1.

159 *See* Meyer v. Nebraska, 262 U.S. 390, 398-400 (1923).

160 *See id.* at 399.

161 *See* Griswold v. Connecticut, 381 U.S. 479, 484-85 (1965) (creating a privacy interest for married couples in their decision to use birth control). *See also* Eisenstadt v. Baird, 405 U.S. 438, 453 (1972) (creating a right "to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision whether to bear or beget a child").

162 *See* Roe v. Wade, 410 U.S. 113, 120 (1973).

163 *See id.*

164 *Id.* at 153.

165 *See id.* at 155.

166 For instance, the Court recognized, *inter alia*, that "[m]aternity . . . may force upon the woman a distressful life and future," and that the woman's "[m]ental and physical health may be taxed by child care." *See id.* at 153.

167 *See id.* at 163. For the prenatal life, this is at the point of viability. *Id.*

decision whether or not to terminate; (2) in the late first trimester or early second trimester until the point of viability, the state's interest became compelling in protecting the woman, and the state could regulate to protect the mother's health; and (3) in the third trimester at the point of viability, the state's interest became compelling in protecting potential life, and the state could regulate to protect the fetus and ban abortions.[168] In sum, the Court considered three inherent rights of privacy in its holding: that of the woman, that of the mother, and that of the potential human life.[169]

In *Planned Parenthood v. Casey*, the Court rejected the specific trimester approach of *Roe*, but *Casey* is guided by the same essential principles of protecting women in their right to privacy.[170] The plaintiffs in *Casey* challenged several provisions of the Pennsylvania Abortion Control Act of 1982.[171] The Court in *Casey* recognized the interests of the woman, the mother, and the potential life in its analysis, but abandoned the trimester approach for a point of viability approach.[172] Specifically, when referencing the interests of the woman, the Court recognized people's opinions differ on intimate matters: one woman might feel "pregnancy ought to be welcomed and carried to full term no matter how difficult it will be to provide for the child and ensure its well-being," while another woman may decide "the inability to provide for the nurture and care of the infant is a cruelty to the child and an anguish to the parent."[173] The focus in early pregnancy was protecting a woman's control over these intimate matters, regardless of her stance, under the liberty interest of the Fourteenth Amendment.[174]

168 This was qualified because the state had to make an exception where the mother's life was at risk. *See id*. at 163-64.

169 *See id.* at 164-65. The Court held the State's interest is stronger in later stages of pregnancy and set up a trimester approach to regulate abortion that was rejected in *Casey*. *Id*.; *see* Planned Parenthood v. Casey, 505 U.S. 833, 872 (1992). Notably, the Court recognized the woman distinct from the mother: before viability, the *woman* has a right to her personal decisions regarding abortion; at viability, the State must protect the potential life but protects the *mother* when her health or life is at risk. *Roe*, 410 U.S. at 164-65.

170 *See Roe,* 410 U.S. at 153; *see also Casey*, 505 U.S. at 849.

171 *See Casey*, 505 U.S. at 844. This act imposed many pre-requisites and restrictions for abortion in Pennsylvania including informed consent, spousal notification, parental notification, medical emergencies, and reporting requirements. *Id.*

172 *Id*. at 837.

173 *Id*. at 853.

174 *Id*. at 868-69.

The Court went further, holding the State has a right to regulate abortion at viability and ensure a woman's decision to bear or beget a child is an informed one.[175] The Court qualified the State's right to ensure a women's decision is informed by prohibiting the State from placing an undue burden on a woman's ability to decide whether or not to have an abortion.[176] The Court defined undue burden as "a state regulation [that] has the purpose or effect of placing a substantial obstacle in the path of a woman seeking an abortion of a nonviable fetus."[177] In *Whole Woman's Health v. Hellerstedt*, the Court further explained the undue burden standard was a balancing test: courts must "consider the burdens a law imposes on abortion access together with the benefits those laws confer."[178]

These guidelines are foggy leaving room for subjective interpretation. With no clear line of delineation, they provided the perfect vehicle for powerful interest groups, rather than facts and law, to eventually guide abortion legislation.[179] As a result, legislation and litigation over this legislation has become irreconcilable and inconsistent yielding very murky guidelines.[180]

175 *See id.* at 872. "An informed consent regulation is reasonable if it is 'truthful,' 'nonmisleading,' and 'relevant . . . to the decision.'" Scott W. Gaylord & Thomas J. Molony, *Casey and a Woman's Right to Know: Ultrasounds, Informed Consent, and the First Amendment*, 45 CONN. L. REV. 595, 603 (2012) (quoting *Casey*, 505 U.S. at 838).

176 *Casey*, 505 U.S. at 877. A state's regulation must "inform the woman's free choice, not hinder it." *Id.*

177 *Id.*

178 Whole Woman's Health v. Hellerstedt, 136 S. Ct. 2292, 2298 (2016).

179 *See generally,* Rob O'Dell & Nick Penzenstadler, *You elected them to write new laws. They're letting corporations do it instead.*, USA TODAY (June 19, 2019), https://www.usatoday.com/in-depth/news/investigations/2019/04/03/abortion-gun-laws-stand-your-ground-model-bills-conservatives-liberal-corporate-influence-lobbyists/3162173002/; *About Us,* NARAL PRO-CHOICE AMERICA, https://www.prochoiceamerica.org/about/; Alan Blinder, *Federal Judge Blocks Mississippi Abortion Law,* N. Y. TIMES (May 24, 2019), https://www.nytimes.com/2019/05/24/us/mississippi-abortion-law.html.

180 *See generally* Margaret Talbot, *The Supreme Court's Just Application of the Undue-Burden Standard for Abortion*, NEW YORKER (June 27, 2016), https://www.newyorker.com/news/news-desk/the-supreme-courts-just-application-of-the-undue-burden-standard-for-abortion.

B. Decisions Applying the Undue Burden Standard

On this point, several state abortion regulations have been challenged under the Supreme Court's undue burden standard.[181] In *Casey*, the challenged Pennsylvania abortion statute contained several abortion prerequisites: (1) spousal notification, (2) a twenty-four hour waiting period, (3) parental consent, and (4) state reporting requirements.[182] The statute had an exception for medical emergencies where the woman's life was in danger, and the statute's definition of medical emergency was also challenged.[183] The Court held the spousal notification requirement was an undue burden, requiring a woman to notify her spouse prior to an abortion can enable women that are victims of spousal abuse to be forced into the decision of their husband.[184] However, the other regulations were not undue burdens because they furthered the state's interest in promoting the lives involved while not affecting the woman's ability to make the ultimate decision of whether or not to terminate.[185] The twenty-four hour waiting period delayed abortions, but did not prevent them.[186] The parental consent requirement included a judicial bypass so a minor could obtain an abortion without a parent's consent.[187] The reporting requirement served an important state interest in information gathering.[188] The medical emergency exception ensured the woman's life and health were not threatened when medical providers complied with abortion regulations.[189] In sum, if a provision prevented an abortion by putting a substantial obstacle in place for no good

181 *See generally* Planned Parenthood v. Casey of Se. Pa., 505 U.S. 833 (1992); Whole Woman's Health v. Hellerstedt, 136 S. Ct. 2292 (2016); Stenberg v. Carhart, 530 U.S. 914 (2000); Gonzales v. Carhart, 550 U.S. 124 (2007).

182 *Casey*, 505 U.S. at 844.

183 *Id.* at 844, 879. The Pennsylvania Statute defined a medical emergency as "that condition which, on the basis of the physician's good faith clinical judgment, so complicates the medical condition of a pregnant woman as to necessitate the immediate abortion of her pregnancy to avert her death or for which a delay will create serious risk of substantial and irreversible impairment of a major bodily function." *Id.* at 879.

184 *Id.* at 893-97. The Court pointed out that millions of women are abused by their husbands, and that a spousal notification requirement would be a substantial obstacle for women trying to obtain an abortion. *Id.*

185 *Id.* at 900-01.

186 *Id.* at 887.

187 *Id.* at 844.

188 *Id.* at 900-01

189 *Id.* at 880.

reason, it was an undue burden, but if it only made it a little more difficult or time consuming, it was not an undue burden.[190]

Decisions subsequent to *Casey* challenged other regulations and whether they imposed undue burdens on women's access to abortion.[191] In *Hellerstedt*, the Court struck down regulations requiring doctors to have admitting privileges within thirty minutes of abortion facilities and requiring abortion facilities to meet the minimum standards for surgical centers.[192] These regulations were undue burdens because they did not provide any health benefits to women,[193] and they imposed undue barriers to women's access to abortion.[194] In the same vein, the Court in *Stenberg v. Carhart* struck down a statute criminalizing partial birth abortions[195] because it inhibited a woman's ability to choose a common method of abortion and did not have an exception for partial birth abortions performed to protect the mother's health.[196] The Court in *Gonzales v. Carhart*, however, overruled a lower court decision declaring the Partial-Birth Abortion Ban Act of 2003 unconstitutional.[197] The Court distinguished *Stenberg* because the regulation in *Gonzales* made an exception for partial birth abortions that protected the mother's health.[198]

190 *See, e.g., id.* at 893-94 (noting the "spousal notification requirement is thus likely to prevent a significant number of women from obtaining an abortion" and "[i]t does not merely make abortions a little more difficult or expensive to obtain; for many women, it will impose a substantial obstacle").

191 *See generally* Whole Woman's Health v. Hellerstedt, 136 S. Ct. 2292 (2016); Stenberg v. Carhart, 530 U.S. 914 (2000); Gonzales v. Carhart, 550 U.S. 124 (2007).

192 *See* Hellerstedt, 136 S. Ct. at 2300.

193 *See id.* The evidence showed abortion was so safe that no patients had to go to the hospital from complications (making the admitting privileges requirement unnecessary) and the risks were no different for those in surgical centers than they were in nonsurgical centers (making the surgical-center requirement unnecessary). *See id.* at 2311, 2315.

194 *See id.* at 2300. Imposing this regulation would mean almost all abortion clinics would have to shut down, clinics could not meet the demand for the over 10,000 women seeking abortions each year in the affected area, and patients would have to travel much further to obtain abortions. *See id.* at 2301-302.

195 *See* Stenberg v. Carhart, 530 U.S. 914, 920 (2000). Partial birth abortion is when a fetus is extracted to a certain point outside of a mother and then terminated. *See id.*

196 *See id.* at 929.

197 *See* Gonzales v. Carhart, 550 U.S. 124, 168 (2007). Under this law, "[a]ny physician who . . . knowingly performs a partial-birth abortion and thereby kills a human fetus shall be fined under this title or imprisoned not more than 2 years, or both," but this law made an exception for partial-birth abortions "necessary to save the life of a mother whose life is endangered by a physical disorder, physical illness, or physical injury, including a life-endangering physical condition caused by or arising from the pregnancy itself." *Id.* at 141; 18 U.S.C.S. § 1531 (2018).

198 *See Gonzales*, 550 U.S. at 129, 166-67.

From these cases decided under the undue burden standard—as applied—abortion regulations constitute undue burdens when they (1) affect the woman's choice over whether or not to abort,[199] (2) do not provide sufficient health benefits to women,[200] and (3) do not provide exceptions for circumstances that threaten the life of the mother.[201]

However, it is not an undue burden to (1) ensure a woman makes a fully informed consent, considering truthful, non-misleading, relevant information, regardless of whether or not a regulation has a connection to the woman's health,[202] or (2) safeguard the health of the woman or the potential life at the point of viability.[203] This undue burden standard is the current framework in determining the constitutionality of proposed abortion regulations.[204]

C. Ultrasound Regulations and the Undue Burden Standard

Ultrasound regulations are fairly new to abortion law and have recently faced challenges under the undue burden standard.[205] Ultrasound abortion laws generally require a doctor or ultrasound technologist perform an ultrasound prior to a medical or surgical abortion.[206] Some states require an ultrasound for all abortions, some require doctors to offer an ultrasound to all abortion patients (with an option for the patient to decline), and some states do not require an ultrasound at all.[207]

199 *See* Planned Parenthood v. Casey, 505 U.S. 833, 901 (1992).

200 *See* Whole Woman's Health v. Hellerstedt, 136 S. Ct. 2292, 2300 (2016).

201 *See Gonzales*, 550 U.S. at 168.

202 *See Casey*, 505 U.S. at 882 (upholding 24-hour waiting periods because the Court did not see "[any] reason why the State may not require doctors to inform a woman seeking an abortion of the availability of materials relating to the consequences to the fetus, even when those consequences have no direct relation to her health").

203 See *id.* at 871-72.

204 *See Undue Burden,* NOLO'S PLAIN ENG. L. DICTIONARY, https://www.nolo.com/dictionary/undue-burden-term.html (last visited Nov. 10, 2019).

205 *See The Undue Burden Standard*, CTR. FOR REPROD. RTS. L. SCH. INITIATIVE, 1-2, http://www.reproductiverights.org/sites/crr.civicactions.net/files/documents/crr_Updated_UB_Module.pdf (last visited Nov. 10, 2019).

206 *See Forced Ultrasound*, *supra* note 22.

207 *See Requirements for Ultrasound,* GUTTMACHER INST., (Nov. 1, 2019) https://www.guttmacher.org/state-policy/explore/requirements-ultrasound.

States that do require ultrasounds before abortion have specific requirements for the test. Current ultrasound abortion laws include the following:[208]

(1) Mississippi requires the physician performing the abortion to perform an ultrasound and make fetal heart tones audible to the patient prior to the abortion; offer the patient an opportunity to see the ultrasound and hear the heartbeat; offer a physical photo of the ultrasound; obtain the patient's signature certifying the patient was given an opportunity to see the ultrasound, hear the heartbeat, and receive a physical photo; and retain the patient's certification in the patient's medical record.[209]

(2) Alabama's "Woman's Right to Know Act" requires all facilities where abortions are performed have ultrasound viewing equipment, all women have an ultrasound prior to abortion, and all women having an abortion be offered an opportunity to view the ultrasound and sign a form verifying she was informed of this opportunity.[210]

(3) Florida requires an ultrasound be performed by the physician performing the abortion or someone who has completed a course in ultrasound; the person performing the ultrasound offer the woman an opportunity to view the ultrasound and hear an explanation of it; and if the woman does not want to view the ultrasound or hear the explanation, she must fill out a form that she was at least given the opportunity.[211]

(4) Wisconsin requires a pre-abortion ultrasound where the woman is given a list of providers that perform free

208 Each of these laws has other regulations for abortion but listed are those specifically pertaining to ultrasound requirements. *See id.*

209 *See* MISS. CODE ANN.§ 41-41-34 (2007). The law does not specify the type of ultrasound (transvaginal or transabdominal) but requires "[a]n ultrasound image must be of a quality consistent with standard medical practice in the community, shall contain the dimensions of the unborn child and shall accurately portray the presence of external members and internal organs, if present or viewable, of the unborn child." *See id.*

210 *See* ALA. CODE § 26-23A-6 (LexisNexis 2019).

211 *See* FLA. STAT. § 390.0111 (LexisNexis 2019).

ultrasounds; the woman selects the type of ultrasound transducer (transabdominal or transvaginal) after both types have been explained; the person performing the ultrasound explains the ultrasound while it is being performed and offers an opportunity to view the heartbeat where there is one; and the woman has a right to decline to view the ultrasound and the heartbeat;[212]

(5) Idaho requires physicians providing abortions inform women of the availability of ultrasound and heart monitoring, provide women with a list of free ultrasound providers, and that this information be communicated in person or over the phone twenty-four hours before the procedure.[213]

(6) Wyoming requires physicians performing abortions to inform the woman that she has the opportunity to view the ultrasound and hear the heartbeat of the unborn child.[214]

(7) North Carolina's "Woman's Right to Know Act" requires abortion providers to perform an ultrasound seventy-two hours before the abortion, place the ultrasound image in the patient's line of sight, and describe the image and offer an opportunity to hear the heartbeat.[215]

(8) South Dakota requires physicians performing abortions offer an ultrasound before women can consent to abortion, offer to describe the ultrasound images, offer an opportunity to hear the heartbeat when the woman consents to the ultrasound, and document the woman's response to the offer including the date and time of the offer and the woman's signature.[216]

(9) Tennessee bans abortion once a heartbeat is detected on ultrasound, and as such, an ultrasound is required prior to

212 *See* 2013 Wis. Legis. Serv. 37.
213 *See* IDAHO CODE § 18-609 (2016).
214 *See* WYO. STAT. ANN. § 35-6-119 (2017).
215 *See* N.C. GEN. STAT. § 90-21.82 (2019).
216 *See* S.D. CODIFIED LAWS § 34-23A-52 (2019).

> an abortion. The person performing the ultrasound is required to offer the woman an opportunity to view or hear the heartbeat.[217]

The laws do not require a transvaginal ultrasound specifically,[218] and all have exceptions for medical emergencies including those that threaten the pregnant woman's life and situations where pregnancies result from sexual abuse.[219] Many other states have proposed similar ultrasound laws which have yet to be signed into law.[220]

There is also a federal proposal before the House called the "Ultrasound Informed Consent Act."[221] This act provides that before an abortion, abortion providers would be required to perform an obstetrical ultrasound on the patient, explain the ultrasound images during the exam, display the images for the patient to view, and provide a medical description of the images.[222] The patient would be allowed to turn away from the ultrasound so she would not have to see it.[223] This proposed bill carves out an exception to this requirement for emergencies endangering the patient's life.[224] The bill was proposed on January 17, 2019, but it has yet to be adopted.[225] Supporters of ultrasound laws argue these laws provide informed consent, protect women's heath, and protect life.[226] Those opposed to ultrasound laws urge these tests are medically unnecessary, make abortions more costly, and

217 *See* TN H.B 0077 111th Gen. Assembly (2019).

218 *See, e.g.* MISS. CODE ANN.§ 41-41-34 (2007), ALA. CODE § 26-23A-6 (LexisNexis 2019). Most only require the ultrasound be performed in a quality consistent with standard medical practice in the community (which often requires a transvaginal ultrasound for early pregnancies). *See* WYO. STAT. ANN. § 35-6-119 (2019).

219 That is, where the pregnancy threatens the mother's life, or was the result of rape, incest, sex trafficking, domestic violence, or other abusive sexual acts, the ultrasound requirement is waived. *See.* FLA. STAT. § 390.0111 (LexisNexis 2019), ALA. CODE § 26-23A-6 (LexisNexis 2019), S.D. CODIFIED LAWS § 34-23A-10.1 (2019).

220 *See* Lena H. Sun, *Virginia's Ultrasound Bill Joins Other States' Measures*, WASH. POST (Feb. 26, 2012), https://www.washingtonpost.com/national/health-science/virginia-ultrasound-bill-joins-other-states-measures/2012/02/24/gIQAervUcR_story.html.

221 *See* Ultrasound Informed Consent Act, H.R. 634, 116th Cong. (2019).

222 *See id.*

223 *See id.*

224 *See id.*

225 *See id.*

226 *See generally Forced Ultrasound, supra* note 22.

interfere with women exercising their Fourteenth Amendment right to choose abortion.[227]

Several lower courts have analyzed pre-abortion ultrasound screening regulations under the undue burden standard.[228] For example, an ultrasound regulation have been upheld in *Texas Medical Providers v. Lakey*.[229] In *Texas Medical Providers v. Lakey*, regulations requiring sonograms, disclosures of the fetal heartbeat, and descriptions of the sonogram were challenged.[230] The Fifth Circuit found these regulations constitutional under *Casey* because they ensured informed consent and provided truthful, non-misleading information.[231] In *Edwards v. Beck*, the Eighth Circuit Court of Appeals enjoined an Arkansas act that would have banned abortions once a fetal heartrate was detected.[232] This bill required an abdominal ultrasound be performed prior to abortion.[233] The Eighth Circuit ultimately enjoined the entire act on the grounds the abortion ban once a heartrate was detected was an undue burden.[234] In *EMW Women's Surgical Center v. Beshear*, the Sixth Circuit considered a Kentucky ultrasound law requiring a pre-abortion ultrasound where the patient would see the ultrasound and hear the heartbeat.[235] The Sixth Circuit upheld the ultrasound requirement because it provided truthful, non-misleading, and relevant information related to an informed consent of an abortion.[236]

227 *See id.*

228 *See generally* Tex. Med. Providers Performing Abortion Servs. v. Lakey, 667 F.3d 570, 573, 576 (5th Cir. 2012).

229 *See id.* at 580.

230 *See id.* at 574. While these disclosures were more graphic, they were a result of scientific advancements and thus simply a modern application of *Casey*. *Id.* at 578.

231 *See Lakey*, 667 F.3d at 575. The District Court upheld the ultrasound regulations on remand. Texas Med. Providers Performing Abortion Servs. v. Lakey, 667 F.3d 570, 573 (5th Cir. 2012), *remanded* to Texas Med. Providers Performing Abortion Servs. v. Lakey No. A-11-CA-486-SS (West. Dist. Tex. 2012).

232 *See* Edwards v. Beck, 786 F.3d 1113, 1115-16 (8th Cir. 2015).

233 *See* Edwards v. Beck, 8 F.Supp.3d 1091, 1094 (E.D. Ark. 2014).

234 *Edwards,* 786 F.3d at 1119 (finding that the ban unconstitutional under *Casey* as it would prohibit abortions at twelve weeks infringing on a woman's right to choose abortion before viability).

235 *See* EMW Women's Surgical Ctr. v. Beshear, 920 F.3d 421, 423 (6th Cir. 2019).

236 *See id.* at 446.

However, some lower courts have struck down ultrasound regulations under the undue burden test.[237] In *Planned Parenthood of Indiana and Kentucky v. Commissioner of Indiana State Department of Health*, the Seventh Circuit blocked an Indiana bill that would have required an ultrasound eighteen hours before an abortion, with an option for the woman to see the ultrasound images and hear the heartbeat.[238] The Seventh Circuit found the eighteen hour waiting period was an undue burden because the delay provided no medical benefit, and only served to put inconvenience in the way of women exercising their Fourteenth Amendment right to abortion.[239] In *Stuart v. Camnitz*, the Fourth Circuit considered a North Carolina statute requiring physicians to perform an ultrasound, display the ultrasound, and describe the ultrasound for women seeking abortion.[240] The Fourth Circuit enjoined this statute determining states have the right to ensure a woman's decision to have an abortion is informed, but states cannot abridge physicians' right to free speech in the process.[241]

Despite these contrary decisions, an ultrasound prerequisite to abortion is not an undue burden. First, it does not affect the woman's choice over whether or not to abort because it is a screening mechanism used to confirm and date a pregnancy.[242] Second, it provides health benefits to women because it rules out irregular pregnancies and abnormalities and avoids unnecessary and improper management.[243] Third, the whole purpose of the test is to preserve the mother's life because it rules out problematic life-threatening pregnancies.[244]

Further, a transvaginal ultrasound prerequisite to abortion, where necessary to screen early pregnancies, is not an undue burden. First, it would ensure a woman's informed consent because

237 *See* Planned Parenthood of Ind. & Ky. v. Comm'r of Ind. State Dept. of Health, 896 F.3d 809, 833-34 (7th Cir. 2018).

238 *See id.* at 812-13.

239 *See id.* at 833-34.

240 *See Stuart v. Camnitz,* 774 F.3d 238, 242 (4th Cir. 2014).

241 *See id.* at 255-56 (holding that both an undue burden analysis and a First Amendment analysis should be used).

242 *See generally* Planned Parenthood v. Casey, 505 U.S. 833, 900-01 (1992).

243 *See generally* MIDDLETON ET AL., *supra* note 3, at 305-111; *see also* Whole Woman's Health v. Hellerstedt, 136 S. Ct. 2292, 2300 (2016) (holding that there were not enough medical benefits to justify the regulations burdens).

244 *See supra,* Part I.

the test most accurately characterizes the pregnancy, providing the woman truthful, non-misleading, relevant information prior to her decision.[245] And second, it is a test that safeguards women because it detects pregnancy complications affecting women's health as early and accurately as possible, ensuring proper treatment and prompt management.[246]

III. PROPOSAL FOR REGULATION

Ultrasound abortion regulations are not undue burdens, but legislatures have yet to establish the proper formula for this type of legislation.[247] This is because legislation has focused too much on pro-choice and pro-life justifications for regulations rather than medical justifications.[248] The medical utility of ultrasound should guide ultrasound abortion regulations.

This Note proposes states should make transvaginal ultrasounds a prerequisite for early first trimester abortions, with an option for a woman to opt for a transabdominal ultrasound. Should she opt for a transabdominal ultrasound, she must first be fully informed about the differences between the tests and their diagnostic sensitivities, and the potential consequences of opting out of the more sensitive transvaginal ultrasound.[249] Where a woman chooses to opt for a transabdominal ultrasound when a transvaginal ultrasound is indicated, she would be required to sign a certification acknowledging the consequences of not having the transvaginal exam and the limitations of the transabdominal approach. At the point where first trimester pregnancies can be accurately confirmed by transabdominal ultrasound,[250] the transvaginal prerequisite can be lifted. However, a transvaginal requirement in early abortions confirms and classifies pregnancies

245 *See Casey*, 505 U.S. at 882.

246 *See id.* at 882-83.

247 *See generally id.* at 833 (describing what constitutes an undue burden).

248 *See Forced Ultrasound*, *supra* note 22 (arguing an ultrasound is medically unnecessary for abortion).

249 For instance, she should be told that ectopic pregnancies could be missed, she might be having an unnecessary abortion.

250 This can be determined if a patient's last menstrual period or pregnancy hormone level indicates she has progressed beyond the early first trimester. Alternatively, a transabdominal ultrasound can first be attempted and where a pregnancy is well-visualized through this approach, the transvaginal prerequisite can be lifted.

earlier and more accurately than transabdominal ultrasounds and should not immediately be foregone solely because it is an invasive uncomfortable test.[251]

Additionally, the regulation would require either a physician trained in ultrasound or a registered ultrasound technologist to perform the ultrasound.[252] The ultrasound can be at another facility or at the abortion facility, but in either case, the patient must have documentation interpreted by a radiologist or other qualified physician that confirms an IUP and its estimated gestational age.[253] Abortion facilities should have physicians or ultrasound technologists available at all times, or where this is not possible, should provide to patients a list of low cost and/or free ultrasound providers.

Prior to an obstetrical ultrasound where a patient has indicated they are considering abortion, the patient would fill out a form indicating whether or not she wanted to see the ultrasound or hear the heartbeat so the person administering the ultrasound could tailor her exam accordingly. Regardless of the woman's decision to view or hear the ultrasound, she would be given the medical results (whether the pregnancy is normal or abnormal and whether any pelvic abnormalities were detected) prior to the abortion from the physician. She should have the opportunity to ask any questions she chooses to ask, but at no point should the physician give results beyond the medical description of the pregnancy without the patient's consent.[254]

Finally, since the ultrasound pre-requisite to abortion is permissible to ensure informed consent, [255] insurance providers should not be restricted from covering the cost of the ultrasound, regardless of whether an abortion ultimately results. Informed consent is premised on the idea the patient being informed is receiving the

[251] *See generally* MIDDLETON ET AL., *supra* note 3, at 344.

[252] *See generally Information for Patients,* AM. REGISTRY FOR DIAGNOSTIC MED. SONOGRAPHY, https://www.ardms.org/ (last visited Dec. 10, 2019).

[253] Both results are necessary to properly manage the pregnancy. *See* Part I.B.

[254] For instance, the patient should not be required to look at the ultrasound or hear the heartbeat if she chooses not to since this serves no medical benefit. Likewise, the person performing the ultrasound should turn the screen away from the patient if the patient has indicated she does not want to see the ultrasound. However, the physician can tell the patient the heartrate and the gestational age of the pregnancy since both parameters are medically necessary in managing the pregnancy. *See supra*, Part I.B.

[255] *See* Planned Parenthood v. Casey of Se. Pa., 505 U.S. 833, 882 (1992).

information to guide their decision.[256] As such, this presumes a decision has not yet been made. Since pre-abortion ultrasounds guide a patient's decision whether or not to have an abortion, they should be treated as any other medical procedure (rather than as an abortion procedure) and not be exempt from insurance coverage.[257]

The ultrasound requirement should be tailored to serve all the interests involved: the mother, the potential life, and the woman. By performing transvaginal ultrasounds prior to an abortion, the mother is protected because abnormal pregnancies can be detected early to ensure proper management and preservation of reproductive health.[258] The potential life is protected because ultrasound can assess gestational age and provide information to the mother about the potential for human life.[259] Finally, the woman—previously forgotten—is protected because her decision is more fully informed, and when a pregnancy complication exists, proper treatment can be provided promptly to avoid bodily harm and mortality.[260]

Specifically, the woman's interest is protected with a transvaginal ultrasound regulation. The TV US debate centers around pro-life and pro-choice views focusing on the fetus and the mother; pro-life advocates favor the test hoping it will deter *mothers* from aborting after seeing the *fetus*, and pro-choice advocates disfavor the test for its guilt inducing qualities when viewing the *fetus*.[261] However, the focus should also be women in the early stages of pregnancy.

Transvaginal ultrasounds protect women by providing information about their pregnancy necessary for informed consent.[262] Transvaginal ultrasounds do illustrate the nature of the

256 *See Informed Consent*, AM. MEDICAL ASS'N, https://www.ama-assn.org/delivering-care/ethics/informed-consent (last visited Nov. 5, 2019).

257 Many states restrict insurance from covering costs associated with abortion. *See Bans on Insurance Coverage of Abortion*, AM. C.L. UNION, https://www.aclu.org/issues/reproductive-freedom/abortion/bans-insurance-coverage-abortion (last visited Nov. 5, 2019).

258 Ectopic pregnancies can be detected early to avoid tubal rupture, molar pregnancies can be detected early to avoid metastatic disease requiring hysterectomy, and missed abortions can be detected to avoid unnecessary abortions. *See supra*, Part I.

259 MIDDLETON ET AL., *supra* note 3, at 342-43.

260 Lozeau et al., *supra* note 58.

261 *See* Amanda M. Friz, *Technologies of the State: Transvaginal Ultrasounds and the Abortion Debate*, 21 RHETORIC & PUBLIC AFFAIRS 639, 652-53 (2018).

262 *See supra* Part I.D.

pregnancy to allow a woman to fully appreciate the potential for motherhood and new life.[263] However, they also demonstrate abnormal pregnancies and complications.[264] When detected, the woman can receive proper treatment to protect herself from physical and psychological harm and mortality.[265]

Also, without a transvaginal ultrasound requirement, doctors and medical providers may become lax in administering the exam as a result of limited finances,[266] time, and resources, harming mothers, potential lives, and women. Mothers risk losing reproductive capacity.[267] Potential lives lose the semblance of their humanity.[268] Women lose the ability to be fully informed and risk bodily harm.[269]

In considering this legislation under prior undue burden tests, transvaginal ultrasound regulations are constitutional under *Casey*.[270] Using the reasoning of *Lakey* and *Beshear*, ultrasound regulations are permissible because they provide truthful, non-misleading, relevant information.[271] As highlighted throughout this Note, transvaginal ultrasound provide this information about a pregnancy and a woman's body—superior to that of transabdominal ultrasound.[272]

Alternatively, transvaginal ultrasounds can be distinguished from decisions enjoining ultrasound under the undue burden test. In *Commissioner of Indiana State*, the ultrasound requirement

263 *See supra* Part I.B.

264 *See id.*

265 *See supra* Part I.D.

266 An in-depth analysis of the costs of this transvaginal requirement is beyond the scope of this Note. However, women who continue their pregnancies are afforded multiple ultrasounds throughout their pregnancies, and the potential costs of pregnancy complications and having a child far outweigh the cost of a single transvaginal ultrasound, which averages between $99-$300. *See* Ruthie Dean, *Expecting? How Much Does an Ultrasound Cost?*, BERNARD BENEFITS (May 2, 2014), https://blog.bernardhealth.com/bid/196963/expecting-how-much-does-an-ultrasound-cost.

267 *See supra*, Part I.B.3.

268 This includes the information transvaginal ultrasound can provide about the fetus's age and heartbeat. For example, a transvaginal ultrasound provides information about a fetus's heartbeat that tends to be used as a sign that it is human. *See* MIDDLETON ET AL., *supra* note 3, at 343-44, 454.

269 *See supra*, Part I.

270 *See generally* Planned Parenthood v. Casey, 505 U.S. 833 (1992).

271 *See* Texas Med. Providers Performing Abortion Servs. v. Lakey, 667 F.3d 570, 573 (5th Cir. 2012); EMW Women's Surgical Ctr., P.S.C. v. Beshear, 920 F.3d 421, 424 (6th Cir. 2019).

272 *See supra,* Part II.C.

was unconstitutional because it created a time delay for an abortion without any medical benefit.[273] Here, a transvaginal ultrasound requirement may cause a time delay because it may postpone an abortion until an IUP can be confirmed, but it comes with a medical benefit. As previously discussed, confirming an IUP avoids the dangers of ruptured ectopic pregnancies and other pregnancy complications as well as unnecessary abortions for failed pregnancies.[274] The proposed legislation is also different from *Stuart* because it does not require physicians to describe the pregnancy in detail when it is being performed, but rather requires physicians to provide medical results of which the patient is entitled to, and additional non-medically essential information at the patient's discretion.[275]

The following analysis takes a critical look at this proposed legislation by addressing (1) opposition to a transvaginal ultrasound regulation, (2) why alternatives are inadequate, and (3) perspectives on transvaginal ultrasound.

A. Opposition to a Transvaginal Ultrasound Requirement for Abortion

i. Transvaginal Ultrasounds Intrude on Bodily Integrity

Transvaginal ultrasound regulations may impose a burden on women's freedom of choice in their bodily integrity, but women are not likely to choose an inferior diagnostic test at a risk to their health when a superior alternative exists. Tests such as CAT scans and x-rays impose on bodily integrity: they expose patients to radiation with potential carcinogenic effects.[276] However, the risks of failing to perform these tests when clinically warranted

[273] *See* Planned Parenthood of Ind. and Ky., Inc., v. Comm'r of Ind. State Dep't of Health, 896 F.3d 809, 934 (7th Cir. 2018).

[274] *See supra,* Part I.B.1.

[275] *See* Stuart v. Camnitz, 774 F.3d 238, 242 (7th Cir. 2014).

[276] *See X-Rays – what patients need to know*, INT'L ATOMIC ENERGY AGENCY (March 2018), https://www.iaea.org/resources/rpop/patients-and-public/x-rays#3 (noting that patients receive very low doses of radiation during diagnostic imaging with x-rays and CAT scans).

and missing their diagnostic information outweigh the minimal risk of a minor exposure to radiation.[277]

With transvaginal ultrasounds, there is no risk of exposure to radiation.[278] While albeit a different type of risk than radiation, a concerning aspect of the transvaginal exam is that it requires the insertion of a camera into an intimate bodily cavity.[279] While uncomfortable and psychologically taxing, the exam mirrors a pelvic exam, which most women consent to and experience on a yearly basis at their gynecologist's office in preservation of their reproductive health.[280] Further, ultrasound does no physically-measurable damage to the body.[281] The information gleaned from this exam prevents more substantial disruptions to bodily integrity, such as surgery, loss of bodily structures, disease progression, or loss of fertility.[282]

However, in preserving a woman's right to choose, and recognizing sensitivities of women whose cultures and experiences make them uneasy about the exam, there should be an exception: if a woman refuses a transvaginal ultrasound, she should be informed of the value of the test—for women generally and for pregnancies—and the disadvantages of not being given the test.[283] She should be told of the limitations of the transabdominal approach.[284] And while slightly impacting her freedom of choice, she should be advised of the desirability of postponing the abortion until a time when the pregnancy can be confirmed using a transabdominal ultrasound approach.[285] Time delays do not automatically make a regulation an undue burden especially considering the delay is meant to safeguard the woman's health.[286]

277 *See id.* (noting that the low doses of radiation from these tests are not likely to produce adverse effects other than minor skin injuries).

278 *See* MIDDLETON ET AL., *supra* note 3 at 3.

279 *See id.* at 531.

280 *See id.*

281 *See id.* at 3.

282 *See supra* Part I.B.

283 This could include victims of assault and rape, but could also extend to those who, for religious or cultural reasons, oppose the exam.

284 *See supra*, Part I.A.

285 This measure encourages a woman's decision to be informed.

286 *See* Planned Parenthood v. Casey, 505 U.S. 833, 886-887 (1992).

ii. Forcing Women to Learn the Result of an Ultrasound is an Undue Burden

To preserve a woman's right to choose, she should learn the results of her ultrasound prior to the abortion. These results should include a medical description of her pregnancy and the status of her pelvic structures generally, including the presence of abnormalities. These measures will promote informed consent prior to making her decision whether or not to abort.[287]

It should be a woman's decision whether or not she must learn medically unnecessary details of her pregnancy.[288] Namely, she should choose whether to hear the heartbeat or see the ultrasound. Should she reject hearing the heartbeat or viewing the ultrasound, her doctor can adequately inform her of the status of her pregnancy by word of mouth without the added imagery through multiple sensory receptors.

The informed consent requirement should include medically necessary information. Any information that could impact a woman's health should be provided to her, but any information intending to simply play to her emotions should be provided or not provided at her direction. This ensures a woman has fully informed consent, including truthful, non-misleading, relevant information and thus, is not an undue burden.[289]

iii. Requiring a Transvaginal Ultrasound Prior to Abortion is too Costly

With so many benefits to this exam, query why is it not already a prerequisite to abortion. It is likely not required because of the exam's cost and the lack of availability.[290] Cost is not a proper justification for not administering the test under the undue burden

287 *See generally Forced Ultrasound, supra* note 22. In providing information about the status of the pregnancy, this protects both the mother and potential life. *Id*.

288 This might serve as a compromise between the psychological pain of acknowledging a potential life and the State's interest in protecting potential life. The knowledge needs to be shared because it is truthful and relevant to the decision, but can be less psychologically demanding than being forced to look at and hear the heartbeat of the potential life, as some ultrasound legislation requires. *See generally Requirements for Ultrasound*, *supra* note 14.

289 *See Casey*, 505 U.S. at 882.

290 *See generally Expecting? How Much Does an Ultrasound Cost?, supra* note 266.

standard.[291] Women continuing their pregnancies are often afforded first trimester transvaginal ultrasounds under their insurance. Additionally, the test costs as little as $99 for those without insurance.[292]

Also, time delay due to lack of availability is not a proper justification for not administering the exam under the undue burden standard.[293] Most clinics have onsite ultrasounds on a weekly basis or affiliate with ultrasound providers, so access to ultrasound is available.[294] Also, there are many services that provide free or low cost ultrasound.[295] While this might increase costs and slightly delay the abortion, the costs are slight and the test provides medical benefits making the time delay justified.[296]

B. Alternatives to a Transvaginal Ultrasound

Those opposed to transvaginal ultrasound regulations argue that pregnancies can be accurately assessed through the use of other tests.[297] For instance, some argue detection of pregnancy hormones is sufficient to confirm a pregnancy.[298] However, as demonstrated in Part I of this Note, there is a wide range of normal and abnormal pregnancy hormone levels and, alone, pregnancy hormone levels cannot confirm a normal pregnancy.[299]

It has also been argued that a bi-manual exam, where a doctor performs a pelvic exam to feel for the pregnancy, can be sufficient

291 *See Casey*, 505 U.S. at 901.

292 *Expecting? How Much Does an Ultrasound Cost?, supra* note 266.

293 *See generally Casey*, 505 U.S. at 886.

294 *See Requirements for Ultrasound*, *supra* note 14. *See, e.g. What's an ultrasound?*, PLANNED PARENTHOOD (2009), https://www.plannedparenthood.org/learn/pregnancy/prenatal-care/whats-ultrasound.

295 *See, e.g. Free or Low-Cost Ultrasound in NYC*, AVAIL, (July 31, 2018) https://www.availnyc.org/free-ultrasound-in-nyc/; *see, e.g. Free Ultrasound*, CHOICES PREGNANCY CARE CTR., https://www.choicespregnancy.org/pregnancy-health-services/free-ultrasound/ (last visited Apr. 4, 2010); *see, e.g. What's an ultrasound?*, *supra* note 294; *see, e.g. Compassionate, Quality Healthcare for Women*, DREAM CENTERS, https://www.dreamcenters.com/womens-clinic/ (last visited Apr. 4, 2010).

296 *But cf.* Planned Parenthood v. Comm'r of the Ind. State Dep't of Health, 898 F.3d 809, 820 (7th Cir. 2018).

297 *See* Sue H. Abreu, *The Doctor's Dilemma with the Oklahoma Abortion Law Ultrasound Requirement*, 37 OKLA. CITY U. L. REV. 253, 268 (2012).

298 *See Hormones During Pregnancy*, HEALTH (2019), https://www.hopkinsmedicine.org/health/conditions-and-diseases/staying-healthy-during-pregnancy/hormones-during-pregnancy.

299 *See generally* MIDDLETON ET AL., *supra* note 3, at 353; *see supra,* Part I.

to confirm a normal pregnancy.[300] However, this would require a patient have a regular menstrual cycle and to know when her last menstrual cycle was so the doctor would know how large the pregnancy should be.[301] Since thirty percent of women have irregular menstrual cycles, this is an unreliable method.[302]

C. Perspectives on Transvaginal Ultrasounds

Women typically experience little, if any, adverse feelings about receiving transvaginal ultrasounds.[303] As previously discussed, the procedure to perform a transvaginal ultrasound is extremely similar to the procedures carried out at any routine gynecology exam.[304] Namely, an instrument is inserted vaginally for a short duration of time to assess pelvic structures, which may result in pressure or discomfort of varying levels depending on the person's physical status at the time of the exam.[305]

In a study, women who were administered transvaginal ultrasounds were assessed to determine psychological morbidity associated with the transvaginal ultrasound.[306] The majority of women who had the scan found the scan to be acceptable, and experienced only mild pain and anxiety.[307] Only 1.6 percent of women reported clinically significant levels of psychological trauma.[308]

In another study where women received transvaginal ultrasounds, most women were more concerned about the status of their

300 *See* Abreu, *supra* note 297, at 260-61.

301 *See id.*

302 *See* Jay Sheehan, *The Facts About Irregular Periods*, EVERYDAY HEALTH, https://www.everydayhealth.com/pms/irregular-periods.aspx (last updated Feb. 17, 2010).

303 *See, e.g.*, S. Clement, et al., *Transvaginal ultrasound in pregnancy: its acceptability to women and maternal psychological morbidity*, ULTRASOUND OBSTETRICS GYNECOLOGY 508, 512 (2003).

304 *See What is a Pelvic Ultrasound?,* HEALTH, https://healthcare.utah.edu/womenshealth/pelvic-care-incontinence-center/pelvic-ultrasound.php.

305 *See* Jaime Herndon et al., *What is a transvaginal ultrasound?*, HEALTHLINE, (June 27, 2017) https://www.healthline.com/health/transvaginal-ultrasound.; *see* Clement et al., *supra* note 303, at 509. Someone presenting with pelvic pain may experience more discomfort than someone who presents for the exam with no symptoms.

306 *See* Clement et al., *supra* note 303, at 508.

307 *See id.*

308 *See id.*

pregnancy than about the transvaginal ultrasound.[309] Of the women who had the test, 99 percent said they would agree to the procedure in the future, and only 1.9 percent experienced marked discomfort.[310]

In general, women accept transvaginal exams.[311] A study in Australia questioned how regulations can be tailored to make the exams even more acceptable to women.[312] It found that women are more willing to accept the exam if during it there is a chaperone in the room, privacy is maintained, there is good communication, dignity is upheld, the provider exercises due care, the duration of the exam is limited, the benefits of the exam are explained, and consent was ascertained.[313] These can be tailored as recommendations in a statute, but are basic quality care measures of health care providers and should always be part of medical treatment.[314]

While there are valid concerns regarding legislation requiring a transvaginal ultrasound, they are adequately assuaged under the proposed legislation. Since the proposed transvaginal ultrasound requirement requires (1) women have the exam for the purpose of being comprehensively informed about the situation of their pregnancies and their bodies, and (2) women have the option to opt out of the invasive exam after being fully informed of its utility, the potential concerns lack merit.

CONCLUSION

In *Roe v. Wade*, the Court legalized abortion to protect women's health under the liberty interest of the Fourteenth Amendment.[315] Almost fifty years later, courts and legislatures still struggle to regulate abortion to make it safe for women, while upholding their

309 R.L. Dutta & D.L. Economides, *Patient Acceptance of Transvaginal Sonography in the Early Pregnancy Unit Setting*, 22 ULTRASOUND OBSTETRICS GYNECOLOGY 503, 503-07 (2003).

310 *See id.*

311 *See* Kathryn Deed et al., *What Are the Perceptions of Women Towards Transvaginal Sonographic Examinations?*, 1 SONOGRAPHY 33, 35 (2014).

312 *See id.* at 35-36.

313 *See id.* at 35.

314 Unfortunately, this might not always be the case, but it is certainly an ideal to strive for and a prudent and workable recommendation to be made.

315 *See* Roe v. Wade, 410 U.S. 113, 159, 165 (1973).

right to abortion.[316] Legislation should continue to protect mothers and potential life but should also recognize women's interests. This can be accomplished with a transvaginal ultrasound prerequisite to abortion with an option to opt for a transabdominal ultrasound after being given sufficient information about the test.

Women have a right to adequate information about decisions that impact their health, and requiring women to have a screening test before an abortion provides this information. The ultrasound regulation proposed in this Note has the potential to dramatically improve abortion complication outcomes for women. Legislation should maintain the goals of abortion law to balance interests of mothers, potential life, and women, while avoiding unnecessary harm to women's health.

316 *See generally* Aamer Madhani et al., *Warren, Gillibrand: Pass federal law to protect abortion rights from state legislatures*, USA TODAY, https://www.usatoday.com/story/news/politics/2019/05/17/abortion-rights-warren-gillibrand-congress-preempt-conservative-states/3701692002/ (last updated May 17, 2019, 12:29 p.m.); *see generally* Ed Kilgore, *Everything You Need to Know About the Abortion Debate*, N.Y. MAG., (June 17, 2019) http://nymag.com/intelligencer/2019/06/abortion-debate-everything-you-need-to-know.html.