

PUBLIC HEALTH IMPACTS OF STATE-LEVEL ABORTION RESTRICTIONS

Overview of Research & Policy in the United States

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INTRODUCTION

In the United States, abortion is extensively regulated and has been extensively studied. However, the recent wave of regulations reducing access to abortion care is not based on compelling evidence that these additional limitations will improve public health. In fact, a growing body of research documents the ways in which public health suffers when laws reduce abortion access.

A first-trimester abortion is one of the safest medical procedures (Guttmacher Institute, 2018c), and carrying a pregnancy to term involves far greater risks of serious complications and death than abortion does (Gerdtz, Dobkin, Foster, & Schwarz, 2016; Raymond & Grimes, 2012). A recent report from the National Academies of Science, Engineering, and Medicine examined the evidence related to claims of abortion-related health risks and concluded that legal abortions are safe and effective. The report notes that “[s]afety and quality are optimized when the abortion is performed as early in pregnancy as possible” and that state requirements can impede the timeliness of abortion care (National Academies of Sciences, Engineering, and Medicine, 2018).

On June 27, 2016, the United States Supreme Court decision in *Whole Woman’s Health v. Hellerstedt* reaffirmed the undue burden standard established 25 years ago in *Planned Parenthood v. Casey* — that an undue burden exists if its purpose or effect is to place substantial obstacles in the path of a woman seeking an abortion before the pregnancy is viable. The Supreme Court ruled that two provisions in Texas House Bill 2, which require hospital admitting privileges for abortion providers and ambulatory surgical standards for clinics, imposed an undue burden on women seeking abortion care, and were thus unconstitutional (Center for Reproductive Rights, n.d.). Though this decision was a major victory for abortion access, similar laws, referred to as targeted regulation of abortion providers (TRAP) laws, continue to burden abortion providers in many states and make it difficult or nearly impossible for women to access abortion care in a timely manner. Even more states have enacted restrictive laws directed at patients. Together, these laws have created substantial obstacles for pregnant women¹ — especially those under 18, those with low incomes, and women of color — to access abortion care.

Though often enacted under the claim of protecting women’s health, these restrictions have instead resulted in negative health consequences and created emotional and financial hardships. The Supreme Court examines one law at a time, but in many states providers and patients alike encounter a net of restrictions that grows denser with each legislative term. Many of those seeking an abortion encounter multiple barriers simultaneously, which can exacerbate the impact of an individual restriction and leave some women unable to obtain desired abortions at all. In its 2018 *Bad Medicine* report on abortion restrictions, the National Partnership for Women & Families reports that 44 states have passed at least one of the kinds of abortion restrictions studied (biased counseling

¹ For simplicity, we use “women” throughout this paper to refer to those who are, or are biologically capable of becoming, pregnant. This may include individuals who are under 18 and who do not identify as women.

laws, ultrasound requirements, mandatory delays, medication abortion restrictions, and TRAP laws), and 19 have passed all five (National Partnership for Women & Families, 2018).

As the latest wave of abortion restrictions has swept through many states, a number of researchers have been studying their impacts. Evidence about the impacts of abortion restrictions played an essential role in the *Whole Woman's Health* decision, and will continue to be important as legislatures consider additional laws affecting access to abortion care.

This paper reviews several types of restrictions that affect abortion access and summarizes recently published scientific evidence on the public health impacts of state-level abortion restrictions not rooted in science; these include restrictions on insurance coverage, TRAP laws, gestational limits, waiting periods, state-mandated information, and restrictions on medication abortion. The paper focuses on studies that addressed the impacts of laws that have been enacted and implemented, rather than studies that considered only the anticipated outcomes prior to the laws taking effect, and closes with future policy directions and areas where additional research is needed.

OVERVIEW OF ABORTION RESTRICTIONS

Although most of the newest laws that reduce abortion access are at the state level, federal laws prohibiting certain insurers from covering abortion services and banning certain procedures also affect access to abortion care.

Supreme Court decisions have struck down some laws' provisions and allowed others to stand. The standard the Court applies in judging a specific law shapes how future laws will be written and how lower courts will evaluate current and future laws that are challenged. The standards can change as the Court's composition is altered, as has occurred in the past.

The Court's 1973 *Roe v. Wade* decision stated that limitations on abortion access must meet the most rigorous "strict scrutiny" standard (Masci & Lupu, 2013). However, the 1992 decision in *Planned Parenthood of Southeastern Pennsylvania v. Casey* replaced that standard with an easier test of not placing an "undue burden" on those seeking abortions (Masci & Lupu, 2013). In 2016, the *Whole Woman's Health v. Hellerstedt* decision emphasized the importance of considering the evidence in evaluating both the benefits and burdens of laws that limit abortion access — as a majority of the Justices concluded that the Texas law in question substantially burdened women seeking abortions without providing evident benefits to women's health (Grossman, 2016). (See Box 1 for more details about key Supreme Court cases.)

FEDERAL-LEVEL ABORTION POLICIES

Federal law on abortion primarily involves many restrictions on federal funding for abortion services. The most prominent of these restrictions is the Hyde Amendment, which dates back to 1976 and in its current form prohibits the use of federal funds to cover abortions for enrollees in Medicaid, the Children’s Health Insurance Program, and Medicare (although Medicare primarily serves those over age 65, it also covers many people with disabilities) (Donovan, 2017). It includes exceptions for life endangerment or pregnancies resulting from rape or incest (Donovan, 2017), but providers are often not reimbursed for abortions that should qualify for funding for these reasons (Dennis & Blanchard, 2013; Kacanek, Dennis, Miller, & Blanchard, 2010).

Congress has also applied the Hyde restrictions — prohibiting coverage or provision of abortion except in cases when the pregnancy threatens life or results from rape or incest — to the Federal Employee Health Benefits Program, the Department of Defense’s TRICARE insurance program, military and Veterans Administration facilities, the Indian Health Service, the Peace Corps program, and federal prisons or immigrant detention centers operated by Immigrations and Customs Enforcement (Donovan, 2017).

Thanks largely to the Affordable Care Act (ACA), which took full effect in January 2014, the percentage of U.S. women without insurance dropped from 17% in 2013 to 11% in 2016 (Kaiser Family Foundation, 2017b). However, increased insurance coverage does not necessarily mean increased coverage of abortion care, especially given that much of the coverage increase was due to the Medicaid expansion and most states’ Medicaid programs do not cover abortions. States can prohibit plans sold through their ACA insurance marketplaces from covering abortion services — without requiring exceptions for life or health endangerment or pregnancies resulting from rape or incest — and the ACA prohibits them from requiring that marketplace plans cover abortion as an essential health benefit (Salganicoff, Sobel, Kurani, & Gomez, 2016). Some states also prohibit private insurance plans from covering abortions except in limited circumstances; Kansas, Kentucky, Missouri, Nebraska, North Dakota, and Oklahoma only allow private plans to cover abortions in cases of life endangerment (Salganicoff et al., 2016).

In 2003, President George W. Bush signed a law that bans the intact dilation and extraction procedure that in 2000 accounted for an estimated 0.2% of all U.S. abortions but had some medical safety advantages for patients with uterine scarring, bleeding disorders, or heart disease (Guttmacher Institute, 2007). (The law is called the “Partial-Birth Abortion Ban” even though “partial-birth abortion” is not a medical term; American College of Obstetricians and Gynecologists, 2014.)

BOX 1. SUPREME COURT CASES

Several Supreme Court cases have shaped access to abortion nationwide. *Roe v. Wade* challenged a Texas law that outlawed all abortions except those in which the life of the woman was at risk. In its 1973 decision, the Court struck down that statute and concluded that access to abortion is a fundamental right, and only a “compelling state interest” could justify limitations on it — which meant states would have to meet the most rigorous “strict scrutiny” standard to defend restrictions (Masci & Lupu, 2013). The decision specified the kinds of limitations that could be imposed by trimester, from no limits on abortion access in the first trimester to bans on abortion after fetal viability, as long as exceptions are available when the woman’s life or health is at risk (Masci & Lupu, 2013).

As the Supreme Court’s composition has changed, later decisions have allowed increasingly onerous state restrictions on access. The 1992 decision in *Planned Parenthood of Southeastern Pennsylvania v. Casey* upheld provisions of a Pennsylvania law that required a 24-hour waiting period for those seeking abortions and parental consent for minors (Masci & Lupu, 2013). It also dismantled *Roe*’s prohibition on laws limiting access during the first trimester and replaced the “strict scrutiny” standard with a lower burden of proof. Under *Casey*, states need only demonstrate that the laws do not create an “undue burden” on those seeking abortions (Masci & Lupu, 2013).

In its 2007 decision on the *Gonzales v. Cathart* case challenging the federal Partial-Birth Abortion law, the Court upheld the law, even though it does not contain an exception for cases in which a woman’s health is at risk (Masci & Lupu, 2013).

Advocates for women’s health scored a victory in 2016, when the Supreme Court decision in *Whole Woman’s Health v. Hellerstedt* struck down the provisions of Texas law HB 2 that required physicians providing abortions to have admitting privileges at a hospital within 30 miles of their facilities and facilities where abortions are offered to meet ambulatory surgical center standards (Center for Reproductive Rights, n.d.). (Provisions of the law addressing medication abortion and gestational limits still stand.) The plaintiffs — led by Whole Woman’s Health, which operates clinics in Texas, with legal representation from the Center for Reproductive Rights — successfully demonstrated to the Court that the law imposed substantial burdens without commensurate benefits. In the majority opinion, Justice Breyer wrote, “neither of these provisions confers medical benefits sufficient to justify the burdens upon access that each imposes” (*Whole Woman’s Health*, 2016). The decision underscored the importance of evidence in demonstrating both benefits and burdens of laws (Grossman, 2016) — and in this case, the evidence clearly showed substantial burdens with no compelling evidence of benefits.

STATE-LEVEL ABORTION POLICIES

In the last several years, states have enacted abortion restrictions at a historic rate: the Guttmacher Institute reports that between 2011 and 2017, states adopted 401 abortion restrictions — approximately one-third of the total 1,193 state abortion restrictions adopted since the 1973 *Roe v. Wade* decision (Nash, Gold, Mohammed, Ansari-Thomas, & Cappello, 2018). These include increasingly early limits on how far into pregnancies abortion is allowed; regulations on abortion providers that far exceed those on providers of other health services with similar risk profiles; waiting periods between when a woman contacts a provider seeking an abortion and when she may have the procedure; and requirements for ultrasounds and certain required — and in many cases inaccurate — information to be given to those seeking abortion care (Nash et al., 2018).

RESTRICTIONS ON INSURANCE COVERAGE

Under the Hyde Amendment, federal Medicaid dollars cannot pay for abortion services except when the pregnancy endangers the woman’s life or results from rape or incest, so states that want their Medicaid programs to cover other abortions must use state funds for all costs. Sixteen states² use state-only funds to cover Medicaid beneficiaries’ abortions in circumstances beyond those in the Hyde Amendment (Guttmacher Institute, 2018g), and this list of states includes some of the most populous (e.g., California and New York). Thirty-two states cover abortions under Hyde circumstances, with some variations: Indiana, Utah, and Wisconsin’s Medicaid programs will also use state funds to cover abortions necessary to prevent grave, long-lasting damage to the pregnant woman’s physical health, and Iowa, Mississippi, and Virginia do so in cases of fetal impairment (Guttmacher Institute, 2018g). South Dakota’s Medicaid program will only pay for abortions in cases of life-threatening pregnancy, not when the pregnancy results from rape or incest (Guttmacher Institute, 2018g). Although policymakers in the District of Columbia consistently support coverage for abortion care in the D.C. Medicaid program, Congress typically prohibits the District from using locally raised funds to cover abortions,³ leaving low-income D.C. women without that financial support for services (National Women’s Law Center, 2015).

Many states that restrict abortion coverage for one kind of insurance restrict it for others, too. As of September 2017, starting with the least restrictive, 16 states did not impose coverage limitations on any insurance plans and one state, Arizona, limited abortion coverage only in ACA marketplace plans (Kaiser Family Foundation [KFF], 2017a). Eight states limited abortion coverage only in Medicaid plans; 14 in Medicaid and marketplace plans; and 11 in Medicaid, private, and marketplace plans (KFF, 2017a).

² In addition to the 16 states that currently use their own funds, a court has ordered that Alaska Medicaid cover medically necessary abortions, but a law defining “medically necessary” is temporarily blocked by a court (Guttmacher Institute, 2018g).

³ The Constitution grants Congress a level of authority over the District of Columbia that it does not have over states.

GESTATIONAL LIMITS

Forty-three states prohibit most abortions after a certain point in pregnancy. Seventeen states limit abortions after viability (Guttmacher Institute, 2018h) — that is, the point at which the fetus is able to survive outside the uterus (Masci & Lupu, 2013). Although 24 weeks is typically the gestation at which a fetus is considered viable, a minority of infants born at 23 weeks and a very small minority of those born at 22 weeks have survived with intensive treatment (Belluck, 2015; Rysavy et al., 2015). Clinicians and researchers have raised concerns that future advances in medicine may lead to further shifts, which would further restrict the time during which abortion is a legal option (Han, Rodriguez, & Caughey, 2018).

BOX 2. PREGNANCY DATING

To determine gestation and viability, clinicians typically rely on a combination of imaging and a pregnant woman’s report of the date her last menstrual period (LMP) began. For most pregnancies, the best obstetrical estimates of gestation have a margin of error of five days (Rysavy et al., 2015). Some states have substituted weeks “postfertilization” for weeks of gestation, even though this goes against convention (Guttmacher Institute, 2018h). Fertilization commonly occurs two weeks after LMP (Guttmacher Institute, 2018h), so the states that limit abortions after 20 weeks postfertilization are limiting access after 22 weeks’ gestation according to clinical convention. When states use “post-implantation,” it is equivalent to three weeks LMP.

Of the 26 states that limit abortions after a certain point in the pregnancy, 17 do so at 20 weeks postfertilization (or 22 weeks LMP) (Guttmacher Institute, 2018h). These laws are often based on the unproven assertion that fetuses can feel pain at that point in the pregnancy (Guttmacher Institute, 2018d); however, a 2005 comprehensive literature review concluded that “fetal perception of pain is unlikely before the third trimester” (Lee, Ralston, Drey, Partridge, & Rosen, 2005). Other states limit abortions after a certain number of weeks LMP: 20 in Mississippi⁴ and North Carolina, 22 in Kansas and West Virginia, and 24 in Florida, Pennsylvania, and Rhode Island (Guttmacher Institute, 2018h). Massachusetts’ cutoff is 24 weeks post-implantation (equivalent to 27 weeks LMP), and Virginia’s is the third trimester (Guttmacher Institute, 2018h).

According to the Guttmacher Institute (2018h), several states have laws on the books that violate the Supreme Court requirement that abortions after fetal viability must be allowed to preserve the life and both the physical and mental health of the woman. Idaho, Michigan, and Rhode Island limit these later

⁴ In March 2018, Mississippi passed a 15-week limit that took effect immediately but was quickly blocked by a federal judge (Gandy, 2018).

abortions to cases of threats to life, and 20 other states allow them for life or physical health endangerment, without the necessary provisions for mental health risk (Guttmacher Institute, 2018h).

In 2013, 89% of abortions took place within 12 weeks LMP, and approximately 5% after 15 weeks LMP (Guttmacher Institute, 2018c). An analysis of 2014-2015 data on women's abortions found that black women, those with lower educational levels, those relying on financial assistance for the procedure, and those who recognized the pregnancy later than seven weeks LMP were more likely to have received abortions at or after 13 weeks, when compared to women who obtained abortions at or before six weeks (Jones & Jerman, 2017b). Interviews with women who obtained either first-trimester abortions or abortions at or after 20 weeks (conducted in 2008-2010, when fewer states had 20-week limits) revealed that not recognizing the pregnancy quickly, costs, and difficulties finding and getting to a facility were among the most common reasons for delays in both groups (Foster & Kimport, 2013).

TRAP LAWS

Targeted regulation of abortion providers (TRAP) laws restrict access to safe abortion care, commonly by requiring providers to have hospital admitting privileges and clinics to meet standards that previously applied only to ambulatory surgical centers (ASCs), which perform procedures that carry much higher risks than abortions. Such facility standards can include accreditations and specifications about physical plant characteristics; for instance, they may require room sizes and corridor widths that would be necessary to accommodate use of equipment that is typically needed only in facilities that perform higher-risk procedures that are more likely to require emergency response and additional equipment. Some TRAP laws also require facilities to have formal emergency agreements with local hospitals to transfer patients if complications arise, even though the Emergency Medical Treatment and Labor Act (EMTALA) obligates a hospital to provide emergency treatment to any patient, regardless of its relationship with her provider (EMTALA, 1986). Although TRAP laws' proponents state that they are intended to make abortion safer (Martinez & Botelho, 2013; Feibel, 2014), researchers note that abortion's safety record is already strong (Raymond, Grossman, Weaver, Toti, & Winikoff, 2014; White, Carroll, & Grossman, 2015) and these requirements reduce access to the safest and most appropriate care (Grossman, White, Hopkins, & Potter, 2014).

A requirement that an abortion provider have admitting privileges at a local hospital is more burdensome than necessary to ensure patient safety. Abortion patients rarely develop complications, and if they do, formal admitting privileges or transfer agreements are not necessary for an abortion patient to access emergency care. For patients who have to travel long distances to obtain abortions, hospitals near home will not be the same ones that are close to abortion clinics. A study using California Medicaid (Medi-Cal) abortion data found that 0.20% of women experienced a major complication that required hospitalization and only 0.03% involved ambulance transfers to

emergency departments on the day of the abortion (Upadhyay, Desai, Zlidar, Weitz, Grossman, Anderson, & Taylor, 2015).

Abortion providers may encounter difficulties in securing admitting privileges despite having appropriate professional credentials. Religiously affiliated hospitals may oppose admitting privileges for abortion providers based on opposition to the procedure, and some hospitals will only grant admitting privileges to physicians who admit a certain number of patients per year — even though abortion’s safety means abortion patients very rarely have complications that would require hospital admission (Lachman, 2016).

Critics have questioned the need for TRAP laws in the absence of scientific evidence demonstrating that clinic regulations improve the quality of abortion care provided. In an amicus brief filed to *Whole Woman’s Health v. Hellerstedt*, the American College of Obstetricians and Gynecologists (ACOG) and other medical associations presented evidence that HB 2’s requirement for clinics to meet ASC standards had no medical purpose. They point out that laws do not require colonoscopies or liposuction to be performed in an ASC, even though mortality rates for these two procedures are more than ten times that of abortion (ACOG, 2015). The Guttmacher Institute explains that abortion providers already follow rigorously developed standards to protect patients, and states: “Requiring facilities that provide abortion to meet the same standards as Ambulatory Surgical Centers (ASCs) cannot be justified as protecting patients’ health and safety. These standards go well beyond what is necessary to ensure clinics are prepared to handle an emergency” (Guttmacher Institute, 2018j).

To examine the premise that facility requirements can affect patient outcomes, Berglas and colleagues (2018) conducted a systematic review of research studies that investigated the relationship between facility type or characteristics and patient outcomes for any type of medical procedure performed outside a hospital setting — including, but not limited to, abortions. After analyzing the studies that met their criteria, the researchers concluded that existing research indicates no difference in patient safety between ASCs and physician offices for outpatient procedures, and there is not enough research to draw conclusions about relationships between specific facility characteristics and patient outcomes (Berglas, Battistelli, Nicholson, Sobota, Urman, & Roberts, 2018). The claim that TRAP laws will improve patient outcomes in what is already a very safe medical procedure is not based on scientific evidence.

Several states regulate office-based surgery (OBS) but also have separate laws that apply only to abortion. To investigate the extent to which states’ regulation of abortion differs from their regulation of other office-based medical procedures, Jones and colleagues (2018) assessed state OBS laws (covering office-based surgeries, procedures, sedation, or anesthesia) and abortion facility laws in effect as of August 2016. They found that states had enacted more TRAP laws than OBS laws and that TRAP laws involved more numerous and more stringent requirements than OBS laws (Jones, Daniel, & Cloud, 2018). While nearly all of the OBS laws applied only to facilities that used a certain level of sedation or anesthesia, all of the TRAP laws applied to abortion facilities regardless of the level of

sedation or anesthesia used — and in many cases, they applied even to facilities that only offer medication abortion, which does not involve sedation or anesthesia (Jones, Daniel, & Cloud, 2018). As the authors explain, “The Supreme Court’s 2016 decision in *Whole Woman’s Health v. Hellerstedt* casts doubt on the legitimacy of that differential treatment” (Jones, Daniel, & Cloud, 2018).

Following the *Whole Woman’s Health* decision, lower courts blocked similar laws (or their earlier blocks stood) on transfer agreements in Ohio, laws requiring admitting privileges in Alabama and Louisiana, and an Arkansas law requiring each medication abortion provider to have a contract with a physician who has admitting and surgical privileges at a hospital (Center for Reproductive Rights, 2017). However, as of April 1, 2018, the Guttmacher Institute reports that “23 states have laws or policies that regulate abortion providers and go beyond what is necessary to ensure patients’ safety” (Guttmacher Institute, 2018i).

WAITING PERIODS

Twenty-seven states require waits of 18 to 72 hours between pre-abortion consultation and the actual procedure or medication process (Guttmacher Institute, 2018b). Supporters claim such waiting periods give women more time to consider their decisions (Elgion, 2014; OK.gov, 2015), although research has found that, on average, women report less conflict about abortion decisions than do people making decisions about other kinds of health care (Ralph, Foster, Kimport, Turok, & Roberts, 2017). One large study of women who received abortions (from the Turnaway Study, described in “Turnaway Study: Public Health Impacts of Abortion Restrictions”) found that the typical participant had a greater than 99% chance of reporting abortion was the right decision for her over the three years following the procedure (Rocca, Kimport, Roberts, Gould, Neuhaus, & Foster, 2015). Other health care procedures do not require such waiting periods (Medicaid-funded sterilization is an exception) (Guttmacher Institute, 2018k).

As of April 1, 2018, 16 states impose 24-hour waiting periods on abortion patients, while the waits are 18 hours in Indiana; 48 hours in Alabama, Arkansas, and Tennessee; and 72 hours in Missouri, North Carolina, Oklahoma, South Dakota (where weekends and holidays do not count towards that time period), and Utah (Guttmacher Institute, 2018b). Florida, Iowa, Louisiana, Massachusetts, and Montana have also passed waiting-period laws but seen them enjoined (blocked from taking effect) by courts (Guttmacher Institute, 2018b). While some states allow pre-abortion counseling via mail, fax, internet, or phone, 14 states require that it occur in person (Guttmacher Institute, 2018b). Kentucky allows the counseling via telemedicine, and Utah allows women to receive it in any medical office in the state; Texas and Virginia waive the in-person requirement for those who live more than 100 miles from an abortion provider (Guttmacher Institute, 2018b). Where in-person consultations at the same clinic are required, these laws force patients to make at least two trips to the facility where the abortion will be provided.

All waiting-period requirements extend the amount of time those seeking abortions must wait to receive them. Although abortion is a very safe medical procedure, the risks do increase with gestation (Zane, Creanga, Berg, Pazol, Suchdev, Jamieson, & Callaghan, 2015). A 24-hour waiting period can easily stretch into a week when either patient or clinic schedules limit the days of the week on which an abortion can occur (White, deMartelly, Grossman, & Turan, 2016). When a patient seeks care just before a gestational limit, the required waiting period can make procedure costs higher, certain kinds of abortion (e.g., medication abortion) no longer available, some clinics no longer able to provide the procedure, or abortion no longer a legal option at all. Where states require in-person counseling, waiting periods also increase the costs incurred by those seeking abortions, which often include transportation, lost wages from missed work, childcare, and overnight accommodations for those traveling far from home (Roberts, Turok, Belusa, Combellick, & Upadhyay, 2016; Sanders, Conway, Jacobson, Torres, & Turok, 2016).

MANDATED CONTENT OF PRE-ABORTION VISITS

Several states legislate the content of abortion consultation visits, with requirements for providers to give certain spoken or written information to patients or to offer or conduct ultrasounds. These additional requirements increase the time and other resources patients and providers must devote to abortions. Researchers found that women who received counseling at facilities where state laws mandate provision of specific information and/or state-approved written materials were less likely to describe it as beneficial than were women who received counseling at facilities not subject to such requirements (Gould, Foster, Perrucci, Barar, & Roberts, 2013).

Abortion providers, like other clinicians, meet extensive training and licensing requirements and are governed by medical ethics. Like other clinicians, they must provide adequate and appropriate information about procedures and receive patients' consent before performing them. In the absence of evidence that abortion providers are more likely than providers of other forms of health care to ignore their training or ethical obligations, or that abortion recipients are not receiving appropriate medical information, the apparent reason for mandating counseling content is to attempt to discourage abortions among those who have already requested them.

Some of the information in state-mandated pre-abortion materials is accurate and not inappropriate. For instance, 29 states require information on the health risks of continuing pregnancy (which are substantially greater than those for abortion), and 15 require informing patients that they cannot be coerced into obtaining an abortion (Guttmacher Institute, 2018b). However, of the 26 states that mandate inclusion of information about the risks of abortion, several inaccurately portray risks to future fertility, a possible link to breast cancer, and/or negative emotional responses (Guttmacher Institute, 2018b). Arizona, Arkansas, Idaho, South Dakota, and Utah require information not based on medical evidence about the possibility of stopping a medication abortion after a patient takes the first drug but before she takes the second one, despite inadequate scientific evidence to support this (Cha, 2018; Guttmacher Institute, 2018b). Thirteen states require providers to give abortion patients

information about the ability of a fetus to feel pain, and six mandate the claim of personhood beginning at conception (Guttmacher Institute, 2018b). Minkoff and Marshall write that mandating that abortion providers engage in ideological speech “forces physicians to commit an untenable ethical and professional wrong, deceiving their patients and withholding clinical data” (Minkoff & Marshall, 2009).

Ultrasounds are common before abortions to determine gestation, and women’s preferences for viewing ultrasound images vary (Kimport, Upadhyay, Foster, Gatter, & Weitz, 2013). Several states require pre-abortion ultrasounds, and some of these laws dictate that providers describe ultrasound images to the patient. The goal of such laws is to discourage women from having abortions, and opponents criticize them for attempting to shame women (Clark, 2007; Hall, 2013). Eleven states require pre-abortion ultrasounds (Guttmacher Institute, 2018f). Arizona, Louisiana, Virginia, and Texas require that these ultrasounds occur at least 24 hours before the abortion, although Virginia waives the ultrasound requirement for those who have been sexually assaulted (Guttmacher Institute, 2018f). Laws requiring providers to display and describe the ultrasound image have been permanently enjoined in Kentucky, North Carolina, and Oklahoma but are still in force in Louisiana, Texas, and Wisconsin (in Louisiana and Texas, patients can decline to listen to the description under certain circumstances, and Wisconsin waives the ultrasound requirement for those who have been sexually assaulted) (Guttmacher Institute, 2018f).

Research on voluntary ultrasound viewing has not found evidence that it dissuades women from abortion (Gatter, Kimport, Foster, Weitz, & Upadhyay, 2014; Kimport, Preskill, Cockrill, & Weitz, 2012). However, a study using data from one Wisconsin abortion facility before and after that state’s law took effect found that the percentage of patients who did not proceed to abortions at the same facility increased from 8.7% in the pre-law period to 11.2% in the post-law period (Upadhyay, Kimport, Belusa, Johns, Laube, & Roberts, 2017). Interviews with a subset of patients revealed that two of the women who decided to continue their pregnancies had felt uncertain prior to the ultrasound (Upadhyay et al., 2017). In an environment hostile to abortion rights, “the process of having the ultrasound image described and displayed may be the tipping point that leads a woman who was in the process of making her decision about whether to have an abortion decide to continue her pregnancy,” Upadhyay and colleagues (2017) write. “The question of whether this cumulative social pressure to continue a pregnancy is coercive is important as evidence shows negative consequences for women who do not receive wanted abortions” (Upadhyay et al., 2017).

RESTRICTIONS ON MEDICATION ABORTION

Medication abortion — taking mifepristone to halt a pregnancy and following it 24-72 hours later with misoprostol to expel it — has the potential to increase abortion access. However, state laws have restricted its use by requiring adherence to specific protocols, limiting the types of providers who can offer it, and/or prohibiting medication abortions via telemedicine (Guttmacher Institute, 2018d).

When the Food and Drug Administration (FDA) approved the medication abortion drug Mifeprex in 2000, it did so based on findings from studies conducted in the prior decades. The approved drug protocol specified the kinds of procedures and dosages that had been used in drug trials in the 1980s and 1990s, but evidence quickly evolved to demonstrate that variations on this older protocol were also safe and effective (Borkowski, Strasser, Allina, & Wood, 2015). The variations included allowing use of medication abortion for pregnancies of up to 70 days, rather than just 49; reducing the mifepristone dosage from 600mg to 200mg; and allowing women to take the second drug (misoprostol) on their own rather than returning to the provider's office to receive it (Borkowski et al., 2015).

Such “off-label” variations on FDA-approved protocols are common across many types of care, in part because getting FDA approval for a new label requires substantial time and resources from the manufacturer (Borkowski et al., 2015). In most states, abortion providers adopted the variations on the medication abortion protocol as high-quality research demonstrated their safety and efficacy and as professional societies recommended their use. However, some states passed laws prohibiting providers from deviating from the FDA-approved protocol (Borkowski et al., 2015), and as of April 1, 2018 such laws are in force in North Dakota, Ohio, and Texas (Guttmacher Institute, 2018d). Courts enjoined similar laws in Arkansas and Oklahoma (Guttmacher Institute, 2018d).

Requiring providers to adhere to an outdated protocol constrained providers' ability to offer their patients care based on the latest evidence. The situation improved in 2016, when FDA approved a revised label submitted by Mifeprex manufacturer Danco Laboratories, LLC (FDA, 2016), including lowering the dose of mifepristone and extending the gestational age for use. The new label retains some requirements that are substantially more restrictive than typical restrictions for prescription drugs of a similar safety profile, such as mandating that providers and patients sign agreements (Wood, Borkowski, Strasser, & Allina, 2016). Overall, though, the new label has the effect of making state laws in North Dakota, Ohio, and Texas substantially less onerous than they were.

As of February 1, 2018, 34 states allow only licensed physicians to perform medication abortions, and 19 states effectively prohibit telemedicine by mandating that clinicians providing medication abortion be physically present during the procedure (Guttmacher Institute, 2018d). This is despite research demonstrating that the procedure can be safely and effectively administered via telemedicine (Grossman, Grindlay, Buchacker, Lane, & Blanchard, 2011; Grossman, Grindlay, Buchacker, Potter, & Schmertmann, 2013) and by nurse practitioners and other advanced practice clinicians (Barnard, Kim, Park, & Ngo 2015). These laws limit the options of women seeking abortion care, with particularly severe impacts in rural areas and in states where few providers offer abortion services.

BOX 3. PARENTAL INVOLVEMENT

In 37 states, minors are required to involve one or both parents in their decision to have an abortion through parental consent or notification (Guttmacher Institute, 2018e). In most states with such requirements, a minor may seek court approval to obtain an abortion without parental involvement (Guttmacher Institute, 2018e). A judge may consider the “minor’s intelligence, emotional stability and understanding of the possible consequences of obtaining an abortion” (Guttmacher Institute, 2018e). The burden of proof may fall heavily on minors in states where a judge requires “clear and convincing evidence” in order to grant a judicial bypass waiver and allow the minor to obtain an abortion without parental involvement (Guttmacher Institute, 2018e).

A literature review of 29 studies examining the impact of parental involvement laws found an increase in the number of minors who traveled for abortion services to a neighboring state with less-restrictive laws (Dennis, Henshaw, Joyce, Finer, & Blanchard, 2009). Overall, the impact of parental involvement laws on rates of abortion, birth, and pregnancy and health outcomes of children born to women who may have been affected by parental involvement laws was unclear due to limitations in methodology. These included the absence of comprehensive data accounting for minors who travel outside their home state for abortion services and of adequate comparison groups (Dennis et al., 2009).

After New Hampshire adopted a parental involvement law in 2012 (requiring a parent to be present at the abortion or notified 48 hours in advance), MacAfee and colleagues (2015) used data from Planned Parenthood clinics in that state and in neighboring Vermont and Maine, which have no parental involvement laws, to examine patterns in minors’ receipt of abortions in 2011 and 2012. They found a 47% drop in abortions among minors at New Hampshire Planned Parenthood clinics, but report that this is largely explained by a drop in the number of minors from Massachusetts, which mandated parental consent before New Hampshire did, crossing into New Hampshire for abortions (MacAfee, Castle, & Theiler, 2015). The authors note that abortions among minors dropped in all three states studied; New Hampshire saw its teen birth rate increase, though (from 5.4 per 1,000 in 2011 to 6.2 in 2012), while rates decreased in Vermont and Maine (MacAfee et al., 2015). The difference was not statistically significant, but the authors describe it as possibly indicating a reduction in teens’ access to abortion that requires further investigation (MacAfee et al., 2015).

Additional research is still needed to examine the public health impacts of parental involvement laws on minors as well as compounded impacts of parental involvement requirements in addition to other abortion restrictions.

NATIONAL LEVEL: ACCESS, COST, AND QUALITY

The laws described above affect abortion services and patient experiences in multiple ways. Recent research at the national level has provided evidence of the geographic and financial barriers faced by women across the country due to state laws that limit access to abortion, and has highlighted the ways in which abortion restrictions affect quality of care.

GEOGRAPHY OF ABORTION ACCESS

Complying with TRAP law requirements can cost more than abortion providers can afford and lead to clinic closures (Guttmacher Institute, 2018j). Even in 2008, before the recent wave of TRAP laws, women were more likely to travel greater distances for abortions if they were in states with 24-hour waiting periods or lived in rural areas (Jones & Jerman, 2013); TRAP-related clinic closures have likely exacerbated these disparities. Between 2011 and 2014, the number of clinics providing abortions declined by 6%, with drops of 22% in the Midwest and 13% in the South (Jones & Jerman, 2017a). This increases time and travel burdens for patients.

Bearak and colleagues (2017) analyzed the distances women in each county would need to travel for abortion care and found several counties where the median distance to the nearest abortion provider increased by 30 miles between 2011 and 2014. Many of these counties are concentrated in Texas, Iowa, Montana, and Missouri (Bearak, Burke, & Jones, 2017). In 2014, the median distance traveled was 11 miles, but 20% of women would have had to travel more than 40 miles, and half of all women in Wyoming, North Dakota, and South Dakota would need to travel more than 90 miles to get to the nearest clinic (Bearak et al., 2017). The authors report: “Counties where women would have had to travel 180 miles (290 km) or more to reach the nearest clinic were concentrated in the middle of the country, covering large portions of Montana, Wyoming, North Dakota, South Dakota, Nebraska, Kansas, and Texas” (Bearak et al., 2017).

ABORTION COSTS AND INSURANCE COVERAGE

An analysis of data from the Guttmacher Institute’s annual census of U.S. abortion-providing facilities found that in 2014, charges for surgical abortions at 10 weeks’ gestation ranged from \$75 to \$2,500, and patients paid an average of \$508; the comparable price for medication abortion was \$535 (Jones, Ingerick, & Jerman, 2018). At 20 weeks’ gestation, when procedures are more complex, the median charge was \$1,195 (Jones, Ingerick, & Jerman, 2018).

Restrictions on abortion coverage are common in both private insurance plans and Medicaid programs (see “Restrictions on Insurance Coverage”), and many women struggle to pay the full sum out of pocket. Abortion has become increasingly concentrated among those with lower incomes, with 75% of 2014 abortion patients having a family income below 200% of the federal poverty level (Jerman, Jones, & Onda, 2016). Many are eligible for Medicaid, but as previously discussed, the

majority of Medicaid programs will only cover abortion under limited circumstances. Women of color are disproportionately likely to have Medicaid insurance, and thus disproportionately likely to face these restrictions. The risks from carrying pregnancies (wanted or not) is also unequally distributed: The maternal mortality rate for black women is three to four times that of white women (Louis, Menard, & Gee, 2015). Jarlenski and colleagues' (2017) analysis of 2000-2011 pregnancy-related hospitalizations in 43 states found that state Medicaid coverage of abortion was associated with a 16% decreased risk of severe maternal conditions such as heart attacks, acute renal failure, eclampsia, sepsis, and shock. However, it is important to note that other state policy choices — such as overall generosity of Medicaid coverage and investment in public health — are also likely to influence these health outcomes for women who give birth, and the states that use their own Medicaid funds to cover abortions may also be more likely to invest in other aspects of women's health.

Although the majority of abortion patients have some form of insurance, most of them either face restrictions that prevent them from using it for abortion or do not use it due to confidentiality concerns or uncertainty about whether a plan covers abortion (Cockrill & Weitz 2010; Van Bebber, Phillips, Weitz, Gould, & Stewart, 2006; Jones, Upadhyay & Weitz, 2013). A study of patients at six abortion providers across the U.S. in 2011 found that among those who had insurance, 46% reported that their plans did not cover abortions, 29% were unsure about coverage, and 12% did not want to use their insurance (Jones et al., 2013). Among those with private insurance who did not want to use it, those who had coverage through a spouse or family member were more likely than those with other sources of private insurance to report that they were not using their insurance because they did not want others to know (Jones et al., 2013). Half of patients relied on others — including abortion funds, male partners, and family members — for assistance paying for care, and many reported delaying or not paying other bills to cover procedure costs (Jones et al., 2013).

In an analysis of baseline data for the Turnaway Study (described in “Turnaway Study: Public Health Impacts of Abortion Restrictions”) with women who presented for abortion care at 30 facilities across the US from 2008 to 2010, Roberts and colleagues (2014) found that 7% used private insurance to pay for their abortions, 34% used Medicaid (either because their state used non-federal funds for Medicaid abortion coverage or because their circumstances qualified them for Medicaid abortion coverage under Hyde restrictions), and 29% received assistance from another organization, such as an abortion fund; 29% did not receive financial assistance (Roberts, Gould, Kimport, Weitz, & Foster, 2014). (Abortion funds raise private donations in order to contribute toward abortion costs for those who struggle to afford the procedures; Mack, 2012.) This study also found that total costs for abortion services and travel were equivalent to more than one-third of monthly personal income for 56% of participants, and 54% reported that difficulty raising money for the procedure delayed their care (Roberts, Gould, et al., 2014). Delays in raising funds for abortion can result in pregnancies exceeding the gestational limit for medication abortion or for procedures to be conducted at nearby facilities, and thus result in even higher costs and more delays.

RESTRICTIONS AND QUALITY OF ABORTION CARE

In 2001, the National Academies' Institute of Medicine defined six dimensions of health care quality, recommending that care should be safe, effective, patient-centered, timely, efficient, and equitable (Institute of Medicine, 2001). Although abortion care remains very safe and effective, state laws have resulted in delays that make it less timely and efficient (National Academies of Sciences, Engineering, and Medicine, 2018). Because women with fewer resources face greater challenges in overcoming the growing list of systemic barriers, equity has also suffered.

The patient-centeredness of abortion care has also declined as more states have adopted laws that seem designed to discourage abortions. In many states, providers must deliver scripts or written materials that describe processes or outcomes for the fetus, rather than the woman, and contain inaccurate information. Those who would prefer medication abortions can lose this option due to delays or to state restrictions that result in the procedure being unavailable in their areas (Baum, White, Hopkins, Potter, & Grossman, 2016). And although FDA's 2016 update to the Mifeprex label reduced the gap between evidence-based practice and the on-label procedures mandated by some states, it is still problematic for those states to require adherence to a specific protocol rather than allowing providers to alter their practice as the evidence base evolves (Wood et al., 2016).

BOX 4. SELF-MANAGED ABORTION

Some who are confronted by barriers when seeking abortion care from a health care provider may decide instead to end a pregnancy outside the formal medical system. Studying these self-managed abortions is challenging, but researchers have gathered some data describing these practices.

In a 2014–2015 survey of Texas women ages 18–49, 4.1% of participants reported either that they had tried to end a pregnancy on their own, or that they knew or suspected a best friend had done so; participants reported methods including taking the drug misoprostol, using herbs or homeopathic remedies, or getting hit in the abdomen (Grossman, White, Fuentes, Hopkins, Stevenson, Yeatman, & Potter, 2015). Given those responses, the authors estimate that 100,000–240,000 Texas women have tried to end a pregnancy on their own without medical assistance (Grossman et al., 2015). A survey of women seeking abortions at Texas clinics in 2012, after the state adopted new restrictions, found that 12% of those attending clinics near the Texas-Mexico border reported first trying to take something — most often misoprostol or herbs — on their own to induce abortion (Grossman, White, Hopkins, & Potter, 2014).

Although the combination of mifepristone and misoprostol is more effective for medication abortion than use of misoprostol alone (Kulier, Kapp, Gulmezoglu, Hofmeyr, Cheng, & Campana, 2011), misoprostol is often sufficient to induce abortion, safely ending a pregnancy in

83% of women with pregnancies of up to 63 days who used it (von Hertzen et al., 2007). Misoprostol is often easier to obtain, as it is licensed as a drug for gastrointestinal conditions in approximately 90 countries (Winikoff & Sheldon, 2012); by contrast, FDA policy requires that mifepristone be available in the U.S. only from providers who have signed agreements with the manufacturer (Borkowski et al., 2015). The World Health Organization recommends that misoprostol can be safely used alone to end a pregnancy in circumstances when mifepristone is not available (World Health Organization, 2012).

Misoprostol is readily available from pharmacies in Mexico; however, the drug is labeled as a treatment for gastric ulcers and does not come with instructions for use as an abortifacient (Burnett, 2016). The authors of the Texas clinic survey warn that without accurate information, users of misoprostol may not take appropriate doses — and may not realize an abortion failed until later in the pregnancy (Grossman et al., 2014).

Health advocates call for the elimination of unnecessary regulatory and statutory restrictions that prevent all women being able to access the medication abortion method with highest efficacy and fewest side effects (Winikoff & Sheldon, 2012). In the absence of such policy change, self-managed abortion may become more common. “Self-managed abortion can be a safe and viable option,” Jelinska and Yanow (2018) comment, and suggest, “Putting abortion pills and information into women’s hands promotes women’s autonomy.” Worldwide, feminist activists run websites and abortion hotlines to help women self-manage abortions and operate networks to get abortion drugs to those who need them (Jelinska & Yanow, 2018). In the U.S., similar efforts do not directly supply medications, but do offer support and information about recommended use of medications for abortion (Plan C, n.d.; Women Help Women, n.d)

Aiken and colleagues (2017) studied outcomes in 1,000 women from the Republic of Ireland and Northern Ireland who managed their own abortions after receiving medications online from the nonprofit Women on Web and provided follow-up information. The authors conclude, “Self sourced medical abortion using online telemedicine can be highly effective, and outcomes compare favorably with in clinic protocols” (Aiken, Digol, Trussell, & Gomperts, 2017). In the U.S., Murtagh and colleagues (2018) ordered mifepristone and misoprostol from online vendors and analyzed the pills they received (18 mifepristone-misoprostol combinations and two misoprostol products from 16 different websites). All mifepristone tablets contained 92 – 102% of the labeled quantity; most misoprostol tablets contained lower amounts than labeled, though the authors note that lower amounts are not necessarily ineffective for terminating pregnancy (Murtagh, Wells, Raymond, Coeytaux, & Winikoff, 2018). They conclude: “Given our findings, we expect that some people for whom clinic-based abortion is not easily available or acceptable may consider self-sourcing pills from the internet to be a rational option” (Murtagh et al., 2018). However, women in some states have faced prosecution for using medication on their own to end pregnancies (Coeytaux, Hessini, & Allina, 2015).

STATE LEVEL: IMPACTS OF ABORTION RESTRICTIONS ON ACCESS

From the point of seeking abortion care to the time of obtaining services, women encounter abortion restrictions that create new obstacles and exacerbate existing health care access barriers. Most of the studies discussed in this paper examined the impact of these restrictions on the experiences of women seeking abortion services in Texas, where research played an important role in the *Whole Woman's Health* decision. This section also discusses studies conducted in Alabama, Ohio, and Utah. While study findings in a limited list of states may not reflect impacts across the country, they suggest the kinds of outcomes that could occur if states continue enacting more abortion restrictions. It is also important to note that researchers generally recruited study participants onsite at clinics, meaning that these studies do not capture the experiences of women unable to overcome barriers to getting to a clinic. This limitation means that the findings may underestimate the far-reaching impacts of abortion restrictions. Studies described in this section of the paper are summarized in Table 3 (at the end of the paper).

SECURING AN APPOINTMENT AMIDST CLINIC CLOSURES

An analysis of data from the Guttmacher Institute's 2014 Abortion Patient Survey found that 76% of abortion patients were able to obtain an abortion within seven days of calling for an appointment (Jones & Jerman, 2016). However, this percentage may be falling as additional state abortion restrictions take effect. In several states, laws have made it harder for women to find a nearby clinic that can offer her an appointment for her desired method of abortion without increased travel burdens. Researchers have studied women's experiences in Texas, where many clinics have closed following TRAP law implementation.

Grossman and colleagues compared the accessibility and delivery of abortion services before and after enforcement began (in November 2013) for the Texas House Bill 2 (HB 2) admitting privileges requirement, medication abortion restrictions, and 20-week gestational limit. Using data on the number of available abortion facilities in Texas and U.S. Census data, researchers found a 46% reduction in the number of Texas abortion facilities from November 1, 2012 to April 30, 2014; only 22 of 41 facilities remained open after HB 2 took effect (Grossman, Baum, Fuentes, White, Hopkins, Stevenson, & Potter, 2014). Moreover, the study reported a surge in the number of women living more than 200 miles from a Texas clinic providing abortions — at approximately 10,000 women before HB 2 vs. 290,000 women after six months under HB 2 (Grossman, Baum, et al., 2014). Women living outside the four largest metropolitan areas (Austin, Dallas/Fort Worth, Houston, and San Antonio) were disproportionately affected; 11 of 13 facilities in the non-large-metro areas closed within the same time period (Grossman, Baum, et al., 2014). In particular, residents of the Lower Rio Grande Valley, many of whom have low incomes and are undocumented, live more than 150 miles away from the nearest clinic (Grossman, Baum, et al., 2014).

Additionally, researchers measured the effect of clinic closures, due to the admitting privileges requirement, on the number and type of abortion services delivered using data directly collected by

email or telephone from licensed abortion providers. Based on data provided by 36 of the 41 licensed Texas abortion facilities, the abortion rate in Texas decreased by 13% from November 2012–April 2013 (12.9 per 1,000 women age 15–44) to November 2013–April 2014 (11.2/1,000 women age 15–44) (Grossman, Baum, et al., 2014). Medication abortions have become more common nationally, but this study found the opposite trend in Texas after it adopted medication abortion restrictions: a 70% decrease in medication abortions in the state (Grossman, Baum, et al., 2014). This occurred as fewer facilities offered medication abortions and fewer women could meet gestational limits, afford the higher procedure costs, and make multiple visits (Grossman, Baum, et al., 2014). This may be one reason the proportion of abortions occurring in the second trimester increased from 13.5% to 13.9% ($p < 0.001$) (Grossman, Baum, et al., 2014) — a small change in percentage terms, but one that equates to several hundred women.

Lastly, Grossman and colleagues assessed the potential impact of ambulatory surgical center (ASC) requirements — the portion of HB 2 that was scheduled to take effect in September 2014 — on the service capacity of facilities they expected would be able to comply with the requirements and continue providing abortions. The researchers predicted that six facilities, all located in the four largest metropolitan areas, would need to provide abortion care to the entire state (Grossman, Baum, et al., 2014). However, they observed no substantial change in the proportion of abortions provided in ASCs between the November 2012–April 2013 period (21%) and November 2013–April 2014 (22%), suggesting that ASCs may not be able to expand their service capacity to meet the abortion needs of all Texas women (Grossman, Baum, et al., 2014).

Clinic closures immediately complicated the experiences of women seeking abortion care in Texas. A study by Fuentes and colleagues (2016) involved interviews with 23 women who sought abortion care at Texas clinics that no longer provided abortions due to enforcement of HB 2. More than half of respondents reported confusion and frustration with unclear and missing information regarding abortion services at open clinics (Fuentes, Lebenkoff, White, Gerdts, Hopkins, Potter, & Grossman, 2016). Some women described receiving referrals to a farther clinic even though a closer clinic was available (Fuentes et al., 2016). Misinformation prolonged the process of finding a clinic and securing an appointment; eight women reported waiting more than an additional week to have an abortion, and two ultimately reported deciding to carry their pregnancies to term (Fuentes et al., 2016). The study also documented the challenges women faced in finding available appointments at times that did not conflict with their ongoing responsibilities, such as work shifts and childcare, in Texas after HB 2 implementation (Fuentes et al., 2016).

BOX 5. BALANCING TIME, COST, AND DISTANCE

A 22-year-old woman living in El Paso described her difficult decision to choose the closer abortion provider with higher costs for the procedure, because of her new job and inability to take time off to travel to a farther but less expensive clinic (Fuentes et al., 2016). She obtained an abortion three weeks after initiating the inquiry process at just over 12 weeks' gestation, thus eliminating her medication abortion option and increasing procedure costs by more than \$200 (Fuentes et al., 2016). Two women who attempted to schedule appointments were unable to successfully find a clinic within their time and financial parameters, and ended up deciding to carry their pregnancies to term (Fuentes et al., 2016).

Similar themes emerged in a later study by Baum and colleagues that involved 2014 interviews with 20 women who received or strongly desired a medication abortion or traveled at least 50 miles one way to Texas clinics. Most study participants made multiple phone calls to find an open clinic providing abortion services (Baum et al., 2016). Two women found the process of locating and reaching the clinic so onerous that they considered forgoing abortion care; they ultimately obtained abortions, but one study participant continued her pregnancy, at least in part because of obstacles encountered (Baum et al., 2016). Clinic closures can affect appointment availability. For example, average wait time at Dallas facilities had been no more than five days until a large-volume provider closed in June 2015, leaving only two open facilities in Dallas and increasing wait times to as much as 20 days (Texas Policy Evaluation Project, 2015). The next sections of this paper address the challenges and consequences associated with getting to an appointment at a distant clinic.

LONGER TRAVEL DISTANCES INCREASE DEMANDS ON PERSONAL RESOURCES

With fewer facilities providing abortions, more women must travel longer distances for abortion care. Getting to their appointments presents multiple challenges.

A survey conducted among 398 Texas women seeking abortion care at ten Texas facilities in mid-2014 found that those women whose nearest clinic had closed after HB 2 implementation experienced more hardships obtaining abortion services compared to women whose nearest clinic had remained open; see Table 1 for details (Gerdtts, Fuentes, Grossman, et al., 2016).

Table 1: Measures of Hardship in Accessing Abortion Care in Texas in 2014, from Gerdt et al., 2016			
	Women whose nearest clinic in 2013 was open in 2014 (n=151), %	Women whose nearest clinic in 2013 was closed in 2014 (n=247), %	p value
Traveled > 50 miles	9.6%	43.8%	< .001
Out-of-pocket expenses > \$100	19.7%	31.9%	.04
Unable to receive preferred form of abortion	21.8%	36.8%	.003
Reported accessing abortion care was somewhat or very hard	18.0%	35.9%	< .001

In their interviews with 23 women who received abortions in Texas, Fuentes and colleagues (2016) found that HB 2 was associated with increased costs as well as travel time. Four women reported spending an average of \$75 on gas to drive nearly four hours from the Lower Rio Grande Valley to San Antonio to get to their abortion appointments (Fuentes et al., 2016). Six women who were unable to complete the round trip journey in one day reported spending \$60-\$200 on hotel costs; four reported leaving home at around 3 a.m. in order to get to the clinic on time and driving home directly after the procedure in order to avoid lodging expenses. One respondent explained why she chose to stay overnight at a hotel rather than make the eight-hour round trip:

We didn't know how I was going feel ... we didn't want to be on the road and then I start – I keep bleeding...that's the only experience I didn't like, the whole traveling and then having to stay somewhere we didn't want to stay, but since we lived so far away that we didn't have a choice (Fuentes et al., 2016).

The Baum et al. study, involving interviews conducted in 2014 with 20 women who obtained abortions in Texas, reported similar findings on the challenges women experienced getting to their appointments (Baum et al., 2016). The study sample included a woman who reported travelling 300 miles (approximately six hours) one way to obtain an abortion, because nearby clinics had closed (Baum et al., 2016).

In addition to facing financial and logistical challenges, women also reported that barriers forced them to disclose their decision to a family member or friend who they might not otherwise have confided in to seek help paying for their abortion, getting to their abortion appointment, or both (Fuentes et al., 2016; Baum et al., 2016). Baum and colleagues (2016) point out that individuals

accompanying women to obtain an abortion can incur additional costs from lost wages. Waiting period requirements can amplify these resource needs and force women to travel to facilities for multiple visits; the impacts of waiting periods are discussed in “Waiting Periods Cause Delays and Compound Financial and Emotional Burden.”

Table 2: Barriers to Obtaining Abortion Reported by Women Who Traveled to Receive Services in Jerman et al., 2017
<p>Travel-related logistical issues</p> <p>Making arrangements after appointment was scheduled (e.g., for transportation, accommodations, child care, and work schedule changes)</p> <p>Involving unwanted persons in abortion decision or travel arrangements</p> <p>Requiring multiple means of transport to get to appointment</p>
<p>System navigation issues</p> <p>Hoop-jumping (logistics involved in securing an appointment)</p> <p>Lack of information, resources, or referrals, including lack of transparency</p> <p>Need to make multiple visits to the procedure clinic</p> <p>Encountering crisis pregnancy centers that delayed abortion care</p>
<p>Limited clinic options</p> <p>Limited or no options near home</p> <p>Clinic closures in home state*</p> <p>Unavailable appointment times at other clinics (e.g., because of overbooking or excessive demand)</p>
<p>Financial issues</p> <p>Need to raise money for procedure and related costs (e.g., travel, logistics)</p> <p>Lack of insurance coverage</p> <p>Difference in procedure costs between clinics</p>
<p>State or clinic restrictions</p> <p>Gestational limits (state- or clinic-imposed)**</p> <p>Waiting periods (state-imposed)</p>

* This barrier signifies that women explicitly mentioned clinic closures as the reason for travel, rather than simply indicating a lack of clinics near their home.

** Includes limits on medication abortion.

In a study that addressed impacts of TRAP laws in Ohio and Texas, Jerman and colleagues interviewed 29 abortion patients (14 from Ohio and 12 from Texas) who either came from a neighboring state to Michigan or New Mexico or traveled more than 100 miles within the state. In 2015 when the study was conducted, Michigan and New Mexico allowed later abortions than Ohio and Texas and did not require abortion providers to have hospital admitting privileges. The most commonly experienced barrier, reported by 27 women, was making arrangements for a scheduled appointment (e.g., transportation, accommodations, child care, and work schedule changes) (Jerman, Frohwirth, Kavanaugh, & Blades, 2017). The researchers found that all five kinds of barriers they identified resulted in three main consequences: obtaining a later abortion due to delays (19 women); experiencing negative mental health outcomes (17); and considering self-induction (6) (Jerman et al., 2017). (See Box 4 for more on self-managed abortion.) Jerman and colleagues (2017) noted that it was not possible to distinguish the individual impact of a single barrier. Rather, women encountered these barriers simultaneously, producing a compounded effect.

WAITING PERIODS CAUSE DELAYS AND COMPOUND FINANCIAL AND EMOTIONAL BURDEN

State waiting-period laws requiring women to make multiple clinic visits in order to receive abortion care further complicate the challenges of arranging for and traveling to abortion appointments. An analysis of data from the Guttmacher Institute's 2014 Abortion Patient Survey found that women in states with a waiting period were more likely than those in states without such laws to have at least two weeks elapse between calling to schedule an appointment and receiving an abortion (Jones & Jerman, 2016). Studies in Alabama and Utah investigated the impacts of waiting periods, as well as testing the premise that state-mandated waiting periods are beneficial for women seeking abortions.

In a study involving interviews with 25 women who traveled more than 30 miles to an abortion clinic in Alabama, the majority of respondents believed the in-person counseling visit and 48-hour waiting period were unnecessary and burdensome (White, deMartelly, Grossman, & Turan, 2016). Due to the additional travel and wait time required, they would have preferred to receive critical information, such as expected side effects, onsite at the procedure appointment or beforehand via phone or email (White et al., 2016). One woman described traveling more than 120 miles one way for her counseling visit and waiting nearly two hours in the clinic before she was seen (White et al., 2016). During the study period from July to September 2014, the state had only three sites offering abortions, and two of those sites provided them only one day per week (White et al., 2016).

Only five of the 17 women who obtained a first-trimester abortion were able to return for their procedure 48 hours after their counseling visit; the authors note that these five women either had scheduled leave or did not work full time (White et al., 2016). The remaining 12 women waited up to two weeks for their procedures due to a combination of reasons, including limited appointment availability, conflicting work schedules, and travel arrangements (e.g., finding transportation, coordinating child care) (White et al., 2016). Four of the eight women who obtained second-

trimester abortions had sought abortion care during their first trimester, but encountered additional delays due to challenges such as clinic closure(s), scheduling an appointment, finding enough money, and returning for the procedure visit (White et al., 2016).

In a separate study, White and colleagues obtained two Alabama clinics' billing data for all 2013 abortion encounters and examined the relationship between the distance a woman traveled (calculated from her home zip code to the clinic) and the time that elapsed between her consultation visit and abortion procedure. More than half of the women (59%) returned for their procedures within six days of their consultation visits; 29% returned between seven and 13 days later; and 12% returned 14 days or more after their consultation visits (White, Turan, & Grossman, 2017). Women with incomes below the federal poverty level had longer intervals between the two visits compared to women with incomes at 100–200% of the poverty level, and those who traveled between 50 and 100 miles one way had longer intervals than those who made trips of under 25 miles (White et al., 2017).

Shortly after Utah's waiting period was extended from 24 hours to 72 hours in May 2012, researchers from the University of Utah conducted a survey to compare the proportion of women who returned for their procedures after receiving in-person state-mandated information before and after the law took effect (Sanders, Conway, Jacobson, Torres, & Turok, 2016). Using medical chart data reported by the three largest family planning clinics in Utah, the authors found a relatively small but still significant decrease in the proportion of women who returned for their abortion procedures after consultations before and after the new abortion restriction (80% vs 77%) (Sanders et al., 2016). In a second assessment of 307 respondents at one of the clinics, 62% reported negative effects from the 72-hour wait, including lost wages (47%), additional costs for childcare (18%) and transportation (30%), financial losses and expenses for family members and friends who accompanied them to the clinic (27%), and disclosing their abortion decision to someone they would not have told otherwise (33%) (Sanders et al., 2016).

Supporters of waiting periods have argued that the additional time allows women to reverse their decision to have an abortion. When Utah Governor Gary Herbert signed the 72-hour waiting period into law, a spokesperson said, "He felt the bill appropriately allows a woman who's facing that decision to fully weigh her options and the implications of that decision" (Dobuzinkis, 2012). Roberts and colleagues (2016) investigated women's experiences with the 72-hour-waiting period by surveying women attending abortion information visits at Utah facilities and following up with them three weeks later. Women who indicated being more conflicted about their decision to have an abortion and who were further along before they realized they were pregnant were significantly more likely to be pregnant at follow-up (Roberts, Turok, Belusa, Combellick, & Upadhyay, 2016). The authors estimated that 2% of women who were not conflicted at the information visit changed their minds and continued their pregnancies, which is consistent with prior studies finding that 1-3% of women have changed their minds under no or minimal (i.e., two-hour) waiting periods (Roberts et al., 2016). The researchers recommend individualized patient counseling for the small minority who were conflicted when they presented for care instead of a waiting period, given that the vast

majority of patients were certain about their decision (Roberts et al., 2016; Roberts, Belusa, Turok, Combellick, & Ralph, 2017).

Roberts and colleagues found most women endured the financial and emotional costs, exacerbated by the waiting period, and followed through with their decision to obtain an abortion. On average, they waited eight days after their information visit to have an abortion due to limited appointment availability (48%), logistics (19%), and financial challenges (9%) (Roberts et al., 2016). Information visit costs ranged from \$0 to \$590 (mean, \$44), which equated to increasing abortion costs by approximately 10% (Roberts et al., 2016). These expenses translated to more than 5% of the monthly household income for 25% of participants and more than 17% of income for 10% of participants (Roberts et al., 2016). Women expressed frustration at having to wait after having made their decisions; one woman said, “Knowing that I had to wait after deciding what I wanted to do and not having control over my own life and my body made me mad” (Roberts et al., 2016). Additionally, 6% reported disclosing their abortion decision to someone they preferred not to tell in order to make the required information visit (Roberts et al., 2016). Some women reported feeling nervous that the waiting period would push them beyond a provider’s gestational limit or past the point they felt comfortable having an abortion. Another woman’s response captured the financial impact of gestational limits compounded by waiting periods: “I knew the longer it took, the more money it would cost...We are living paycheck to paycheck as it is, and if I [had] gone one week sooner, it would have been \$100 less” (Roberts et al., 2016).

ABORTION RESTRICTIONS MAKE MEDICATION ABORTIONS LESS ATTAINABLE

Laws that result in fewer providers offering medication abortion and delayed care affect the kinds of abortions women can receive. Studies document experiences of women who would have preferred medication abortions but encountered barriers that effectively removed this option.

In the qualitative study by Baum and colleagues (2016), several women in Texas reported that they preferred but could not obtain medication abortions, due to gestational limits or access barriers. At the time, the Texas requirement that medication abortions adhere to the FDA-approved protocol meant four clinic visits (except for those who live more than 100 miles away, for whom in-person counseling is not required) and a seven-week gestational limit. One study participant, wary of the costs associated with traveling 200 miles for a medication abortion, ultimately obtained a surgical abortion that involved traveling 50 miles (Baum et al., 2016). Another woman, who was just under the gestational limit for a medication abortion when she discovered her pregnancy, described feeling like she had no choice over her method of abortion because “I didn’t have half the money I needed for it yet” (Baum et al., 2016).

In White and colleagues’ (2016) study of women seeking abortions in Alabama, one of the 25 interviewees, who had preferred a medication abortion, explained that the required third visit to a

clinic almost 50 miles away made her decide against the medication method; it “did not seem practical to me to spend more money to go that far, and take the time off” (White et al., 2016). Similarly, one of the participants in Fuentes and colleagues’ (2016) study of women who sought abortions at Texas clinics that no longer provided them referenced all the factors (child care costs, time off work, and travel distance) that go into a decision and said: “I wanted to get the medication procedure but they said I couldn’t because it requires at least two visits to go back to the doctor and I wouldn’t be able to travel back to San Antonio ... because I work and I wouldn’t be able to have so many days off to go” (Fuentes et al., 2016).

In Ohio, where a law mandating the FDA-approved protocol for medication abortions took effect in 2011, Upadhyay and colleagues (2016) used records from 2,783 patients and administrative data from four facilities that provide abortions in order to compare abortion types and outcomes the year prior to the law’s implementation date to types and outcomes three years after the law took effect. Prior to the law, providers had been using the evidence-based regimen, which included a lower dose of mifepristone and higher dose of misoprostol and allowed women to take the misoprostol at home; under the new law, women had to return to the clinic for misoprostol and make a total of four visits rather than three, and could only receive medication abortions for pregnancies of up to 49 days LMP rather than 63 days (Upadhyay, Johns, Combellick, Kohn, Keder, & Roberts, 2016). Compared to women who received medication abortions in the pre-law period, those who received medication abortions after the law took effect had three times the odds of requiring additional interventions, mainly additional misoprostol (8.0%) or aspiration (3.3%), and were more likely to report at least one side effect (8.4% before the law, 15.6% after it) (Upadhyay et al., 2016). The average patient charge for medication abortion increased from \$426 to \$551, and the percentage of abortions performed with medication dropped from 22% in the pre-law period to 5% after the law took effect, despite a national trend for a growing percentage of abortions being medication abortions (Upadhyay et al., 2016).

TURNAWAY STUDY: PUBLIC HEALTH IMPACTS OF ABORTION RESTRICTIONS

A landmark study called the Turnaway Study, conducted by researchers at Advancing New Standards in Reproductive Health (ANSIRH), examines the health and socioeconomic effects of being denied abortion care for exceeding the provider’s gestational limit. Over a five-year period, ANSIRH staff conducted phone interviews every six months with women who had been recruited from 30 abortion providers nationwide from 2008 to 2010. ANSIRH completed data collection in December 2015. The study categorized 956 participants into three groups: (1) women who sought an abortion up to three weeks over the gestational limit and were turned away without receiving an abortion (Turnaways, n=231); (2) women who sought an abortion up to two weeks under the facility’s gestational limit and received an abortion (Near-Limit Abortion Patients, n=452); and (3) women who received an abortion in the first trimester of pregnancy (First-Trimester Abortion Patients, n=273) (ANSIRH, n.d.).

This section summarizes some of the key findings from the Turnaway Study that involve public health impacts of abortion restrictions.

IMPACT: BEING DENIED AN ABORTION

An analysis of data from the Turnaway Study and the Guttmacher Institute Abortion Provider Census estimated that in 2008 approximately 4,143 women presented at abortion facilities, were denied abortions due to gestational limits, and carried their pregnancies to term (Upadhyay, Weitz, Jones, Barar, & Foster, 2014). However, this estimate does not include women who desired an abortion but did not present at a facility — e.g., those who inquired by phone about gestational limits and realized they did not meet the cutoff (Upadhyay et al., 2014).

Both Turnaways and Near-Limit Abortion Patients reported travel and procedure costs as the main reason for initial delays in seeking an abortion, followed by not recognizing the pregnancy (Upadhyay et al., 2014). Other reasons included “insurance problems,” “not knowing where to get care,” and “not knowing how to get to a provider” (Upadhyay et al., 2014). Upadhyay and colleagues found that Near-Limit Abortion Patients were able to exert greater effort overall than Turnaways in obtaining an abortion: A greater proportion of Near-Limit Abortion Patients had traveled more than 100 miles to the provider (30.5% v. 19.5%) and had visited multiple providers apart from the facility where they obtained the abortion (51.9% v. 34.5%) (Upadhyay et al., 2014).

Nearly 22% of Turnaways reported thinking about trying again at a different provider, but paying for travel and procedure costs remained a roadblock. Additional issues that persisted among Turnaways included “not being able to find a provider who would do the abortion so late, not knowing where to go, or a belief that no services were available for their gestational age, and not knowing how to get there” (Upadhyay et al., 2014). The authors estimated an average of 4,000 women were turned away each year due to gestational limits, but this was calculated before the recent wave of states had enacted gestational limits at 20 weeks (Upadhyay et al., 2014); now that so many more restrictions are in place, even more women will likely be affected by these barriers.

IMPACT: INCREASED RISK OF DOMESTIC VIOLENCE

Previous studies have found that between 6% and 22% of women seeking abortions report intimate partner violence, and some women cite it as a reason for terminating pregnancies (Roberts, Biggs, Chibber, Gould, Rocca, & Foster, 2014). Study participants described “not wanting to expose children to violence and believing that having the baby will tether them to an abusive partner” (Roberts, Biggs, et al., 2014). A study using the first 2.5 years of data from the Turnaway Study found that physical violence (e.g., being pushed, hit, slapped, kicked, choked) from the male involved in the pregnancy significantly decreased among women able to obtain an abortion but not among Turnaways who gave birth (Roberts, Biggs, et al., 2014). Psychological violence decreased for both groups. “Terminating an unwanted pregnancy may allow women to avoid physical violence

from the MIP [man involved in the pregnancy], while having a baby from an unwanted pregnancy appears to result in sustained physical violence over time,” the authors conclude (Roberts, Biggs, et al., 2014).

Women unable to leave their physically violent relationships may suffer more injuries, chronic pain, sexually transmitted infections, depression, and other health problems (Campbell, 2002).

Additionally, the circumstances jeopardize the health and well-being of their children, as those who experience violence during pregnancy face an increased risk of preterm delivery and low-birthweight infants (Sarkar, 2008).

IMPACT: ECONOMIC HARDSHIP AND INSECURITY

Several studies have found that many women seek an abortion because they are financially unprepared to raise a(nother) child (Finer, Frohwirth, Dauphinee, Singh, & Moore, 2005; Biggs, Gould, & Foster, 2013; Kirkman, Rowe, Hardiman, Mallett, & Rosenthal, 2009). When Turnaway Study participants sought abortion care, half (51%) of the participants reported living below the federal poverty level and 76% reported not having enough money for housing, transportation, and food (Foster, Biggs, Ralph, Gerds, Roberts, & Glymour, 2018). Additionally, 63% of participants already had children (Foster et al., 2018).

A study analyzing all five years of data from the Turnaway Study found that women who were denied an abortion were significantly more likely than women who received an abortion to experience economic hardship and insecurity (Foster et al., 2018). At six months, women who carried their unwanted pregnancies to term (Turnaway-Births) faced great economic hardships; they were significantly more likely than Near-Limit Abortion Patients to not work full-time, earn a lower income, and live below the federal poverty level (Foster et al., 2018). Additionally, Turnaway-Births were significantly more likely to receive public assistance from Temporary Assistance for Needy Families (TANF), the Supplemental Nutritional Assistance Program (SNAP), and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) (Foster et al., 2018). Trajectories for the two groups converged to some degree in the ensuing years, but differences remained: After four years, there was no statistically significant difference in the proportion of the two groups with full-time employment, but Turnaway-Births were still significantly more likely to live below the poverty level and receive SNAP (Foster et al., 2018).

IMPACT: EMOTIONAL AND MENTAL HEALTH

Proponents of abortion restrictions have argued that such restrictions are intended to protect a woman from experiencing regret for obtaining an abortion and to safeguard her mental health. Studies based on data from the Turnaway Study did not find support for this rationale.

Rocca and colleagues found that at all time points over three years following abortion, the vast majority (95%) of participants who had obtained near-limit or first-trimester abortions reported feeling that their decision was the right one for them (Rocca, Kimport, Roberts, Gould, Neuhaus, & Foster, 2015). Based on the researchers' model, which accounted for attrition and baseline characteristics, the average participant had greater than a 99% probability of reporting that her decision to obtain an abortion was the right one for her (Rocca et al., 2015). The study found that decisional rightness was less likely among women who reported planning their pregnancies or struggling with their decisions and more likely among those who reported attending school or working (Rocca et al., 2015). Women who perceived more community abortion stigma reported more negative emotions, and those with more social support reported fewer (Rocca et al., 2015). The authors noted no differences in intensity of emotions, whether negative (regret, anger, guilt, sadness) or positive (happiness, relief) over time between First- Trimester Abortion Patients and Near-Limit Abortion Patients. Findings demonstrate that most women are able to cope well emotionally in the years following an abortion (Rocca et al., 2015) and contradict assertions that many women regret their abortion decisions.

Another study found that Turnaways, in comparison to Near-Limit Abortion Patients, reported significantly more symptoms of anxiety, lower self-esteem, and lower satisfaction at one week after seeking an abortion (Biggs, Upadhyay, McCulloch, & Foster, 2017). The psychological well-being of women denied an abortion improved quickly within 6 to 12 months, reaching levels similar to those of women who had obtained an abortion (Biggs et al., 2017). The authors note that the stress of navigating multiple obstacles to obtain an abortion and then being denied one may induce the initially higher levels of anxiety and lower levels of self-esteem and life satisfaction reported by Turnaways (Biggs et al., 2017). In line with previous studies, they found that a history of mental health conditions and traumatic life experiences (e.g., child abuse or neglect) was most associated with experiencing adverse health outcomes after an abortion (Biggs et al., 2017). The authors conclude: "Women with such a history are at greater risk of experiencing adverse outcomes and may have poorer mental health outcomes if they are denied an abortion than if they receive a wanted abortion" (Biggs et al., 2017).

IMPACT: LIMITED OPPORTUNITIES FOR PERSONAL AND PROFESSIONAL ADVANCEMENT

Several studies have found that women reported time-related and goal-oriented reasons for seeking an abortion (Biggs, Gould, & Foster, 2013; Finer, Frohwirth, Dauphinee, Singh, & Moore, 2005; Kirkman, Rowe, Hardman, Mallett, & Rosenthal, 2009). In the Turnaway Study, women who sought an abortion reported feeling not financially prepared (40%), that it was not the right time (36%), and that having a baby would interfere with future opportunities (20%) (Biggs et al., 2013).

One analysis found that First-Trimester Patients and Near-Limit Abortion Patients were over six times as likely to report a positive goal-oriented (i.e., aspirational) one-year plan as Turnaways unable

to obtain an abortion elsewhere (Parenting Turnaways) (Upadhyay, Biggs, & Foster, 2015). Topics of aspirational plans included completing education, getting a new or better job, and living independently (Upadhyay et al., 2015). One year after describing their goals to researchers, Near-Limit Abortion Patients (45.6%) and women who were initially turned away but obtained an abortion elsewhere (Non-Parenting Turnaways) (47.9%) were significantly more likely to have an aspirational plan and to have achieved it than Parenting Turnaways (30.4%) (Upadhyay et al., 2015). The authors found that Parenting Turnaways were significantly less likely than Near-Limit Abortion Patients to report employment-related goals, noting that Parenting Turnaways might consider such goals unattainable while parenting a newborn (Upadhyay et al., 2015). Additionally, Parenting Turnaways were more likely to report a neutral or negative outlook (Upadhyay et al., 2015). Findings from this study indicate that laws restricting access to abortion may potentially limit opportunities for personal and professional achievement.

IMPACT OF POLICY CLIMATES HOSTILE TO REPRODUCTIVE RIGHTS

The studies discussed in this paper examined impacts of specific state-level abortion restrictions. While such focused analysis is important in discerning the harmful effects of abortion laws, comparing outcomes in groups of states with supportive or hostile climates for reproductive health can also help identify ways restrictions may affect women's lives and public health.

Jones and colleagues (2018) examined indicators of abortion service delivery in states with policy climates considered supportive, middle ground, or hostile on abortion rights. They analyzed the distribution of abortion-providing facilities and different aspects of abortion service delivery using data from the 2014 Guttmacher Institute Abortion Provider Census (Jones, Ingerick, & Jerman, 2018). Additionally, they used an analysis conducted by Guttmacher Institute to characterize the policy climates of states as hostile, neutral, or supportive of abortion rights based on criteria that included abortion restrictions discussed in this white paper (e.g., mandatory counseling, gestational limits) (Gold & Nash, 2012). Though approximately the same number and proportion of abortions occurred in hostile and supportive states (44% in each), the majority of women of reproductive age lived in hostile states (57%) (Jones et al., 2018). Hostile states had less than half the number of abortion-providing facilities that supportive states did (423 vs. 1,044) (Jones et al., 2018). In comparison to supportive states, hostile states had fewer clinics that provided only early medication abortion (37% vs. 8% of all clinics) and fewer clinics where advanced practice clinicians provided abortion care (65% vs. 3%) (Jones et al., 2017). When adjusted for cost of living, women paid \$40 more for a first-trimester surgical procedure in hostile (\$442) than in supportive (\$402) states (Jones et al., 2017).

A study examining the impact of states' overall climates for reproductive health found that the climate may influence infant health outcomes. Wallace and colleagues (2017) examined states' reproductive rights scores and the risk of low birthweight and preterm birth using a reproductive rights composite index derived from a similar index constructed by the Institute for Women's Policy

Research (Hess, Milli, Hegewisch, Román, Anderson, & Augeri, 2015) as well as birth records. The authors divided the scores into tertiles, with the highest tertile representing states with the strongest policy positions on reproductive rights, and found that odds of preterm birth and low birthweight were greater in states in the lowest tertile when compared to those in the highest tertile (Wallace, Evans, & Theall, 2017). The authors note that several factors not included in their analysis – such as Medicaid eligibility limits and nutritional policies – can also influence birth outcomes, and that “[g]reater reproductive rights may also be an indicator of other positive policies” (Wallace et al., 2017). Although these studies only demonstrate associations between policies and outcomes and therefore cannot prove causality, they can remind policymakers to consider laws’ indirect effects.

MOVING FORWARD

Many of the studies described in this paper take advantage of unfortunate natural experiments, comparing outcomes before and after states implemented new restrictions that reduce access to abortion care. Such laws typically pass despite a dearth of evidence that they will benefit those seeking abortions, and new research documents the consequences. Future studies can continue to build on existing research into the emotional, financial, and health impacts of laws that limit access to abortion, and the disproportionate burdens these laws place on particular populations of women, such as those already facing poverty, discrimination, and other challenges.

While many states continue to create additional barriers to abortion services, others have passed laws to protect or improve abortion access. Illinois has repealed its prohibition on using state funds to cover abortions for Medicaid enrollees; Oregon and New York have passed laws requiring private health plans to cover abortion without cost-sharing; and in response to a court order, Idaho has lifted its ban on using telemedicine for medication abortion (Nash, Gold, Mohammed, Ansari-Thomas, & Cappello, 2018). Additionally, eight states have now passed laws that protect the right to choose abortion prior to viability or when necessary to preserve life or health (Guttmacher Institute, 2018a).

Research on how these changes affect access and outcomes, including any impacts on existing disparities, can help other states make informed decisions about adopting similar laws.

Additional research is also needed in some understudied areas. Studies on abortion access for those under 18 could clarify the impacts of parental-notification and parental-assent requirements. Several aspects of self-managed abortion also warrant attention, including prevalence, methods used for self-management, availability of information and other resources for those considering ending a pregnancy outside the formal health care system, and outcomes among those who self-manage the end of their pregnancies. Research into self-managed abortion should explore both the impact of abortion restrictions and the preferences women may have to manage their own abortion care even when options exist for care within the formal medical system. Such research can inform approaches to ensuring that, once a woman has decided to end a pregnancy, she is able to do so on her own terms, in a timely, safe, and affordable manner. The National Academies report on abortion safety

recommends more study of how to meet the needs of women with lower incomes seeking abortion care and research into how the FDA policy restricting mifepristone distribution “impacts dimensions of quality, including timeliness, patient-centeredness, and equity” (National Academies of Sciences, Engineering, and Medicine, 2018).

As studies of policy impacts continue, researchers may not be able to separate the impacts of individual laws when the study participants are encountering multiple restrictions simultaneously. Like most of the studies described in this paper, future studies will report findings on the combination of restrictions that limit abortion access — and effectively eliminate it for some women.

The *Whole Woman’s Health* decision represented a victory for women’s health advocates and those who call for scientific evidence to play a role in policy decisions. Since then, however, developments at the federal level suggest further reductions in access to reproductive health care. These include laws and policies that jeopardize gains in insurance coverage and benefits seen after Affordable Care Act implementation and that threaten low-income clients’ access to providers such as Planned Parenthood.

As the legal landscape of abortion continues to shift, research in these areas will continue to play an essential role in identifying and documenting the impacts of laws that shape access to abortion care. Where lawmakers are committed to using evidence to inform policy, current and new knowledge also has the potential to shape legislation and court decisions.

Table 3: Studies Examining Impacts of Abortion Restrictions in Specific States

Study	State	Restriction(s)	Methods	Results	Type of Impact
White et al., 2016	Alabama	State-mandated information, 48-hour waiting period	<p>Phone interviews</p> <p>25 women attending an abortion-related visit (i.e., consultation, procedure, or follow-up) who traveled more than 30 miles to the clinic</p>	<p>The majority of participants believed the in-person counseling visit and 48-hour waiting period were unnecessary and burdensome.</p> <p>Only five of the 17 women who obtained a first-trimester abortion were able to return for their procedure 48 hours after their counseling visits. The remaining women waited up to two weeks for their procedure due to reasons including limited appointment availability, conflicting work schedule, and travel arrangements.</p> <p>One woman chose an aspiration rather than medication abortion in order to avoid the time and expense of a third visit.</p>	<p>Waiting periods cause delays</p> <p>Inability to receive preferred form of abortion</p>
White et al., 2017	Alabama	48-hour waiting period	Billing data from two abortion clinics for all 2013 abortion encounters	<p>Intervals between consultation and abortion visits were 7-13 days for 29% of women and 14 days or more for 12%.</p> <p>Women with incomes below the federal poverty level and women who traveled 50-100 miles one way had longer intervals between visits.</p>	Waiting periods cause delays

Upadhyay et al., 2016	Ohio	Requirement that medication abortion be performed according to FDA-approved protocol	Patient charts and administrative data from four abortion-providing facilities for one year before the law's implementation (2010) and three years after it (2011-2014)	<p>Women obtaining medication abortion after the law took effect had three times the odds of requiring additional intervention (e.g., repeat misoprostol, aspiration) as those who received medication abortions in the pre-law period.</p> <p>More women reported at least one side effect in the post-law period (15.6%) than in the pre-law period (8.4%).</p> <p>The percentage of abortions via medication dropped from 22% before the law's implementation to 5% after it took effect.</p>	<p>Increased demands on personal resources</p> <p>Inability to receive preferred form of abortion</p>
Jerman et al., 2017	Ohio, Texas (via women seeking care in Michigan and New Mexico)	<p>Ohio: Hospital transfer agreement; 20-week "post fertilization" limit; 24-hour waiting period</p> <p>Texas: Admitting privileges requirement; medication abortion following FDA-approved protocol; 20-week "post fertilization" limit; 24-hour waiting period</p>	<p>In-person interviews</p> <p>29 women who sought abortion services at six sites in Michigan and New Mexico and had traveled >100 miles or from a different state (14 from Ohio; 12 from Texas; one from Indiana, Nebraska, and New Mexico)</p>	<p>Five kinds of barriers: travel-related logistical issues, system navigation issues, limited clinic options, financial issues, and state or clinic regulations.</p> <p>24 women experienced four of the five barriers.</p> <p>19 women obtained abortions at later gestations than desired due to delays.</p> <p>17 women experienced negative mental health outcomes as a consequence of encountering barriers.</p> <p>6 women considered self-induction because of barriers.</p>	<p>Difficulty finding an open abortion clinic/ securing an appointment</p> <p>Increased demands on personal resources</p>

Baum et al., 2016	Texas	Admitting privileges requirement; medication abortion following FDA-approved protocol (with some dosage modification allowed); 20-week “post fertilization” limit; 24-hour waiting period	Phone interviews 20 women who received or strongly desired medication abortion or traveled at least 50 miles one way for procedure	<p>Most participants made multiple phone calls to find an open clinic providing abortion.</p> <p>Several women who preferred medication abortion obtained surgical abortions instead.</p> <p>Participants reported disclosures to family member or friend they otherwise might not have confided in.</p> <p>One woman continued her pregnancy, at least in part because of logistical challenges.</p>	<p>Difficulty finding an open abortion clinic/ securing an appointment</p> <p>Increased demands on personal resources</p> <p>Inability to receive preferred form of abortion</p>
Fuentes et al., 2016	Texas	Admitting privileges requirement; medication abortion following FDA-approved protocol (with some dosage modification allowed); 20-week “post fertilization” limit; 24-hour waiting period	Phone interviews 23 women who sought abortions at Texas clinics that no longer provided them	<p>More than half of respondents reported confusion and frustration with unclear and missing information regarding abortion services at open clinics.</p> <p>Two women reporting deciding to carry their pregnancies to term after appointment cancelation (due to HB 2) or failed attempts to schedule appointment.</p> <p>Eight women reported waiting more than an additional week to have an abortion.</p> <p>Four women reported spending an average of \$75 on gas to drive nearly four hours from the Lower Rio Grande Valley to San Antonio. Six women reported spending \$60-\$200 on hotels.</p>	<p>Difficulty finding an open abortion clinic/ securing an appointment</p> <p>Increased demands on personal resources</p>

				Participants reported disclosures to family member or friend they otherwise might not have confided in.	
Gerdts et al., 2016	Texas	Admitting privileges requirement; medication abortion following FDA-approved protocol (with some dosage modification allowed); 20-week “post fertilization” limit; 24-hour waiting period	Self-administered survey 398 women seeking abortion services in Austin, Dallas/Fort Worth, Houston, and San Antonio in mid-2014	Average one-way travel distance was 85 miles for women whose nearest clinic in 2013 was closed in 2014, compared to 22 miles for women whose nearest clinic in 2013 remained open in 2014. Women whose nearest clinic in 2013 closed in 2014 compared to women whose nearest clinic in 2013 remained open were more likely to: travel more than 50 miles (44% vs. 10%), spend more than \$100 (32% vs. 20%), have a frustrated demand for medication abortion (37% vs. 22%), and find accessing abortion care to be somewhat or very hard (36% vs. 18%).	Increasing demand on personal resources Inability to receive preferred form of abortion
Grossman et al., 2014	Texas	Admitting privileges requirement; medication abortion following FDA-approved protocol (with some dosage modification allowed); 20-week “post fertilization” limit; 24-hour waiting period	Information requested from all licensed Texas abortion facilities on abortions performed between November 2012 and April 2014	Number of Texas facilities providing abortion dropped from 41 in May 2013 to 22 in Nov 2013. 13% decrease in abortion rate from the Nov 2012 – April 2013 time period to Nov 2013 – April 2014. Medication abortions decreased by 70%. Second-trimester abortions increased from 13.5% to 13.9% of all abortions.	Difficulty finding an open abortion clinic/ securing an appointment Inability to receive preferred form of abortion

<p>Roberts et al., 2016</p>	<p>Utah</p>	<p>72-hour waiting period</p>	<p>500 women completed baseline surveys at information visit; 309 completed follow-up phone interviews three weeks later</p>	<p>Participants waited a median of eight days after their information visit for abortions due to limited appointment availability (48%), logistics (19%), and finances (9%).</p> <p>Waiting period pushed at least one woman beyond her facility's gestational limit.</p> <p>Logistical and financial challenges of making two visits increased abortion costs by approximately 10%.</p> <p>Participants reported disclosures to someone they otherwise might not have confided in, including the man involved in the pregnancy, family, friend, or co-worker.</p>	<p>Difficulty finding an open abortion clinic/ securing an appointment</p> <p>Increased demands on personal resources</p> <p>Waiting periods cause delays and compound financial and emotional burden</p>
<p>Sanders et al., 2016</p>	<p>Utah</p>	<p>72-hour waiting period</p>	<p>Assessment 1: Chart review 3 family planning clinics and 8 associated clinics that offer information visits</p> <p>Assessment 2: Self-administered survey 307 women waiting for their procedure</p>	<p>Assessment 1: Decrease in the percentage of counseled women who returned for abortion procedure after 72-hour waiting period compared to a 24-hour waiting period (77% vs. 80%).</p> <p>Assessment 2: 62% reported negative effects from 72-hour wait, including lost wages (47%), additional costs for childcare (18%) and transportation (30%), financial losses and expenses for family members /friends who accompanied them to the clinic (27%), and disclosing their abortion decision to someone they would not have told otherwise (33%).</p>	<p>Waiting periods cause delays and compound financial and emotional burden</p>

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