

**IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT**

Paul A. Isaacson, M.D., *et al.*,
Plaintiffs-Appellants,

v.

No. 12-16670

Tom Horne, Attorney General of
Arizona, in his official capacity, *et al.*,
Defendants-Appellees.

**MOTION OF AMERICAN COLLEGE OF OBSTETRICIANS AND
GYNECOLOGISTS AND AMERICAN CONGRESS OF
OBSTETRICIANS AND GYNECOLOGISTS
FOR LEAVE TO FILE BRIEF *AMICUS CURIAE***

Pursuant to Fed. R. App. P. 29(b), *amici curiae* American College of Obstetricians and Gynecologists and American Congress of Obstetricians and Gynecologists move for leave to file the attached brief *amicus curiae* in support of Plaintiffs’ challenge to Arizona’s House Bill 2036 (“HB 2036”), which, among other restrictions, makes it a criminal offense to provide an abortion beginning at 20 weeks of pregnancy.

INTERESTS OF *AMICI CURIAE*

Sharing more than 57,000 members, the American College of Obstetricians and Gynecologists and the American Congress of Obstetricians and Gynecologists (collectively, “ACOG”) are the leading professional associations of physicians

who specialize in the health care of women. The American College of Obstetricians and Gynecologists is a non-profit educational and professional organization founded in 1951. The College's objectives are to foster improvements in all aspects of health care of women; to establish and maintain the highest possible standards for education; to publish evidence-based practice guidelines; to promote high ethical standards; and to encourage contributions to medical and scientific literature. The College's companion organization, the American Congress of Obstetricians and Gynecologists, is a professional organization dedicated to the advancement of women's health and the professional interests of its members. The Arizona Section of the Congress has 925 members, many of whom would be affected by HB 2036.

REASONS FOR GRANTING *AMICUS* PARTICIPATION

As the nation's leading experts on the health care of women, *Amici* respectfully request the opportunity to participate in this appeal to correct the inaccurate and misleading data relied upon by the Arizona legislature, the Defendants below, and ultimately, the district court. Due to their particular expertise in the health of women, *Amici* have a compelling interest in ensuring that this Court is properly informed regarding the medical and psychological consequences of abortion bans like HB 2036, the underlying rationale of which (*i.e.*, protecting maternal health and preventing fetal pain) is neither supported by

scientific evidence nor necessary to achieve an important public health directive. To this end, ACOG's work has been cited frequently by the Supreme Court and other federal courts seeking authoritative medical data regarding childbirth and abortion.¹

Counsel for *Amici* contacted counsel for all parties to obtain their consent to file this brief. Counsel for Plaintiffs, counsel for Defendants Barbara LaWall, Tom Horne, the Arizona Medical Board, and Lisa Wynn consented to this filing. Counsel for Defendant William Montgomery conditioned consent to file this brief on ACOG's procuring from Plaintiffs a blanket consent to file amicus briefs by any interested party. Because ACOG was unable to procure such blanket consent, Defendant Montgomery declined to consent to the filing of this brief.

¹ See, e.g., *Stenberg v. Carhart*, 530 U.S. 914, 932-936 (2000) (quoting ACOG's *amicus* brief extensively and referring to ACOG as among the "significant medical authority" supporting the comparative safety of the abortion procedure at issue); *Hodgson v. Minnesota*, 497 U.S. 417, 454 n.38 (1990) (citing ACOG's *amicus* brief in assessing disputed parental notification requirement); *Simopoulos v. Virginia*, 462 U.S. 506, 517 (1983) (citing ACOG publication in discussing "accepted medical standards" for the provision of obstetric-gynecologic services, including abortions); see also *Gonzales v. Carhart*, 550 U.S. 124, 170-171, 175-178, 180 (2007) (Ginsburg, J., dissenting) (referring to ACOG as "experts" and repeatedly citing ACOG's *amicus* brief and congressional submissions regarding abortion procedure); *Greenville Women's Clinic v. Bryant*, 222 F.3d 157, 168 (4th Cir. 2000) (extensively discussing ACOG's guidelines and describing those guidelines as "commonly used and relied upon by obstetricians and gynecologists nationwide to determine the standard and the appropriate level of care for their patients").

CONCLUSION

For these reasons, *amici curiae* respectfully seek this Court's leave to file the attached brief *amicus curiae*.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I certify that on September 11, 2012, I electronically filed the foregoing Motion with the Clerk of Court for the United States Court of Appeals for the Ninth Circuit using the appellate CM/ECF system.

Participants in the case who are registered CM/ECF users (either as entities or through individual attorneys representing those offices) will be served by the appellate CM/ECF system.

I further certify that some of the participants in the case are not registered CM/ECF users. I have sent the foregoing document by Federal Express Overnight Delivery to the following non-CM/ECF participants:

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TOM HORNE, Attorney General of Arizona,
in his official capacity, *et al.*,
Defendants-Appellees.

On Appeal from the United States District Court for the District of Arizona,
Civil Case No. 2:12-cv-01501-JAT (Hon. James A. Teilborg)

**BRIEF FOR AMICI CURIAE AMERICAN COLLEGE OF
OBSTETRICIANS AND GYNECOLOGISTS AND AMERICAN
CONGRESS OF OBSTETRICIANS AND GYNECOLOGISTS IN SUPPORT
OF PLAINTIFFS-APPELLANTS AND REVERSAL**

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CORPORATE DISCLOSURE STATEMENT

Neither of the *amici curiae* is a nongovernmental entity with a parent corporation or a publicly held corporation that owns 10% or more of its stock.

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INTEREST OF *AMICI CURIAE*¹

The American College of Obstetricians and Gynecologists (the “College”) and the American Congress of Obstetricians and Gynecologists (the “Congress”) (collectively, “ACOG”) submit this brief as *amici curiae* in support of Plaintiffs’ challenge to Arizona’s House Bill 2036 (“HB 2036”), which, among other restrictions, makes it a criminal offense to provide an abortion beginning at 20 weeks of pregnancy.² As the nation’s leading experts on the health care of women, *amici* write to correct the inaccurate and misleading medical data relied upon by the Arizona legislature, Defendants below, and, ultimately, the district court.

Sharing more than 57,000 members, the College and Congress are the leading professional associations of physicians who specialize in the health care of women. The College is a non-profit educational and professional organization founded in 1951. The College’s objectives are to foster improvements in all aspects of health care of women; to establish and maintain the highest possible

¹ Pursuant to Fed. R. App. P. 29(c)(5), *amici* state that no party’s counsel authored this brief in whole or in part, and that no party or person other than *amici*, their members, and their counsel contributed money towards the preparation or filing of this brief.

² Counsel for *amici* contacted counsel for all parties to obtain their consent to file this brief. Counsel for Plaintiffs, and counsel for Defendants Barbara LaWall, Tom Horne, the Arizona Medical Board, and Lisa Wynn consented to this filing. Counsel for Defendant William Montgomery conditioned consent to file this brief on ACOG’s procuring from Plaintiffs a blanket consent to file amicus briefs by any interested party. Because ACOG was unable to procure such blanket consent, counsel for Montgomery declined to consent to the filing of this brief.

standards for education; to publish evidence-based practice guidelines; to promote high ethical standards; and to encourage contributions to medical and scientific literature. The College's companion organization, the Congress, is a professional organization dedicated to the advancement of women's health and the professional interests of its members. The Arizona Section of the Congress has 925 members, many of whom would be affected by HB 2036. ACOG's work has been cited frequently by the Supreme Court and other federal courts seeking authoritative medical data regarding childbirth and abortion.³

The College and Congress recognize that the issue of support for or opposition to abortion is a personal matter and respect the need and responsibility of their members to determine their individual positions. As organizations, the College and Congress recognize that abortion is an essential health-care service

³ See, e.g., *Stenberg v. Carhart*, 530 U.S. 914, 932-936 (2000) (quoting ACOG's *amicus* brief extensively and referring to ACOG as among the "significant medical authority" supporting the comparative safety of the abortion procedure at issue); *Hodgson v. Minnesota*, 497 U.S. 417, 454 n.38 (1990) (citing ACOG's *amicus* brief in assessing disputed parental notification requirement); *Simopoulos v. Virginia*, 462 U.S. 506, 517 (1983) (citing ACOG publication in discussing "accepted medical standards" for the provision of obstetric-gynecologic services, including abortions); see also *Gonzales v. Carhart*, 550 U.S. 124, 170-171, 175-178, 180 (2007) (Ginsburg, J., dissenting) (referring to ACOG as "experts" and repeatedly citing ACOG's *amicus* brief and congressional submissions regarding abortion procedure); *Greenville Women's Clinic v. Bryant*, 222 F.3d 157, 168 (4th Cir. 2000) (extensively discussing ACOG's guidelines and describing those guidelines as "commonly used and relied upon by obstetricians and gynecologists nationwide to determine the standard and the appropriate level of care for their patients").

and oppose laws regulating medical care that are unsupported by scientific evidence and that are not necessary to achieve an important public-health objective.

INTRODUCTION

Contrary to the assertions made by the Arizona legislature and Defendants, HB 2036's ban on abortions at or after 20 weeks of pregnancy will not further or protect maternal health. Rather, it will do just the opposite. The ban will jeopardize women's health by severely curtailing physicians' ability to treat patients who face serious health conditions later in pregnancy and will force women to carry pregnancies to term when their fetuses suffer from serious impairments, including those that are incompatible with life. And notwithstanding the legislature's and Defendants' claim that the Act is intended to protect women from the alleged health risks posed by abortion, clear medical evidence shows that abortion is many times safer for a woman than carrying a pregnancy to term and giving birth, that abortion past 20 weeks is not more dangerous than carrying to term and giving birth, and that abortion does not harm the psychological well-being of pregnant women. Nor will HB 2036 prevent fetal pain perception, as there is no credible, current medical evidence that fetuses are sufficiently neurologically developed to perceive pain before 24 weeks; indeed, there is significant evidence to the contrary.

Amici are aware that the facts herein are not relevant to the outcome of this case, as the parties agree on the one dispositive fact: HB 2036 reaches abortions where the fetus is not viable. *Amici* likewise concur that 20 weeks is a previability stage of pregnancy. *Amici* nonetheless submit this brief to provide the Court with the most reliable and widely accepted medical knowledge relating to the inaccurate medical assertions made by the Arizona legislature, Defendants, and the district court.

ARGUMENT

I. NOT ALL FETAL ANOMALIES CAN BE DIAGNOSED BEFORE 20 WEEKS

Contrary to the district court's finding "that it would be extremely rare to find a condition that could be diagnosed after 20 weeks that could not have been diagnosed earlier," there are numerous fetal anomalies that are regularly only detected after 20 weeks.⁴ *Isaacson v. Horne*, No. CV-12-01501, 2012 WL 3090247, at *7 (D. Ariz. July 30, 2012). While chromosomal anomalies can generally be diagnosed by 20 weeks, some low-risk couples do not elect to have testing and instead learn that their fetus has a chromosomal anomaly during a routine ultrasound later in pregnancy. Moreover, many lethal or serious fetal

⁴ HB 2036 defines "gestational age" as "the age of the unborn child as calculated from the first day of the last menstrual period of the pregnant woman." A.R.S. § 36-2151(4). Because the last menstrual period of the pregnant woman generally predates fertilization by an average of two weeks, the prohibition applies beginning at what is essentially 18 weeks' gestation.

conditions are structural (not chromosomal) and are not susceptible to testing by amniocentesis, and thus can only be diagnosed by detailed ultrasound examination. In non-obese patients, this cannot happen until 18 weeks of pregnancy at the earliest, and in practice such tests typically take place between 18 and 20 weeks. By the time a diagnosis is confirmed by a specialist capable of diagnosing these anomalies, the pregnancy has often progressed beyond 20 weeks. Perhaps most importantly, however, given that almost 60% of Arizona women are obese,⁵ there are many patients in whom a detailed ultrasound examination will not reveal structural anomalies in the fetus until those anomalies become more pronounced, and thus visible, later in the pregnancy—often after 20 weeks.

Many tests cannot definitively diagnose grave conditions affecting a pregnancy prior to twenty weeks because the fetus is not sufficiently developed for those conditions to be detected. Even in cases where an ultrasound detects indications of a structural anomaly prior to 20 weeks, additional tests (such as amniocentesis or echocardiogram) are often necessary to confirm the diagnosis. Scheduling those additional tests and obtaining the results will take additional time, often up to two weeks. As a result, a woman whose fetus is critically impaired often will not learn that fact until well into the second trimester. Once

⁵ The obesity rate among women in Arizona is 57.1%. See Kaiser Permanente, *Arizona: Overweight and Obesity Rates for Adults by Gender, 2010*, available at <http://www.statehealthfacts.org/profileind.jsp?rgn=4&ind=90> (last visited Sept. 11, 2012).

the diagnosis is confirmed, many couples need additional time to make a well-informed and careful decision about whether to terminate the pregnancy.

Before the district court, Plaintiffs marshaled evidence that their own patients were diagnosed, near or after 20 weeks, with anencephaly, a “lethal defect characterized by absence of the brain and cranium above the base of the skull and orbits,” which results in death before or soon after birth, *Williams Obstetrics* 394 (Cunningham et al. eds., 22d ed. 2005); renal agenesis, the failure of kidneys to materialize, leading to death before or shortly after birth; limb-body wall complex, in which the organs are often outside the body cavity; severe heart defects; and neural tube defects such as encephalocele (the protrusion of brain tissue through an opening in the skull), and severe hydrocephaly (severe accumulation of excessive fluid within the brain). *See, e.g.*, Declaration of William H. Clewell (“Clewell Decl.”) [D. Ct. Dkt. #2] ¶¶ 14-15; *see also, e.g.*, *Williams Obstetrics* 394 (anencephaly can be diagnosed “[i]f visualization is adequate”); *id.* (cephalocele “may be difficult to image”); *id.* at 399 (renal agenesis may not be detectable ultrasonographically because kidneys may appear after 18 weeks). Dr. Clewell’s testimony comports with the experiences of ACOG’s members, who regularly treat patients in whom serious and often lethal fetal anomalies are not diagnosed until after 20 weeks’ gestation. Indeed, in addition to the structural defects Dr. Clewell identified, ACOG’s members have treated patients in whom other anomalies,

including meningocele (an opening in the vertebrae through which the meningeal sac may protrude) and caudal regression syndrome (a structural defect of the lower spine leading to neurological impairment and incontinence), were diagnosed only near or after 20 weeks of pregnancy. *See also* Parilla et al., *Antenatal Detection of Skeletal Dysplasias*, 22 J. Ultrasound Med. 255, 256 (2003) (mean gestational age for ultrasound diagnoses of lethal skeletal dysplasias, including caudal regression syndrome, was 20.4 weeks; mean gestational age for all skeletal dysplasias was 22.7 weeks).

The medical difficulty—if not impossibility—of diagnosing many of these lethal structural defects before 20 weeks is heightened by the fact that additional tests and doctors' appointments are often needed to confirm the anomaly, as discussed above. General obstetricians who suspect a problem based on an ultrasound at 18 to 20 weeks often refer their patient to a perinatologist (the relevant specialist) for confirmatory study and then diagnosis. These confirmatory tests take additional time—sometimes several weeks—to schedule and obtain results, particularly for women who live in rural or underserved areas. The final diagnosis will thus regularly take place near or after 20 weeks. Implementation of HB 2036 would leave women in Arizona with no ability to consider the possibility of an abortion after learning that their previsible fetus was gravely impaired. *Cf.* Grimes, *The Continuing Need for Late Abortions*, 280 JAMA 747, 749 (1998)

(“Although techniques such as chorionic villus sampling and early amniocentesis have allowed earlier diagnosis, by the time results of midtrimester amniocentesis or ultrasound are available, a woman may be beyond 20 weeks’ gestation.”).

The district court appears to have acknowledged that in certain circumstances, “a diagnosis of fetal anomalies will not occur until after 20 weeks and thus, a woman’s decision as to whether to have an abortion will be completely taken away from her.” *Isaacson v. Horne*, 2:12-CV-01501, 2012 WL 3090247, at *7 (D. Ariz. July 30, 2012). It nonetheless dismissed this possibility as irrelevant to a “facial” challenge to the statute because it concluded—without any medical basis—that such circumstances were somehow “unique.” *Id.* at *8. As the evidence above establishes and the experience of *amici* confirm, there will be numerous patients each year in Arizona for whom grave fetal abnormalities will first be diagnosed at or after 20 weeks, and who would be denied the opportunity to obtain an abortion by HB 2036, even though the fetus has not reached viability.

II. HB 2036 FORCES DOCTORS TO COMPROMISE PATIENT HEALTH BY WAITING UNTIL A WOMAN’S HEALTH CONDITION QUALIFIES AS AN EMERGENCY BEFORE INTERVENING AND ALSO PREVENTS DOCTORS FROM TREATING WOMEN WITH SERIOUS HEALTH CONDITIONS

HB 2036 is unconstitutional because it bans abortion at a previability stage of pregnancy; no health exception, no matter how broad, could save it. But in addition, the medical emergency language in HB 2036 fails entirely to protect women for whom pregnancy poses serious health risks. HB 2036 limits abortions

at and after 20 weeks to cases of “medical emergency,” defined as “a condition that, on the basis of the physician’s good faith clinical judgment, so complicates the medical condition of a pregnant woman as to necessitate the immediate abortion of her pregnancy to avert her death or for which a delay will create serious risk of substantial and irreversible impairment of a major bodily function.” A.R.S. § 36-2151(6). Under this exception, a physician can perform an abortion only once a medical condition has so compromised the woman’s health that she requires an “*immediate* abortion of her pregnancy to avert her death” or a “*delay*” in care will create serious risk of permanent damage. *Id.* (emphasis added). Both circumstances require the medical threat to be acute and immediate, thus foreclosing an abortion in circumstances in which the pregnancy poses a serious, but not yet urgent, health risk.

As an initial matter, there are many circumstances in which it will not become clear to the doctor or patient before 20 weeks that continued pregnancy threatens the patient’s health, or that the doctor cannot manage the risks of a pre-existing condition within parameters acceptable to the woman. Indeed, patients seeking abortions at or after 20 weeks often do so because they are experiencing a potentially life-threatening medical condition that is either caused or worsened by the pregnancy, or because they need to obtain treatment for a condition such as

cancer but cannot do so while pregnant.⁶ Exacerbating the problem, some patients with medical conditions that make pregnancy particularly dangerous for them are not referred to the proper specialist until almost 20 weeks or even after that point.⁷ To preserve their health, at least some of these patients ultimately choose to end their pregnancies after receiving a definitive diagnosis. *See, e.g.,* Clewell Decl. ¶ 16. Even where abortion presents the best way to preserve a woman's long-term health (including her life), HB 2036 bans abortion at or after 20 weeks unless her condition is so dire that an immediate abortion is necessary to avert death or serious risk of permanent damage.

Yet many serious threats to a pregnant woman's health do not require such immediate treatment. By way of example, pregnant women with serious diabetic complications often risk a worsening of their condition, including the onset of blindness, if they carry their pregnancies to term. *See* Greene & Ecker, *Abortion, Health, and the Law*, 350 N. Engl. J. Med. at 184. Notwithstanding the significant

⁶ ACOG members treat patients with the very same conditions detailed by Plaintiffs' declarants: diabetes, kidney disease, cardiac disease, history of severe pre-eclampsia or eclampsia, and maternal hematologic diseases that cause abnormal blood clotting. *See, e.g.,* Declaration of Paul A. Isaacson ("Isaacson Decl.") [D. Ct. Dkt. #2] ¶ 13; Clewell Decl. ¶ 16.

⁷ Ideally, all women with chronic medical conditions would consult with their obstetrical care providers before becoming pregnant. Such consultation frequently does not occur, however, because many patients do not appreciate the potential for complications associated with pregnancy and because 50 percent of all pregnancies in the United States are unplanned. Greene & Ecker, *Abortion, Health, and the Law*, 350 N. Engl. J. Med. 184, 184 (2004).

risks that diabetic complications may pose to a woman's health, they generally do not fit within HB 2036's definition of a "medical emergency" because they do not necessitate an *immediate* abortion to avert death or the risk of permanent damage.

Several other medical conditions—for which timing cannot be predicted during a pregnancy—present similar difficulties. For example, a woman who discovers after 20 weeks that she has breast cancer requiring radiation or chemotherapy may choose to terminate rather than have a fetus die *in utero* as a result of exposure to these toxic treatments. *See, e.g.*, Clewell Decl. ¶ 16.

Other medical conditions that may lead a patient to terminate a previability pregnancy after 20 weeks to protect her health include: Alport syndrome, a form of kidney inflammation;⁸ severe pulmonary hypertension, which involves increased pressure within the lung's circulation system;⁹ high grade mitral valve stenosis, an abnormal closing of a heart valve;¹⁰ and lupus, a connective tissue disorder which may suddenly worsen during pregnancy and lead to fatal blood

⁸ *See* Matsuo et al., *Alport Syndrome and Pregnancy*, 109 *Obstet. & Gynecol.* 531, 531 (2007).

⁹ *See* Bowers et al., *Dilation and Evacuation During the Second Trimester of Pregnancy in a Woman with Primary Pulmonary Hypertension*, 33 *J. Reprod. Med.* 787, 787 (1988).

¹⁰ *See* Reimold & Rutherford, *Valvular Heart Disease in Pregnancy*, 349 *N. Engl. J. Med.* 52, 55 (2003).

clots and other serious complications.¹¹ All of these conditions pose serious health risks for pregnant women, and the state should not prohibit treatment until such conditions advance to the point that an “immediate” abortion is required to avert the patient’s death or that any “delay” will create risk of substantial and irreversible impairment of a major bodily function. To require a physician to postpone care until that point is to put the patient’s health in serious jeopardy and to compromise the physician’s ethical duty to the patient.

It is no answer that the medical emergency language in HB 2036’s *ban* is identical to the language that the Supreme Court upheld in *Casey* in the context of a law that imposed mere *delay* on accessing abortion care. *See Planned Parenthood of Se. Pa. v. Casey*, 505 U.S. 833, 887 (1992) (upholding provisions imposing 24-hour waiting period for abortion). Take, for example, a patient with a cardiac condition for whom continued pregnancy presents serious health risks, but who does not require an *immediate* abortion to avert death or substantial risk of irreversible damage. She does not qualify for a medical emergency exception under either law, but the consequences for her are entirely different: under the law at issue in *Casey*, she must merely wait 24 hours, and is then free to terminate her pregnancy to protect her health while she still has it; under HB 2036, if she is at or

¹¹ *See* Cortes-Hernandez et al., *Clinical Predictors of Fetal and Maternal Outcome in Systemic Lupus Erythematosus: A Prospective Study of 103 Pregnancies*, 41 *Rheumatology* 643, 646-647 (2002).

after 20 weeks, she cannot terminate her pregnancy at all—unless and until her health deteriorates so severely that an immediate abortion is necessary to avert death or serious risk of permanent damage. Hence, Defendants’ assertion notwithstanding, there is no such thing as a “*Casey* health exception” to a complete ban on previability abortions such as HB 2036. Indeed, the Court in *Casey* did not consider, let alone approve, any medical emergency exception to an outright ban on abortion at a previability stage of pregnancy: nothing in *Casey* so much as suggests that this medical emergency language could save an outright ban before viability from constitutional infirmity, nor that it protects adequately women’s lives and health.

In thus severely endangering women’s health, HB 2036 places restrictions on physicians that conflict with their ethical duty to provide the best care possible to their patients. *See* ACOG Code of Conduct I.2 (“The obstetrician-gynecologist should serve as the patient’s advocate and exercise all reasonable means to ensure that the most appropriate care is provided to the patient.”). Under HB 2036’s “medical emergency” exception, a doctor must either let a patient deteriorate until an “immediate” termination—or termination without “delay”—is necessary or face possible criminal prosecution and license suspension or revocation. By requiring doctors to wait until a woman faces immediate injury or death, the ban indefensibly jeopardizes patients’ health.

III. ABORTION IS FAR SAFER FOR WOMEN THAN CARRYING A PREGNANCY TO TERM AND GIVING BIRTH

Given the utter disregard for women's health discussed above, Defendants' attempt to justify HB 2036 on maternal health grounds is neither credible nor persuasive. Defendants insist on the unremarkable proposition that the "instance of complications [from abortion] is highest after twenty weeks of gestation," *Isaacson*, 2012 WL 3090247, at *10. But Defendants fail to account for the fact that the alternative to abortion is continued pregnancy and childbirth; that medical evidence overwhelmingly demonstrates that abortion imposes far *lower* risks on a woman's health than does carrying a pregnancy to term and giving birth; and that no credible evidence exists supporting the proposition that abortion specifically at and after 20 weeks is more dangerous for a woman than continuing the pregnancy and giving birth.

Defendants make much of the fact that abortion, like all medical or surgical procedures, carries some health risks.¹² The argument, however, misses the point. Not only is induced abortion one of the *least* risky procedures in modern medicine,¹³ but well-accepted statistics show that it is far safer than the only

¹² See, e.g., Def. Montgomery's Motion to Dismiss [D. Ct. Dkt. #25] ¶¶ 7-8; *Isaacson*, 2012 WL 3090247, at *2 (observing Arizona legislature finding that "abortion has a higher medical risk when the procedure is performed later in pregnancy" (internal quotation marks omitted)).

¹³ See Bartlett et al., *Risk Factors for Legal Induced Abortion-Related Mortality in the United States*, 103 *Obstet. & Gynecol.* 729, 729 (2004).

available alternative—*i.e.*, carrying a pregnancy to term and giving birth.¹⁴ Indeed, the mortality rate associated with abortions performed from 1998 to 2005 was 0.6 deaths per 100,000 procedures, whereas the mortality rate associated with live births during that same time period was 8.8 deaths per 100,000 live births.¹⁵ That is, the woman’s risk of death associated with childbirth was approximately 14 times higher than that associated with abortion.¹⁶ Additionally, Defendants fail to mention that “*every complication,*” including anemia, hypertensive disorders such as preeclampsia, and pelvic and perineal trauma, is “more common among women having live births than among those having abortions.”¹⁷ While Defendants claim that “abortion becomes more dangerous to the mother than childbirth—in terms of

¹⁴ See Raymond & Grimes, *The Comparative Safety of Legal Induced Abortion and Childbirth in the United States*, 119 *Obstet. & Gynecol.* 215, 215 (2012); see also Grimes & Creinin, *Induced Abortion: An Overview for Internists*, 149 *Annals Internal Med.* 620, 623 (2004) (noting that abortion is “one of the safest [surgical] procedures in contemporary practice”).

¹⁵ Raymond & Grimes, 119 *Obstet. & Gynecol.* at 216; see also Bartlett et al., 103 *Obstet. & Gynecol.* at 734 (“In the 25 years following the legalization of abortion in 1973 ... the risk of death from legal abortion declined dramatically by 85%, from 4.1 to 0.6[.]”).

¹⁶ Raymond & Grimes, 119 *Obstet. & Gynecol.* at 216.

¹⁷ *Id.* at 216-217 (emphasis added); see also Bruce et al., *Maternal Morbidity Rates in a Managed Care Population*, 111 *Obstet. & Gynecol.* 1089, 1092 (2008) (“Rates of anemia, hypertensive disorders of pregnancy, pelvic and perineal trauma, excessive vomiting, and postpartum hemorrhage each occurred more frequently in women who had a live birth or stillbirth.”).

short-term risks—at least by 20 weeks gestation,”¹⁸ they cite to but a single article lacking any evidence at all in support of that assertion.¹⁹

In an attempt to bolster their weak position, Defendants also point to studies indicating a link between abortion and the risk of subsequent preterm birth, stressing the attendant risks to the woman. But this too is incorrect. The most recent evidence confirms there is no significant risk of preterm birth after one abortion.²⁰ Moreover, as one author has cautioned, many of the older studies on which Defendants rely neither prove nor conclude that abortions are the *cause* of those conditions; they merely show an *association* between multiple abortions and some adverse birth outcomes such as preterm labor (which could be caused by

¹⁸ See Def. Montgomery’s Resp. to Pls’ Motion for Preliminary Injunction or Temporary Restraining Order [D. Ct. Dkt. #27] ¶ 3 (citing Bartlett et al., 103 *Obstet. & Gynecol.* 729)

¹⁹ Declaration of David A. Grimes (“Grimes Decl.”) [D. Ct. Dkt. #34-2] ¶ 8 (describing Defendants’ reliance on Bartlett article as “misleading” because it “has no information at all on childbirth mortality and thus cannot support the proposition” that “by at least 20 weeks,” abortion becomes more dangerous for women than childbirth).

²⁰ See Klemetti et al., *Birth Outcomes After Induced Abortion: A Nationwide Register-Based Study of First Births in Finland*, *Human Reproduction* 1, 3, 4 (2012); see also Ancel et al., *History of Induced Abortion as a Risk Factor for Preterm Birth in European Countries*, 19 *Human Reproduction* 734, 736 (2004) (finding risk of preterm delivery higher in women who reported two or more previous abortions than women with only one previous abortion).

other factors).²¹ Finally, even if a causal link could be established, Defendants make no attempt to explain how it could possibly serve as a basis for banning abortions for all women given the potentially grave health risks posed by forcing them to carry to term as well as the fact that some women may choose not to become pregnant again.

IV. ABORTION DOES NOT INCREASE PSYCHOLOGICAL RISKS FOR WOMEN

Defendants and the legislature have separately sought to justify the ban on grounds that because abortion allegedly causes negative mental health effects, it is more dangerous than childbirth. This statement, too, is wholly unsupported by the scientific evidence. As the American Psychological Association concluded in a comprehensive 2008 review of existing literature:

[S]ome women do experience sadness, grief, and feelings of loss following termination of a pregnancy, and some experience clinically significant disorders, including depression and anxiety. However, [the APA Task Force] reviewed no evidence sufficient to support the claim that an observed association between abortion history and mental health was caused by the abortion per se, as opposed to other factors.

²¹ Klemetti et al., *Human Reproduction* 6 (increased risk following several induced abortions may be due to confounding factors that could not be controlled for).

Major et al., *Report of the APA Task Force on Mental Health and Abortion* 4 (2008), available at <http://www.apa.org/pi/women/programs/abortion/mental-health.pdf> (“*APA Task Force Report*”).²²

Indeed, in support of its argument Defendants cite but a single study that compared women who had abortions in their second and third trimesters to women who had abortions in the first trimester; the authors found that women who had abortions later in pregnancy reported ““more disturbing dreams, more frequent reliving of the abortion, and more trouble falling asleep.””²³ But a more recent (and comprehensive) review of scientific literature by the Academy of Royal Medical Colleges in the United Kingdom found this study to be extremely

²² The 2008 APA report continues to stand as the benchmark review of this body of literature. Although a 2011 meta-analysis claimed to find flaws in the report’s findings (*see* Coleman, *Abortion and Mental Health: Quantitative Synthesis and Analysis of Research Published 1995-2009*, 199 *Brit. J. Psychiatry* 180, 180, 185 (2011)), this meta-analysis itself has been roundly criticized by the scientific community. Academy of Medical Royal Colleges, *Induced Abortion and Mental Health* 14 (2011), available at http://www.nccmh.org.uk/reports/ABORTION_REPORT_WEB%20FINAL.pdf (“*Report of the Academy of Medical Royal Colleges*”) (observing with respect to the Coleman meta-analysis that “[d]etails of the search strategy and the number of papers retrieved in the search were not provided, nor was it clear why certain papers and outcomes were excluded”; studies relied on were “not required to control for mental health problems prior to the abortion”; and “[p]revalence rates of mental health problems and factors associated with poorer outcomes were not included in the review and meta-analysis”).

²³ Def. Montgomery’s Resp. to Pls.’ Emergency Motion for Preliminary Injunction Pending Appeal [9th Cir. Dkt. #7-1] 8 (quoting Coleman et al., *Late-Term Elective Abortions and Susceptibility to Posttraumatic Stress Symptoms*, *J. Pregnancy* 1, 7 (2010)).

unreliable, as the results were drawn entirely from a self-administered internet survey completed by women from around the world, including countries where abortion is illegal.²⁴ Moreover, as the Academy also pointed out, this study lacked an appropriate comparison group—women who continued their pregnancies—so it cannot be relied upon to draw any conclusions as to the relative safety of abortion over childbirth.²⁵

It is well-documented, in fact, that the lack of an appropriate comparison group is a common problem in studies that claim to show that abortion causes negative mental health effects. *Report of the Academy of Medical Royal Colleges* 7 (observing that “[t]he majority of studies included in the review were subject to multiple limitations” including “inadequate control for confounding variables and inappropriate comparison groups, [*i.e.*] comparing women who had had an abortion with those who had given birth without considering whether or not the pregnancy was wanted”); *APA Task Force Report* 8 (observing that “few studies examining the mental health implications of abortion include appropriate comparison groups” for purposes of determining the relative risk of mental health

²⁴ *Report of the Academy of Medical Royal Colleges* 49 (observing that because “the sample used in the analysis was self-selected, the chances of selection bias were increased and because “women were recruited from ... countries ... where abortion is illegal” and “women in other countries may have had an abortion before abortion was legalized,” the study’s applicability to countries where abortion is legal was “limit[ed]”).

²⁵ *Id.* at 153.

problems associated with abortion compared to its alternatives). This is all the more important to remember here, where, as Plaintiffs' declarations demonstrate, many patients who choose to terminate viable pregnancies at or after 20 weeks are terminating *wanted* pregnancies because of severe health indications or fetal abnormalities. As the APA explains:

Abortion under these circumstances is a very different physical and psychological event than an abortion of an unplanned or unwanted pregnancy. Not only does abortion for reasons of fetal anomaly typically occur later in pregnancy, but more importantly, it usually occurs in the context of a pregnancy that was initially planned and wanted. Consequently, the meaning and significance of the pregnancy and abortion are apt to be quite different, as is the extent of loss experienced.

APA Task Force Report 68. For these women, the appropriate comparison group would be women carrying similarly wanted pregnancies who receive a tragic diagnosis late in pregnancy and decide not to terminate. *Amici* are aware of only one study that adequately compares these two groups, and it concluded that women who gave birth to a child with severe abnormalities suffered worse mental health outcomes than did the women who chose abortion. *Id.* at 70-72 (citing Rona et al., *Anxiety and Depression in Mothers Related to Severe Malformation of the Heart of the Child*, 87 *Acta Paediatrica* 201, 201-205 (1998)).

Of course, no one would suggest that, because of these findings, the State should force women in this situation to terminate. Likewise, the state should not force women to carry pregnancies to term based on what it asserts (incorrectly) is

the scientific evidence. Ultimately, abortion is a tremendously personal and complicated decision, and one of the many reasons this ban is so harmful—to both a woman’s physical and mental health—is that it would force a one-size-fits-all decision on women and their families regardless of their circumstances, background, and needs.

V. SCIENTIFIC EVIDENCE ESTABLISHES THAT PREVIABILITY ABORTION DOES NOT CAUSE FETAL PAIN

A. There Is No Credible Scientific Evidence Of Fetal Pain Perception Previability

In its ruling, the District Court found as “undisputed” fact that fetuses can experience pain at 20 weeks of gestation. *Isaacson*, 2012 WL 3090247, at *10. This “fact” is irrelevant to the issue of whether HB 2036 can be constitutionally applied to abortions prior to viability. It is also insupportable. There is no credible scientific evidence of previability fetal pain perception.

Recent systematic reviews of the existing research published in peer-reviewed journals have concluded that there is no evidence of fetal pain perception prior to viability. In 2005, a group of experts in all the relevant fields at the University of California, San Francisco (“UCSF”) conducted such a review, published in the *Journal of the American Medical Association*.²⁶ The UCSF review concluded that a human fetus probably does not have the capacity to

²⁶ Lee et al., *Fetal Pain: A Systematic Multidisciplinary Review of the Evidence*, 294 JAMA 947 (2005).

experience pain until 29 weeks at the earliest.²⁷ Similar conclusions were reached by the Royal College of Obstetricians and Gynaecologists in March 2010, and again in 2012 by Italian researchers from the University of Siena in Siena, Italy, in an article published in the peer-reviewed Journal of Maternal-Fetal and Neonatal Medicine, the official journal of The European Association of Perinatal Medicine.²⁸

The District Court refers to the Arizona legislature’s findings of “substantial and well-documented evidence” of fetal pain perception at 20 weeks, but the “evidence” it cites does not come close to meeting that description. The “evidence” in support of those findings consists of only two affidavits submitted by Defendants, one by Dr. Jean Wright, the other by Dr. Paul Liu, neither of which deserves any credence. *See Isaacson*, 2012 WL 3090247, at *10. First, neither Dr. Wright nor Dr. Liu has conducted or published peer-reviewed research on the question. Instead, they rely on their anecdotal experience as anesthesiologists. *See*

²⁷ *Id.* at 947, 952.

²⁸ Bellieni & Buonocore, *Is Fetal Pain A Real Evidence?*, 25 J. Maternal-Fetal & Neonatal Med. 1203, 1205 (2012) (“Our data show that there is consistent evidence of the possibility for the fetus to experience pain in the third trimester, and this evidence is weaker before this date and null in the first half of pregnancy.”); Royal College of Obstetricians and Gynaecologists, *Fetal Awareness: Review of Research and Recommendations for Practice* 11 (Mar. 2010) (“*Fetal Awareness*”) (“The lack of cortical connections before 24 weeks ... implies that pain is not possible until after 24 weeks” and “[e]ven after 24 weeks, there is continuing development and elaboration of intracortical networks”).

generally Affidavit of Paul H. Liu (“Liu Aff.”) [D. Ct. Dkt. #25-1]; Declaration of Jean A. Wright (“Wright Decl.”) [D. Ct. Dkt #25-1].

Second, though Dr. Wright and Dr. Liu purport to rely on scientific literature, they demonstrate no familiarity with the body of research available on the topic of fetal pain perception. Dr. Liu’s affidavit cites no scientific literature at all. *See generally* Liu Aff. Dr. Wright relies on a cherry-picked selection of thoroughly outdated articles, none of which supports her conclusion that it is “well grounded in scientific and medical fact” that a fetus has the capacity to perceive pain at 20 weeks. Wright Decl. ¶ 32; *see also id.* ¶ 20 (citing “early studies”); *id.* ¶ 27 (citing article from 1991); *id.* ¶ 31 (quoting article from 1987). Instead, Dr. Wright relies primarily upon the work of Dr. K.S. Anand. Wright Decl. ¶¶ 11, 19, 31. Dr. Anand is not himself a primary researcher in pain perception: he is “a pediatrician who has conducted research on pain in general, focusing primarily on infants.” *Planned Parenthood Fed’n v. Ashcroft*, 320 F. Supp. 2d 957, 999 (N.D. Cal. 2004), *rev’d on other grounds by Gonzales v. Carhart*, 550 U.S. 124 (2007). His purported expertise regarding fetal pain perception has been rejected in a published decision by another district court in this Circuit. *Id.* at 999-1000 (declining to give Dr. Anand’s testimony any weight greater than that of others who have reviewed the scientific literature and reached different conclusions). Moreover, even Dr. Anand has admitted that the question of when fetal pain

perception may develop is a matter of substantial “disagreement” within the medical community. *See Carhart v. Ashcroft*, 331 F. Supp. 2d 805, 913 (D. Neb. 2004), *rev’d on other grounds by Gonzales v. Carhart*, 550 U.S. 124 (2007) (quoting Dr. Anand).

Additionally, both Dr. Liu and Dr. Wright falsely suggest that because fetal anesthesia is often used during fetal surgery, the medical consensus must be that there is fetal pain perception. Liu Aff. ¶¶ 5-6; Wright Decl. ¶ 26; *see Isaacson*, 2012 WL 3090247, at *10. That is simply not so. During fetal surgery, fetal anesthesia and analgesia are appropriate because they serve other purposes unrelated to pain reduction, particularly inhibition of fetal movement and prevention of long term developmental consequences from the hormonal and circulatory stress responses to surgery.²⁹ Whether fetal anesthesia is appropriate during fetal surgery is thus a separate and distinct question from whether there is fetal pain perception.³⁰

In sum, the assertion of Defendants, the legislature and the District Court that there is fetal pain perception at 20 weeks is not only unsupported by the

²⁹ Lee et al., 294 JAMA at 951; Smith et al., *Pain and Stress in the Human Fetus*, 92 European J. Obstet. & Gynecol. and Reprod. Biology 161, 161, 165 (2000) (fetal anesthesia may be appropriate even before the “neuroanatomical pathways” necessary to feel pain begin to develop, because of hormonal and circulatory stress responses with “long-term neurodevelopmental sequelae” that can occur earlier, and which may be prevented by anesthesia).

³⁰ Lee et al., 294 JAMA at 951

“evidence” they cite but also completely at odds with the prevailing scientific research and opinion.

B. The Human Fetus Does Not Have The Capacity To Experience Pain Until After Viability

The District Court’s reasoning as to why a fetus “can feel pain” by 20 weeks gestational age has also been roundly rejected by the scientific community. The District Court found that by 20 weeks the fetus has “a full complement of pain receptors” and will exhibit stress responses to stimuli. *Isaacson*, 2012 WL 3090247, at *10. But there is no scientific support for the conclusion that, as a result, a fetus can feel pain.³¹ The connections necessary to transmit signals from peripheral sensory nerves to the brain, as well as the brain structures necessary to process those signals, do not develop until at least 24 weeks of gestation.³²

³¹ RCOG, *Fetal Awareness* 7 (“Reflex movements and hormonal stress responses ... cannot be assumed to indicate perception or awareness.”); Lee et al., 294 JAMA at 947 (similar, because reflexes and hormonal stress responses “can be elicited by nonpainful stimuli and occur without conscious cortical processing”).

³² RCOG, *Fetal Awareness* 11 (“Connections from the periphery to the cortex are not intact before 24 weeks of gestation.”); Kostović & Jovanov-Milošević, *The Development of Cerebral Connections During the First 20-45 Weeks’ Gestation*, 11 Seminars in Fetal & Neonatal Med. 415, 416-417 (2006) (describing transition from “fetal phase” (20-23 weeks) and “early preterm phase” (24-32 weeks)); Derbyshire, *Can Fetuses Feel Pain?*, 332 BMJ 909, 912 (2006) (stating that the “neuroanatomical system for pain can be considered complete by 26 weeks’ gestation”); Smith et al., 92 European J. Obstet. & Gynecol. and Reprod. Biology 161-162 (the neuroanatomical pathways necessary to feel pain begin to develop at 22 weeks, and are complete at 26 weeks).

Because it lacks these connections and structures, the fetus does not even have the physiological capacity to perceive pain until at least 24 weeks of gestation.³³

Moreover, the perception of pain requires more than just the mechanical transmission and reception of signals; it is “an emotional and psychological experience that requires conscious recognition of a noxious stimulus.”³⁴ The capacity for such conscious recognition does not develop until the third trimester at the earliest, well past the period between 20 weeks and viability at issue in this case.³⁵ Indeed, there is good evidence that the neural circuitry necessary to distinguish touch from “nociception” (*i.e.*, painful touch) does not develop until late in the third trimester.³⁶

³³ RCOG, *Fetal Awareness* 11 (“The lack of cortical connections before 24 weeks ... implies that pain is not possible until after 24 weeks.”).

³⁴ Lee et al., 294 JAMA at 952; *see also* Derbyshire, 332 BMJ at 912 (“A developed neuroanatomical system is necessary but not sufficient for pain experience”); RCOG, *Fetal Awareness* 6, 10 (similar, and discussing definition of pain).

³⁵ Lee et al., 294 JAMA at 947, 952; Bellieni & Buonocore, 25 J. Maternal-Fetal & Neonatal Med. at 1205; *see also* RCOG, *Fetal Awareness* 11 (“[T]he fetus is sedated by the physical environment of the womb and usually does not awaken before birth.”); Derbyshire, 332 BMJ at 912 (concluding that “it is not possible for a fetus to experience pain”).

³⁶ Fabrizi, *A Shift in Sensory Processing that Enables the Developing Human Brain to Discriminate Touch from Pain*, 21 Current Biology 1552, 1552 (2011) (concluding that “specific neural circuits necessary for discrimination between touch and nociception emerge from 35-37 weeks gestation in the human brain”); *see also* Lee et al., 294 JAMA at 950.

In short, the current scientific consensus is that (1) the human fetus does not develop the capacity to perceive pain until much later than 20 weeks gestational age; (2) before at least 24 weeks, even the basic anatomical structures necessary for transmission of signals from peripheral neural receptors to the brain have not developed; and (3) the capacity for conscious perception of pain does not develop until at least the third trimester. In finding otherwise, the District Court relied on purported “expert” opinions of anesthesiologists who lack relevant expertise, and a skewed portion of the medical and scientific literature that is not only incomplete, but contains no credible evidence. *See Isaacson*, 2012 WL 3090247, at *10.

In the end, though, none of this matters here. Although there is no scientific support for the notion of fetal pain perception previability, the issue is simply irrelevant to the question before the Court: whether HB 2036 can be constitutionally applied to abortions prior to viability. It cannot. *See Casey*, 505 U.S. at 871 (“The woman’s right to terminate her pregnancy before viability is the most central principle of *Roe v. Wade*. It is a rule of law and a component of liberty we cannot renounce.”); *Planned Parenthood of Idaho, Inc. v. Wasden*, 376 F.3d 908, 921 (9th Cir. 2004) (“Adult women have a Fourteenth Amendment right to terminate a pre-viability pregnancy.”).

CONCLUSION

For the reasons set forth above, *amici* join Plaintiffs in urging this Court to reverse the decision of the district court and find the 20-week ban, to be codified as A.R.S. § 36-2159 B, unconstitutional as applied to previability abortions.

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

Pursuant to Fed. R. App. P. 32(a)(7)(C) and Ninth Circuit Rule 32-1, I certify that the attached Brief for *Amici Curiae*, has a typeface of 14 points and contains 6,968 words, exclusive of exempted portions.

s/ Alan E. Schoenfeld

Alan E. Schoenfeld

CERTIFICATE OF SERVICE

I certify that on September 11, 2012, I electronically filed the foregoing Brief for *Amici Curiae* with the Clerk of Court for the United States Court of Appeals for the Ninth Circuit using the appellate CM/ECF system.

Participants in the case who are registered CM/ECF users (either as entities or through individual attorneys representing those offices) will be served by the appellate CM/ECF system.

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