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CLERK OF THE SHAWNEE COUNTY DISTRICT COURT
CASE NUMBER: 2015-CV-000490

IN THE THIRD JUDICIAL DISTRICT
DISTRICT COURT, SHAWNEE COUNTY, KANSAS

HODES & NAUSER, MDs, P.A.; and TRACI LYNN NAUSER, M.D.,	)	
Plaintiffs,	)	**Case No. 2015CV490**
	)	**Division 2**
v.	)	
DEREK SCHMIDT, in his official capacity as Attorney General of the State of Kansas; and STEPHEN M. HOWE, in his official capacity as District Attorney for Johnson County,	)	
Defendants.	)	

<u>Plaintiffs' Motion for Summary Judgment</u>

Pursuant to K.S.A. § 60-256, Plaintiffs respectfully move the Court to grant summary judgment on their sole claim that Senate Bill 95 ("S.B. 95" or the "Act") violates Section 1 of the Kansas Constitution Bill of Rights. In support of this motion, Plaintiffs rely on the memorandum of law submitted herewith and a copy of S.B. 95 (Exhibit 1); the expert and fact declaration of Traci Lynn Nauser, M.D. (Exhibit 2); the expert declaration of Anne Davis, M.D., M.P.H. (Exhibit 3); the expert declaration of Thomas Cunningham, PhD, M.A., M.S. (Exhibit 4); a copy of the Amended Case Management Order in this litigation (Exhibit 5); and a copy of the Responses of Defendants to Plaintiffs' First Interrogatories (Exhibit 6). There are no disputed issues of fact.

Accordingly, in the interest of judicial economy, and for the reasons set forth in Plaintiffs' Memorandum of Law in Support of Plaintiffs' Motion for Summary Judgment, summary judgment is appropriate at this time.

Pursuant to Kansas Supreme Court Rule 133(c)(1), Plaintiffs respectfully request the Court to grant oral argument on this motion for summary judgment.

WHEREFORE Plaintiffs request that the Court:

a. grant this motion for summary judgment;

b. issue a declaratory judgment that the Act as a whole is unconstitutional and therefore unenforceable;

c. issue a permanent injunction restraining Defendants, their agents, and their successors in office from enforcing the Act in its entirety or any provisions thereof; and

d. grant such other and further relief as the Court deems just, proper, and equitable.

Respectfully submitted,

/s Genevieve Scott Date: January 31, 2020

Genevieve Scott, NY Bar #4922811*
Caroline Sacerdote, NY Bar #5417415*
Jiaman ("Alice") Wang, NY Bar # 5559737*
Center for Reproductive Rights
199 Water Street, 22nd Floor
New York, NY 10038
Phone: (917) 637-3605
Fax: (917) 637-3666
gscott@reprorights.org
csacerdote@reprorights.org
awang@reprorights.org
*Admitted *pro hac vice*

Paul W. Rodney, CO Bar #41951*
Arnold & Porter Kaye Scholer LLP
370 Seventeenth Street, Suite 4400
Denver, CO 80202
Phone: (303) 863-2319
Fax: (303) 832-0428
Paul.Rodney@arnoldporter.com
*Admitted *pro hac vice*

Teresa A. Woody, KS Bar #16949
The Woody Law Firm PC
1621 Baltimore Avenue
Kansas City, MO 64108
Phone: (816) 421-4246
Fax: (816) 471-4883
teresa@woodylawfirm.com

COUNSEL FOR PLAINTIFFS

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on January 31st, 2020 the foregoing was served on the following by electronic mail pursuant to an agreement of the parties:

Robert Hutchison
Thompson Warner, P.A.
333 W. 9th Street
P.O. Box 1264
Lawrence, KS 66044
robert.hutchison@333legal.com

Jeffrey A. Chanay
Deputy Attorney General, Civil Litigation Division
Office of the Kansas Attorney General
120 SW 10th Avenue, 3rd Floor
Topeka, KS 66612-1597
jeff.chanay@ksag.org

Brant M. Laue
Deputy Solicitor General
Memorial Building, 2nd Floor
120 SW 10th Avenue
Topeka, Kansas, 66612-1597
brant.laue@ag.ks.gov

COUNSEL FOR DEFENDANTS

/s Genevieve Scott

Genevieve Scott*

EXHIBIT 1

SENATE BILL No. 95

By Senators Love, Abrams, Arpke, Baumgardner, Bruce, Donovan, Fitzgerald, Holmes, Kerschen, Knox, LaTurner, Lynn, Masterson, McGinn, O'Donnell, Olson, Ostmeyer, Petersen, Pilcher-Cook, Powell, Pyle, Smith, Tyson, Wagle and Wilborn

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AN ACT concerning abortion; creating the Kansas unborn child protection from dismemberment abortion act.

Be it enacted by the Legislature of the State of Kansas:

Section 1. The provisions of sections 1 through 9, and amendments thereto, shall be known and may be cited as the Kansas unborn child protection from dismemberment abortion act.

Sec. 2. As used in sections 1 through 9, and amendments thereto:

(a) "Abortion" means the use or prescription of any instrument, medicine, drug or any other substance or device to terminate the pregnancy of a woman known to be pregnant with an intention other than to increase the probability of a live birth, to preserve the life or health of the child after live birth, or to remove a dead unborn child who died as the result of natural causes in utero, accidental trauma or a criminal assault on the pregnant woman or her unborn child, and which causes the premature termination of the pregnancy.

(b) (1) "Dismemberment abortion" means, with the purpose of causing the death of an unborn child, knowingly dismembering a living unborn child and extracting such unborn child one piece at a time from the uterus through the use of clamps, grasping forceps, tongs, scissors or similar instruments that, through the convergence of two rigid levers, slice, crush or grasp a portion of the unborn child's body in order to cut or rip it off.

(2) The term "dismemberment abortion" does not include an abortion which uses suction to dismember the body of the unborn child by sucking fetal parts into a collection container, ***although it does include an abortion in which a dismemberment abortion, as defined in subsection (b)(1), is used to cause the death of an unborn child but suction is subsequently used to extract fetal parts after the death of the unborn child.***

(c) "Knowingly" shall have the same meaning attributed to such term in K.S.A. 2014 Supp. 21-5202, and amendments thereto.

(d) "Medical emergency" means a condition that, in reasonable medical judgment, so complicates the medical condition of the pregnant

woman as to necessitate the immediate abortion of her pregnancy to avert the death of the woman or for which a delay necessary to comply with the applicable statutory requirements will create serious risk of substantial and irreversible physical impairment of a major bodily function. No condition shall be deemed a medical emergency if based on a claim or diagnosis that the woman will engage in conduct which would result in her death or in substantial and irreversible physical impairment of a major bodily function.

Sec. 3. (a) No person shall perform, or attempt to perform, a dismemberment abortion on an unborn child unless: (1) The dismemberment abortion is necessary to preserve the life of the pregnant woman; or (2) a continuation of the pregnancy will cause a substantial and irreversible physical impairment of a major bodily function of the pregnant woman. No condition shall be deemed to exist if it is based on a claim or diagnosis that the woman will engage in conduct that would result in her death or in substantial and irreversible physical impairment of a major bodily function.

(b) No woman upon whom an abortion is performed or attempted to be performed shall be liable for performing or attempting to perform a dismemberment abortion. No nurse, technician, secretary, receptionist or other employee or agent who is not a physician, but who acts at the direction of a physician, and no pharmacist or other individual who is not a physician, but who fills a prescription or provides instruments or materials used in an abortion at the direction of or to a physician shall be liable for performing or attempting to perform a dismemberment abortion.

Sec. 4. The attorney general or any district or county attorney with appropriate jurisdiction may bring a cause of action for injunctive relief against a person who has performed or attempted to perform a dismemberment abortion in violation of section 3, and amendments thereto. Any injunctive relief ordered pursuant to an action filed under this section shall prohibit the defendant from performing or attempting to perform any dismemberment abortions in violation of section 3, and amendments thereto.

Sec. 5. (a) A cause of action for civil damages against a person who has performed a dismemberment abortion in violation of section 3, and amendments thereto, may be maintained by the following persons, unless, in a case where the plaintiff is not the woman upon whom the abortion was performed, the pregnancy resulted from the plaintiff's criminal conduct:

(1) A woman upon whom a dismemberment abortion has been performed in violation of section 3, and amendments thereto;

(2) the father of the unborn child, if married to the woman at the time the dismemberment abortion was performed; or

(3) the parents or custodial guardians of the woman, if the woman has

not attained the age of 18 years at the time of the abortion or has died as a result of the abortion.

(b) Damages awarded in such an action shall include:

(1) Money damages for all injuries, psychological and physical, occasioned by the dismemberment abortion;

(2) statutory damages equal to three times the cost of the dismemberment abortion;

(3) injunctive relief; and

(4) reasonable attorney fees awarded in accordance with subsection (d).

(d) (1) If judgment is rendered in favor of the plaintiff in an action brought under section 4, and amendments thereto, or this section, the court shall award reasonable attorney fees to the plaintiff in addition to any other relief that is awarded.

(2) If judgment is rendered in favor of the defendant in an action brought under section 4, and amendments thereto, or this section, and the court finds that the plaintiff's action was frivolous and brought in bad faith, the court shall award reasonable attorney fees to the defendant in addition to any other relief that is awarded.

(3) No attorney fees shall be assessed against the woman upon whom a dismemberment abortion was performed or attempted to be performed except in accordance with paragraph (2).

Sec. 6. Upon a first conviction of a violation of section 3, and amendments thereto, a person shall be guilty of a class A person misdemeanor. Upon a second or subsequent conviction of a violation of section 3, and amendments thereto, a person shall be guilty of a severity level 10, person felony.

Sec. 7. In every civil, criminal or administrative proceeding or action arising out of a violation of K.S.A. 65-6703, 65-6721, K.S.A. 2014 Supp. 65-6724 or section 3, and amendments thereto, the court shall rule whether the anonymity of any woman upon whom an unlawful abortion has been performed or attempted to be performed shall be preserved from public disclosure if she does not give her consent to such disclosure. The court, upon motion or sua sponte, shall make such a ruling and, upon determining that such woman's anonymity should be preserved, shall issue orders to the parties, witnesses and counsel and shall direct the sealing of the record and exclusion of individuals from courtrooms or hearing rooms to the extent necessary to safeguard her identity from public disclosure. Each such order shall be accompanied by specific written findings explaining why the anonymity of the woman should be preserved from public disclosure, why the order is essential to that end, how the order is narrowly tailored to serve that interest and why no reasonable less restrictive alternative exists. In the absence of written consent of the

woman upon whom an unlawful abortion has been performed or attempted to be performed, anyone other than a public official who brings an action arising out of a violation of K.S.A. 65-6703, 65-6721, K.S.A. 2014 Supp. 65-6724 or section 3, and amendments thereto, shall do so under a pseudonym. This section shall not be construed to conceal the identity of the plaintiff or of witnesses from the defendant or from attorneys for the defendant.

Sec. 8. Nothing in sections 1 through 9, and amendments thereto, shall be construed as creating or recognizing a right to abortion, nor a right to a particular method of abortion.

Sec. 9. If any provision or clause of this act or application thereof to any person or circumstances is held invalid, such invalidity shall not affect other provisions or applications of the act which can be given effect without the invalid provision or application, and to this end the provisions of this act are declared to be severable.

Sec. 10. This act shall take effect and be in force from and after its publication in the statute book.

EXHIBIT 2

IN THE THIRD JUDICIAL DISTRICT
DISTRICT COURT, SHAWNEE COUNTY, KANSAS

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Plaintiffs,	)	**Case No. 2015CV490**
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EXPERT AND FACT DECLARATION OF TRACI LYNN NAUSER, M.D.

TRACI LYNN NAUSER, M.D., declares the following statements to be true and correct under penalty of perjury under the laws of the State of Kansas:

1. I am a Plaintiff in the challenge to S.B. 95. I am a board-certified OBGYN licensed to practice medicine in Kansas and Missouri and a provider of abortion services. I am a fellow of the American College of Obstetricians and Gynecologists ("ACOG"), the leading medical society of OBGYNs in the United States, and a member of the National Abortion Federation ("NAF"), the leading medical society of abortion providers in North America. I have been licensed to practice medicine in the State of Kansas since 1998 and in the State of Missouri since 1994.

2. I obtained my undergraduate degree and medical degree from the University of Missouri Kansas City as part of a six-year combined bachelor's degree and medical degree program. After I obtained my medical degree, I completed the Obstetrics and Gynecology Residency Program at the University of Missouri-Kansas City School of Medicine in Kansas City, Missouri. I currently provide training to medical students who attend the University of Kansas Medical School and the Kansas City University of Medicine and Biosciences.

3. I have 23 years of experience providing first and second trimester abortions in Kansas and Missouri. My patients come from throughout Kansas and neighboring states. Over the course of my career, I have taken care of patients from across the country.

My Medical Practice

4. My practice is located in Overland Park, Kansas, and advertises under the name "Center for Women's Health." At the Center for Women's Health ("the Center"), we provide a full range of obstetrical and gynecological services, including but not limited to family planning services, pap smears, prenatal care, delivery of babies, gynecological procedures and surgeries, screening for and treatment of sexually transmitted infections, screening for gynecological and breast cancers, treatment of menopausal symptoms, treatment of dysfunctional uterine bleeding and fibroids, and infertility treatments. We also provide previability abortion services up to 21.6 weeks from the last menstrual period.

5. The Center is a private practice with two physicians and one nurse practitioner. The Center has been providing comprehensive obstetrical and gynecological care to women in Overland Park, Kansas for over 40 years. I am the only physician at the Center who provides Dilation and Evacuation ("D&E") procedures.

6. We perform a significant number of abortions in situations where the patient has a medical condition that complicates her pregnancy. We also perform a significant number of abortions for patients who seek to end their pregnancy because the fetus has been diagnosed with a severe or lethal anomaly. Many OBGYNs and perinatologists from Kansas and other states primarily or exclusively refer their patients to the Center when the patient seeks an abortion.

7. I am aware of only two other locations in Kansas where abortions are available. The other two providers are Planned Parenthood and South Wind Women's Center. Planned Parenthood is located in Overland Park, Kansas. South Wind Women's Center is approximately three hours away in Wichita, Kansas.

8. Our practice abides by the Kansas "Office Based Surgery Guidelines" and is routinely inspected as such. Throughout the years, we have complied with mounting regulations including, but not limited to, those requiring patients to receive state-mandated information 24 hours before an abortion procedure; mandatory ultrasound requirements: limitations on insurance coverage for abortion: a prohibition on abortion after 22 weeks, except in very narrow circumstances in which the woman's life or health is at risk; and a ban on the use of intact D&E, an alternative method of second-trimester abortion, unless the procedure is necessary to preserve the woman's life.

9. In the first trimester, we perform abortions by either medical or surgical means. Surgical abortions in the first trimester are done by suction curettage, in which a plastic curette connected to a suction apparatus is used to remove the products of conception.

10. At the Center, we typically use suction curettage to perform surgical abortion procedures through approximately14 weeks, 6 days gestation.

11. I perform D&E procedures, in which I use forceps or similar instruments to remove the fetus, either without using suction or in conjunction with suction, beginning at approximately 15 weeks gestation.

12. There is no firm gestational cutoff between a procedure accomplished solely using suction and D&E. When a physician sets out to perform surgical abortion using suction, even early in the second trimester, the physician cannot always rely solely on suction because it may not be effective at removing certain products of conception. In that case, the use of other surgical instruments, such as forceps, may be necessary. Whether the use of additional surgical instruments will be necessary to safely complete the procedure for a given patient cannot be predicted prior to beginning the procedure. For example, in a recent case on a patient at approximately 11 weeks gestation, it was not possible to safely complete her procedure using solely suction curettage, and I instead completed the procedure using a very small surgical instrument that allowed me to complete the procedure as quickly and as safely as possible. It was not possible prior to the procedure to predict that suction curettage would not be sufficient.

13. A D&E abortion is a surgical procedure, which is performed in two steps: dilation of the cervix and surgical removal of the fetus and placental tissue. When performing a D&E, in general, I first examine the patient, then insert a speculum and spray an antiseptic on the cervix and vagina. Following that, I inject a paracervical block to numb the cervix. I then dilate the cervix using dilators and then usually break the amniotic sac and remove the amniotic fluid. I then typically place laminaria and/or administer misoprostol as indicated for cervical ripening. When ready for the evacuation procedure, we use the appropriate monitoring devices to monitor pulse oximetry, respirations, blood pressure, pulse rate, and a 3 lead ECG. Patients are administered conscious sedation intravenously as well as IV fluids and oxytocin, an uterotonic agent. Then

using ultrasound guidance, the uterine contents are removed with a combination of suction and forceps. The use of forceps prior to causing fetal demise would violate the Act. Uterine evacuation typically takes between 3–10 minutes.

14. I typically provide D&Es as one day procedures up to 20 weeks 6 days gestation. Beginning at 21 weeks gestation, I sometimes provide D&Es as two day procedures if it is medically indicated for the patient. I do not provide procedures past 21 weeks and 6 days gestation.

Effect of the Act on My Provision of Abortion Care

15. I have reviewed S.B. 95 (the "Act"), including the prohibition on the use of what is termed "dismemberment abortion" on a living fetus. It is my understanding that the Act will operate to ban the provision of the standard D&E procedure, a safe, standard method of abortion and the most common abortion method after 14–15 weeks, unless fetal demise is induced prior to the procedure.

16. The Defendants suggest that there are alternative abortion methods that I could employ to avoid violating the Act, namely, induction procedures or causing fetal demise prior to D&E procedures. I strongly disagree that these are reasonable or feasible alternatives to the safe D&E procedure that I currently provide and that would be banned by the Act. The alternatives suggested by the Defendants would expose my patients to more complex procedures with greater risk, while offering no medical benefit. If the law were to go into effect, I would have to choose between subjecting my patients to such procedures or stop providing D&Es altogether. Each of these options raises difficult ethical concerns.

17. It has not been my practice to intentionally induce fetal demise prior to performing a D&E procedure and, prior to the passage of S.B. 95, I never considered incorporating it into my practice.

18. Should S.B. 95 go into effect, umbilical cord transection would not be a reliable method of inducing fetal demise to comply with the law. Though the cord is sometimes severed when the amniotic sac is ruptured and the amniotic fluid is removed using suction, or when using suction after removal of amniotic fluid, that does not occur in every case. It would not always be possible to transect the cord prior to beginning a D&E procedure and it is impossible to predict whether I will be able to transect the umbilical cord of any given patient or transect it without also transecting other fetal tissue. Efforts to reach the cord can expose my patients to increased risk of uterine perforation and bleeding. Further, waiting for fetal cardiac activity to cease before continuing the procedure would prolong the procedure and increases the risk of pain, bleeding, and infection. Waiting for fetal cardiac activity to cease could also lead to the need for additional IV sedation as well, which has its own risks associated with it.

19. Umbilical cord transection is largely unstudied. It has been reviewed in a single study, Kristina Tocce et al., *Umbilical Cord Transection to Induce Fetal Demise Prior to Second-Trimester D&E Abortion*, 88 Contraception 712 (2013), which does not provide a basis to conclude that I could safely achieve umbilical cord transection prior to a D&E in every case. As a physician, I would rarely, if ever, change my practice based on a single study, and in fact, think it would be unwise to do so, as subsequent studies may undermine or contradict the initial findings. Too many factors can influence the outcome of a single study, and indeed, the authors of this study note that its main limitation is "a potential lack of generalizability." *Id.* at 715. Notably, the authors do not identify any benefit to patients from causing demise using transection prior to a D&E procedure and do not address whether transection can be achieved prior to D&E without also transecting other fetal tissue. In my medical opinion, it is a more complex procedure with greater risk than D&E and provides no medical benefit.

20. In cases where I would attempt but be unable to transect the umbilical cord, my options would be to proceed with performing the D&E procedure in violation of the Act or withhold critical treatment from my patient in violation of medical ethics. Attempting to transect the umbilical cord necessarily entails rupturing the patient's amniotic sac. If the pregnancy tissue is not removed after the amniotic sac is broken, the patient will be exposed to risks including infection, hemorrhage, or spontaneous loss of pregnancy in an uncontrolled setting. I also could not rely on other methods of inducing fetal demise at that point in the procedure. The induction of fetal demise using digoxin following rupture of the amniotic sac is unstudied, and there is no evidence that it is either safe or effective. For these reasons, umbilical cord transection is not a reliable method of inducing fetal demise and digoxin injection, discussed further below, is not a feasible back-up to a failed transection procedure.

21. I also have serious concerns about the administration of digoxin to my patients prior to D&E. The evidence I am aware of shows increased risks of infection, extramural deliveries, and hospital admissions.[1] Based on my review of the medical evidence on the use of digoxin, although a very limited subset of physicians believe that digoxin may soften the fetal tissue and make the surgery easier, the medical research studies demonstrate no medical benefit from causing fetal demise. While no peer-reviewed study establishes a medical benefit to causing demise, several peer-reviewed studies establish that causing demise with digoxin does pose risks.[2] In my medical judgment, the evidence does not show the requisite statistically significant benefits to justify routine use of digoxin or any method of inducing fetal demise in our practice. In light of

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[1] Gillian Dean et al., *Safety of Digoxin for Fetal Demise Before Second-Trimester Abortion by Dilation and Evacuation*, 85 Contraception 144, 146 (2012).

[2] *Id.* at 146, 147–48; *see also* Katharine O'Connell White et al., *Intra-fetal Compared with Intra-amniotic Digoxin Before Dilation and Evacuation: A Randomized Controlled Trial*, 128(5) Obstetrics & Gynecology 1071, 1076 (2016).

the lack of a clear benefit, I do not think it is medically necessary or appropriate to subject my patients to an additional procedure which carries increased risks.

22. In order to comply with S.B. 95 should it go into effect, beginning at approximately 15 weeks gestation, I would need to completely alter the way I do the surgical procedure to include a more complex procedure with greater risk and no medical benefit. Further, inducing fetal demise prior to performing a D&E will in some instances prolong the procedure from 1 day to 2 days. Alternatively, I will be forced to refuse patients services altogether. The vast majority of these patients have maternal health risks complicating their pregnancy or severe and or lethal fetal anomalies.

23. Further, if S.B. 95 goes into effect, there are certain patients for whom I would have likely been able to provide care but will be unable to due to the requirement that fetal demise be induced prior to every D&E procedure.

24. If fetal demise is not induced in the expected time period after the first digoxin injection, a second injection will be necessary, though there is no medical research demonstrating the efficacy of a second dose of digoxin.[3] To my knowledge, there is no published information on the cumulative effects of multiple doses of digoxin totaling more than 2 milligrams. No studies prove the safety of administering multiple doses of digoxin, and I do not think it is appropriate to mandate multiple doses of digoxin on patients where that treatment is largely untested.

25. Moreover, prior to 18 weeks gestation, to my knowledge, there is virtually no research on the induction of fetal demise using digoxin prior to a D&E.[4] To my knowledge, there are not any physicians in the United States who induce fetal demise using digoxin prior to a D&E

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[3] Dean et al., *supra* note 1, at 147.

[4] White et al., *supra* note 2, at 1072 (studying use of digoxin to induce fetal demise prior to a D&E starting at 20 weeks gestation).

before 18 weeks gestation. Because there is a dearth of information on induction of fetal demise prior to D&E at this gestational age, S.B. 95 would force doctors to provide procedures to women that are not practiced, effectively forcing doctors to experiment on women.

26. A requirement to induce fetal demise will, among other things, seriously disrupt patient scheduling at my office. It will impact the times patients are scheduled to receive procedures, increase the time needed for patient counseling, and limit the number of days patients can receive treatment per week. Because digoxin can take 24 hours or more to be effective, and because of the potential need for more than one dose of digoxin, I will be forced in some instances to begin providing D&E procedures as a 2–3 day procedure, forcing patients to make multiple trips to my office. Likewise, the 24 hours or more needed for digoxin to take effect and the possibility that more than one dose will be necessary will in turn require that a 48 hour buffer be allotted for each patient. That will limit the days in which a D&E can be scheduled to begin to Monday–Wednesday and, consequently, the number of patients who can be treated per week.

27. As a result, some patients may be forced to delay their procedure until they can arrange to visit the office for 2 to 3 consecutive days, increasing the length of time a patient must be away from home, work, and other obligations. That will increase the gestational age at which the procedure is scheduled and performed. There will also be increased costs for both the clinic and patients.

28. Further, this requirement will prevent me from providing optimal care to my patients or force me to risk prosecution. It will put me in the unethical situation of having to choose between being able to evolve with a medical complication and abiding by the law.

29. The result would be an extraordinarily negative impact on the doctor-patient relationship and on my ability to provide the care that I deem to be in my patients' best interests.

30. Although fetal demise is induced at 15–18 weeks to selectively reduce multiple fetuses, for the most part using a feticidal agent called potassium chloride (KCl), that procedure is only available in hospitals in Kansas, and having a multiple gestation pregnancy is a high risk pregnancy to the patient. By reducing the pregnancy to a smaller number of fetuses, the pregnancy is less risky for both the mother and the fetuses. Further, these procedures are never forced on women who do not wish to induce fetal demise. Forcing patients to undergo a procedure that decreases the safety of the D&E abortion is not a reasonable alternative to my current practice.

31. KCl involves much higher risks for patients than digoxin, and I would not be willing to subject my patients to that risk. Moreover, induction of fetal demise using KCl would require substantial additional training that may not be readily available, or available at all, in Kansas.

32. Defendants' suggestion that induction is a reasonable alternative to D&E cannot be taken seriously when one compares induction and D&E procedures. I can perform D&E procedures in my office. Evacuation of the uterus takes between 3 and 10 minutes, and I am with the patient throughout the procedure. In most cases, the entire process is completed in one day. Because it is so safe, D&E procedures are a standard method of abortion after approximately 14–15 weeks.

33. By contrast, induction abortions, where labor is induced using medication, are rarely done and largely unavailable to our patients. They must be performed on an in-patient basis in a hospital, and I cannot perform this procedure in my office. Moreover, the hospitals where I have admitting privileges have their own regulations that further restrict when patients are able to access abortion. One of these hospitals does not provide abortion care under any circumstances; the other only permits abortion care under very limited circumstances where pregnancy poses a serious health risk to the patient.

34. Induction is done by the administration every 2–6 hours of medications that open the cervix and bring on contractions. Unlike a cervix at full term, prior to 24 weeks, the cervix is tightly closed, and therefore induction prior to 24 weeks typically takes longer than labor at term. The patient must undergo 3 to 4 times more dilation of her cervix than would be required for a D&E procedure. Once the process begins, the time to delivery is at least 6 hours, but can be as long as 2 to 3 days.

35. Most significantly, the patient must go through the process of labor, which will include several hours to more than a day of contractions. The patient will either have to endure labor pain or accept IV medication or an epidural procedure. Patients face a risk of infection due to the prolonged course of induction, and many patients will have to undergo a D&C procedure to remove the placenta. It is physically difficult and potentially emotionally traumatic for patients to go through the labor process in order to terminate a pregnancy before viability.

36. The cost of an in-patient induction procedure would be many times more expensive than an out-patient D&E abortion, as the patient would have to pay for nursing care, pharmacy costs, anesthesia services, and a daily facility fee, in addition to the cost of my services.

37. It would not be possible for me to incorporate routine provision of induction abortions into my practice. As discussed above, induction abortion is not a treatment option for most patients at the hospitals where I practice, nor at any local hospital to my knowledge. I already have to balance my time between seeing patients in the office and delivering babies at the hospitals where I practice. It is challenging to do so when patients are in the hospital awaiting delivery because I may be called to leave at any moment. Adding a significant number of additional patients who are in the hospital waiting for an induction abortion would strain our resources beyond capacity.

38. My decision not to subject my patients to either a procedure to induce fetal demise prior to a D&E or to induction of labor is not a matter of preferring one procedure (D&E without demise) over another. Any change in my current practice to avoid liability under the Act adds risks with no benefit to the patient. Based on my 23 years of experience providing D&E procedures, my review of medical literature, and the position of ACOG that causing demise prior to a D&E offers no medical benefit to the patient,[5] I see this as an issue of patient safety.

39. Further, the increased risk of extramural delivery and infection from inducing fetal demise prior to a D&E may force patients to go to hospitals where they are likely to face stigma for seeking abortion care. This could further restrict access because hospitals may have their own rules limiting the circumstances in which patients may access abortion.

40. As a Board-Certified obstetrician-gynecologist, I provide a full range of reproductive health care to my patients. None of the other treatment that I provide is subject to a state mandate that forces me to change my provision of care in ways that I feel undermines the health and safety of my patients. With regard to my abortion services, I am being treated differently than other physicians.

41. In sum, I do not believe that inducing demise prior to D&E has any health benefits for my patients. Physicians need to be able to care for patients based on their patients' individual needs and circumstances without fear of criminal prosecution dictating how they practice medicine. There is no one method to provide any procedure for every patient. The human body is too complex and complicated. I view S.B. 95 as imposing a needless procedure with increased risk on all patients, regardless of medical contraindications or the wishes of patients, which curtails

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[5] Am. Coll. of Obstetricians & Gynecologists, *Practice Bulletin Number 135: Second Trimester Abortion*, 121(6) Obstetrics and Gynecology 1394 (2013).

access to a safe, standard method of abortion after approximately 14–15 weeks and increases harms to patients.

42. The Act's exceptions for "the life of the pregnant woman" and for "substantial and irreversible physical impairment of a major bodily function of the pregnant woman" do not remedy the Act's limits on the availability of abortion in Kansas.[6] My patients seek to access abortion care for a variety of reasons. Some have health risks complicating their pregnancy that may fall within the Act's exceptions, but the majority of my patients would not fall within these exceptions. Further, the exceptions are completely insufficient to protect women's health. For example, a woman suffering from premature rupture of membranes who is bleeding and shows signs of infection but is not yet hemorrhaging or septic will eventually suffer those consequences if left untreated. It is inconsistent with my medical practice and with medical ethics to wait to provide care until a patient's condition worsens and she develops symptoms that will certainly cause irreversible harm. Doing so needlessly puts the patient's life and health at risk, in conflict with the basic principles of medical care.

43. Forcing women to undergo procedures with greater costs, harms, and risks, and which in many instances are still experimental, is inconsistent with medical ethics. Rather than serving the integrity or wellbeing of the profession, the Act requires patients to undergo an invasive, unnecessary procedure that is inconsistent with the advice of their physician, or be prevented from accessing abortion entirely. Physicians have a duty to provide the care and treatment that is best for their patients, and this law forces an unnecessary procedure with increased risk and no medical benefit on patients in contravention of that duty.

[6] S.B. 95 (codified at K.S.A. 65-6741 through 65-6749).

44. In providing abortion care in Kansas, I provide a service to women that enables them to make choices for their own lives and families. It is not my role as a provider to choose for another person what is appropriate for them to do with their lives. I provide high-quality, compassionate, individualized care to all of my patients that is safe and private. From an ethical and professional perspective, it is extremely important to me that patients receive care that preserves their safety and minimizes complications. I provide non-judgmental, empathic care to patients and offer them the options to carry a pregnancy to term and be delivered by our practice, work with our practice to arrange for an adoption, or terminate the pregnancy. I support my patients and their right to make decisions about their own bodies and futures.

Dated: January 21TH, 2020

Traci Lynn Nauser

Traci Lynn Nauser, M.D.

EXHIBIT A

CURRICULUM VITAE

Name: **Traci L. Nauser, M.D., FACOG**

Current Appointments:

Private Practitioner, Obstetrics and Gynecology (07/1998-Present)
The Center for Women's Health
4840 College Boulevard
Overland Park, Kansas 66211
Ph: (913) 491-6878

Teaching Associate, University of Kansas (2008-Present)
3901 Rainbow Boulevard
Kansas City, Kansas 66160
Ph: (913) 588-1227

Preceptor, Touro University, California (2009-Present)
1310 Club Drive
Mare Island Vallajo, California 94592
Ph: (707) 638-5838

Department Vice Chairman, Obstetrics and Gynecology (2015,2016)
Saint Luke's South Hospital
12300 Metcalf Ave
Overland Park, Kansas 66213
Ph: (913) 317-7000

Department Chairman, Obstetrics and Gynecology (2015,2016)
Menorah Medical Center
5721 W 119th St
Overland Park, Kansas 66209
Ph: (913) 498-6000

Board Member (2014 & 2015)
Kansas City Gynecological Society
9229 Ward Parkway, Suite 280
Kansas City, MO 64114
Ph: (816) 523-3383

Past Appointments:

Assistant Clinical Professor (07/1998-07/2000)
University of Missouri-Kansas City
Truman Medical Center West
Department of Obstetrics and Gynecology
2301 Holmes Street
Kansas City, Missouri 64108
Ph: (816) 404-3855

Department Vice Chairman, Obstetrics and Gynecology (2006 & 2009)
Saint Luke's South Hospital
12300 Metcalf Ave
Overland Park, Kansas 66213
Ph: (913) 317-7000

Department Vice-Chairman, Obstetrics and Gynecology (2007 & 2010,2015)
Saint Luke's South Hospital
12300 Metcalf Ave
Overland Park, Kansas 66213
Ph: (913) 317-7000

Education:

Administrative Chief Resident, Obstetrics and Gynecology (07/1997-07/1998)
University of Missouri-Kansas City
Truman Medical Center West
Department of Obstetrics and Gynecology
2301 Holmes Street
Kansas City, Missouri 64108
Ph: (816) 404-3855

Intern and Resident, Obstetrics and Gynecology (07/1994-07/1998)
University of Missouri-Kansas City
Truman Medical Center West
Department of Obstetrics and Gynecology
2301 Holmes Street
Kansas City, Missouri 64108
Ph: (816) 404-3855

Doctor of Medicine (08/1988-05/1994)
University of Missouri-Kansas City School of Medicine
Kansas City, Missouri

Bachelor of Arts, Biology (08/1988-05/1994)
University of Missouri-Kansas City
Kansas City, Missouri

Licensure:

Medical License-State of Kansas and Missouri
American College of Obstetrics and Gynecology-Board Certified November 2001
American College of Obstetrics and Gynecology-Fellow December 2002
American Board of Obstetrics and Gynecology-Board Certified November 2001
American Board of Obstetrics and Gynecology-Diplomat December 2009
Advanced Cardiac Life Support, Certified
Basic Life Support Provider, Certified

Memberships:

Kansas City Gynecological Society
American Board of Obstetrics & Gynecology
The Youngblood Society
Metropolitan Medical Society
Kansas Medical Society
National Abortion Federation

Awards:	Kansas City Super Doctors Obstetrician/Gynecologist	2008-2016
	Americas Top Obstetrician/Gynecologist	2008
	The Dept of Obstetrician/Gynecologist at Truman Medical Center And University of Missouri-Kansas City Outstanding Resident Award	1998
	The Dept of OB/GYN at Truman Medical Center And University of Missouri-Kansas City Outstanding Resident Teaching Award	1998
	University of Kansas School of Medicine Ad Astra Volunteer Faculty Award	2015
	Alpha Omega Plpha Honor Society Volunteer Clinical Faculty Award	2016

EXHIBIT 3

IN THE THIRD JUDICIAL DISTRICT
DISTRICT COURT, SHAWNEE COUNTY, KANSAS

HODES & NAUSER, MDs, P.A.; and TRACI LYNN NAUSER, M.D.,	)	
Plaintiffs,	)	**Case No. 2015CV490**
	)	**Division 2**
v.	)	
DEREK SCHMIDT, in his official capacity as Attorney General of the State of Kansas; and STEPHEN M. HOWE, in his official capacity as District Attorney for Johnson County,	)	
Defendants.	)	

EXPERT DECLARATION OF ANNE DAVIS, M.D., M.P.H.

ANNE DAVIS, M.D., M.P.H., declares the following statements to be true and correct under penalty of perjury under the laws of the State of Kansas:

1. I submit this declaration in support of Plaintiffs' Motion for Summary Judgment.

2. I am a physician licensed to practice medicine in the state of New York. I have been Board Certified in obstetrics and gynecology by the American Board of Obstetrics and Gynecology since 2001. I hold a B.A. in Psychology and Neurobiology from Cornell University, an M.D. from the Columbia University Vagelos College of Physicians and Surgeons, and a Masters of Public Health, Epidemiology from the Columbia University Mailman School of Public Health.

I am a Fellow of the American College of Obstetrics and Gynecology and a Fellow of the Society of Family Planning.

3. I completed my residency in obstetrics and gynecology ("OBGYN") at the University of Washington, and I completed a Fellowship in Family Planning in the Columbia University Irving Medical Center Department of Obstetrics and Gynecology. As part of the Family Planning Fellowship, I received training in abortion from experts in the field. I also participated in the training of residents and medical students during my fellowship.

4. At the Columbia University Vagelos College of Physicians and Surgeons and at the Columbia University Irving Medical Center Department of Obstetrics and Gynecology in New York, as well as during my medical residency at the University of Washington, I have gained substantial experience with birth and abortion procedures. I have also worked at freestanding clinics, including at Planned Parenthood in New York and as a physician with the Feminist Women's Health Centers in Renton, Washington and Yakima, Washington.

5. At present, I am the Wyeth Ayerst Associate Professor of Obstetrics and Gynecology in the Department of Obstetrics and Gynecology at Columbia University Irving Medical Center and the Director of the Fellowship in Family Planning. In those roles, I am responsible for numerous aspects of medical care at Columbia University Irving Medical Center, including gynecological care of patients in the first and second trimester of pregnancy and the provision of first and second-trimester miscarriage and abortion care. I am also an attending physician at New York Presbyterian Hospital. I also perform research on contraception for women with chronic medical conditions, including epilepsy, in collaboration with several neurologists. I have also done research on pain control for women during abortion procedures and on

contraception following medical abortion. I served for three years on the Columbia University Irving Medical Center Institutional Review Board, which oversees research at our medical center.

6. My *curriculum vitae*, which sets forth my experience and credentials more fully, is annexed hereto as Exhibit A. I have authored numerous publications, including co-authoring Society of Family Planning clinical guidelines on first-trimester abortion in women with medical conditions and a chapter in the National Abortion Federation textbook on medical evaluation and management of abortion.[1] Both of these publications are highly-regarded in the field of abortion care.

7. The opinions in this declaration are my expert opinions, which are based on my education; training; practical experience as an OBGYN and an abortion provider; attendance at professional conferences; review of relevant medical literature; and conversations with other medical professionals. My opinions in this declaration are expressed to a reasonable degree of medical certainty.

8. I have reviewed S.B. 95 (the "Act"), including the prohibition on the use of what is termed "dismemberment abortion" on a living fetus. The term "dismemberment abortion" is not a medical term and the definition stated in S.B. 95 does not use medical terminology. The Act nevertheless prohibits a procedure known in medical terms as Dilation and Evacuation ("D&E"). It is my understanding that to avoid the Act's criminal sanctions, physicians will be forced to stop providing D&E altogether, or induce fetal demise prior to the procedure.

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[1] Maryam Guiahi & Anne Davis, *First-Trimester Abortion in Women with Medical Conditions*, Soc'y of Family Planning Clinical Guideline #20122, 86 Contraception 622 (2012), https://www.contraceptionjournal.org/article/S0010-7824(12)00811-6/pdf; Anne Davis & Thomas Easterling, *Medical Evaluation and Management*, *in* Management of Unintended and Abnormal Pregnancy: Comprehensive Abortion Care 78 (Maureen Paul et al. eds., 2009).

9. The Act's ban on D&E departs from decades of accepted, standard medical practice for pregnant women. No studies known to me conclude that fetal demise prior to D&E will improve the safety of abortion procedures or promote women's health. It is my expert medical opinion that there is no safe and reliable way to ensure fetal demise prior to starting the D&E procedure. Instead, the Act requires every woman to either forgo a D&E procedure or undergo another procedure that would increase the complexity, risk, and pain of the abortion procedure, with no medical benefit to the patient.

10. To my knowledge, there is no other context in which doctors are forced by law to administer an unnecessary, painful, and invasive medical procedure, with increased risks, in contravention of their expert medical opinion, the best interests of the patient, and the wishes of the patient. It would raise serious ethical concerns for me if I were faced with choosing between performing a medically unnecessary needle or transection procedure to cause fetal demise, that has risks with no benefits, or withholding the D&E procedure altogether.

11. Legal abortion is one of the safest medical procedures in the United States,[2] and it is very common. Approximately one in four women obtain an abortion by the age of 45.[3] About

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[2] Nat'l Acads. of Scis., Eng'g, & Med., *The Safety and Quality of Abortion Care in the United States* 74–76 (2018), https://www.nap.edu/catalog/24950/the-safety-and-quality-of-abortion-care-in-the-united-states.

[3] Guttmacher Inst., *Induced Abortion in the United States* (2018) (citing Rachel K. Jones & Jenna Jerman, *Population Group Abortion Rates and Lifetime Incidence of Abortion: United States, 2008–2014*, Am. J. Pub. Health (2017), https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2017.304042), https://www.guttmacher.org/fact-sheet/induced-abortion-united-states.

59% of abortions are obtained by women who have had at least one birth.[4] Women who are poor or low-income account for about 75% of abortions.[5]

12. Legal abortion is dramatically safer than carrying a pregnancy to term. The risk of death associated with childbirth in the U.S. is approximately 14 times higher than that associated with abortion,[6] estimated to be 8.8 per 100,000 live births compared to 0.7 per 100,000 abortion procedures.[7] Indeed, abortion-related mortality is significantly lower than that for other common outpatient medical procedures, such as colonoscopy (2.9 deaths per 100,000 procedures).[8] While the risks related to second-trimester abortions are extremely low overall, these risks do increase as pregnancy advances. Thus, delay in care increases risks.

The D&E Method

13. In the first trimester of pregnancy, abortions are performed using medications or surgical treatments. Abortions commonly referred to as "surgical abortions" are not surgical in the usual sense; they do not involve incision into the woman's skin. Medication abortions, which are provided through approximately 70 days gestation LMP (last menstrual period) in the United States, involve two medications taken at least one day apart. Surgical abortions in the first trimester are performed by dilating (opening) the uterine cervix and then using suction to empty the pregnant uterus.

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[4] *Id.* (citing Jenna Jerman, Rachel K. Jones, & Tsuyoshi Onda, *Characteristics of U.S. Abortion Patients in 2014 and Changes Since 2008*, Guttmacher Inst. (2016), https://www.guttmacher.org/sites/default/files/report_pdf/characteristics-us-abortion-patients-2014.pdf).
[5] *Id.* (citing Jerman, Jones, & Onda, *supra* note 4).
[6] Elizabeth G. Raymond & David A. Grimes, *The Comparative Safety of Legal Induced Abortion and Childbirth in the United States*, 119 Obstetrics & Gynecology 215, 215 (2012).
[7] Nat'l Acads. of Scis., Eng'g, & Med., *supra* note 2, at 74–75.
[8] *Id.*

14. Until 14 weeks gestation, surgical abortions are usually completed using only suction.[9] Beginning at approximately 14–15 weeks LMP, physicians begin using the D&E technique, which often incorporates suction. A D&E has two steps: dilation of the cervix and then removal of the amniotic fluid, membranes, fetus, placenta, and uterine lining (decidual tissue) with surgical instruments.

15. As with virtually all medical procedures, there is some variation among physicians as to how abortions are performed. For example, cervical preparation, the dilation and softening process, can be accomplished by various methods alone or in combination. These methods include medications similar to those used for labor induction at term, the use of graduated tapered dilators which are gently passed through the cervix and removed, and/or the insertion of small dilators, which are placed in the cervix and absorb moisture from the body to gently and gradually open the cervix over an interval of several hours. Based on the method of cervical preparation, the physician may start the dilation process for a D&E procedure one or two days before the procedure itself, or do the dilation and procedure on the same day.

16. Once cervical preparation is accomplished, analgesia and sedation or anesthesia is administered. In the D&E procedure, amniotic fluid is removed, and a combination of suction and forceps are used to remove the fetus and placenta. Usually, because the cervix is narrower than the fetus, some separation of fetal tissue occurs as the physician withdraws the fetal tissue held in the instrument and gently brings it through the cervix. This is why virtually all D&Es that do not involve fetal demise prior to the use of surgical instruments will violate the Act. A final suction

[9] Sometimes the use of an instrument is necessary, in addition to suction, to complete a procedure beginning at approximately 13 weeks gestation.

curettage is often performed to ensure that the uterus is completely evacuated. The evacuation process takes between 10–15 minutes on average.

17. Second-trimester abortion is an important component of comprehensive women's health care. Women seek termination of pregnancy for a variety of medical and social reasons, including poverty, youth, and having completed one's family. Circumstances that can lead to second-trimester abortion include delays in suspecting and testing for pregnancy; delay in obtaining insurance and/or funds for the procedure and related expenses, such as travel, childcare, and lost wages; a medical condition requiring hospital referral; and delay in obtaining referral; as well as difficulties locating and travelling to a provider. In addition, the identification of most major anatomic or genetic anomalies in the fetus occurs in the second trimester; some women seek abortion in those circumstances.[10]

18. In many areas of the United States, women have very limited access to second trimester abortion. Ninety percent of all U.S. counties lacked an abortion clinic in 2014.[11] Not all clinics provide abortions after the first trimester. In a census of abortion providers, only 64% reported providing services after 12 weeks of gestation.[12]

19. D&E is a standard, safe method of abortion and the most common method of abortion after approximately 14–15 weeks gestation. To my knowledge, suction alone can generally be used in the second trimester up to approximately 15 weeks. Thereafter, narrow

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[10] Am. Coll. of Obstetricians & Gynecologists, *Practice Bulletin Number 135: Second-Trimester Abortion* at 1, 121 Obstetrics & Gynecology 1394 (2013) (reaffirmed 2019), https://www.acog.org/-/media/Practice-Bulletins/Committee-on-Practice-Bulletins----Gynecology/Public/pb135.pdf?dmc=1&ts=20190917T2028079136.

[11] Rachel K. Jones & Jenna Jerman, *Abortion Incidence and Service Availability in the United States, 2014*, 49(1) Persps. on Sexual & Reprod. Health 17 (2017), https://www.guttmacher.org/journals/psrh/2017/01/abortion-incidence-and-service-availability-united-states-2014.

[12] Am. Coll. of Obstetricians & Gynecologists, *supra* note 10, at 2.

forceps or another appropriate instrument is essential for safety. Physicians' first priority is patient safety, and the safest D&E is done as quickly and gently as possible to minimize bleeding and risk of complications to preserve health and fertility.

20. Because of its impressive safety record and its availability in an outpatient setting, D&E remains a standard method, and is the most commonly used method for abortion after approximately 14–15 weeks. D&E abortions occur primarily in outpatient settings.[13]

21. D&E is extremely safe. Major complications occur in less than 1% of D&E cases.[14] The extremely low complication rate for second-trimester abortion is, in large part, attributable to the low complication rate for the D&E method itself.

22. D&E can be performed on an outpatient, ambulatory basis in a clinic setting at a lower cost than any other second-trimester abortion procedure performed after approximately 15 weeks gestation.

Attempting to Induce Fetal Demise

23. The American College of Obstetricians and Gynecologists ("ACOG") has stated that there is no sound medical basis for requiring abortion providers to induce fetal demise prior to performing a D&E. According to ACOG, "[n]o evidence currently supports the use of induced fetal demise to increase the safety of second-trimester medical or surgical abortion. Techniques used to cause fetal demise include division of the umbilical cord, intraamniotic or intrafetal digoxin injection, or fetal intracardiac potassium chloride injection."[15] The highest quality evidence

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[13] Cassing Hammond & Stephen Chasen, *Dilation and Evacuation*, *in* Management of Unintended and Abnormal Pregnancy: Comprehensive Abortion Care 157, 157–58 (Maureen Paul et. al eds. 2009); Am. Coll. of Obstetricians & Gynecologists, *supra* note 10, at 2.
[14] Hammond & Chasen, *supra* note 13, at 158.
[15] Am. Coll. of Obstetricians & Gynecologists, *supra* note 10, at 3.

available demonstrates that inducing fetal demise prior to a D&E does increase the risks of complications compared to not inducing fetal demise prior to a D&E.[16] Attempting to cause fetal demise prior to beginning a D&E therefore should not be imposed on every patient.[17]

24. A minority of physicians, beginning around 18 to 20 weeks LMP, induce fetal demise prior to a D&E procedure by administering a pharmacologic agent. The pharmacologic agents used to induce fetal demise are fetal intracardiac potassium chloride (KCl) and intrafetal or intraamniotic digoxin; both are administered using a needle through the women's abdomen or vagina. Nationally, the vast majority of D&E abortions are performed prior to 18 weeks. The use of such agents to attempt to cause fetal demise before a D&E at that point in pregnancy is extremely uncommon. A national survey found that 74% of clinicians who reported performing D&Es at 18 weeks LMP or greater "did not routinely induce preoperative fetal demise." [18] Of the minority of clinicians who *did* routinely induce fetal demise (26%), 70% began at 20 weeks' gestation or more.[19] Just 7.7% of surveyed physicians routinely attempt to cause demise before 20 weeks.[20]

25. Much of the literature on causing fetal demise before abortion has come in the wake of enforcement of federal and state bans on so-called partial birth abortions. As many of these studies acknowledge, many physicians began using demise not because they believed it offered medical benefits, but in order to avoid legal liability.[21]

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[16] *See, e.g.*, Gillian Dean et al., *Safety of Digoxin for Fetal Demise Before Second-Trimester Abortion by Dilation and Evacuation*, 85(2) Contraception 144, 146–48 (2012).
[17] Justin Diedrich & Eleanor Drey, *Induction of Fetal Demise Before Abortion*, Soc'y of Family Planning Clinical Guideline #20101, 81 Contraception 462, 470 (2010), https://www.contraceptionjournal.org/article/S0010-7824(10)00019-3/pdf.
[18] Katharine O. White et al., *Second-Trimester Surgical Abortion Practices in the United States*, 98 Contraception 95, 98 (2018).
[19] *Id.*
[20] *Id.*
[21] *Id.*

26. In my practice, we have never routinely induced fetal demise prior to performing a standard D&E procedure. Shortly after the passage of the federal Partial Birth Abortion ban, we began administering digoxin on patients at or after 18 weeks gestation where we felt an intact procedure was safer for patients. We administered digoxin via transabdominal intrafetal or intraamniotic injection approximately 24 hours prior to D&E. After only a few months, we abandoned the practice. We found that digoxin administration provided no safety benefits to our patients and was not effective in every case, but that it deeply upset some patients to undergo the transabdominal procedure, particularly those who had already undergone amniocentisis. Many of our patients had already undergone amniocentesis, a form of genetic testing that also requires a transabdominal needle procedure. During the procedure itself, some patients cried due to the pain and emotional distress of being subjected to an invasive injection. We abandoned the practice because we felt it did not put patients' best interests first and caused harm to our patients, in violation of our medical ethics.

27. Further, when we used digoxin prior to *intact* D&E procedures, we could still lawfully perform a *standard* D&E when digoxin failed to induce fetal demise. The availability of standard D&E was essential to our willingness to even attempt to induce demise because it afforded a fallback option in the inevitable cases of digoxin failure. In contrast, I understand the Act prohibits a clinician from beginning the evacuation part of a D&E without first confirming fetal demise.

Digoxin

28. In the United States, injection of digoxin, a medication that is also used to treat certain heart conditions, is the most commonly used method of attempting to induce fetal demise

prior to a D&E procedure. Digoxin is rarely used, if at all, prior to 18 weeks and is virtually unstudied at these earlier gestational ages.[22]

29. An intrafetal or intraamniotic digoxin injection is not 100% effective. With a one milligram intrafetal injection, the failure rate (no demise occurs) of an experienced provider can be low. However, the failure rate increases in intraamniotic injections. Most providers who induce demise use a spinal needle passed through the woman's abdomen, vagina, or cervix, into her uterus using ultrasound guidance. After confirming correct needle placement, providers inject the digoxin intrafetally or intraamniotically. These procedures can be technically difficult for the physician and both physically and emotionally painful for the patient.

30. The research to date has not shown medical benefits of digoxin before abortion; in no study has fetal demise been demonstrated to improve abortion safety for women. Reactions to digoxin include greater incidence of unplanned fetal expulsion (delivery) outside a medical facility, as well as vomiting, infection and hospital admission.[23] The literature documents that digoxin toxicity is a rare but extremely serious risk associated with the injection. In one case, digoxin toxicity as a result of an abortion procedure caused hyperkalemic paralysis, which can be fatal.[24] The majority of studies conclude that there is insufficient information to recommend the use of digoxin.[25]

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[22] *Id.* (reporting that, of the surveyed physicians who reported inducing fetal demise prior to a D&E procedure, 70% began inducing fetal demise only at 20 weeks LMP or later and 74% of clinicians who reported performing D&Es at 18 weeks LMP or greater "did not routinely induce preoperative fetal demise").

[23] Dean et al., *supra* note 16, at 146; Diedrich & Drey, *supra* note 17, at 468–69.

[24] Manish Garg & Nadia Markovchick, *Hyperkalemic Paralysis: An Elective Abortion Gone Wrong*, 45(2) J. Emergency Med. 190, 192 (2013).

[25] Diedrich & Drey, *supra* note 17.

31. When given, digoxin is usually administered 1–2 days before the D&E procedure. It can take up to 24 hours to be effective, adding at least an extra day to the procedure and requiring an additional trip to the facility, in all cases in which the physician was not already beginning cervical preparation the day before the evacuation.[26] Further, administration of digoxin for pregnancies between 15–18 weeks would more often be intraamniotic, rather than intrafetal, compared to later gestations. At earlier gestations, the smaller fetal size makes an intrafetal injection more challenging and sometimes impossible, requiring physicians to resort to intraamniotic injections. Compared to intrafetal injections, intraamniotic injections take longer to take effect and have an increased failure rate.[27]

32. Though it is rare, some women have contraindications for digoxin injections. Digoxin injections are also less likely to be successful for obese women if the needle is unable to reach the inside of the uterus; obesity is common. Uterine fibroids, which are benign growths in the uterus, likewise make it difficult or impossible to administer digoxin because they are solid and can become calcified and therefore challenging to pass through with a needle; fibroids likewise are common. The placental location can also impact the difficulty of passing a needle into the uterine cavity.

33. A recent very pertinent clinical study examined digoxin administration before abortion.[28] In a prospective, randomized controlled trial, investigators randomized 270 patients between 20–24 weeks LMP to have either an intrafetal or intraamniotic digoxin injection. This study design is the best type of scientific evidence available because characteristics of the

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[26] *Id.* at 465.
[27] *Id.* at 467–68; Dean et al., *supra* note 16, at 147; Katharine O'Connell White et al., *Intra-fetal Compared with Intra-amniotic Digoxin Before Dilation and Evacuation: A Randomized Controlled Trial,* 128(5) Obstetrics & Gynecology 1071, 1074 (2016).
[28] White et al., *supra* note 27, at 1071.

participants that can affect the outcome are balanced between the two groups, minimizing the chances that bias explains the results.

34. The study found significant failure rates in causing fetal demise. The study randomized 270 women to receive intra-fetal (n=136) or intra-amniotic (n=134) injections. For those patients who were successfully administered intrafetal digoxin, the failure rate was under 2% (n=122). However, physicians were not able to successfully administer intrafetal digoxin for 17% of the patients in that group due to the technical difficulty of injecting the fetus, and those patients instead received intraamniotic injection.[29] This difficulty was due to placenta location, fetal position, patient obesity, or low amniotic fluid volume.[30] Thus, some of the patients in the group randomized to receive intrafetal injection received intraamniotic injections instead, and the group assigned to receive intrafetal injection had an overall failure rate of 5%. In the intraamniotic group, the failure rate was 20% (n=141).[31]

35. In other words, the study found that, even when a physician attempts an intrafetal digoxin injection—which is more effective in causing fetal demise than intramniotic injections—it is not uncommon for the physician to be unable to inject the digoxin into the fetus and to have to resort to the less effective, intraamniotic injection.[32] The physician had to revert to the less effective route of digoxin administration, with a 20% failure rate, nearly one out of five times. Therefore, the study demonstrates that reliably inducing fetal demise through digoxin injection prior to a D&E is not possible for a meaningful number of people.

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[29] *Id.* at 1074–75.
[30] *Id.*
[31] *Id.* at 1074.
[32] *Id.* at 1075.

36. Moreover, the study did not include patients at gestational ages of less than 20 weeks LMP. At lower gestational ages, when most D&E abortions are performed, the fetus is smaller, and the difficulty of digoxin injection would be expected to increase, resulting in a greater percentage of intraamniotic versus intrefetal injections than found in this study. Rates of digoxin failure would therefore be even greater at lower gestational ages included in the Act.

37. Indeed, the vast majority of studies only address the administration of digoxin at or after 18 weeks gestation prior to a D&E procedure. Prior to 18 weeks gestation, when most D&E procedures occur, I am aware of virtually no data addressing the use of digoxin prior to D&E. At that point, the risk benefit ratio is unknown and, prior to 18 weeks, in some cases, it may be technically impossible to do an intrafetal injection. Requiring physicians to use a needle to inject women in an attempt to cause fetal demise prior to 18 weeks is tantamount to experimentation on women.

38. If a physician were to attempt to comply with the Act by taking steps to induce fetal demise using digoxin, but fetal demise did not occur in the expected time period after the first digoxin injection, a second injection would be necessary to avoid liability. Even among physicians who have experience inducing fetal demise with digoxin, performing a second injection—and delaying the procedure even longer for demise—is not acceptable medical practice. If the first injection fails, there is no medical benefit to further delay of the abortion, but increased risk of uterine infection, extramural delivery, or digoxin toxicity following a second injection would be expected. To my knowledge, there is no data showing that multiple sequential injections of digoxin to induce fetal demise prior to a D&E are either safe or effective.[33]

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[33] In one study, a digoxin injection to induce fetal demise prior to a D&E was repeated at the physician's discretion for persistent cardiac activity. Dean et al., *supra* note 16, at 145; *see also*

Potassium Chloride

39. Less common than digoxin in this context, some physicians with advanced training induce demise using intracardiac (fetal) potassium chloride (KCl) administration via transabdominal needle injection performed with ultrasound guidance. KCl is injected in the fetal heart and asystole is confirmed with ultrasound. KCl use includes a risk of maternal cardiac arrest if inadvertent maternal intravascular injection occurs.[34] There are also risks of intramniotic infection. Like digoxin injections, KCl injections can be greatly complicated or impossible in some women with common conditions such as obesity or uterine fibroids. Due to dilution, KCl will not cause fetal demise when injected into the amniotic fluid and is not effective if injected into any other part of the fetus; injection into the fetal heart or umbilical cord is required.

40. A successful intracardiac injection of KCl is usually effective, but requires an extremely high level of skill to perform, and thus is typically only performed by Maternal-Fetal Medicine OB-GYNs following a specialized fellowship with extensive and advanced training. Training to perform KCl injection is not part of obstetrics and gynecology residency training, and it is not part of the training program of family planning fellowships such as the one I direct at Columbia. In situations where patients require intracardiac KCl, they are referred to the few physicians who have this skill because it is not routine. For example, I practice at Columbia University Irving Medical Center, one of the world's premiere tertiary care teaching hospitals, but only a handful of the physicians on staff—all maternal fetal medicine specialists—provide this procedure. There are no studies of the failure or complication rate of KCl injections performed by

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id. at 147 (explaining that, out of 44 digoxin patients who had positive fetal heart motion on ultrasound day two, 9 were given an extra dose of digoxin prior to the D&E). "[E]fficacy of second injections was not recorded." *Id.*

[34] G.A. Coke et al., *Maternal Cardiac Arrest Associated with Attempted Fetal Injection of Potassium Chloride*, 13 Int'l J. Obstetric Anesthesia 287 (2004).

physicians without such specialized training or in settings that provide outpatient abortion at gestational ages covered by the Act. Thus, KCl is not a method of demise that can be administered by the vast majority of abortion providers without extensive additional training.

41. KCl administration is most commonly performed for selective termination in a multifetal pregnancy or to induce fetal demise of an abnormal fetus before labor induction, and, as discussed above, a small number of physicians possess the requisite skill and experience. Further, unlike induction of fetal demise prior to a D&E procedure, multifetal pregnancy reduction confers safety benefits for women by reducing risks associated with multifetal gestation, in addition to risks due to the injection. Physicians make case-by-case recommendations by weighing the respective benefits and risks for each individual woman who makes the ultimate decision about her medical care.

Umbilical Cord Transection

42. Umbilical cord transection (separation) is another proposed method of inducing demise prior to a D&E procedure. It is performed by using an appropriate surgical instrument or suction to divide the cord. However, umbilical cord transection is not possible before fetal extraction in every case and cannot be relied on as a method of inducing fetal demise prior to D&E. A physician cannot guarantee that he or she will be able to locate the umbilical cord in utero separately from the rest of the fetus and placenta. Umbilical cord transection may occur when the fluid from the amniotic sac is removed using suction. However, that does not occur in every, or even most, cases. A D&E procedure begins with entry into the uterine cavity and rupture of membranes leading to fluid flowing out of the uterine cavity. Once the amniotic fluid leaves the uterus, any attempt at umbilical cord transection becomes a blind procedure that cannot be guided using ultrasound technology because without amniotic fluid, the cord can no longer be

distinguished as separate from the rest of the fetus and placenta. Again, were a physician to attempt to extract the umbilical cord separately using surgical instruments, he or she would risk violation of the Act. Thus, the use of umbilical cord transection to induce fetal demise is not a reliable method, and in many cases may be a technically impossible method, of inducing demise prior to a D&E procedure.

43. Further, attempting intrauterine cord transection is a clinically untested procedure, without research evidence of safety. It is likely that attempting this procedure would carry risks of pain, uterine perforation, infection, and bleeding. There is no known medical benefit to inducing demise using umbilical cord transection prior to D&E. Even if successful, waiting for fetal demise as evidenced by asystole on ultrasound could as much as double the length of the D&E procedure, not including the time it may take to locate and transect the cord. Such an intra-operative delay goes against my medical training and judgement because, once the procedure has been started, it is best for the patient to have the procedure completed as quickly as possible. Waiting can increase the amount of blood loss the patient experiences and the amount of anesthesia she needs, without medical benefit.

44. The use of routine umbilical cord transection as a method of inducing fetal demise during abortion has only been addressed in one retrospective case series,[35] which constitutes level C evidence. This retrospective study is insufficient evidence to support routine use of this practice.

45. In that case series, umbilical cord transection was performed in one clinic in response to the Partial Birth Abortion Ban, to avoid the risk of violating that legislation.[36] Thus, it was performed in response to legislation, not because it was an innovation in practice. The main

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[35] Kristina Tocce et al., *Umbilical Cord Transection to Induce Fetal Demise Prior to Second-Trimester D&E Abortion*, 88 Contraception 712 (2013).
[36] *Id.* at 713.

outcome reported in the paper is the time that elapsed between umbilical cord transection and asystole. The retrospective analysis was based on physician charts, which were prepared for record-keeping purposes, not for a research study. Further, a single retrospective study such as this, compared for example to a prospective randomized study, does not justify a change in practice.

46. This study does not address the feasibility of identifying and transecting the cord without including fetal tissue as described in the Act. To my knowledge, no published study even suggests that it is feasible to do so, let alone safe. Indeed, I spoke to one of the authors of this study. She reported that there was no indication that the physicians performing the procedure were attempting to identify and transect the cord separately from fetal tissue—that could not be ascertained from the clinical records and was not what the study purported to examine.[37] She agreed that it would be difficult, if not impossible, to reliably transect the cord separately from the fetus, particularly at the early gestational ages in the second trimester when many D&Es are performed.

47. I would not consider changing my practice based on the results of this study. D&E without cord transection is a safer and more efficient way to perform a second-trimester procedure.[38] Based on my medical experience, when performing a D&E, it is extremely unlikely that a physician would be able to transect the cord in every instance. Before performing a D&E, a physician would never be able to predict whether attempted UCT would comply with the Act. At approximately 15–16 weeks LMP, the fetal cord is soft and is about the diameter of a strand of yarn. It is therefore nearly impossible to identify as distinct from other uterine contents,

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[37] *Id.*

[38] In addition to the additional time it may take to locate and transect the umbilical cord, time to asystole ranged from 1–11 minutes. *Id.* at 714.

particularly because it would have to be identified through an instrument that has no sensation. Requiring transection would lengthen the abortion procedure and lead to potential harm for the patient, including uterine perforation. Thus, requiring physicians to transect the cord in every case shifts the focus away from the best interests of the patient to compliance with legislation, with increased risks and no benefit.

48. The use of umbilical cord transection is not a tested; reliable; or, in most cases, technically possible method of inducing fetal demise prior to a D&E. The physician would know only that he or she could not safely locate the cord after beginning the procedure by dilating the cervix and rupturing the membrane. At that point, it would be medically imperative to proceed with the D&E, which the physician could not do under the Act.

Alternatives to D&E

49. The only alternatives to D&E after approximately 14–15 weeks gestation are performing a hysterotomy or an induction abortion procedure. Hysterotomy is a surgical procedure comparable to cesarean delivery and entails an incision through the woman's abdomen and uterus, in contrast to a D&E which is performed through the vagina without an incision. Unlike D&E, hysterotomy carries all the risks of significant abdominal surgery.

50. In an induction abortion procedure, the physician uses medication to induce labor and delivery. Induced labor abortions must be performed on an inpatient basis in a hospital, and the length of the procedure can vary from between 5–6 hours up to 2–3 days. Because induction must take place in a hospital setting, inductions can be far more expensive than an out-patient D&E procedure. Inductions require women to go through the labor process, often in a labor and delivery area, which can be physically and psychologically challenging for some women. Further, following an induction, between 10–33% of women have retained placenta and must undergo a

surgical dilation and suction curettage after fetal expulsion, an additional surgical procedure, to have it removed.[39] In some cases, the induction may fail, and a D&E must be performed urgently if infection or heavy bleeding occur. Induction abortion can cause uterine rupture, which is rare but can be life-threatening. This is especially a concern for women who have had previous multiple cesarean deliveries. A prolonged induction poses an increased risk of infection compared with D&E. Although inductions rarely lead to serious complications, such complications occur more often in inductions than in D&E procedures.[40]

Patient Preference

51. No studies support requiring the induction of fetal demise prior to a D&E for every woman on the basis of patient preference. In one study, when patients were offered the option of digoxin injection, the vast majority (81%) declined.[41] Their reasons for declining included discomfort with preoperatively inducing fetal demise, a desire to avoid unnecessary medication, and fear of a painful injection.[42]

52. Further, studies demonstrate that even where some women have expressed such a preference, those studies were limited to instances in which women had no alternative but to undergo a demise procedure prior to an abortion and many women had incorrect perceptions about the procedure, including that the injection would make the abortion easier and less painful for them.[43] The authors noted other reasons for skewed results and emphasized that the generalizability of the result related to patient preferences was limited.[44]

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[39] Amy M. Autry et. al, *A Comparison of Medical Induction and Dilation and Evacuation for Second-Trimester Abortion*, 187 Am. J. Obstetrics & Gynecology 393, 394 (2002).
[40] Nat'l Acads. of Scis., Eng'g, & Med., *supra* note 2, at 67.
[41] Aileen M. Gariepy et al, *Transvaginal Administration of Intraamniotic Digoxin Prior to Dilation and Evacuation*, 87 Contraception 76, 78 (2013).
[42] *Id.*
[43] Diedrich & Drey, supra note 17, at 464.
[44] *Id.*

53. My own experience reflects that once patients understand the risks and details of the induced demise procedure, the large majority of women express a strong desire to avoid a demise procedure for many of the reasons cited above. Moreover, even assuming that some women might prefer it in certain circumstances, that does not provide a basis for requiring it for all women, including those for whom it is medically contraindicated.

54. Any assertion that prohibiting D&E promotes the mental health of patients is likewise not supported by the medical evidence. On the contrary, the best evidence demonstrates that abortion has no negative mental health effects.[45] Nothing in the medical literature demonstrates that inducing fetal demise prior to a D&E has a positive impact on patients' mental health after abortion.

Medical Ethics Implications

55. Enforcement of the Act would require physicians to induce demise for all patients who need D&E procedures, or to cease providing D&E procedures to the extent that demise is not induced. Yet, where there are risks and no medical benefits, it is not ethical or appropriate to require demise before D&E for all patients. Further, in cases where a physician uses digoxin prior to 18 weeks, the Act will also force physicians to administer a virtually untested procedure. Umbilical cord transection as a step to induce fetal demise before second trimester abortion is also largely unstudied and unlikely to be feasible for the majority of patients.

56. The medical emergency exception to the ban is grossly insufficient to ensure patient safety or uphold medical ethics. It requires a physician to withhold care and witness a patient's deterioration until the patient meets the requirements of the medical emergency exception for substantial irreversible impairment of a bodily function or death. Forcing physicians to postpone

[45] Nat'l Acads. of Scis., Eng'g, & Med., *supra* note 2, at 149–52.

necessary healthcare is completely outside any medical norm. It is entirely unethical and unacceptable under any circumstance in medicine.

57. There is no medical basis to suggest that it is more dignified to induce fetal demise prior to performing a D&E. My treatment of patients is focused on safety, respect, and honoring their wishes. It is the role of the physician to honor the choices and beliefs of patients. A D&E procedure is brief, requires no invasive and painful injection, and afterwards I am able to reassure my patient that the surgery was safe and is complete. Conversely, attempting to induce fetal demise prior to the procedure is protracted and not always successful. The woman may endure an injection of digoxin only to have it fail, and there is no data indicating that a second injection of digoxin will be safe or effective.

Harm to Women

58. If the Act goes into effect, the result would be an extraordinarily negative impact on women seeking second trimester abortions. Some physicians performing D&E would no longer be able to provide the care that they deem to be in their patients' best interests or in line with their medical ethics. The ethical practice of medicine includes providing comprehensive reproductive healthcare, of which second-trimester abortion is an important part. Providing the care people need upholds standards of professionalism for healthcare providers. Physicians would also be exposed to criminal and civil liability.

59. Due to increased procedure times for digoxin procedures requiring multiple trips to a clinic, patients may face significant delay in accessing an abortion procedure. Although legal abortion is a very safe procedure, the risks increase as the pregnancy advances. Thus, delaying abortion until later in pregnancy increases the potential risks for patients.

60. For some women, the Act will delay or completely prevent them from accessing abortion. Some women, deprived of access to legal abortion, forgo the abortions they would have

obtained if they could and, instead, carry unwanted pregnancies to term. These women are exposed to increased risks of major complications from childbirth, including death, and they are at much greater risk of complications during pregnancy and after delivery.

61. For these reasons, the Act will harm both physicians who provide abortions affected by the Act and their patients.

Dated: January 30, 2020

Anne Davis, M.D., M.P.H.

EXHIBIT A

CURRICULUM VITAE FOR
DR. ANNE R. DAVIS

1) **Date of Preparation** 8/14/19

2) **Personal data**

Name Anne Rachel Davis

Contact information 622 West 168th Street
Presbyterian Hospital 16-69
Department Obstetrics and Gynecology
Columbia University Irving Medical Center
New York, NY 10032

(212) 305-9368
ard4@cumc.columbia.edu

Birthplace Rochester, NY
Citizenship U.S.

3) **Academic appointments, hospital appointments and other work experience**

Academic appointments

Department of Obstetrics and Gynecology, Columbia University Irving Medical Center

7/2008-present Wyeth Ayerst Associate Professor of Obstetrics and Gynecology
7/1999-6/08 Assistant Professor of Clinical Obstetrics and Gynecology
7/1997-6/99 Clinical Instructor in Obstetrics and Gynecology

7/2012-present Director, Fellowship in Family Planning
7/2004-6/12 Co-director, Fellowship in Family Planning

Department of Urology, Columbia University Irving Medical Center

7/2001-6/04 Co-director, New York Center for Human Sexuality

Hospital appointment

7/2008-present Associate Attending Physician

	New York Presbyterian Hospital
7/1999-6/08	Assistant Attending Physician
	New York Presbyterian Hospital

4) Education

9/1997-6/2002	Masters of Public Health, Epidemiology Columbia University School of Public Health, NY, NY
9/1989-6/1993	Medical Doctor College of Physicians and Surgeons, NY, NY
9/1984-6/1988	BA, Psychology and Neurobiology College of Arts and Sciences, Cornell University, Ithaca, NY

5) Training

7/1997-6/1999	Fellow, Columbia University Medical Center, Department Obstetrics and Gynecology, Kenneth Ryan Fellowship in Family Planning, NY, NY
7/1993-6/1997	Intern and Resident, Obstetrics and Gynecology, University of Washington, Seattle, WA

6) Explanation of Gaps

I worked as a research assistant for Dr. Donald Gash, a neuroscientist at the University of Rochester, from 7/88 until 6/89.

7) Licensure and board certification

Licensure

1997-present	New York State #207702
1993-1997	Washington State #32927

Board qualification

2001-present	American Board of Obstetrics and Gynecology Original certification 2001 Annual recertification, last 2018

8) Honors and awards

2018 Certificates of Excellence. Quality Improvement in Contraceptive Access

(QINCA) learning collaborative of the New York City Department of Health.

- Physician Champion for 2 year, multi-site project at Allen and Morgan Stanley Children's Hospitals

2015 Benson and Pamela Harer Seminar on History. "Your" Reproductive Decision? There's a Law for That.

- Invited lecture for plenary session. American College of Obstetrics and Gynecology Annual meeting.

2014 Leadership Management Institute, Columbia University Medical Center

2011 National Physician Advocacy Merit Award. Institute on Medicine as a Profession,

- For advocacy work in women's reproductive health, awarded to three U.S. physicians annually

2010 Best Abstract in Neuroendocrinological Research. American Academy of Neurology, Neuroendocrinology Section

2005 Physician Leadership Conference, New York Presbyterian Hospital

2003 Elected to New York Obstetrical Society

2001 Early Career Women Faculty Professional Development Program, AAMC

1997 Outstanding Resident Teacher, Department OB/GYN, University of Washington

1993 Alpha Omega Alpha, College of Physicians and Surgeons

1993 Conrad Lattes Fellowship, Columbia Society and Medicine Program

1990 Dean's Summer Research Fellowship, College of Physicians and Surgeons

1988 Magna cum Laude, Phi Beta Kappa, Cornell University

1987 Ford Foundation Research Fellowship, Cornell University

9) Academic service

Local

2016-present	Mother's Center, Physician Liaison, integrated family planning services, Department OB/GYN
2016-present	Perinatal Practice Committee, Department OB/GYN
2013-present	Clinical Competency Committee, Department OB/GYN
2010-present	Institutional Review Board, alternate, Columbia University Medical Center

2008-2010	Institutional Review Board, full member, Columbia University Medical Center.
2006-2008	OR Anesthesia Committee, Allen Hospital.
2003-present	Department OB/GYN, Residency Interview Committee
2002-2007	Department OB/GYN, Quality Assurance Committee

National

2019-present	Representative, Society of Family Planning. Levels of Gynecologic Care Task Force, American College of Obstetrics and Gynecology.
2019-present	Presenter and committee member. Society of Maternal Fetal Medicine. Joint national workshop: Reproductive Services for Women at High Risk of Maternal Mortality
2018-present	Advocacy education committee, Fellowship in Family Planning
2015-2016	Education committee for "M" in "MFM" project. Society of Maternal Fetal Medicine

10) Professional Organizations and Societies

Local

2003-present New York Obstetrical Society

- 2005 Membership Committee
- 2006 Committee Chair, Residency Research Day

National

2005-present Society of Family Planning, Fellow

- 2018 Scientific Program Planning Committee

2004-2018 Association Reproductive Health Professionals, member

2003-present National Abortion Federation, member

1997-present Physicians for Reproductive Health

- Partnership for Abortion Provider Safety, Committee member, 2018-present
- Leadership Training Academy Council of Advisors 2014 –present
- Consulting Medical Director, 2011-present
- Chair, Voices of Courage Award Committee 2008-2016

- Board of Directors, 1999-2008

1997-present American College of Obstetrics and Gynecology, Fellow

1989-2008 American Medical Women's Association, member

International

2000-2005: International Society for Women's Sexual Health, member.

- Board of Directors, 2001-2002

Consultative

Local

2014-present NYC DOH Office of School Health, Adolescent Health Unit. Medical Advisor to School-Based Health Center, Reproductive Health Project, New York City

2004-2006 NYC Health and Hospital Corporation (HHC) physician trainer, initiative to improve surgical and medical management of early pregnancy failure

National

2016-2018 American Civil Liberties Union, expert witness: declaration, deposition and in-person hearing and trial testimony. Lawsuits challenging dilation and evacuation abortion bans in Alabama (2016) and Kentucky (2018)

2015-2016 Center for Reproductive Rights, expert witness: declaration for lawsuit challenging dilation and evacuation abortion ban in Kansas

2011-present Physicians for Reproductive Health, Consulting Medical Director

- Media communications
- Drafting organization press releases
- Review medical content in amicus briefs and legislative testimony
- Represent organization at coalition meetings

2017-2018 Evofem Pharmaceuticals. Pregnancy adjudication committee for clinical trial.

2015 Association for Reproductive Health Professionals. Developed webinar and presentation: Contraception for women with epilepsy.

2014 FDA BRUDAC, invited member to special committee meeting,

December 18, 2014

2014-2017	Agile Pharmaceuticals. Pregnancy adjudication committee for clinical trial.
2013-2014	Fellowship in Family Planning, reviewer, fellow research proposals.
2013-2018	TEACH project. Scientific Advisory Committee. Development of teaching and training materials for first trimester abortion.
2012	American College of Obstetrics and Gynecology, reviewer, scientific abstract submissions
2009-10	Association of Reproductive Healthcare Professionals. Mainstreaming the IUD presentation for CME, curriculum development
2005-2006	Association of Reproductive Health Professionals. Development of post-partum provider guidelines, first and revised editions
2004-2005	American Medical Women's Association. Reproductive Health Initiative, Curriculum Development

International

2016	The Educational University of Hong Kong. Reviewer, research proposal for The Committee on Research and Development Healthcare and Promotion Fund.
2011	Gynuity. Research consultant for implementation of the study: Capacitación para el equipo del estudio: Mifepristona y misoprostol en comparación con el misoprostol solo para la interrupción del embarazo en el segundo trimestre. Medical Center of the University of San Juan, Puerto Rico
2011	Gynuity. Chair, data safety and monitoring board, international study of misoprostol for labor induction after fetal demise
2006	Gynuity. Research consultant implementation of a RCT: protocol initiation medical versus surgical management of first trimester early pregnancy failure. Maternidad Isidro Ayalo and CEMOPLAF, Quito, Ecuador
2005	Gynuity. Development of "Instructions for Use: Misoprostol for Treatment of Incomplete Abortion and Miscarriage" Reproductive Health Technologies Project

Journal reviewer

Obstetrics and Gynecology

- top 100 reviewers, 2005)

American Journal Obstetrics and Gynecology

- outstanding reviewer 2017)

British Journal of Obstetrics and Gynecology

Journal of the Society for Gynecologic Investigation

Women's Health in Primary Care

American Journal of Public Health

Psychoneuroendocrinology

Contraception

- top reviewer 2014
- outstanding reviewer 2016

JAMA Archives of Pediatric and Adolescent Medicine

New England Journal of Medicine

The Medical Letter

Journal of Reproductive Medicine

Epilepsia

Editorial Board

None

11) **Fellowship and grant support**

Present Support

1997-present	Anonymous Foundation, Fellowship program in family planning and contraception, 403.13. Director 2012-present, $605,553 (2018-19) renewed annually
2018-2020	Bayer. Multi-center, open label, uncontrolled study to assess contraceptive efficacy and safety of Mirena extended beyond five years of use. BAY86-5028/18649 Site PI. Total direct funds to date: $33,405

Past Support

7/14-7/15	The Society of Family Planning. Combining research, mentorship and advocacy to advance the health of special populations. P.I. SFPRF7-MC1 ($40,000)
8/11-7/15	Bayer. Safety, acceptability and efficacy of the LNG IUS in women with epilepsy. Investigator initiated. P.I. WH-2010-9 ($218,277)
01/11-7/14	Milken Foundation. Pregnancy outcomes in women with epilepsy (WEPOD). Observational, controlled three year cohort study. PI J. French, Davis Co-I. #NSLIJRI CU11-0642 ($26,699)
3/10-3/11	Epilepsy Foundation. Epilepsy birth control registry project. P.I. A Herzog. Co-I Davis #137557 ($99,620)
7/09-2/1/11	Bayer. Multicenter, low-dose patch contraception trial, Phase 3, Multicenter trial. #91555 ($98,657)
2/09-4/11	Bayer. Multicenter, open-label, randomized study to assess the safety and contraceptive efficacy of two doses (in vitro 12g/24 h and 16g/24 h) of the low-dose levonorgestrel contraceptive intrauterine system (LCS) ($32,000)
3/05-2/07	NICHD. Oral contraceptives and cytochrome p450 inducers. R03-HD048547-01. PI Davis ($170,500)
3/03-9/04	Wyeth. Levonorgestrel 90mg, ethinyl estradiol 20mcgs in a continuous daily regimen for oral contraception. P.I. ($123,281).
4/01 – 4/04	NICHD N01-HD13321 – RCT on Management of Early Pregnancy Failure: Clinical Centers. ($479,006). P.I. Westhoff, Davis Co-I.
4/01-03/03	NICHD R03-HD39776-RCT Oral contraceptives for the management of dysmenorrhea in adolescent girls. P.I., ($170,500).
8/01-07/03	NICHD R21-AT00836.Effects of Hypericum Perforatum on oral contraceptives. P.I Murphy, Co-I Davis ($250,000).
7/01-6/02	Partnership for Women's Health at Columbia University An fMRI study to localize the neuropsychiatric effects of testosterone replacement in post-menopausal women. P.I. Seidman, Co-I Davis ($200,000).
10/00-1/02	Bayer. A Multi-center, open-label, uncontrolled trial of the levonorgestrel-releasing IUS (intrauterine system) to evaluate insertion and counseling procedures. P.I. Westhoff, Co-I Davis ($82,000).
4/99-3/01	Gynetics. A prospective, open-label study of levonorgestrel

0.75mg tablets as an emergency contraceptive agent. PI Westhoff, Co-I. Davis ($25,925).

12) Educational contributions

Direct teaching, precepting, supervising

Department Obstetrics and Gynecology

- Division of Prevention and Ambulatory Care, Division research/practice meeting 1 hour weekly since 2001
- Fellowship weekly didactic lecture, one hour weekly since 2012
- Clinical supervision of residents, one week per month surgical abortion services, 16 hours 1997-present
- Resident education lectures. Contraception, abortion, sexual dysfunction, dysmenorrhea, gynecology and contraception for women with epilepsy. 1999-2008 three hours per year, one hour per year thereafter
- 1999-2012: Resident clinical supervision. Family Planning Clinic 8-12 hours weekly
- 2003-2006: St.Vincent's Hospital OB/GYN Resident clinical supervision in CUIMC Department of OB/GYN, 3-4 months/year

Department Family Medicine

2004-2010: Resident clinical supervision. Family Planning Clinic, 8 hours weekly for six months yearly.

Vagelos College Physicians and Surgeons

- 2009-present: Lecturer. Pharmacology block. Hormonal contraception.
  - Student evaluations in appendix
- 1999-present: Clinical supervisor. Medical Students for Choice Student Externship, 2-3 months/year.
- 2008-2018. Third year medical student clerkship. Clinical supervision, surgical abortion service. Eight hours monthly.
- 1999-2008: Clinical supervisor. AMWA Reproductive Health Initiative fourth year elective, 2-3 months a year.
- 1999-2005. Third year medical student lectures. Contraception, abortion, sexual dysfunction. Four hours per year.
- 1999-2002: Clinical supervisor. Sexuality and Reproduction

(clinical practice course), first year medical students.

School of Public Health

- Population and Family Health P6621. Guest lecturer, Fall 2001.
- Second reader, candidates Master's Degree in Public Health:

  Dr. Karla Maguire, 2011

  Dr. Noa'a Shimoni, 2009

  Sarah Kaufman, 2005

  Tina Robilotto, 2005

  Dr. Paula Castano, 2005

  Dr. Katharine O'Connell, 2004

Advising and mentorship

Department Obstetrics and Gynecology

Fellowship in Family Planning

Program co-director 2011-2012, Program director 2012-present

Supervised program graduates:

Dr. Ian Bishop 2019

Dr. Surya Cooper 2019

Dr. Chioma Ndubisi 2018

Dr. Annie Fu 2017

Dr. Caitlin Weber 2017 (family medicine)

Dr. Piyapa Praditpan2016

Dr. Katherine Rivlin 2015

Dr. Tanya Ohly 2014

Dr. Siripanth Nippita 2013

Dr. Kathleen Morrell2012

Dr. Maryam Guiahi 2011

Dr. Karla Maguire 2011

Resident/fellow mentor and research supervisor

Dr. Sarah Horvath 2014-17

Dr. Noa's Shimoni 2007-09

Vagelos College of Physicians and Surgeons

Medical Student research mentor

Dr. Jasmine Saadatmand

Dr. Lauren Osborne

Dr. Ava Yoon

Dr. Jordana Kritzer

Dr. Sarah Nowygrod

Other

Faculty mentor, Dr. Dara Matseoane-Peterssen, NYP Obstetrics and Gynecology/Pediatrics Faculty Leadership Program, 2014

Physicians for Reproductive Health

Mentor, reproductive health advocacy fellow

- Dr. Diane Horvath-Cosper 2013-14
- Dr. Kathleen Morrell 2012-13
- Dr. Lin Fan Wang 2011-12

Educational Administration and Leadership

Fellowship in Family Planning, Department Obstetrics and Gynecology, Columbia University Irving Medical Center

Director, Fellowship in Family Planning 2012-present

Co-director, Fellowship in Family Planning 2004-12

New York Presbyterian Hospital

Career advisory panel. Hospital-wide QUEST program for residents: Quality, Economics, Safety, Teamwork and Leadership. Invited panelist 2013-18.

Instructional/educational materials used in Print or other Media

Training Program in Early Abortion (TEACH). Early Abortion Training Workbook, for resident learners new to providing abortion services. Scientific advisory Committee, content reviewer and editor, 2015-2017.

https://www.teachtraining.org/training-tools/early-abortion-training-workbook/

- From 2016 to 2018, workbook users increased from 1080 to over 14,000.
- Workbook accessed in 100 countries worldwide.

General Adolescent Sexual and Reproductive Health Training. Developed training for adolescent school based providers in NYC DOH School-based Clinics. Six-hour didactic and case discussion format. Teaches basic gynecology topics, geared to new learners including advanced practice clinicians, 2018-present.

- See evaluation section appendix

Development of webinar for healthcare providers on self-managed abortion, presenter, 2018

https://prh.adobeconnect.com/pqnmapgq0eb0

Sharable Grand Rounds Presentation on Physician Advocacy, modified annually 2015-2018.

DAVIS AR, Engle C. Sexual Function. Reproductive Health Initiative Model Curriculum, 2nd Edition, Psychosocial module. American Medical Women's Association, 2003.

DAVIS AR. Early pregnancy loss, recurrent pregnancy loss and ectopic pregnancy. Resident study guide for CREOG exams. 2003, 2004, 2005.

13) Report of Clinical Care and Public Health Activities and Innovations

Clinical practice

1999-present: Ambulatory faculty practice in Gynecology, Department of Obstetrics and Gynecology, Columbia University Medical Center (2-6 sessions per week)

1999-present: surgical services at Allen Hospital including surgical treatment for abortion, miscarriage and sterilization (2 sessions per month)

1999-present: on-call coverage of emergency surgical services for miscarriage and abortion (one week per month)

1999-2014: attending physician, Family Planning Clinic of the Ambulatory Care Network, New York Presbyterian Hospital (3 sessions per week)

Quality Improvement initiative

QINCA: Quality Improvement in Contraceptive Access, NYC DOH. Learning collaborative across CHONY and Allen Hospitals to improve access to contraception for women at the time of out-patient visits, abortion or delivery (2016-18). Role: Physician Champion, coordinated program across pharmacy, billing, clinical providers, formulary and therapeutics committee. Awarded certificates of excellence at 10 sites.

14) Patents and inventions

None

15) Publications

Peer reviewed publications in print or other media

1. Mourad M, Castano P, Fu A, **DAVIS A**. Treatment of Septic Shock in the Second Trimester with Dilation and Evacuation. Journal of Reproductive Medicine. Accepted, March 2019.
2. Vieira CS, Pack A, Roberts K, **DAVIS A**. A pilot study of levonorgestrel concentrations and bleeding patterns in women with epilepsy using a levonorgestrel IUD and treated with anti-epileptic drugs. Contraception 2018. pii: S0010-7824(18)30520-1. doi: 10.1016
3. Fu A, Weber C, Gilmore E, **DAVIS A**, Hirsch G, Westhoff CL. A randomized controlled trial comparing transabdominal and transvaginal sonography for medical abortion eligibility assessment. Contraception 2018 Sep; 98(3):199-204.
4. Pennell P, French J, Harden C, **DAVIS A**, Bagiella E, Andreopoulos E, Lau C, Llewellyn N, Barnard S, Allen S. Fertility and birth outcomes in women with epilepsy seeking pregnancy. JAMA Neurol 2018; 75(8): 962-969.
5. Herzog A, MacEachern D, Mandle H, Cahill C, **DAVIS A** and Hauser A. Folic Acid Use by Women with Epilepsy: Findings of the Epilepsy Birth Control Registry. Epilepsy & Behavior 2017; 72:156-160.
6. Praditpan P, Hamouie A, Basaraba CN, Nandakumar R, Cremers S, **DAVIS AR**, Westhoff CL. Pharmacokinetics of levonorgestrel and ulipristal acetate emergency contraception in women with normal and obese body mass index. Contraception. 2017; 95(5): 464-469.
7. Lazorwitz A, Guiahi M and **DAVIS AR**. The effect of carbamazepine on etonorgestrel concentrations in contraceptive implant users. Contraception. 2017; 95(6): 571-577.
8. **DAVIS AR**, Horvath SK, Castaño PM. Trends in gestational age at time of

surgical abortion for fetal aneuploidy and structural abnormalities. Am J Obstet Gynecol;2017; 216(3):278-e1-278.e5.

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10. Harden C, Pennell P, French J, **DAVIS A**, Lau C, Llewellyn N, Kaufman B, Bagiella E, Kirshenbaum A. Anti-mullerian hormone is higher in seizure free women with epilepsy compared to those with on-going seizures. Epilepsy research 2016;127:66-71.

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12. Herzog A, **DAVIS AR,** Hauser A, Mandle H, Cahill K. Contraceptive practices of women with epilepsy: findings of the epilepsy birth control registry. Epilepsia 2016;57(4):630-7.

13. Maguire K, Joslin-Roher S, Westhoff CL, **DAVIS AR**. IUDs at 1year: predictors of early discontinuation. Contraception 2015;92(6):575-7.

14. Nippita S, Oviedo JD, Velasco MG, Westhoff CL, **DAVIS AR**, Castaño PM. A randomized controlled trial of daily text messages versus monthly paper diaries to collect bleeding data after intrauterine device insertion. Contraception 2015, 92(6): 578-84.

15. Morrell K, Cremers S, Westhoff CL, **DAVIS AR**. Relationship between etonorgestrel level and BMI in women using a contraceptive implant for more than one year. Contraception 2015;93:263-265.

16. Nippita S, Velasco MG, Oviedo JD, Westhoff CL, **DAVIS AR**, Castaño PM. 90-day bleeding patterns after intrauterine device insertion: a prospective parallel cohort study. Obstet Gynecol 2014; 123:1:12S (suppl).

17. Shimoni N, **DAVIS AR** and Westhoff CL. Can ultrasound predict IUD expulsion after medication abortion? Contraception 2014 May;89(5):434-9.

18. Maguire K, Morrell K, Westhoff C, **DAVIS A**. Accuracy of providers' assessment of pain during intrauterine device insertion. Contraception 2014;89(1):22-4.

19. Amoroso MW, Croft G, Roybon L, Oakley D, Williams D, **DAVIS AR**, Henderson C, and Wichterle H. Accelerated high-yield generation of limb-innervating motor neurons from human stem cells using small molecules. Journal of Neuroscience 2013;33(2):574-586.

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2012;86(3):214-9.

21. Shimoni N, **DAVIS AR**, Ramos ME, Rosario L and Westhoff CL. Timing of intrauterine device insertion after medical abortion. Obstet Gynecol. 2011;118(3):623-8.

22. **DAVIS AR**, Westhoff CL, Stanczyk FZ. Carbamazepine co-administration with an oral contraceptive: Effects on steroid pharmacokinetics, ovulation, and bleeding. Epilepsia 2011;52(2):243-247.

23. Pack, A, **DAVIS AR**, Kritzer J, Yoon A and Camus A. Anti-epileptic drugs: are women aware of interactions with oral contraceptives and potential teratogenicity? Epil and Behav 2009; 14(4):640-4.

24. **DAVIS AR**, Kroll R, Soltes B, Zhang N, Grubb GS, Constantine GD. Return to menses after cessation of a continuous oral contraceptive. Fert Steril 2008; 89:1059-63.

25. **DAVIS AR**, Pack A, Yoon A, Kritzer J, Camus A. Reproductive history, sexual behavior and use of contraception in women with epilepsy. Contraception 2008;77:405-409.

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28. O'Connell K, **DAVIS AR**, Kerns J. Oral contraceptives, side effects and depression among adolescent girls. Contraception 2007;75(4):299-304.

29. Westhoff CL, S Heartwell, S Edwards, M Zieman, G Stuart, C Cwiak, **DAVIS AR**, T Robilotto, L Cushman and D Kalmuss. Oral contraceptive discontinuation: do side effects matter? AJOG 2007; 196:412.e1-412.e7.

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32. Creinin MD, Huang X, Westhoff C, Barnhart K, Gilles JM, Zhang J. For the National Institute of Child Health and Human Development Management of Early Pregnancy Failure Trial Group. Factors related to successful misoprostol treatment for early pregnancy failure. Obstet Gynecol 2006;107(4):901-7, 2006.

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34. Schafer J, Westhoff CL, Osbourne L and **DAVIS AR**. Acceptability and satisfaction using quick start with a contraceptive vaginal ring versus an oral contraceptive. Contraception 2006; 73:488-492.

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data from a national registry. Support Care in Cancer 2003:11:700-706.

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1. Moroz L, Riley LE, D'Alton M, Brown HL, **DAVIS AR**, Foley M, Graves CR, Sheffield JS, Zerden ML, Bryant AS. SMFM Special Report: Putting the "M" back in MFM: Addressing education about disparities in maternal outcomes and care. AJOG 2018; 218(2):B2-B8.
2. Morrell K, **DAVIS AR**. Location, location, location: where you live determines your access to abortion. Columbia Medical Review. 2017 Volume 1 (2):2-5.
3. Praditpan P and **DAVIS A**. Emergency Contraception: two steps forward, one step back. Semin Reprod Med 2016;34:152-58.
4. Praditpan P and **DAVIS A**. Manual vacuum aspiration: a safe and effective treatment for early miscarriage. OBG Management 2015; 27(10):38-43.
5. Higgins J and **DAVIS AR**. Contraceptive sex acceptability: a commentary, synopsis and agenda for future research. Contraception 2014; 90(1):4-10.
6. Guiahi M and **DAVIS A**. First-trimester abortion in women with medical conditions: release date October 2012. Society of Family Planning clinical guideline #20122. Contraception 2012;86(6):622-30.
7. National guideline, posted on Society of Family Planning website
    - Downloaded an average of 45 times/month since publication (data provided by Society of Family Planning)
8. Dragoman M, **DAVIS A**, Banks E. Contraceptive options for women with

preexisting medical conditions. J Womens Health (Larchmt). Mar 2010;19(3):575-580.

9. **DAVIS AR** and Castano P. Oral contraceptives and libido in women. Ann Rev Sex Res 2004; 15: 297-312.

10. **DAVIS AR**, Westhoff C. Primary dysmenorrhea in adolescent girls and treatment with oral contraceptives. J Ped Adol Gyn 2001;14:3-8.

Reviews, chapters, monographs, editorials

1. Pennell P and **DAVIS A**. Selecting contraception for women on anti-epileptic drugs. In: Waters J, O'Neal MA (eds). Neurologic Illness in Pregnancy (2014) Editors O'Neal, Walters.
2. **DAVIS A**, Pack A and Dennis A. (2014). Contraception for women with epilepsy. In Contraception for the Medically Challenging Patient (pp. 135-146). New York, NY: Springer.
3. Pennell P and **DAVIS AR**. Selection of contraception for women with epilepsy. In: Bui and Klein A (eds). Women with Epilepsy: a practical management handbook. Cambridge, UK, Cambridge University Press, 2014. Edited by Esther Bui and Autumn Klein.
4. **DAVIS AR**, Morrell KM. Epilepsy and Contraception. In Epilepsy and Women. Edited by CL Harden, SV Thomas, and T Tomson, Wiley-Blackwell, UK, 2013.
5. Higgins J and **DAVIS AR**. Sexuality & Contraception. Contraceptive Technology, 20th Edition. Ardent Media, Inc, 2011.1-28.
6. **DAVIS AR**. Abortion in adolescents. In Textbook of Adolescent Health Care. American Academy of Pediatrics, 2011
7. Grimes D, **DAVIS AR**, Ramos D. Heavy menstrual bleeding. Assessing impact, evaluating management options. Supplement to OBG management. October 2009.
8. **DAVIS AR** and Beasley A. Abortion in adolescents, epidemiology, confidentiality and methods. Current Opinion in Obstetrics and Gynecology. Curr Opin Obstet Gynecol 2009; 21(5):390-395
9. **DAVIS AR** and Easterling TE. Medical evaluation and management. In Management of unintended and abnormal pregnancy: comprehensive abortion care. Blackwell, U.K. 2009.
10. Dempsey-Fanning A and **DAVIS AR**. Medical management of early pregnancy failure: how to treat and what to expect. Semin Reprod Med 2008. Vol 26 (5) 401-10.

11. Dragoman M and **DAVIS AR**. Abortion care for adolescents. Clinical Obstet Gynecol 2008; 51(2): 281-9.
12. **DAVIS AR**. Pregnancy prevention in epilepsy: assessing the options. Practical Neurology 2006. Vol 5 (2) 28-33.
13. **DAVIS AR** and Castano P. Oral contraceptives and libido. In Women's Sexual Function and Dysfunction: Study, Diagnosis and Treatment. Edited by I Goldstein, C Meston, S Davis and A Traish, Taylor and Francis, UK, 2005.
14. **DAVIS AR**, Harden C and Pennel P. Women with Epilepsy: Hormones, Contraception and Treatment Options. Supplement to OB/GYN News. Summer 2005.
15. **DAVIS AR**, Schnare S. Hormonal contraceptives and libido. Dialogues in Contraception. Volume 9, Issue 2, 2005.
16. **DAVIS AR**. Contraception: making the right choice. In Women with epilepsy: hormones, contraception and treatment options. Supplement to Clinical Neurology News. August, 2005.
17. Anastasiadis A, Droggin D, **DAVIS A**, Salomon L and Shabsigh R. Male and female sexual dysfunction: epidemiology, pathophysiology, classification and treatment. Principals of Gender Specific Medicine. Editor: Marianne J. Legato, Elsevier Science, San Diego, CA, 2004, chapter 52, 573-585.
18. Scheinfeld N, **DAVIS AR**. Teratology and drug use during pregnancy. Emedicine Journal, 2003. http://author.emedicine.com/MED/topic3242.htm.
19. **DAVIS AR**, Teal S. Controversies in adolescent hormonal contraception. Infert Reprod Med Clin N Am 2003;14:141-156.
20. Anastasiadis AG, **DAVIS AR**, Ghafar MA, Burchardt M, Shabsigh R. The epidemiology and definitions of female sexual disorders. World J Urol, 2002;20:74-78.
21. **Davis AR**. Book review. A Clinician's Guide to Medical and Surgical Abortion. NEJM 2000;343(3):227-228.
22. **DAVIS AR**. Recent advances in female sexual dysfunction. Curr Psych Reports 2000;2:211-214.

Case reports, letters to the editor

1. **DAVIS AR** and Westhoff C. Two OB/GYNs on women and depression. (2018, June 26) [Letter to the editor, in response to "Common drugs may be contributing to depression"]. The New York Times.
2. Westhoff C and **DAVIS A**. Abortion-related adverse events by facility type: reassurance from a national analysis. (2018, June 6) JAMA Editorial.
3. **DAVIS AR**, Pack A, Pennell P and Hesdorffer D. Birth control in epilepsy: we need to know more. (2017, April) Expert Review of Neurotherapeutics. p. 521.

4. **DAVIS AR**. Requiring ultrasounds before an abortion. (2015, June 3) [Letter to the editor, in response to "Gov. Walker and the cool thing"]. The New York Times.
5. **DAVIS AR**. Court ruling on abortion. (2013, November 5). [Letter to the editor, in response to "In reversal, court allows Texas law on abortion" news article, Nov 1] The New York Times, p. A28.
6. **DAVIS AR**. An anti-abortion film. (2012, April 19) [Letter to the editor, in response to "Anti-abortion film is pro-profit"]. The New York Times.
7. **DAVIS AR**. Calls for free coverage for birth control. (2011, July 26) [Letter to the editor, in response to "Make birth control affordable"]. The New York Times.
8. **DAVIS AR**. Reproductive choices women face. (2011, January 8) [Letter to the editor, in response to "The Unborn Paradox"] The New York Times, p. WK9.
9. **DAVIS AR**. The right to birth control. (2010, October 3) [Letter to the editor, in response to "Birth control over baldness"]. The New York Times. (Also summarized in the Daily Women's Health Policy Report newsletter)
10. **DAVIS AR**. The abortion choices of poor women. (2009, January 11) [Letter to the editor, in response to "For privacy's sake, risking do-it-yourself abortion"]. The New York Times.
11. **DAVIS AR** and Pack A. [Letter to the editor, in response to "Initial management of epilepsy"] NEJM 2008; 359:2499-2500
12. Winikoff B and **DAVIS AR**. Abortion is for women. Lancet 2007: 369, June 9.

Other non-peer reviewed publications in print or other media: published and presented abstracts

1. Kelly, Pennell P, Harden C, French J, DAVIS A. Catamenial epilepsy: prevalence in a heterogeneous cohort of women with epilepsy. Poster presentation The American Academy of Neurology Annual Meeting. May 2019.
2. Fu A, Weber C, Gilmore E, DAVIS A, Hirsch G, Westhoff C. A randomized controlled trial comparing transabdominal and transvaginal sonography for medical abortion eligibility assessment. Poster presentation. North American Forum on Family Planning 2017.

3. Pennell P, Harden CL, French J, DAVIS AR, Bagiella E, Lau C. A prospective study of pregnancy in women seeking contraception (The WEPOD study). Oral presentation. The American Academy of Neurology annual meeting 2016.
4. Llewellyn NG, Pennell PB, Lau C, Harden CL, French J, Bagiella E, Davis AR, Barnard S, Cornely, S. Ovulation Rates in Women with Epilepsy Seeking Pregnancy compared to Healthy Controls. Poster 2.197; 2015 American Epilepsy Society Annual Meeting.
5. Harden C, Pennell P, French J, Davis A, Lau C, Kashambwa R, Kaufman B, Bagiella E, Kirshenbaum A. Mullerian Inhibitory substance (MIS) levels are associated with seizure occurrence in women with epilepsy. Platform S6.001; . 2015 American Academy of Neurology Annual Meeting.
6. Harden C, Lau C, Pennell P, Bagiella E, Huynh J, Kashambwa R, Llewellyn N, Kaufman B, Davis A and French J. Menstrual cycle length in women with epilepsy trying to conceive compared to healthy controls. Poster presentation American Epilepsy Society annual meeting 2014.
7. DAVIS AR, Pack A, Saadatmand J. Contraception with the levonorgestrel IUS in women with epilepsy: results from the WE SAIL study. Poster presentation at the North American Forum on Family Planning, Miami, Florida 2014.
8. Nippita S, Castano P and DAVIS AR. Text Messages Versus Monthly Paper Diaries: Collecting Bleeding Data Following IUD Insertion. Poster presentation Spring 2014 ACOG Annual Clinical Meeting.
9. Nippita S, Castano P and DAVIS AR. 90-Day Bleeding Patterns After Intrauterine Device Insertion: A Prospective Parallel Cohort Study. Poster presentation ACOG Annual Clinical Meeting 2014.
10. Herzog A, DAVIS AR, Hauser A Relative Risks of Changes in Seizure Frequency with Hormonal Versus Non-Hormonal Contraception. Platform presentation American Academy of Neurology Annual Meeting, San Diego, CA 2013.
11. Herzog A, DAVIS AR, Hauser A. Relative Risks of Changes in Seizure Frequency with Hormonal Contraception Vary by Antiepileptic Drug Category. Platform presentation American Academy of Neurology Annual Meeting, San Diego, CA 2013.
12. Llewellyn, N.; Harden, C.L.; French, J., Pennell, P.B.; Bartfeld, E., Davis, A.R., Lau, C., Lee, J.K.; Kirshenbaum, A.; Bagiella, E. Maintenance of subject adherence to daily diary entry facilitated by use of a mobile application in the WEPOD study. 2012 Annual Meeting of the American Epilepsy Society.
13. Maguire, K, Morrell K, Davis AR, Westhoff CL. Oral presentation: Accuracy of Providers' Assessment of Pain during IUD Insertion. ACOG's 60th Annual Clinical Meeting May 07, 2012.
14. Pennell, P French, J, Harden, CL, Bartfeld, E, DAVIS AR, Llewellyn, LG, Staley, BA, Lau, C, Keenan, HA. Evaluation of a mobile application tool in the WEPOD study. American Epilepsy Society Annual Meeting 2011.

15. DAVIS AR, Westhoff C, Stanczyk F. Carbamazepine co-administration with an oral contraceptive: effects on steroid pharmacokinetics, bleeding and ovulation. Poster presentation: American Academy of Neurology Annual Meeting, 2010.
16. Tsai S, DAVIS AR, Wade C. Case Series: Acupuncture point injection with vitamin K for treatment of dysmenorrhea. Oral presentation: The Pediatric Academic Societies 2010 Annual Meeting.
17. Eastern Nursing Research Society Conference, 2009.
18. Hall KS, O'Connell K, DAVIS AR, Rickert V, Reame N, Westhoff C. Psychological Symptoms, Perceived Side Effects, and Oral Contraceptive Discontinuation in Minority Adolescent and Young Adult Women.
19. DAVIS AR, Pack A, Camus A, Yoon A, Kritzer J. Patient knowledge of teratogenicity and contraceptive interactions of anti-epileptic drugs. American Epilepsy Society Annual Meeting, 2007.
20. DAVIS AR, Pack A, Camus A, Yoon A, Kritzer J. Patient knowledge of teratogenicity and contraceptive interactions of anti-epileptic drugs. American College of Obsterics and Gynecology annual meeting, 2007.
21. Osorio J, Reddy S, DAVIS AR, O'Connell K, Castano P, Simpson L, Yamashiro D and Mital S. Department Pediatric Cardiology and Obstetrics and Gynecology. Growth signaling pathways in the developing human heart. Poster presentation Pediatric Academic Societies, 2007.
22. DAVIS AR, Pack A, Camus A, Yoon A, Kritzer J. Contraception in women with epilepsy. Poster presentation: Association of Reproductive Health Professionals meeting, 2006.
23. DAVIS AR, Kroll R, Soltes B, Haudiquet V, Zhang N, Grubb GS, Constantine GD. Return to menses after use of a continuous low-dose oral contraceptive. Oral presentation: American College of Obstetricians and Gynecologists annual meeting, 2006.
24. O'Connell K, Kerns J, DAVIS AR. Oral contraceptives and depression in adolescent girls. Poster presentation: Association of Reproductive Health Professionals Annual Meeting, 2005.
25. DAVIS AR, O'Connell K, Westhoff C. A double-blind randomized trial of an oral contraceptive vs. placebo for dysmenorrhea in adolescents. Poster presentation. ACOG Annual Clinical Meeting 2004.
26. O'Connell K, Kearns J, DAVIS AR. Self-treatment of moderate and severe dysmenorrhea in adolescent girls. Poster presentation: Society of Adolescent Medicine, 2004.
27. Seidman S, DAVIS AR, Shabsigh R, Small S. The central acute effect of testosterone in post-menopausal women assessed by fMRI. International Society of Sexual Medicine 2004, Buenos Aires. Awarded prize: ISSM award for best clinical abstract in female sexual dysfunction.

28. DAVIS AR, O'Connell K, Westhoff C. Oral contraceptives for dysmenorrhea in adolescent girls: a randomized, controlled trial. Oral presentation: Association of Reproductive Health Professionals Annual Meeting, 2004.
29. Seidman S, DAVIS AR, Shabsigh R, Small S. The acute effect of testosterone replacement in post-menopausal women as measured by fMRI. Oral presentation: International Society for Women's Sexual Health, 2003.
30. DAVIS AR, Osborne L, Westhoff C and O'Connell K. A placebo-controlled trial of oral contraceptives for dysmenorrhea in adolescent girls: methodological challenges and surprises. Poster presentation: The Association for Reproductive Health Professional Annual Meeting 2003.
31. The MEPF Study Group NICHD. Bleeding patterns after vaginal misoprostol for management of early pregnancy failure. Oral presentation: The Association for Reproductive Health Professionals Annual meeting, 2002.
32. Anastasiadis AG, DAVIS AR, Sawczuk IS, Fleming M, Perelman MA, Burchardt M, Shabsigh R. High quality of life and relationship scores in men and women with high stage and metastatic kidney cancer? Poster presentation: Annual Scientific Program of the Sexual Medicine Society of North America, Inc., May 26, 2002.
33. Anastasiadis AG, DAVIS AR, Sawczuk IS, Fleming M, Perelman MA, Burchardt M, Shabsigh R. Sexual functioning in kidney cancer patients: data from a national registry. Poster presentation: annual meeting American Society of Clinical Oncology, 2002.
34. Anastasiadis AG, DAVIS AR, Sawczuk IS, Fleming M, Perelman MA, Burchardt M, Shabsigh R. Sexual functioning, depression and quality of life in men and women with renal cancer. Poster presentation: The Female Sexual Function Forum annual meeting, 2001.
35. DAVIS AR, Nowygrod S, Westhoff C, Shabsigh R . The influence of vaginal bleeding on the sexual behavior of Hispanic women and men. Poster presentation: The Association for Reproductive Health Professionals annual meeting, 2000.
36. Murphy P, DAVIS AR, Westhoff C, Soren K. Contraception for adolescent girls with chronic illnesses: a demonstration project. Oral presentation: The Society for Adolescent Medicine, 2000.
37. DAVIS AR, Nowygrod S, Westhoff C, Shabsigh R. The influence of vaginal bleeding on the sexual behavior of urban Hispanic women. Oral presentation: Conference on Female Sexual Dysfunction,1999.
38. DAVIS AR, Miller LA, Tamimi H, Gown A. Methotrexate vs. 6-Mercaptopurine for early abortion using the immunohistochemical assay Ki-67. Oral presentation: National Abortion Federation,1997.
39. Killackey M and DAVIS AR. Case-control comparison of papillary serous ovarian CA and papillary serous ovarian CA of the peritoneal surface. Oral presentation: Annual meetings of the American College of Obstetricians and Gynecologists and The Society of Memorial Gynecologic Oncologists, 1992.

16) Invited and/or peer selected presentations at regional, national or international levels

Grand rounds speaker Departments Obstetrics and Gynecology

1. Ohio State University Medical Center. Physician advocacy, in your style, January 2018.
2. University of Utah. Advocacy for reproductive health: a conversation with the dream team (panel presentation), November 2017.
3. Einstein Montefiore Department Obstetrics and Gynecology. Physician advocacy, in your style, November 2017.
4. New York Langone Medical Center. Physician Advocacy: Why and How, April 2017.
5. Hospital of the University Of Pennsylvania. Physician Advocacy, March 2017.
6. University of California San Francisco. Your reproductive health decision: there's a law for that, April, 2016.
7. University of Washington. Contraception for women with epilepsy: does it work? will it help? May 2014.
8. North Shore LIJ Medical Center. A Clinical update in intrauterine contraception, April 2013.
9. Winthrop Hospital. Advances in Contraception, November 2012.
10. Staten Island Hospital Center. Intrauterine progestins for common gynecologic problems, December 2011.
11. Dartmouth Hitchcock Medical Center. The pill for the ill? Contraception for women with medical conditions, December, 2009.
12. Long Island Jewish University. Update on intrauterine contraception. November 2009.
13. University of Rochester. The pill for the ill? Contraception for women with medical conditions, April 2009.
14. University of Utah. The pill for the ill? Contraception for women with medical conditions, September 2009.
15. New York University. Contraception for Women with Medical Problems, 2008.
16. North Shore, Long Island Jewish. A Clinical Update on Intrauterine Contraception, 2008.
17. NYU Bellevue. Mainstreaming intrauterine contraception, 2008.
18. Harlem Hospital Medical Center. The levonorgestrel IUS, 2007.
19. Northwestern University. Contraception and women with medical problems,

2007.

20. Woodhull Medical Center. Surgical management of abortion and miscarriage in the first trimester, 2006.
21. Beth Israel Medical Center. Gynecologic uses of misoprostol. New York, NY, 2006.
22. St. John's Hospital, Detroit, MI. Gynecologic uses of misoprostol, 2005.
23. Lutheran Medical Center. Medical abortion, 2005.
24. Bronx Lebanon Medical Center. Intrauterine contraception, 2005.
25. University of Illinois at Chicago. Gynecologic uses of misoprostol, 2005.
26. Harlem Hospital Center. Intrauterine contraception: expelling the myths and dealing with the dilemmas, 2005.
27. Maimonides Medical Center. Medical abortion regimens, complications, and side effects, 2005.
28. NY Methodist Hospital. Medical abortion, 2005.
29. Queens Medical Center. Early options for pregnancy termination, 2004.
30. Staten Island Medical Center. Emergency Contraception, 2004.
31. Columbia University Medical Center. Oral contraceptives and dysmenorrhea in adolescent girls, 2004.
32. University of Medicine and Dentistry of New Jersey. Second trimester abortion, 2004.
33. Elmhurst Medical Center. New options for pregnancy termination, 2003.
34. New York University. Overview of Abortion, 2003.
35. Cedars-Sinai Medical Center. Medical management of pregnancy termination, 2002.
36. Kaiser Los Angeles Medical Center. Medical abortion regimens, 2002.
37. Jersey Shore Medical Center. Abortion in the United States, 2002.
38. Albany Medical College. Overview of medical abortion, 2002.
39. St. Vincent's Hospital. Recent Advances in Contraception and the levonorgestrel intra-uterine system, 2002.
40. Columbia University Medical Center. Female sexual dysfunction: an update, 2001.
41. Columbia University Medical Center. Tubal sterilization, 1998.
42. University of Puerto Rico at San Juan, San Juan, Puerto Rico. Early surgical abortion, 1998.

Invited presentations at national meetings

1. State-based abortion restrictions and women and high risk of maternal mortality, co-presenter with Andrew Beck American Civil Liberties Union. Society of Maternal Fetal Medicine annual meeting. Reproductive Services for Women at high-risk of Maternal Mortality, February 2018.
2. Complex Family Planning: What is our Advocacy Role? Fellowship in Family Planning Annual Meeting, 2018.
3. TRAP laws, informed consent and access to care. Symposium on Medical and Legal Aspects of Targeted Regulation of abortion Providers. Quinney College of Law, University of Utah, November 2017.
4. Aligning law, science and medicine to preserve abortion rights. Plenary session, panel. National Forum on Family Planning 2017.
5. Benson and Pamela Harer Seminar on History. "Your" Reproductive Decision? There's a Law for That. Plenary session. American College of Obstetrics and Gynecology Annual meeting 2015.
6. GYN perspectives on contraception and use of long-acting reversible contraception (LARC) in women with epilepsy. Neuroendocrinology special interest section. American Epilepsy Society Annual Meeting, 2015.
7. Media and Advocacy 101: An Introduction to Media and Advocacy work in Family Planning, Fellowship in Family Planning Annual Meeting, 2015.
8. Spotlight on the graduated Fellow. Family planning Fellowship meeting, 2014.
9. Microadvocacy: what you can do with a few facts in a few minutes. Association for Reproductive Health Professionals Annual Meeting, 2011.
10. Heavy Menstrual bleeding: assessing the impact, evaluating management options, ACOG Annual Clinical Meeting, 2009.
11. Florida Academy of Physician Assistants. A Clinical Update on Intrauterine Contraception, 2008.
12. National Abortion Federation annual meeting. Challenging abortion cases: best practices Halifax, Nova Scotia, 2008.
13. Clinical Implications of the Federal Abortion Ban, Fellowship in Family Planning Annual Meeting, 2007.
14. American Epilepsy Society. Contraception and epilepsy. Annual meeting, 2004.
15. Early options for pregnancy termination. Round table meeting, ACOG Annual Clinical Meeting, 2003.
16. National Abortion Federation Risk Management Seminar. Medical conditions affecting abortion care, 2002.
17. International Society of Women's Sexual Health Annual Meeting. Adolescent

Sexuality, 2002.

18. Female Sexual Function Forum Annual Meeting. Oral contraceptives and libido. Boston, MA, 2000.

Invited regional presentations

1. Physician advocacy. Obstetrics and Gynecology Resident educational hour. Mt. Sinai Medical Center, New York, NY, April 2019.
2. Reproductive Rights Roundtable. Columbia University Women in Law and Politics. New York, NY, April 2019.
3. Update on contraception clinical care and research. Barnard Student health provider meeting. New York, NY. April 2019.
4. Physician as Expert Witness. Co-presenter with Talcott Camp, ACLU. Physicians for Reproductive Health Leadership Training Academy February 2019, 2018, 2017.
5. Introduction to gynecology in adolescent health. School based reproductive health project. NYC Department of Health. New York, NY, February 2019.
6. Update on contraception. School based reproductive health project. NYC Department of Health. New York, NY. April 2017, February 2018, June 2018.
7. Update on emergency contraception and contraception for women with medical problems. School based reproductive health project. NYC Department of Health. New York, NY. April 2014.
8. The time is now: providing adolescent friendly sexual and reproductive healthcare. For NYPATH New York Promoting and Advancing Teen Health Segundo Ruiz Belvis Diagnostic & Treatment Center Healthcare Network of Health and Hospitals Corporation, 2014, 2013.
9. Medical aspects of abortion. Center for Reproductive Rights. New York, NY. December 10, 2013.
10. Intrauterine progestins for common gynecologic problems. The Sloane Symposium: current issues and controversies in obstetrics and gynecology. Columbia University Medical Center Department OB/GYN 2011.
11. What can she use? Contraception for women with medical problems. New York Nurse Practitioners in Women's Health. New York City, NY, 2011.
12. Reproductive rights at risk: frame the issue, make it law. Co-presenter with Attorney General Eric Schneiderman and New York City Council Speaker Christine Quinn. Congregation Rodeph Sholom, New York City, NY, 2011.
13. What can she use? Adolescents, contraception and the new CDC guidelines.

Mt. Sinai Medical Center, 2010.

14. Contraceptive options and management. Inova Healthcare System, 2010. 7. Sloane Symposium: Current Issues in Obstetrics and Gynecology. The IUD: How don't became do, 2008.
15. Contraception and women with medical problems. Ryan Health Center, 2008.
16. 15th Annual Comprehensive Gynecology 2007: A clinical Update for the Practicing Physician. An update on the vaginal contraceptive ring: factors affecting choice and compliance, 2007.
17. Mainstreaming intrauterine contraception. Columbia University School of Nursing, 2007.
18. Cicatelli Incorporated. Depo Provera and bone health. New York, New York, 2006.
19. Department of Pediatrics Grand rounds. Medical Abortion Overview. Albany Medical Center, 2006.
20. Medical abortion and emergency contraception. Department of Internal Medicine, noontime conference. Long Island Jewish Hospital, NY, 2004.
21. Health and Hospitals Corporation Family Planning Update Conference. Medical conditions affecting abortion care Jacobi Medical Center, NY, 2003.
22. Clinical issues in reproductive health care. Cicatelli Associates Incorporated. New Methods of Hormonal Contraception. New York, NY, 2003.
23. New York State Assembly. Emergency contraception. Albany, NY, 2003.
24. Department of Pediatrics Grand Rounds. Adolescents, dysmenorrhea and oral contraceptives. Columbia University Medical Center, New York, NY, 2002.
25. Sexual dysfunction 2002: Update on female sexual dysfunction. Columbia University. New York, NY, 2002.
26. New York Association of Nurse Practitioners. Beyond Oral Contraception. New York, NY, 2002.
27. Westchester OB/GYN Society. Medical abortion overview, Westchester, NY, 2002.
28. Medical Students for Choice. New York University Regional Conference. Keynote speaker, 2002.
29. Sexual Dysfunction 2001. Multidisciplinary update on ED, premature ejaculation, Peyronie's & Female Sexual Dysfunction. Columbia University, New York, NY, 2001.
30. New Developments in Contraception: Counseling and insertion procedures for

the levonorgestrel IUS. Multiple locations in New York, NY, 2001.

31. Medical Abortion Education Project. Evaluation, management, and administration of medical abortion. Department OB/GYN, Syracuse, NY, 2001.

32. Downstate Medical Center Comprehensive OB/GYN Review Course. Contraception. Brooklyn, NY, 2000-2004.

33. Adolescent Medicine Society of New York. Medical abortion, New York, NY, 2001.

34. American Society for Reproductive Medicine. Clinical symposium. The utility and efficacy of monthly injectable contraception, 2001.

35. New York City Department of Health. Vaginitis. New York, NY, 2000.

EXHIBIT 4

IN THE THIRD JUDICIAL DISTRICT
DISTRICT COURT, SHAWNEE COUNTY, KANSAS

HODES & NAUSER, MDs, P.A.; and TRACI LYNN NAUSER, M.D.,	)	
Plaintiffs,	)	**Case No. 2015CV490**
	)	**Division 2**
v.	)	
DEREK SCHMIDT, in his official capacity as Attorney General of the State of Kansas; and STEPHEN M. HOWE, in his official capacity as District Attorney for Johnson County,	)	
Defendants.	)	

EXPERT DECLARATION OF THOMAS CUNNINGHAM, PhD, M.A., M.S.

THOMAS CUNNINGHAM, PhD, M.A., M.S., declares the following statements to be true and correct under penalty of perjury under the laws of the State of Kansas:

1. I provide the foregoing facts and opinion as an expert in the fields of clinical ethics, bioethics, philosophical ethics, and philosophy of medicine. I am currently the Bioethics Program Director at Kaiser Permanente West Lost Angeles Medical Center, part of the largest managed care organization in the United States. My work presently involves: 1) clinical work, consulting on ethical issues arising in complex medical cases; 2) educational work, developing and implementing educational curricula and other services throughout the hospital system and teaching

throughout the country on various topics in bioethics; 3) scholarship, including publishing my own research in clinical ethics and ethical decision making, as well as reviewing other scholars' research for publication; and 4) administrative work managing my department and contributing to Kaiser Permanente's Southern California Bioethics Program.

2. I have extensive clinical experience working with hundreds of patients and their families who face challenging ethical questions or dilemmas that arise in the health care setting. My clinical work is particularly relevant to the issues presented in this case. In my position as Bioethics Program Director, my consultation is often required in clinical situations involving difficult ethical questions. In these cases, I generally consider the patient's disease process, prognosis, and the range of likely outcomes, and work with the patient and his/her family to help determine the best medical decisions for that patient. This work often involves incorporating patients' religious, moral, and cultural beliefs into their medical decision making, even where those beliefs conflict with or complicate their course of treatment, to ensure that every patient's autonomy is respected by their medical team. In my role as a biomedical ethicist, I work with patients, families, and health care professionals to identify and prioritize the patient's values and preferences in decision making. I have worked with patients of diverse faiths, including Catholics, Christian Scientists, Muslims, Hindus, Jehovah's Witnesses, and Orthodox Jews, where such difficult issues have arisen.

3. Additionally, I have published and taught extensively on both theoretical and clinical bioethics, including mentorship of post-graduate students in medical ethics and philosophy, graduate education in medical ethics, regular presentations at the American Society for Bioethics and Humanities, and undergraduate education in ethics and society, and morality and medicine. My publications have appeared in journals including Journal of Medical Ethics,

Cambridge Quarterly of Healthcare Ethics, Critical Care Medicine, American Journal of Bioethics, and Theoretical Medicine and Bioethics.

4. I have a Ph.D. in the History and Philosophy of Science from the University of Pittsburgh, a masters degree in Bioethics and Health Law from the University of Pittsburgh, and a masters degree in Biology from the University of California at San Diego. My curriculum vitae, which sets forth my education, experience, credentials, and publications more fully, is annexed hereto as Exhibit A.

5. The opinions in this declaration are my expert opinions, based on my education, training, expertise, clinical experience, and research as a bioethicist, as well as my attendance at professional conferences, review of the relevant literature, and conversations with my colleagues. All of the opinions provided in this declaration are based on my personal knowledge.

Effect of the Act

6. I have reviewed Kansas Senate Bill 95 ("S.B. 95" or "the Act"). It is my understanding that the Act prohibits physicians from performing a second-trimester abortion procedure known in medical terms as Dilation and Evacuation ("D&E") unless fetal demise is first induced. It is my understanding that to avoid the Act's criminal penalties and civil liability, a physician must either ensure fetal demise prior to beginning the D&E procedure or decline to perform D&E's altogether.

7. Based on my review of the expert declaration of Dr. Anne Davis and discussions with Plaintiffs' attorneys, I understand that D&E, a standard, safe method of abortion and the most common abortion method after approximately 14–15 weeks LMP, can be performed on an outpatient, ambulatory basis in a clinic setting. I further understand that the only alternative to D&E after approximately 15 weeks LMP is an induction abortion procedure, which requires the

patient to go through the labor process in a hospital. Techniques that have been proposed to induce fetal demise include transection of the umbilical cord, transvaginal or transabdominal intra-amniotic or intra-fetal digoxin injection, or fetal intracardiac potassium chloride ("KCl") injection. I understand that the D&E ban requires every woman to either forgo a D&E procedure or undergo another procedure that would increase the complexity, risk, and pain of the abortion procedure, with no medical benefit to the patient.

8. Based on Dr. Davis' declaration, I further understand that umbilical cord transection is an insufficiently tested procedure in this practice setting that lacks sufficient evidence of safety and efficacy, and is not a reliable method of inducing fetal demise because it cannot be accomplished in every case. Digoxin injection is administered by passing a spinal needle through the woman's abdomen, vagina, or cervix, and takes up to 24 hours to be effective. It is also not effective in every case and there is no data demonstrating that a second digoxin injection is either safe or effective. Prior to 18 weeks, there is no evidence to demonstrate the safety of digoxin injection, and it is extremely uncommon. Even after 18 weeks, the medical research has not shown medical benefits of digoxin. On the contrary, studies document additional risks to patients, and digoxin is contraindicated for some women. There is insufficient information to recommend its use. I further understand that after 18 weeks LMP, a minority of physicians induce demise, often to avoid violating federal and state bans on so-called partial birth abortions. I understand that KCl administration requires specialized training possessed by a small number of physicians and cannot be administered by the vast majority of abortion providers without extensive additional training. I also understand that the use of KCl to induce fetal demise prior to D&E in an outpatient setting is unstudied. It is most commonly performed for selective termination in a

multifetal pregnancy, which confers safety benefits for women by reducing risks associated with multifetal gestation.

9. It is my opinion that the Act violates four basic principles of biomedical ethics: *respect for patient autonomy, beneficence, nonmaleficence,* and *ensuring justice*. The Act inserts the State into medical decision making in ways that are at odds with these foundational principles and ethical standards for physician-patient relationships. It is inconsistent with respect for autonomy, is more likely to harm the patient than benefit her, undermines rather than contributes to justice, and thwarts the development of ethically appropriate shared decision making between patients and physicians.

A Framework for Assessing the Act from the Standpoint of Medical Ethics

10. To assess whether a law is ethical requires first introducing an ethical framework from which to evaluate it. Contemporary bioethical theory is based on legal precedent, policymaking, and scholarship in diverse fields, which constitute a set of rules, regulations, and methods for evaluating the ethics of actions or policies in medical settings. Assessing the ethical appropriateness of the Act requires analyzing its consistency with this set of well-established positions in biomedical ethics. The specific theories and topics that provide the correct basis for analysis are: foundational bioethical principles; the shared decision making model of medical decision making; and the distinction between ethical norms for medical care and experimental research.

The Principles of Bioethics

11. Contemporary models of ethical decision making in medical settings share four foundational principles: respect for autonomy, beneficence, nonmaleficence, and justice (Beauchamp and Childress 2012). Principlism, which is the most well-established and agreed upon

theoretical approach in contemporary biomedical ethics, argues that these four principles are shared across different moral frameworks in history that provide the foundation for ethical reasoning in bioethics. Respect for autonomy counsels that adult persons should be supported in making un-coerced, authentic, and voluntary choices after having been provided material information regarding the decision at issue to achieve the best health outcomes. Under the modern account of respect for autonomy in medical decision making, patients must receive information adequate to their role in decision making. This principle of autonomy serves as the foundation for the concept of informed consent for medical treatment (Berg et al. 2001). Beneficence is the notion that medical interventions should be performed to benefit patients, and the corresponding imperative that health care professionals act with the intent of benefitting patients. Nonmaleficence is the notion that medical interventions should minimize treatment burdens or harms to patients, and accordingly, the obligation for health care professionals to act with the intent of reducing harms or burdens to patients. Since medical interventions often entail burdens and risks, ethical medical practice requires weighing the benefits to the patient against the burdens and risks of harm in choosing the course of treatment that will result in the best net outcome (Cunningham 2017). The principle of justice embodies the idea that medical interventions ought to be equally accessible to those who need them, or that the distribution of healthcare is equitable.

12. These four principles serve both as theoretical foundations for bioethics and, with additional premises, as practical guides to resolving ethical dilemmas in medicine. In practical applications, each principle is afforded equal priority. When assessing the ethics of a specific law or policy using bioethical principlism, one must describe the implications of the law or policy on the affected stakeholders in terms of autonomy, beneficence, maleficence, and justice. Additionally, one must specify how consistent the law or policy is with the principles and balance

tradeoffs between inconsistencies to evaluate whether the proposed law or policy is consistent with the principles of bioethics.

The Act Violates the Foundational Principles of Bioethics

The Act Violates the Ethical Principle of Respect for Autonomy

13. The principle of respect for autonomy reflects the recognition that ethical and sound medical outcomes are best served when patients make un-coerced, authentic, and voluntary choices after having been provided material information regarding the decision at issue. Autonomy further incorporates the right to make choices about how a person's body is treated in the world.

14. The *shared decision making model* of medical decision making is an ethically robust model of choice in the context of physician patient relationships. The shared decision making model requires a minimum of two individuals to make treatment decisions ethically: the physician's role is to process information about the patient's diagnosis, prognosis, and treatment options and solicit the patient's values about possible medical options; and the patient's role is to forthrightly convey information about her values and preferences (Charles et al. 1997; Edwards and Elwyn 2009; Emanuel and Emanuel 2012). To determine the relevant information to convey to the patient, the physician is responsible for assessing the medically appropriate treatment options in relation to the patient's expressed values and preferences. The collaborative nature of the shared decision making model overcomes ethical problems associated with beneficent paternalism and overly-individualistic conceptions of respect for autonomy (Cunningham 2013). The result of this deliberative process is to form a plan of care that is most consistent with the patient's values and that the physician believes is appropriate in light of the shared decision making conversation with the patient.

15. The Act fails to respect patient autonomy because it restricts the range of treatment options that physicians are legally allowed to offer, and thus, that patients can choose from. Autonomy requires that competent persons determine what is in their own best interests and bring their personal, moral values to bear on the medical decisions they face. In prohibiting physicians from performing a procedure that is safe and standard after approximately 14–15 weeks LMP, the Act precludes patients from accessing a medically appropriate treatment option that they might otherwise choose. Moreover, the Act coerces women seeking D&E abortions by forcing them to choose between foregoing the D&E procedure altogether or undergoing an additional demise procedure. The only alternative after approximately 15 weeks LMP is an induction abortion procedure, which would require undergoing the labor process in an inpatient hospital setting. Those who do not wish to undergo a demise procedure or an induction abortion are effectively denied the ability to choose an abortion and afforded no choice but to carry the pregnancy to term. Those who choose to undergo a demise procedure are nevertheless denied their right to autonomy and bodily integrity if they do so only because of the Act's requirements. This is an especially grave violation of the principle of respecting autonomy where the alternatives to the prohibited procedure entail more physically invasive and complicated medical interventions with increased risk.

16. The Act also directly impedes upon the physician's ability to exercise clinical judgment based on the patient's individual needs and subverts ethical decision making by removing the opportunity for shared decision making. The Act thus coerces, under threat of prosecution by the State, physicians to abdicate their responsibilities to support ethical medical decision making. Under the shared decision making model, patients play an active role in conveying their health care values and preferences to physicians, who are charged with assessing

the fit between treatment options and those expressed values and preferences. The Act interferes with this mutual and deliberative process by introducing an external constraint that overrides both the physician's clinical judgments and the patient's values and preferences. As professionals with extensive education and training, and healthcare providers who are uniquely situated to directly engage patients, physicians possess the firsthand information to make clinical judgments about the options that are medically appropriate and considerations that are relevant to patients' health care values and preferences. It is therefore consistent with medical ethics—and indeed, integral to their role—for physicians to impose some structure over patients' health care decisions in accordance with their clinical judgment and ethical models of choice. However, it is inconsistent with medical ethics for the State to usurp the physician's role in shared decision making by restricting the possible treatment options in every case with a blanket prohibition that permits no discretion regarding the patient's personal circumstances and needs. Mandating physicians to withhold from all patients a treatment option that may be medically appropriate and consistent with some patients' values compels physicians to act in ways that are contrary to medical ethics, erodes patients' trust in providers, and damages the physician-patient relationship.

17. Further, by restricting the decisions women can make, the Act diminishes the extent to which their decision can be related to their values. Women's values regarding abortion are complex and multi-factorial. Research indicates that 1 out of 4 women will undergo at least one abortion in their lifetimes (Jones and Jerman 2017). Women give many reasons for undergoing an abortion. In the United States, nearly 9 out of 10 women who were asked about their reasons for seeking abortion care gave more than one reason (Chae et al. 2017). The most common reasons for seeking an abortion were: "lack of financial preparedness (56%), partner-related (55%), and interference with future opportunities (54%)" (Chae et al. 2017). From these reasons, it is clear

that women value the freedom that financial independence provides them and/or their families; that women value certain types of partner relationships, which affects their medical decision making in the setting of abortion; and, that women value their liberty to plan for the future. By restricting women's choices, the Act impedes their sense of independence, freedom, and liberty that is necessary for autonomy, which is directly contrary to the most prominent values associated with their choices to seek abortions.

The Act Violates the Ethical Principles of Beneficence and Nonmaleficence

18. The principles of beneficence and nonmaleficence require physicians to act for the purpose of benefiting and reducing harms to their patients. In practice, physicians must weigh the benefits and burdens of treatment options in advising patients and providing care. The Act is inconsistent with the principles of beneficence and nonmaleficence because it prohibits physicians from offering a safe method of abortion and the most common surgical technique used to perform abortion after approximately 14–15 weeks with no countervailing benefit to patients. To the contrary, it increases treatment burdens on patients by requiring women seeking to obtain D&E abortions to undergo an additional procedure that entails additional risks and is physically invasive.

19. The Act forces physicians, with limited exceptions, to either deny treatment to women seeking abortions after approximately 15 weeks LMP or subject such patients to a more complex medical procedure with increased risk that may include an additional invasive, painful injection.

20. As described above, it is my understanding that each proposed method for inducing fetal demise comes with attendant risks and burdens. Since there is virtually no research on the use of digoxin or umbilical cord transection prior to 18 weeks LMP, the burdens and risks the Act would impose on women seeking D&E abortions at that gestational age are currently unknown

and unquantified. A second dose of digoxin if the first dose is unsuccessful at inducing demise is also unstudied. As discussed further below, when the impacts of an experimental therapy are unknown, bioethical theory provides guidelines for how the risks and benefits of potential treatments can be ethically studied through clinical research, which has not yet been conducted on certain of the proposed methods for inducing fetal demise. Women not subjected to completely unstudied procedures would still be required by the Act to undertake the known and unknown risks associated with umbilical cord transection and/or an injection of digoxin or KCl. Since digoxin takes up to 24 hours to be effective, the process for obtaining a D&E procedure will also be prolonged and require more than one visit, which is not required for many D&E procedures. This change in procedure can result in burdens on providers' time and resources that can, in turn, increase burdens on patients by, for example, forcing providers to limit the number of procedures they perform and to delay treatment of some patients.

21. The Act will harm women by exacerbating the stigmas associated with seeking or receiving abortion. Stigma is conceptualized as an attribute that marks individuals as different or "other" than their fellow community members and, consequently, as less valuable people (Abrams 2015). Stigma functions socially, including as conveyed in legislation, as a means to restrict liberty (Abrams 2015). Research on abortion care indicates that stigma is primarily experienced in two ways, as something perceived to emanate from others and as something that a person self-imposes as a negative self-assessment. These two notions are described as "felt" stigma and "internalized" stigma, respectively (Cockrill and Nack 2013). A 2010 study reports that 2 in 3 women who received an abortion experienced felt stigma (Shellenberg 2010). A 2013 study examined the relationship between abortion-related stigma and other variables, including religious and spiritual belief. It found that internalized stigma persisted regardless of belief, while felt stigma increases

with religiosity (Cockrill et al. 2013). Because the Act imposes an additional, invasive, and painful procedure on a woman as a pre-condition for accessing healthcare, it stigmatizes that care and is likely to increase women's experiences of internalized stigma.

22. Virtually all medical interventions entail some risk of harm, ranging from negligible to profound. The principles of beneficence and nonmaleficence only justify the risks to the patient associated with medical treatments if the risks are outweighed by benefits conferred by treatment. Mandating physicians who wish to offer a procedure that meets the standard of care to administer an additional intervention, which is neither supported by evidence of benefits nor by their clinical judgment, violates these foundational principles of bioethics. Simply put: imposing risks on patients by requiring that they undergo certain treatments when reasonable medical alternatives exist, without any evidence of possible benefit for the patient, is inconsistent with the aim of benefitting patients and minimizing their harm.

23. The Act will also force patients to either forgo their desired treatment or potentially be subjected to experimentation. Treatment and research in the medical field have different functions and are governed by related but nonidentical ethical guidelines (Iltis 2006). Treatment is provided with the purpose of benefiting or improving the health of the patient and should be administered consistently with the ethical norms discussed above. The highest standard of treatment in contemporary medicine is evidence-based medicine, wherein research studies are used to inform clinical judgment in diagnosis and treatment of individual patients (Straus et al. 2018).

24. The function of experimentation, or research, is to generate knowledge. Clinical research is conducted in accordance with standards of research ethics that protect the rights of research participants and promote the scientific validity of the studies (Beauchamp and Childress 2012). Shared decision-making, including information regarding the experimental nature of the

procedure, is especially important in the context of research because the benefits and risks are unknown, and cannot be known prior to the results of experimental investigations designed specifically to quantify them. Thus, the Act's state-imposed requirement that physicians engage in experimental treatment outside the context of clinical research trials violates medical and research ethics.

The Act Fails to Promote Justice

25. The Act conflicts with the bioethical principle of justice because it restricts the health care choices of persons who are pregnant or able to become pregnant, and thus burdens women's access to ethical medical care. As described above, the Act imposes burdens on women's bodily integrity and increases the physical risks, harms, and financial burdens for women seeking an abortion after 14–15 weeks LMP, denying women equal access to health care, with the greatest impact on women in poverty. The Act would disproportionately burden women who lack the means to make multiple trips to an abortion clinic. Since the success rate of umbilical cord transection is unknown and digoxin takes up 24 hours to be effective, many women seeking a D&E abortion would be required by the Act to visit the clinic at least one day prior to the D&E procedure. This change in practice would burden women who lack resources for transportation, lack childcare, and/or cannot afford lost wages more heavily than women with adequate resources to make such arrangements.

26. It is remarkable that the Act gives the State more authority over patients' decisions than medical ethics permits even to parents of minor children. Parents have the legal and ethical authority to make medical decisions on behalf of their children because minors are considered to have not yet developed the competency to make medical decisions and parents are uniquely authorized to assess how the burdens for children relate to their future benefits (Hester 2012). Respect for parental decision making in ethics includes the parents' ability to make decisions for

their children based on their cultural or religious beliefs. However, this authority is not absolute. When scientific research shows that their chosen course of action would pose a serious risk of harm, parents may be prevented from making such a decision on their children's behalf (Diekema 2004). Yet the Act gives the State the authority to impose a restriction on the treatment options available to women that is demonstrated by sound scientific research to increase risks with no countervailing benefits. It thus creates a category of people—those who seek abortion—who are uniquely, absolutely deprived of the ability to exercise their agency in medical decision making, even though their autonomy must otherwise be respected both before and after pregnancy.

The Act Fails to Advance Any Universally Accepted Notions of Dignity in Healthcare

27. It is my opinion that the ban fails to advance any universally accepted notions of dignity in health care, violates basic principles of medical ethics, and inappropriately imposes the State's value judgments onto what is otherwise a private, shared medical decision-making process between the physician and the patient. The principal reason why the ban fails to advance a universally accepted notion of human dignity in health care is that there is no such concept. This view is supported by many sources. Indeed, writing in his capacity as the Chair of the President's Council on Bioethics, appointed by George W. Bush, esteemed bioethicist and physician, Edmund Pellegrino noted: "Since the Council's establishment in 2001, the concept of human dignity has figured frequently in many of the Council's reports. As a result, there have been repeated requests for clarification of the meaning of the term." Pellegrino's interpretation of the many essays commissioned by the Council is unmistakable: "These essays make it clear that there is no universal agreement on the meaning of the term, human dignity." (Pellegrino 2008).

28. There is no universal agreement about the application of the concept of human dignity to the termination of a fetus prior to viability. The concept of human dignity has roots in

Ancient Greek and Roman thinking about the worth of a person's "honor and esteem" in society (Schulman 2008). Eminent scholars working on human dignity conclude that the sheer volume of disagreement regarding the concept of dignity in history indicates that it does not have, and has never had, universal moral meaning (Rosen 2012). Rather, the various religious and secular accounts of human dignity often share emphasis on typical human qualities like our unique ability to exercise rationality and autonomy, our creation in the image of God, or our various capacities for "activity and striving" (Schulman 2008; Cherry 2011; Nussbaum 2008). However, they differ with regards to whether they believe that the concept of dignity should be appropriately conveyed unto beings who obviously do not have those qualities, which leads to reflections on borderline cases, or cases where peoples' intuitions about whether we should confer the notion of human dignity onto something are in opposition (Singer 2002). Prominent philosophers argue, for example, that while children have the qualities that warrant regarding them as having human dignity, the concept should not be extended to fetuses or neonates (Nussbaum 2008). Limiting the discussion only to Christian bioethicists, one still finds disagreement about how to understand borderline cases (Cherry 2011). Thus, from a bioethical perspective, there can be no universal agreement regarding the dignity of fetuses in our diverse and pluralistic society (Connolly 2005). Therefore, there is no consensus on the meaning of "human dignity" upon which to ground judgments about what is not dignified.

29. Indeed, people have a range of moral and religious beliefs about what constitutes dignified and humane treatment of a fetus or fetal tissue. Data from the PEW Research Center shows that the Kansas population is religiously pluralistic, much like the country as a whole. In Kansas, 76% of adults are Christian, 20% are non-religious or unaffiliated, 4% adopt a non-Christian religion, and <1% do not know whether they ascribe to a religious belief. This suggests

that women in Kansas are pluralistic about how they prioritize their religious and moral views in understanding issues of right and wrong, and they differ with regard to how they answer difficult moral questions, including those that pertain to abortion. *See* https://www.pewforum.org/religious-landscape-study/state/kansas/. Rather than honoring these diverse views, the ban imposes a single view of dignity and humane treatment on women and restricts their autonomy to act in accordance with their own beliefs.

30. The argument that a prohibition on D&E abortions can be justified by one narrow view of dignity is antithetical to the foundational bioethical principle of respect for patient autonomy, which requires that that patients' own definitions of dignity be afforded respect. The bioethical principle of respect for autonomy and research on the benefits of receiving care that aligns with patients' values support the basic assumption of pluralism in contemporary medicine (Elwyn et al. 2009; Keirns and Goold 2009). Patients have the autonomy to define and prioritize their own values with regards to factors such as suffering, degree of risk, quality of life, and care that is in alignment with their personal, religious, and cultural beliefs. In prohibiting a standard, safe method of abortion that is the most common abortion method after approximately 14–15 weeks, the Act imposes the State's baseless position that certain methods of inducing fetal demise are more dignified than standard D&E abortion on women, precluding women from receiving care that aligns with their values. Medical ethics does not permit healthcare providers to circumscribe patients' decision-making ability or impose their own or someone else's moral values on patients in the very manner that the Act prescribes.

31. In particular, there is considerable literature that supports the counterview that the moral status of fetuses is uncertain (Singer 2002; President's Council on Bioethics 2002). The mainstream view is that when it comes to treatment decisions in clinical medicine, an individual

has the capacity to determine for herself the moral status of a fetus, particularly prior to the developmental stage of viability (Watson 2018). Bioethical scholarship supports the view that women have the correct standing to determine the moral status of biological tissues, including special and mysterious tissues such as developing embryos and fetuses (Guenin 2008). Even if a state has interest in promoting the value of life, to convey this onto developing biological tissue of uncertain moral status curtails the liberties of persons to determine whether such entities warrant moral status, which is a deeply personal and spiritual choice individuals make and for which there is significant variation.

The Act Does Not Serve the Healthcare Profession

32. Likewise, the Act does not serve the purpose of promoting and protecting the integrity, ethics, and well-being of the healthcare profession in Kansas. First, as discussed above, the religiously and morally pluralistic population of Kansas supports the assumption that not all Kansans hold a monolithic view about what constitutes humane treatment of embryos and fetuses.

33. Moreover, as also discussed above, it is inconsistent with the principles of ethical medical decision making for the State to force a doctor to perform a procedure that she believes confers risks with no benefit or to require a woman to undergo an unnecessary medical procedure. It is inconsistent with the opinions of leading medical organizations and ethical principles to force a patient to assume a risk to her health for the potential benefit of the fetus inside her. Bioethical principles do not require or promote that patients assume risks to their own health for the benefit of another person. Even parents, for example, cannot be forced to provide life-saving blood or organ donations to their children (Hester 2012). Similarly, no patient can be forced to be part of a research study into an experimental procedure, medication, or practice. The ban disempowers women from making their own, authentic judgments about their medical care by coercing women

to subject themselves to experimental procedures in order to access the D&E procedure, with no medical benefit and both known and unknown risks.

34. The preservation of the patient's ultimate authority to make autonomous decisions is an essential component of maintaining the integrity of the medical profession. Major medical organizations support the provision of abortion care as part of comprehensive reproductive healthcare and the ability of the woman to make individual choices about care. For example, the American Medical Association ("AMA") recognizes that individual providers must be permitted to provide abortion care consistent with their "personal values and beliefs." (AMA 2009).

35. Likewise, the American College of Obstetricians and Gynecologists ("ACOG"), the largest association of ob-gyn specialists, has issued ethical guidance stating: "[E]ven though views about the moral status of the fetus and the obligations that status confers differ widely, support of such moral pluralism does not justify an erosion of clinicians' basic obligations to protect the safety of women who are, primarily and unarguably, their patients. ... For situations in which [maternal and fetal] interests diverge, the pregnant woman's autonomous decisions should be respected." (ACOG 2007).

Conclusion

36. It is my opinion that the ban on performing a D&E procedure is unethical. Enforcement of the Act would violate the four fundamental bioethical principles; subvert shared decision making; and expose women seeking abortions to untested, experimental procedures.

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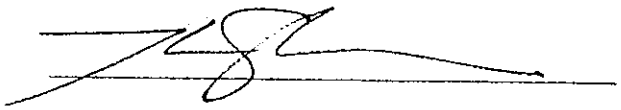
Dated: January 30, 2020



Thomas V. Cunningham, PhD, M.A., M.S.

EXHIBIT A

Kaiser Permanente West Los Angeles Medical Center
6041 Cadillac Ave
Los Angeles, CA 90034 USA
+1 323 243 8871 (cell)
+1 323 857 3431 (office)
thomas.v.cunningham@kp.org

Thomas V. Cunningham

Current Positions

Bioethics Program Director, Kaiser Permanente West Los Angeles Medical Center

Faculty (part-time), Loyola Marymount University Bioethics Institute, Los Angeles

Areas of Specialization

Philosophy of Medicine, Theoretical and Clinical Bioethics

Areas of Competence

Philosophical Ethics, Philosophy of Science

Previously Held Positions

Assistant Professor, Division of Medical Humanities, University of Arkansas for Medical Sciences (UAMS) College of Medicine (2013-2016)

Assistant Professor, Internal Medicine, UAMS College of Medicine (2013-2016)

Clinical Ethicist, UAMS and Arkansas Children's Hospital (2013-2016)

Adjunct Faculty, University of Arkansas at Little Rock (2015)

Education

PhD. History and Philosophy of Science, University of Pittsburgh **2005-2013**

Socializing Medical Practice: A Normative Model of Medical Decision-Making

Committee: Peter Machamer, PhD (co-director; Pittsburgh, HPS)
Kenneth Schaffner, MD, PhD (co-director; Pittsburgh, HPS)
Sandra Mitchell, PhD (Pittsburgh, HPS)
Edouard Machery, PhD (Pittsburgh, HPS)
Robert Arnold, MD (University of Pittsburgh Medical School)

M.A. Bioethics and Health Law, University of Pittsburgh **2008-2013**

Philosophy and Science Policy in the American Cloning Debate

Committee: Mark Wicclair, PhD (director; University of Pittsburgh Medical School, Center for Bioethics and Health Law)
Douglas White, MD, MAS (Pittsburgh, Medical School and CHBL)
Alex London, PhD (Carnegie Mellon University)

M.S. Biology, University of California at San Diego **2001-2004**

Genetic Analysis of Endoplasmic Reticulum Plasticity

Committee: Randolph Hampton, PhD (director; UCSD, Biology)
Laurraine Pillus, PhD (UCSD, Biology)
Douglass Forbes, PhD (UCSD, Biology)

B.S. Biology, University of California at San Diego **1999-2003**

B.A. Philosophy, University of California at San Diego **1999-2003**

Publications

Peer Reviewed Publications

1. TV Cunningham (In press). "A Feminist Defense of Fetal Tissue Research," In J Schoen (ed), *Abortion Care as Moral Work* [working title], Rutgers University Press.

2. TV Cunningham, A Chatburn, C Coleman, E DeRenzo, K Furfari, J Frye, AC Glover, M Kenney, N Nortje, J Malek, M Repenshek, F Sheppard, and JS Crites (Forthcoming). "Comprehensive Quality Assessment in Clinical Ethics Services." *The Journal of Clinical Ethics.*

3. E Gilmore-Szott and TV Cunningham (Forthcoming). "How Do People Make Moral Medical Decisions?" In M Trachsel, S Tekin, NB Andorno, J Gaab, and JZ Sadler (eds.), *The Oxford Handbook of Psychotherapy Ethics*, Oxford University Press.

4. L Low, RS Purvis, TV Cunningham, A Chughati, R Garner, and PA McElfish (2019). "Ethical Dilemmas Encountered by Health Care Providers Caring for Marshallese Migrants in Northwest Arkansas." *Narrative Inquiry in Bioethics* 9(1):53-62.

5. TV Cunningham, LP Scheunemann, RM Arnold, and DB White (2018). "How Do Clinicians Prepare Family Members for the Role of Surrogate Decision Maker?" *Journal of Medical Ethics,* 44(1):21-26.

6. R Green, A Merrick, TV Cunningham, LR Eisenberg, and DM Hester (2017). "The Curricular Ethics Bowl: Answering Pedagogical Challenges." *Teaching Ethics,* 17(2):151-166.

7. TV Cunningham (2017). "Health, Disease, and the Basic Aims of Medicine." In U Feist, Z Biener, J Sullivan, and M Adams (eds.), *Doing History and Philosophy of Science with Peter Machamer.* Dordrecht: Springer International Publishing, pp. 141-162.

8. CR Long, MK Stewart, TV Cunningham, TS Warmack, and PA McElfish (2016). "Health Research Participants' Preferences for Receiving Research Results." *Clinical Trials* 13(6): 582-591.

9. TV Cunningham (2016). "A Life Below the Threshold? Examining Conflict Between Ethical Principles and Parental Vales in Neonatal Treatment Decision Making." *Narrative Inquiry in Bioethics* 6(1):63-71.

10. A Merrick, R Green, TV Cunningham, LR Eisenberg, and DM Hester (2016). "Introducing the Medical Ethics Bowl." *Cambridge Quarterly of Healthcare Ethics* 25(1):141-149.

11. ML Schwarze, TC Campbell, TV Cunningham, DB White, and RM Arnold (2016). "You Can't Get What You Want: Innovation for End-Of-Life Communication in the ICU." *American Journal of Respiratory and Critical Care Medicine* 193(1):14-16.

12. LP Scheunemann, TV Cunningham, RM Arnold, P Buddadhumaruk, and DB White (2015). "How Clinicians Discuss Critically Ill Patients' Preferences and Values with Surrogates: An Empirical Analysis." *Critical Care Medicine* 43(4):757-764.

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14. TV Cunningham (2013). "What Justifies the Ban on Federal Funding for Nonreproductive Cloning?" *Medicine, Health Care, and Philosophy,* 16:825-841.

Other Publications

15. TV Cunningham (2019). "The Methods of Bioethics: An Essay in Meta-Bioethics, by J. McMillan" [Book Review]. *Notre Dame Philosophical Reviews.*

16. AL Scott and TV Cunningham (2016). "The Problems of Half-Hearted Inderdisciplinarity." *AJOB Neuroscience* 27(2): 108-109.

17. TV Cunningham (2016). "Power and Limits in Medical Decision Making." *American Journal of Bioethics* 16(1):56-58.

18. TV Cunningham (2015). "A Multidisciplinary Approach to Ensure Scientific Integrity in Clinical Research: How expensive is sustained moral commitment?" *The Annals of Thoracic Surgery* 100:1534.

19. LR Eisenberg, TV Cunningham, and DM Hester (2015). "Closure But No Cigar." *American Journal of Bioethics* 15(1):44-46.

20. PK Machamer and TV Cunningham (2015). "Mechanisms." In R. Gunstone (editor-in-chief), *Encyclopedia of Science Education.* Dordrecht: Springer Science+Business Media, pp. 625-628.

21. TV Cunningham (2014). "Philosophy, Neuroscience and Consciousness, by Rex Welshon." [Book Review], *Quarterly Review of Biology* (89):256.

22. TV Cunningham (2014). "Non-Reductive Moral Classification and the Limits of Philosophy." *American Journal of Bioethics* 14(2):22-24.

23. TV Cunningham (2013). "Critical Decisions: How You and Your Doctor Can Make the Right Medical Choices Together, by Peter Ubel." [Book Review], *Theoretical Medicine and Bioethics* 34:505-509.

24. TV Cunningham (2013). "Skepticism About the 'Convertibility' of Induced Pluripotent Stem Cells." *American Journal of Bioethics* 13(1):40-42.

25. TV Cunningham (2013). "The Principle of Charity and Non-inferential Coding in Interdisciplinary Behavioral Research." *Proceedings and Addresses of the American Philosophical Association* 86(4):174.

26. LP Scheuenemann, TV Cunningham, M Crankovic, and DB White (2012). "How do Clinicians Elicit Values from Surrogate Decision-Makers of Critically Ill Patients: A Pilot Study" *Proceedings of the American Thoracic Society* A5219.

27. TV Cunningham (2008). "Scientific Pluralism [Book Review]." *The Pluralist* 3:132-137.

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Work in Progress

i. "Surrogate Decision Making" (chapter in progress)

ii. "Why Share Data in Health Care Ethics Consultation?" (research in progress)

iii. "Tracking Ethics Consultation Activities for Quality Assessment" (research in progress)

iv. "Distributed Cognition in Critical Care Medicine" (draft available)

v. "How to Manage the First 15 Minutes of an Ethics Consultation: Simulation Based Education for Ethics Committee Members" (research in progress)

vi. "Ethical Medical Decision Making for Incapacitated, Hospitalized Inmates" (research in progress)

vii. "How Does the Mind/Brain Conceptual Repertoire Influence Informed Consent in Neurosurgery" (research under development)

Presentations

2019: R Mishra, J Crites, TV Cunningham, and J Lesandrini, "What's the Problem with Tracking Ethics Consultations?" American Society for Bioethics and Humanities (ASBH), Pittsburgh, PA, October 24-27, 2019.

SR Gray, E Weber, TV Cunningham, and M Applewhite, "Surrogate Decision Making in Schackles: Finding a Voice for the Hospitalized Inmate." American Society for Bioethics and Humanities (ASBH), Pittsburgh, PA, October 24-27, 2019.

K Wollenburg-Harris, TV Cunningham, M Hester, and J Fanning, "Why Share Data in Health Care Ethics Consultation?" International Conference on Clinical Ethics Consultation, Vienna, Austria, May 22-25, 2019.

TV Cunningham, "Black Birth Matters: What Happens When We Think About Beneficence from a Multi-Level Perspective?" Northwestern University School of Medicine, Chicago, IL, May 2, 2019

TV Cunningham, "Serving the Common Good in the Context of Clinical Care." Loyola Marymount University, Los Angeles, CA, April 2, 2019.

SR Gray, E Weber, M Applewhite, and TV Cunningham, "Surrogacy in Shackles: Finding a Voice for the Hospitalized Inmate." 6th Annual National Nursing Ethics Conference, Los Angeles, CA, March 21-22, 2019.

2018: TV Cunningham, "Clinical Ethics and Advanced Care Planning: Supporting Patient-Centered, Values-Based Care." Panelist for the "Conversations in Medical Ethics" panel at the North American Imamia Medics International (IMI) Annual Meeting, Anaheim, CA, December 14-16, 2018.

TV Cunningham, "Ethical Research and Medical Decision Making in the Pediatric Setting." Research Week Grand Rounds, Children's Hospital of Orange County, Orange, CA, November 14, 2018.

TV Cunningham, "Being an Expert Witness." JCEPHS Learning Forum at the Philosophy of Science Association Biennial Meeting, Seattle, WA, November 1-4, 2018.

AC Glover, TV Cunningham, and J Lesandrini, "National Benchmarks for the Growth of Clinical Ethics Consultation Services." American Society for Bioethics and Humanities (ASBH), Anaheim, CA, October 18-21, 2018.

SK Shah, TS Huddle, and TV Cunningham, "Autonomy: It's Time to Set New Priorities." ASBH Medical Decision Making Affinity Group Annual Meeting, Anaheim, CA, October 18-21, 2018.

AC Glover, TV Cunningham, and J Lesandrini, "National Benchmarks for the Growth of Clinical Ethics Consultation Services." European Association of Centers of Medical Ethics Annual Conference, Amsterdam, The Netherlands, September 6-8, 2018.

J Crites and TV Cunningham, "Continuous Quality Improvement [Whitepaper Workshop]." Innovations in Clinical Ethics: A Working Un-Conference, Cleveland, OH, August 27-28, 2018.

TV Cunningham and J Crites, "Tracking Healthcare Ethics Consult Service Activities Minimally, Meaningfully, and Efficiently." Innovations in Clinical Ethics: A Working Un-Conference, Cleveland, OH, August 27-28, 2018.

AC Glover, TV Cunningham, and J Lesandrini, "National Benchmarks for Clinical Ethics Consultation Services." Innovations in Clinical Ethics: A Working Un-Conference, Cleveland OH, August 27-28, 2018.

2017: TV Cunningham and D Cruze, "Did You Know That in California You're My Relative?" Kaiser Permanente National Bioethics Symposium, Berkeley, CA, November 2-4, 2017.

TV Cunningham, K Mutcherson, J Schoen, and K Watson, "Taking Care: How Can Secular Healthcare Systems Accommodate the Wide Spectrum of Patient and Provider Views on Abortion?" (Panel Presentation). American Society for Bioethics and Humanities (ASBH), Kansas City, MO, October 19-22, 2017.

TV Cunningham, K Mutcherson, J Schoen, and K Watson, "Abortion Care as Moral Work" (Plenary). Forum on Family Planning National Meeting, Atlanta, GA, October 14-16, 2017.

K Watson, J Chor, TV Cunningham, and D Stulberg, "Difficult Ethical Cases in Abortion Care" (Invited Panel Presentation). National Abortion Federation (NAF), Montreal, Québec, April 22-25, 2017.

TV Cunningham, "On Getting By With the Help of Your Friends: How Multidisciplinary Team Meetings Can Resolve Clinical Ethics Dilemmas." Cook Children's Hospital PICU/CICU Meeting, Forth Worth, TX, February 12, 2017.

TV Cunningham, "From Medical School Curriculum to Clinical Practice: How to Approach Ethical Dilemmas with GRACE." Cook Children's Hospital Pediatric Grand Rounds, Forth Worth, TX, February 13, 2017.

TV Cunningham, "Sometimes it Takes More than Two to Tango: From Parental Authority to Shared Decision Making." Cook Children's Hospital Neonatal Grand Rounds, Forth Worth, TX, February 13, 2017.

TV Cunningham, "Working the Hard Cases: Tools for the Ethics Committee." Cook Children's Hospital Ethics Committee, Forth Worth, TX, February 12, 2017.

2016: TV Cunningham, M Kuczewski, H Lipman, and R McKinney, "From "Meh" to MEB: Innovative Ethics Education in Medical School" (Panel Presentation). American Society for Bioethics and Humanities (ASBH), Washington, DC, October 6-9, 2016.

TV Cunningham, "Epic Ethics: Measuring Clinical Ethics Consultation Using the Epic Electronic Health Record System." Vanderbilt University Medical Center, Nashville, TN, July 15, 2016.

TV Cunningham, "Distributed Cognition in Critical Care Medicine." Society for Philosophy of Science in Practice, Glassboro, NJ, June 17-19, 2016.

TV Cunningham, "Philosophical Perspectives on Fetal Tissue Research." Rutgers Workshop on Fetal Tissue Ethics, New Brunswick, NJ, June 10-12, 2016.

TV Cunningham, K Armstrong, and J Fanning, "Integrating Quality Improvement Measures into Ethics Consultation." Pre-Conference Workshop at the International Conference on Clinical Ethics Consultation, Washington, DC, May 19-22, 2016.

TV Cunningham, "Distributed Cognition in Critical Care Medicine." Medical Knowledge in a Social World, Irvine, CA, March 28-29, 2016.

TV Cunningham, "Introduction to the UAMS/ACH Clinical Ethics Consult Service" and "Decision Making in Developmental Pediatrics: Ethical and Legal Considerations." Developmental Pediatrics Lecture Series, Little Rock, AR, March 03 & 10, 2016.

2015: TV Cunningham, LR Eisenberg, and DM Hester, "From "Meh" to MEB: A Novel Curriculum for Overcoming Challenges in Undergraduate Medical Ethics Education." AAMC Medical Education Meeting, Baltimore, MD, November 10-12, 2015.

K Armstrong, J Fanning, and TV Cunningham, "Find Meaning: Evidence Based Practice in Clinical Ethics Consultation." American Society for Bioethics and Humanities (ASBH), Houston, TX, October 22-25, 2015.

TV Cunningham, A Merrick, R Green, LR Eisenberg, and DM Hester, "The Curricular Ethics Bowl: Answering Pedagogical Challenges." Society for Ethics Across the Curriculum, Greenville, SC, October 8-10, 2015.

TV Cunningham, "Guardianship, Capacity, and Decision Making for Incapacitated Loved Ones." Department of Geriatrics Grand Rounds, Little Rock, AR, July 29, 2015.

M Jaffar and TV Cunningham, "Controversies in Critical Care." White Paper Workshop at ICARE (Improving Critical and Acute Care Through Regional Education), Rodgers, AR, July 10-12, 2015.

A Jones, H Moseby, D Jordan, and TV Cunningham, "Controversies in Critical Care." Panel Discussion at ICARE (Improving Critical and Acute Care Through Regional Education), Rodgers, AR, July 10-12, 2015.

TV Cunningham, "Research Misconduct in Light of RCR." UAMS Research Education, Little Rock, AR, May 29, 2015.

TV Cunningham, "Decision Making for Children and Incapacitated Adults: Educating Institutional Stakeholders About Ethical Differences." UAMS IWHE (Intensive Workshop in Healthcare Ethics), Little Rock, AR, May 7-8, 2015.

L Viscioni, M Pippenger, SB Harrington, E Price, TV Cunningham, and LJ Greenfield, "Psychology of Pain" Panel Discussion at Neurology Update 2015, Little Rock, AR, April 11, 2015.

A Merrick, R Green, TV Cunningham, LR Eisenberg, and DM Hester, "On the Uses of the Intercollegiate Ethics Bowl Model for Professional Students' Education in Healthcare Ethics." Association for Practical & Professional Ethics (APPE), Costa Mesa, CA, February 19-22, 2015.

TV Cunningham, A Merrick, R Green, LR Eisenberg, W Ward, and DM Hester, "Introducing the Medical Ethics Bowl" [Poster]. UAMS 1st Annual Educators' Academy Teaching and Learning Symposium: Education Scholarship," Little Rock, AR, January 22, 2015.

2014: TV Cunningham and E Gilmore-Szott, "Debating the Ethics of Embryo Research: The Language from 'Making Babies' to 'Cloning-for-Biomedical-Research." American Society for Bioethics and Humanities (ASBH), San Diego, CA, October 16-19, 2014.

LR Eisenberg and TV Cunningham, "Ethics and Decisionmaking at the End of Life." Hospice & Palliative Care Association of Arkansas Partners in Care Conference, Little Rock, AR, October 2-3, 2014

TV Cunningham, "A Criticial Assessment of Patient- and Family-Centered Care." Department of Surgery Grand Rounds, Little Rock, AR, September 16, 2014.

TV Cunningham, "The Role of an Ethicist in Pediatric Medicine." Arkansas Childrens' Hospital Pastoral Staff Education & Training, Little Rock, AR, June 12 and August 14, 2014.

TV Cunningham, "What is Narrative Medicine? A Deflationary Account for Psychiatry." Association for the Advancement of Philosophy and Psychiatry, New York, NY, May 3-4, 2014.

TV Cunningham, "Rawlsian Reflective Equilibrium." American Philosophical Association Pacific Division, San Diego, CA, April 16-19, 2014.

2013: TV Cunningham, "Is Patient-Centered Care Possible? The Case of Hereditary Breast and Ovarian Cancer." Department of Obstetrics and Gynecology Grand Rounds, UAMS, Little Rock, AR, November 13, 2013.

TV Cunningham, "Concepts of Health and Disease: Who Needs Them? Recent Progress on a Vexing Debate." Philosophy of Medicine Affinity Group, American Society for Bioethics and Humanities (ASBH), Atlanta, GA, October 24-27, 2013.

TV Cunningham, "Surrogate Decision-Making: The Liger of Bioethics?" Arkansas Children's Hospital, Little Rock, AR, September 3, 2013.

TV Cunningham, "The Principle of Charity and Non-Inferential Coding in Interdisciplinary Behavioral Research" [Poster]. American Philosophical Association Pacific Division, San Francisco, CA, March 27-30, 2013.

TV Cunningham, "Objectivity, Scientificity, and the Dualist Epistemology of Medicine." Department of Bioethics, Cleveland Clinic, February 4, 2013.

TV Cunningham, "Objectivity, Scientificity, and the Dualist Epistemology of Medicine." Division of Medical Humanities, University of Arkansas for Medical Sciences, February 1, 2013.

TV Cunningham, "Objectivity, Scientificity, and the Dualist Epistemology of Medicine." Department of Philosophy and Religion, Northeastern University, January 29, 2013.

2012: TV Cunningham, LP Scheunemann, M Crankovic, and DB White "How Informed are Surrogate Decision Makers About the Principles of Surrogate Decision-Making? Preliminary Data from ICU Family Conferences" [Paper]. American Society of Bioethics and Humanities (ASBH), Washington, D.C., October 18-21, 2012.

TV Cunningham, "The Principle of Charity and Non-Inferential Coding in Interdisciplinary Behavioral Research" [Poster]. American Society of Bioethics and Humanities (ASBH), Washington, D.C., October 18-21, 2012.

2011: TV Cunningham, "What Justifies the Ban of Federal Funding of Somatic Cell Nuclear Transfer for Research Purposes?" International Society for the History, Philosophy, and Social Studies of Biology (ISHPSSB), Salt Lake City, UT, July 10-15, 2011.

TV Cunningham, "What is 'Group Decision-Making'? The case of shared decision-making as a normative model of medical choice." Three Rivers Philosophy Conference: Science, Knowledge, & Democracy, University of South Carolina, Columbia, SC, April 1-3, 2011.

TV Cunningham, "Our Unjustified Regulation of Stem Cell Research: What HPS Can teach about how politics influences scientific research." History and Philosophy of Biology in the Desert, Arizona State University, Tempe, AZ, February 1-3, 2011.

2009: TV Cunningham, "To Save the Semantic View." Models and Simulations 3, University of Virginia, Charlottesville, VA, USA, March 6-8, 2009.

2008: TV Cunningham, "J. B. S. Haldane's Intellectual Heritage." History of Science Society, Pittsburgh, PA, USA, November 6-8, 2008.

TV Cunningham, "Natural Selection, Adaptation, and Fitness: On the illusion of perspectively neutral explanatory roles." Institut d'Histoire et de Philosophie des Sciences et Techniques (IHSPT), Paris, France, June 4-5, 2008.

2007: TV Cunningham, "A Reply to Naïve Mechanicism: J. S. Haldane's Shift from Vitalism to Holism, and its Effects on his Philosophy of Biology." International Society for the History, Philosophy, and Social Studies of Biology (ISHPSSB), Exeter, UK, July 25-29, 2007.

TV Cunningham, "Science, Policy, & Politics: How distortion and bias on the President's Council on Bioethics generated the moratorium on cloning for biomedical research." 7th Annual University of Pittsburgh Graduate Student Expo, Pittsburgh, PA, USA, March 1, 2007.

Research and Educational Funding

2015: UAMS TRI Pilot Award: "Participant Preferred Dissemination Methods." Intramural funding for a T4 phase pilot study investigating community and research participant perceptions and preferences regarding the dissemination of research results. **Co-Investigator** (PI: Scott Warmack, PharmD). Total award: **$50,000. No salary coverage.**

UAMS Division of Medical Humanities Bruce and Brandon Lee Scholarship: "Bridging the Gap – An Exploration of the Climate of Mental Health in Rural Costa Rica." Intramural funding for a mixed methods investigation of Costa Rican perspectives on mental health. **Co-Investigator and Mentor** for Matthew Kern (PI and 4th year medical student); Total award: **$3,000. No salary coverage.**

2014: UAMS Department of Pediatrics Innovation in Pediatric Education Grant: "Fourth Year Reflection Rounds." Intramural funding to institute interdisciplinary, spiritual competency curriculum in fourth year acting internships in pediatrics at UAMS and to perform a mixed methods evaluation of program efficacy. **Co-Principal Investigator**, with Rebecca Latch, MD. Total award: **$25,000. 3% salary coverage for 2014-15**.

George Washington Institute for Spirituality and Health (GWish)-John Templeton Foundation: "Reflection Rounds: Sustaining Spirituality-Based Competencies in Medical Education" (GTRR). Extramural funding to institute interdisciplinary, spiritual competency curriculum in third year clinical clerkships at UAMS. **Co-Principal Investigator** for UAMS site, with Wendy Ward, PhD. Total award: **$25,000. 4% salary coverage, 2014-15**.

UAMS Department of Pediatrics Summer Science Student Research Grant. Mentee: Jackson Bridges. Extramural funding (by the Stella Boyle Smith Foundation) to educate and oversee a summer mentee from July-August 2014. **Principal Investigator. $2,500.**

Honors & Awards

Visiting Lecturer (Invited), Cook Children's Hospital, Forth Worth, TX, February 2017.

Early Career Advisee, American Society for Bioethics and Humanities Meeting, October 2014. Advisors: Mark Yarborough, PhD and Alex Rajczi, PhD

Graduate Student Stipend, American Philosophical Association, to present at the 87th Annual American Philosophical Association Pacific Division Meeting, March 2013: $300.

Travel Award, National Science Foundation, to attend the Philosophy of Science Association Annual Meeting, November 2012: $410.

Early Career Scholar Award, American Society for Bioethics and Humanities, October 2012: $500.

Travel Award, Center for Bioethics & Health Law, November 2012: $725.

Travel Award, International Society for the History, Philosophy, and Social Studies of Biology, July 2011: $150.

Travel Award, University of Pittsburgh Graduate and Professional Student Assoc., May 2011: $200.

Housing Assistance Award, University of Arizona History and Philosophy of Biology in the Desert, February 2011: $100.

Travel Award, Center for Bioethics & Health Law, November 2010: $825.

Travel Award, Univ. of Pittsburgh Graduate and Professional Student Assoc., March 2009: $200.

Travel Award, International Society for the History, Philosophy, and Social Studies of Biology, July 2007: $900.

Travel Award, University of Pittsburgh Graduate and Professional Student Association, November 2006: $100.

Departmental Fellowship, University of Pittsburgh: 2005-2006, 2007-2008, 2009-2010

Teaching Experience

Course Coordinator:

History of American Medicine [M4 elective], Fall 2014 (UAMS)

Art & Medicine [M4 elective], Spring 2015 (UAMS)

Course Co-Coordinator:

Genetic Counselor Ethics, Fall 2015

Medical Ethics for Physicians Assistants, Summer 2014 (UAMS)

Biomedical Ethics [M4 elective], Spring 2014 (UAMS)

Instructor

KP Advanced Steps Instructor, Winter 2019 training

Introduction to Bioethics (for Graduate Students), Fall 2019 (LMU)

Introduction to Bioethics (for Graduate Students), Fall 2018 (LMU)

Research Ethics, Summer 2018 (LMU)

Ethics and Society, Fall 2015 (UALR)

Medical Ethics for Physicians Assistants, Summer 2016 (UAMS)

Medical Ethics for Physicians Assistants, Summer 2015 (UAMS)

Teaching Facilitator (co-taught):

Practice of Medicine 1 [for M1 students], 2015-2016 (UAMS)
with Professor D. Micah Hester

Practice of Medicine 1 [for M1 students], 2014-2015 (UAMS)
with Professor D. Micah Hester

Practice of Medicine 2 [for M2 students], 2015-2016 (UAMS)
with Professor D. Micah Hester

Practice of Medicine 2 [for M2 students], 2014-2015 (UAMS)
with Professor D. Micah Hester

Pediatric Reflection Rounds [for M3 and M4 students], 2015-2016 (UAMS)
with Professor Rebecca Latch

Pediatric Reflection Rounds [for M3 and M4 students], 2014-2015 (UAMS)
with Professor Rebecca Latch

Medical Ethics [for M2 students], 2013-2014 (UAMS)
with Professor D. Micah Hester

Clinical Clerkship Ethics Conference [for M3 students], Spring 2011 (Pitt)
with Professor David Barnard

Ethics, Law, and Professionalism [for M1 students], Fall 2011 (Pitt)
with Professor David Barnard

Clinical Clerkship Ethics Conference, Fall 2011 (Pitt)

with Professor David Barnard

Teaching Fellowship (independently taught):

Morality and Medicine [Bioethics], Summer 2011 (Pitt)

Morality and Medicine [Bioethics], Spring 2011 (Pitt)

Morality and Medicine [Bioethics], Fall 2010 (Pitt)

Myth and Science, Spring 2009 (Pitt)

Morality and Medicine [Bioethics], Fall 2008 (Pitt)

Teaching Assistantship:

Explanations of Humans and Society, Spring 2007 (Pitt)
for Professor Peter Machamer

Darwin and His Critics, Fall 2006 (Pitt)
for Visiting Professor Laura J. Snyder

Introduction to Human Nutrition, Spring 2003 (UCSD)

Metabolic Biochemistry, Winter 2002 (UCSD)

Administrative Experience

Director, Bioethics, Kaiser Permanente West Los Angeles Medical Center	**2016-present**
Administrative Assistant, University of Pittsburgh Graduate and Professional Student Government Association	**2011-2013**
Administrative Assistant for Adolf Grunbaum, PhD.	**2007-2008**
Department Representative, University of Pittsburgh Arts & Sciences Graduate Student Council	**2006-2008**

Professional and Community Service

Community Service

Expert Witness, Center for Reproductive Rights, Virginia TRAP Laws (2019)

Expert Witness, Center for Reproductive Rights, Texas Senate Bill 08 (2017)

Conference and Journal Service

Committee Chair and Member, ASBH National Conference Programming Committee, 2019-2020

Member, ASBH National Conference Programming Committee, 2018-2019

Referee for *Clinical Ethics*, 2019-present

Referee for *Palliative Care: Research and Treatment*, 2019-present

Referee for *AJOB Empirical Bioethics*, 2018-present

Referee for *Journal of Evaluation in Clinical Practice*, 2016-present

Referee for *Medicine, Health Care, and Philosophy*, 2016-present

Referee for *Journal of Medical Ethics*, 2016-present

Referee for *American Society of Bioethics and Humanities*, 2014-present

Referee for *Philosophy of Science*, 2010-present

Judge, University of Arkansas, Little Rock High School Ethics Bowl, January 25, 2014

Chair, Contributed Papers: Values, Interests, and Motivations, Philosophy of Science Association 2012, San Diego, CA.

Session Co-organizer, Meeting of the History of Science Society, Pittsburgh, PA, USA, November 6-9, 2008.

Conference Co-organizer, 9th and 10th annual Pittsburgh-Carnegie Mellon Graduate Student Conferences, Pittsburgh, PA, USA, March 2007 and 2008.

Session Chair and Co-organizer, Meeting of the International Society for the History, Philosophy, and Social Studies of Biology, Exeter, UK, July 25-29, 2007

University and Hospital Service

Member, KP West LA Blood Management Committee, 2018-present

Member, KP West LA Neonatal ICU Mortality and Morbidity Committee, 2018-present

Co-Chair, Life Care Planning Committee, KP West LA Medical Center, 2018-2019

Co-Chair, Bioethics Committee, KP West LA Medical Center, 2016-present

Member, Senior Leadership Team, KP West LA Medical Center, 2016-present

Member, KP West LA Critical Care Committee, 2016-present

Member, Compliance Committee, KP West LA Medical Center, 2016-2018

Member, Kaiser Permanente Southern CA Regional Bioethics Committee, 2016-present

Member, UAMS Multidisciplinary Critical Care Committee, 2015-2016

Member, UAMS College of Medicine Curriculum Committee, 2015-2016

Member, UAMS Arts Council, 2015-2016

Chair, Bruce and Brandon Lee Medical Scholarship Committee, 2014-2016

Member, UAMS Institutional Review Board, 2013-2016.

Member, UAMS Medical Ethics Advisory Committee, 2013-2016

Member, UAMS Planned Emergency Research Committee, 2013

Member, Arkansas Genetic Health Committe (ARGHC), 2013-2015.

Member, ARGHC Newborn Screening Subcommittee, 2013-2015.

Member, Children's Hospital of Pittsburgh (UPMC) Ethics Committee, 2012-2013.

Member, University of Pittsburgh Provost's Advisory Committee for Planning and Budget, 2012-2013.

Member, University of Pittsburgh University Senate Child and Dependent Care Subcommittee, 2012-2013.

Member, University of Pittsburgh University Senate Commonwealth Relations Committee, 2012-2013.

Attendee, UPMC Presbyterian Ethics Committee, 2012-2013.

Member, University of Pittsburgh GPSG Executive Committee, 2012-2013.

Chair, University of Pittsburgh GPSG Student Affairs Committee, 2012-2013.

Project Lead, GPSG Pittsburgh Public Schools Fund Raiser: The Represent PITT! Art Initiative, 2012.

Member, University of Pittsburgh Board of Trustees Affirmative Action Commitee, 2011-2013.

Member, University of Pittsburgh University Review Board, 2011-2013

Project Leader, GPSA Alliance for Infants and Toddlers Toy Drive & Fund Raiser, 2011.

Professional Memberships

Since 2011:	American Philosophical Association
Since 2010:	American Society for Bioethics and Humanities
Since 2006:	Philosophy of Science Association
2015-2016:	Association for Practical and Professional Ethics
2006-2014:	History of Science Society; International Society for History, Philosophy, & Social Studies of Biology

Dissertation Abstract

Socializing Medical Practice: A Normative Model of Medical Decision-Making.

My dissertation is about the way people *should* and *do* make medical choices. It defends the claim that medical decisions should be made by groups of persons acting together, not by individuals acting alone. I begin by arguing that prominent models of medical decision-making are problematic, because they fail to be both *descriptively* and *normatively adequate*, which I argue any account of choice in medicine should be. The remainder of the work articulates a model that meets these two criteria. First, I justify an account of the uniquely medical context my model is designed to apply to by distinguishing *two basic aims of medicine*: (i) to fully understand patients in personal and scientific terms; and, (ii) to intervene upon patients' health states in ways that are consistent with this understanding. Then, I take two chapters to develop a descriptive account of medical decision-making. In them, I introduce a close study of the case of hereditary breast and ovarian cancer decision-making, which I argue shows choices are made by groups of interacting persons over extended spatiotemporal and social dimensions. So, I appeal to the theory of *distributed cognition* to describe this collection of persons processing information together when making choices. Having defended a descriptive account of medical choice, I then take two more chapters to propose a normative account, based on a modified version of Rawlsian reflective equilibrium that I call *medical reflective equilibrium*. On my account, medical choices should be made by searching for, selecting, and integrating the right kind and amount of information, which requires considering sufficient information to meet the basic aims of medicine. Given that the basic aims are defined in terms of an epistemic distinction between *subjective* and *objective knowledge*, I argue that performing the medical reflective equilibrium procedure adequately requires multiple participants in decision-making. Consequently, I conclude that medical choices are and should be social.

My dissertation may be accessed here: http://d-scholarship.pitt.edu/20142/

EXHIBIT 5

ELECTRONICALLY FILED
2019 Nov 26 AM 9:55
CLERK OF THE SHAWNEE COUNTY DISTRICT COURT
CASE NUMBER: 2015-CV-000490

Court: Shawnee County District Court

Case Number: 2015-CV-000490

Case Title: Hodes & Nauser MDs PA vs. Derek Schmidt - Attorney General

Type: Amended Case Management Order

SO ORDERED.

/s/ Honorable Richard Anderson, District Judge

IN THE DISTRICT COURT
OF SHAWNEE COUNTY, KANSAS

HODES & NAUSER, MDs, P.A., and TRACI LYNN NAUSER, M.D.,	)	
Plaintiffs,	)	**Case No. 2015CV490**
	)	**Division 2**
v.	)	
DEREK SCHMIDT, in his official capacity as Attorney General of the State of Kansas; and STEPHEN M. HOWE, in his official capacity as District Attorney for Johnson County,	)	
Defendants.	)	

Pursuant to K.S.A. Chapter 60

AMENDED CASE MANAGEMENT ORDER

After consultation with the parties, the Court enters the following case management order:

1. Any motions to amend the pleadings or to add parties, shall be filed on or before **July 2, 2019**.

2. The parties will exchange lists of proposed exhibits and non-expert witnesses. These lists of witnesses shall set forth the address of each witness, as well as the subject matter,

and a brief synopsis of the substance of the facts to which each witness is expected to testify. The preliminary lists of proposed witnesses and of proposed exhibits shall be filed and served by **October 4, 2019**. Final witness and exhibit lists shall be filed and served by **December 13, 2019**.

3. The issues in the case will be defined by Plaintiffs' Petition and Defendants' Answer thereto, as supplemented by the parties' discovery responses. The issue in this case is whether, under the strict scrutiny standard set out by the Kansas Supreme Court in this case, Defendants assert that Kansas Senate Bill 95 (the "Act"), now codified at K.S.A. 65-6741 through 65-6749, serves a compelling state interest and whether the Act is narrowly tailored to further that interest.

4. The following stipulations are agreed to by the parties:

   a. Venue is proper in Shawnee County, Kansas.

   b. Jurisdiction is proper in Shawnee County, Kansas.

   c. Defendant Derek Schmidt, his agents, and his successors are authorized to seek injunctive relief against any person who perform or attempt to perform an abortion procedure in violation of the Act.

   d. Defendant Stephen Howe, his agents, and his successors have the authority to prosecute violations of the Act occurring in Johnson County. In addition, the Act authorizes "any district attorney" with "appropriate jurisdiction" to seek injunctive relief against any person who performs or attempts to perform an abortion procedure in violation of the Act.

   e. The Act was enacted by the Kansas Legislature during the 2015 legislative session, and was signed by the governor on April 7, 2015.

   f. Plaintiffs filed this lawsuit on June 1, 2015, challenging the Act.

   g. Enforcement of the Act was enjoined by this Court on June 30, 2015. On January 22, 2016, an equally divided Kansas Court of Appeals affirmed. The Kansas Supreme Court Agreed to review the case on April 11, 2016, and, on April 26, 2019, affirmed. On May 28, 2019, the Kansas Supreme Court filed its mandate affirming this Court's judgment and remanding the case.

h. Plaintiff Dr. Nauser has standing to challenge the Act on behalf of herself and on behalf of her patients seeking abortions.

i. The Act prohibits the performance on a living fetus of the procedure referred to by physicians as Dilation and Evacuation ("D&E").

5. Alternative dispute resolution is **not** appropriate.

6. The Plaintiff(s) shall provide the names, addresses and other disclosures pertaining to expert witnesses required by DCR 3.211 and K.S.A. 60-226(b)(6) no later than **October 4, 2019**. The Defendant(s) will provide the names, addresses and other required disclosures pertaining to expert witnesses by **October 4, 2019**. The parties will provide the names, addresses, and other required disclosures pertaining to rebuttal expert witnesses by **November 1, 2019**.

7. All discovery shall be completed on or before **December 13, 2019**.

8. The following procedure shall be used by the parties in the disclosure or discovery of electronically stored information, including the form or forms in which it is to be produced:

a. All electronically stored information shall be produced in the form in which it is ordinarily is maintained, with the exception of e-mail as set forth below. All such electronically stored information shall include any and all associated metadata and any and all associated files, including but not limited to attachments or hyperlinked files.

b. All e-mail shall be produced in electronic form in a manner that preserves the relationship between the e-mail and all its attachments. An e-mail with all its attachments shall be produced as separate records. Any attachments to an e-mail shall be produced in the electronic form in which it ordinarily is maintained. Email files (i.e., .msg) should be rendered and provided as .HTML files. A global deduplication should be applied, however, any unique metadata associated with the deduplicated file (such as custodian name) must be preserved and produced in the database filed. All available metadata should be extracted and produced in the .DAT file.

c. All electronically stored information, including e-mail, shall be produced in an electronically searchable form, consistent with the requirements of K.S.A. § 60-234.

9. Pursuant to stipulation of the parties, the parties are limited to taking not more than **8** non-expert depositions per party; any deposition of a non-party, non-expert witness shall not exceed 4 hours; any deposition of a party or designated expert witness, other than a deposition under K.S.A. 60-230(b)(6), shall not exceed 7 hours; any deposition of a party shall be taken before the close of discovery.

10. Any dispositive motions and supporting memoranda shall be filed on or before **January 31, 2020**.

11. The parties agree that statutory medical examinations pursuant to K.S.A. 60-235 are not necessary at this time.

12. The parties agree that because this is not a standard tort or contract case, few of the standard discovery requests will apply. The parties therefore may propound nonstandard, case-specific discovery requests subsequent to the filing of this Case Management Order, subject to the Kansas Code of Civil Procedure, without prior approval by the Court.

13. A final pretrial conference is scheduled for **March 18, 2020**, at **9:00 a.m.** The parties shall exchange and file pretrial questionnaires as required by DCR 3.201.

14. The trial will be scheduled at the Pretrial Conference.

15. Every pleading, motion, response or reply, shall be filed with the Clerk of the District Court and a copy shall be delivered to chambers pursuant to DCR 3.202(c).

16. The parties shall comply with the terms of the Kansas Code of Civil Procedure and the Third Judicial District Court Rules unless otherwise mutually agreed to in writing and/or excused by the Court.

IT IS SO ORDERED.

Entered on this _____ day of _____, 20 ___.

_____

District Judge

SUBMITTED AND APPROVED BY:

/s/ Genevieve Scott _____ Date: November 25, 2019

Genevieve Scott, NY Bar #4922811*
Center for Reproductive Rights
199 Water Street, 22nd Floor
New York, NY 10038
Phone: (917) 637-3605
Fax: (917) 637-3666
gscott@reprorights.org
*Admitted *pro hac vice*

Robert V. Eye, KS Bar #10689
Robert V. Eye Law Office, L.L.C.
4840 Bob Billings Parkway, Suite 1010
Lawrence, KS 66049
Phone: 785-234-4040
Fax: 785-749-1202
bob@kauffmaneye.com

Teresa A. Woody, KS Bar #16949
The Woody Law Firm PC
1621 Baltimore Avenue
Kansas City, MO 64108
Phone: (816) 421-4246
Fax: (816) 471-4883
teresa@woodylawfirm.com

COUNSEL FOR PLAINTIFFS

/s Robert Hutchison

Date: November 25, 2019

Robert Hutchison, #27351
Thompson Warner, P.A.
333 W. 9th Street
P.O. Box 1264
Lawrence, KS 66044
robert.hutchison@333legal.com

Jeffrey A. Chanay, #12056
Chief Deputy Attorney General
Office of Kansas Attorney General Derek Schmidt
Memorial Building, 3rd Floor
120 SW 10th Avenue
Topeka, KS 66612-1597
Phone: (785) 368-8435
Fax: (785) 291-3767
Jeff.Chanay@ag.ks.gov

Brant M. Laue
Deputy Solicitor General
Memorial Building, 2nd Floor
120 SW 10th Avenue
Topeka, Kansas, 66612-1597
brant.laue@ag.ks.gov

COUNSEL FOR DEFENDANTS

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on November 25, 2019 the foregoing was served on the following by electronic mail pursuant to an agreement of the parties:

Robert Hutchison
Thompson Warner, P.A.
333 W. 9th Street
P.O. Box 1264
Lawrence, KS 66044
robert.hutchison@333legal.com

Jeffrey A. Chanay
Deputy Attorney General, Civil Litigation Division
Office of the Kansas Attorney General
120 SW 10th Avenue, 3rd Floor
Topeka, KS 66612-1597
jeff.chanay@ksag.org

Brant M. Laue
Deputy Solicitor General
Memorial Building, 2nd Floor
120 SW 10th Avenue
Topeka, Kansas, 66612-1597
brant.laue@ag.ks.gov

COUNSEL FOR DEFENDANTS

/s/ Genevieve Scott
Genevieve Scott*

EXHIBIT 6

IN THE DISTRICT COURT OF
SHAWNEE COUNTY, KANSAS

HODES & NAUSER, MDs, P.A., *et al.,*	Plaintiffs,
v.	Case No. 2015-CV-490 Division 6
DEREK SCHMIDT, in his official capacity as Attorney General of the State of Kansas, *et al.,*	Defendants.

RESPONSES OF DEFENDANTS
TO PLAINTIFFS' FIRST INTERROGATORIES

1. Identify with specificity each compelling State Interest that you assert will be advanced or served by enforcement of the Act.

ANSWER: (a) Promotion of the Value and Dignity of Life

(b) Promotion and Protection of the Integrity, Ethics, and Well-Being of the Healthcare Profession in Kansas

(c) Improvement and Protection of the Mental and Physical Health of the Mother

2. For each compelling State Interest that you assert will be advanced or served by enforcement of the Act, identify with specificity and provide the factual basis for how enforcement of the Act will advance or serve each of those interests.

ANSWER: **(a) Promotion of the Value and Dignity of Life**

No description of the dismemberment abortion procedure described in the Act, no matter how clinical or gentle, can fail to portray the horror of the act of picking a living fetus apart with forceps. Dr. George Flesh, an obstetrician and gynecologist who chose to stop performing abortions in his practice, stated pointedly that "I believe that tearing a developed fetus apart, limb from limb, simply at the mother's request is an act of depravity that society should not permit. We cannot afford such a devaluation of human life, nor the desensitization of medical personnel that it requires." George Flesh, *Perspective on Human Life: Why I No Longer Do Abortions*,

Los Angeles Times, Sep. 12, 1991. Treating a living unborn child as nothing more than just another piece of body tissue, often called the "products of conception," is inhuman and degrades the value of all life, born or not. The Act requires nothing more than that an unborn child be given the dignity and consideration due any human being. "[I]mplicitly approving such a brutal and inhumane procedure by choosing not to prohibit it will further coarsen society to the humanity of not only newborns, but all vulnerable and innocent human life, making it increasingly difficult to protect such life." *Gonzales v. Carhart*, 500 U.S. 124, 156, 127 S.Ct 1610 (2007) (quotation omitted).

The Act advances the State's compelling interest in promoting the value and dignity of life in a number of ways. First, the Act encourages care providers in Kansas to respect the life and dignity of unborn children by requiring them to treat the unborn like any other human being instead of an extraneous piece of tissue. Second, it expresses the view of the Kansas public, as enacted, that the life of an unborn child is worthy of consideration and respect, and not dismissal. Third, it provides dignity to the unborn at the end of its short life, allowing for a complete, peaceful passing before being torn apart.

(b) Promotion and Protection of the Integrity, Ethics, and Well-Being of the Healthcare Profession in Kansas

The horror and inhumanity of performing a dismemberment abortion goes beyond degrading life as a whole and the lives of the unborn. The procedure degrades the medical profession from a source of compassion, hope, and help to a body of indifference and clinical disregard for the value of all life, potential and otherwise as it flies in the face of its oath to "do no harm." To maintain the integrity of the healthcare profession in Kansas, while still respecting a woman's autonomy, the Act prohibits doctors from performing the procedure on a living unborn child. Doctors are the individuals accountable under the law, not the patients in their care, and it imposes on them a duty to ensure the unborn child is granted a more merciful and dignified end than that provided by the dismemberment procedure. This practitioner focus reflects the State's interest in ensuring the profession retains its integrity as a force for the preservation, promotion, and improvement of the lives of all Kansans. The State has a significant role in regulating the medical profession, and failure to step in when a particular procedure so thoroughly clouds a physician's normal ethical duty to preserve life would risk the ethical and reputational decay of doctors around the state.

The Act also advances the State's interest in promoting the mental well-being of a subset of its population: the healthcare providers who perform these services. A study has shown that healthcare providers do not escape these procedures unscathed, and the mental toll of engaging in this inhuman act is detrimental to both the individual providers and the healthcare profession as a whole in Kansas. Ensuring the dignified and humane treatment of the unborn protects doctors, nurses, and others in close proximity to termination services from the harms and desensitization to life that dismemberment abortions entail.

(c) Improvement and Protection of the Mental and Physical Health of the Mother

Without standing in the way of a patient's choice to terminate a pregnancy, the Act spares her experiencing the mental anguish of imagining and feeling her living unborn child rent apart by forceps. The Act's requirements also reassure patients that their doctors will treat the lives of their unborn children with respect and dignity throughout the termination procedure. By requiring doctors to either choose a different procedure or induce fetal demise prior to undertaking a dismemberment D&E, the Act relieves the mother of some of the anguish, anxiety, and terror the procedure as a whole can imbue, and protects them from both the short-term and long-term potential for mental health concerns arising from having had the procedure performed on a living unborn child. If a doctor opts to induce fetal demise, delivery of the intact unborn may be possible without violating the federal ban on partial-birth abortions. This would help facilitate the needs of some patients who desire to hold their late unborn child in order to mentally heal.

The Act promotes the State's interest in protecting and improving the physical well-being of the mothers undergoing the procedure. Intact delivery of the deceased unborn would eliminate the risk of fetal parts being left behind, which can cause harm to the mother in the form of, *inter alia*, uterine perforations and sepsis. Induced fetal demise can also reduce the D&E procedure time and increase the overall safety of the procedure.

3. For each compelling State Interest that you assert will be advanced or served by enforcement of the Act, identify with specificity and provide the factual basis for how enforcement of the Act is narrowly tailored to advance or serve each interest.

ANSWER: **(a) Promotion of the Value and Dignity of Life**

The Act is tightly constrained to promote the value and dignity of life while not outright banning D&E abortions as a whole. The Act only prohibits the procedure when performed on a living unborn child. Ample non-experimental, safe alternatives are available such that the Act does not effectively restrict access or otherwise reach outside the ambit of its simple aim to have the unborn treated with the respect and dignity they deserve. For those doctors and patients who desire to go ahead with dismemberment of the unborn prior to removal from the fetus can do so, as long as the doctor induces fetal demise prior to the D&E. Opting to terminate at an earlier gestational age also allows for more options that are not restricted or prohibited by the Act. Additionally, the Act has exceptions for procedures "necessary to preserve the life of the pregnant woman," and when "a continuation of the pregnancy will cause a substantial and irreversible physical impairment of a major bodily function of the pregnant woman."

(b) Promotion and Protection of the Integrity, Ethics, and Well-Being of the Healthcare Profession in Kansas

As noted in response 3(a), the Act has specific exceptions for certain risks to the mother, and it only prohibits D&Es performed on living unborn children. The Act is specifically and narrowly tailored to protect the integrity of the healthcare profession by preventing it from brutally rending a living fetus with forceps or similar instrument when not medically necessary, while leaving open other options for the doctor and the patient to proceed, if they so choose. Doctors can provide a much more respectful and merciful means of feticide before removing the unborn from the mother, and the public is spared from thinking of the medical providers as people who rip unborn children apart while still alive.

(c) Improvement and Protection of the Mental and Physical Health of the Mother

Mothers are specifically spared the trauma of knowing and remembering that their unborn child was torn apart while still alive, and are granted the relief of either a less brutal procedure or inducing fetal demise to provide the relief that the unborn child died before the dismemberment procedure. Medical emergency and permanent injury exceptions ensure that the mother's life is not put at risk as a result of this effort to protect their overall mental and physical well-being.

4. Explain how using suction to cause fetal demise, as opposed to using forceps, does not violate, undermine, or harm the State Interest(s) purportedly advanced by the Act.

ANSWER: As written, the Act preserves availability of vacuum aspiration in the first trimester and up to approximately 14-16 weeks' gestation, while ensuring that the grotesque dismemberment of living nearly-viable or actually viable unborn children is not accomplished by any means. Allowing suction options to remain for earlier termination does not interfere with the advancement of the state's compelling interests evident in the prohibition of the act later in pregnancy by means of forceps, scissors, and the other instruments identified in the Act. This is also illustrative of the narrow tailoring of the Act, ensuring some earlier options remain available while prohibiting the narrow category of conduct that is violative of the dignity and respect for life the State wishes to promote, as well as its other interests.

5. Identify with specificity and describe all methods of fetal demise of which you are aware that would comply with the Act.

ANSWER: As a preliminary matter, the Act does not mandate any particular method for induced demise. The Act only prohibits dismemberment D&E from being the cause of an unborn child's death. The means of complying with that prohibition are up to the physician, the patient, and the facility, in compliance with all other laws and regulations.

(a) Digoxin injection (intrafetal, intraamniotic) – Up to 1mg of digoxin is injected either through amniocentesis or transvaginal injection into the unborn child or the amniotic fluid. This method stops the unborn child's heart, thereby inducing demise prior to the D&E procedure.

(b) Potassium chloride injection (intrafetal) – Intracardiac injection of potassium chloride (KCL) has proven to be a highly effective means of inducing fetal demise for over 30 years.

(c) Umbilical cord transection (UCT) - Immediately prior to the D&E procedure, upon removal of the luminaria and amniotomy, a suction curette can be introduced into the uterine cavity, the umbilical cord is externalized and transected.

(d) While other methods do exist, such as intrafetal lidocaine, intramuscular digoxin, cardiac piercing, hypertonic saline, and others, the methods

listed above appear to be the most common currently practiced methods in the United States.

6. For each method of fetal demise of which you are aware that would comply with the Act, identify with specificity and provide the factual basis for the safety, availability, and efficacy of that method in causing fetal demise prior to an abortion.

ANSWER: (a) Digoxin injection (intrafetal, intraamniaotic) – To quote one study, "For practitioners who wish to achieve fetal demise prior to performing a D&E procedure, this study shows that use of digoxin does not cause maternal adverse events in the vast majority of cases." (Steward et al 2012). The study found a possible increase in extramural delivery rates, but was at odds with another study that found a slightly increased infection rate. Ultimately, the study identified the use of digoxin as a feticidal agent as a "minimal risk." The other study to which the Steward study compared itself noted that digoxin has been used as a feticidal agent since the 1980s, so availability is not in question. (Dean et al 2012). That study did not conclude that digoxin was unsafe, but recommended against its use due to a lack of information regarding enhanced safety or medical benefits to justify the apparent complications. That study found an increased risk of extramural delivery associated with digoxin (which the study noted could also have been attributable to "individual factors"). Other than compliance with law, the study did not consider other benefits, such as the advancement of the state interests decided above, patient preference, or other such less tangible gains. There does not seem to be any major contention that the procedure is unsafe, unavailable, or ineffective. Other relevant studies include Gariepy et al 2013 and Molaci et al 2008.

(b) Potassium chloride injection (intrafetal) – One major study found a feticidal success rate of 99.5% with KCL injections, and that improved to 100% when discounting the one patient in whom fetal demise was not confirmed and UTC was employed to ensure demise before the D&E. (Sfakianaki et al 2013). That study concluded that intrafetal injection of KCL is "an effective and safe method for induced fetal demise." Another study noted that use of KCL may have reduced the D&E procedure time by several minutes, that complications were infrequent and no different in overall number than other D&E studies that did not involve KCL, and prophylactic actions addressed the apparent increased rate of uterine atony associated with use of KCL. (Lohr et al 2018). As with digoxin, this procedure has been in widespread use for some time, and availability does not appear to be a question of any kind.

(c) Umbilical cord transection – In one of the largest studies of this method, UCT was found to be 100% effective in inducing fetal demise and did not produce any complications related to waiting for fetal demise upon transection. (Tocce et al 2013). In fact, the rates of complications were comparable to general studies of D&E procedures. The instruments used are already part of the tool array for abortion procedures, and no additional medications are needed. The study did not note any adverse side effects of the procedure.

7. For each method of fetal demise of which you are aware that would comply with the Act, identify with specificity any research supporting the use of that method to cause fetal demise prior to an abortion.

ANSWER: Research supporting or discussing use of the identified methods has been included in the answers to the sixth interrogatory request.

8. For each method of fetal demise of which you are aware that would comply with the Act, identify with specificity and provide the factual basis for any health risks of using that method to cause fetal demise prior to an abortion.

ANSWER: Associated risks are discussed above in response to the sixth interrogatory request.

9. Describe in detail any burdens on women seeking abortions, physicians providing abortions, or facilities licensed to provide abortions that you have reason to believe will result from enforcement of the Act, and the factual basis thereof.

ANSWER: Objection. In *Hodes & Nauser v. Schmidt*, No. 114,153, 440 P.3d 461 (2019), the Kansas Supreme Court mandated application of the strict scrutiny test, not the undue burden test. This information is not relevant to whether the Act is narrowly tailored to advance compelling state interests.

To the extent burdens may be relevant, the Act will require a woman seeking a second term abortion to either elect a procedure other than a dismemberment D&E or to undergo a procedure to induce fetal demise before they can terminate the pregnancy. These procedures may slightly increase the risk of infection, and, in the case of the injection, could require an additional office visit, although that could arguably be included with the

other visit a patient must already make at least a day before terminating a pregnancy. Physicians will need to be sure they are competent to perform the induced fetal demise procedures or would need to cease performing dismemberment D&Es as defined by the Act and instead elect to perform a different procedure. To the extent ensuring competency in these measures is different from activities in which the doctors should already be competent, like amniocentesis and performing intrauterine work, it could impose a one-time burden of training on them. Facilities would be burdened with ensuring their physicians are competent in these functions.

10. Identify all persons, including their position and role, who you believe have knowledge the passage of this law and identify the issues upon which you believe they have knowledge.

ANSWER: Objection. Under the test established by the Kansas Supreme Court in this very case, the passage of the law is irrelevant to this suit. The only relevant matters to a challenge of abortion regulations under the Kansas Constitution are the compelling state interests advanced by the law and whether the law is narrowly tailored to advance those interests. Further, it is simply impossible to identify every member of the Kansas legislature and their staff, plus individuals in the executive branch, who may have knowledge of the passage of this Act four years ago. In addition, the legislative deliberative process is protected by legislative immunity. The legislative history for the Act is included in response to plaintiffs' First Request for Production of Documents, and it provides all of the information responsive to this request as is available to any of the parties in this case.

11. Identify all persons, employee(s), or other contractor(s) or agent(s), including their position and role, who have direct knowledge about planned or actual enforcement of the Act.

ANSWER: Objection. This information is both irrelevant and non-existent. It is not apparent what anything outside the act itself has to do with determining whether the Act itself is narrowly tailored to advance the identified compelling State interests. Further, the Act was enjoined so shortly after it was enacted, by a lawsuit every party knew was coming, that enforcement of the Act has never been even an imagined possibility while this litigation continues.

THOMPSON - HALL P.A.

/s/ Robert C. Hutchison
Robert C. Hutchison #27351
333 W. 9th Street, Suite B
Lawrence, KS 66044
P: (785) 841-4554 / F: (785) 841-4499
robert.hutchison@333legal.com

/s/ Jeffrey A. Chanay
Jeffrey A. Chanay #12056
Chief Deputy Attorney General
Dennis D. Depew #11605
Deputy Attorney General, Civil Litigation Div.
Brant M. Laue #16857
Deputy Solicitor General
Office of Attorney General Derek Schmidt
Memorial Building, 2nd Floor
120 SW Tenth Avenue
Topeka, KS 66612-1597
P: (785) 368-8435 / F: (785) 291-3767
jeff.chanay@ag.ks.gov
dennis.depew@ag.ks.gov
brant.laue@ag.ks.gov

Attorneys for Defendants

DEFENDANT'S SWORN SIGNATURE

STATE OF KANSAS; COUNTY OF SHAWNEE) ss:

Stanley Parker, on behalf of the office of the Attorney General of the State of Kansas, states that he has read the foregoing interrogatories, and the answers given are true to the best of affiant's knowledge and belief.

Stanley Parker, on behalf of the office of
Attorney General of the State of Kansas

The foregoing answers were subscribed and sworn to before me by Stanley Parker, on behalf of the office of the Attorney General for the State of Kansas, this 8th day of October, 2019.

Connie Deckard
Notary Public

My Appointment/Commission Expires: 09/13/23.

CONNIE F. DECKARD
Notary Public - State of Kansas
My Appt. Expires 09/13/23