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*Motions for pro hac vice forthcoming

CLERK OF THE
DISTRICT COURT
TERRY HALPIN

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FILED

BY

DEPUTY

**MONTANA THIRTEENTH JUDICIAL DISTRICT COURT,
YELLOWSTONE COUNTY**

PLANNED PARENTHOOD OF MONTANA,
and JOEY BANKS, M.D., on behalf of
themselves and their patients,

Plaintiffs,

vs.

STATE OF MONTANA, by and through Austin
Knudsen, in his official capacity as Attorney
General,

Defendant.

Cause No.

Judge:

**REBUTTAL AFFIDAVIT
OF STEVEN J. RALSTON,
MD, MPH**

DV-21-00999

**HON. GREGORY R.
TODD**

STATE OF DISTRICT OF COLUMBIA)
 : ss.
County of Washington, D.C.)

Steven J. Ralston, M.D., M.P.H., being first duly sworn upon his oath, hereby declares under penalty of perjury that the following statements are true and correct:

1. I am a board-certified obstetrician/gynecologist (OB/GYN) with over two decades of experience with high-risk pregnancies, prenatal diagnosis, and fetal therapy. I am also board certified in maternal-fetal medicine, which is an area of obstetrics that focuses on the medical and surgical management of high-risk pregnancies. In addition, I have specialized training in medical ethics and bioethics and have done substantial work in that area. This affidavit is based upon my personal knowledge, the knowledge I have acquired in the course of my duties as an OB/GYN, and my decades of experience with high-risk pregnancies, prenatal diagnosis, and fetal therapy.

Summary of Opinions

2. I understand Plaintiffs in this case are challenging Montana's House Bill 136 ("H.B. 136"), which bans abortion beginning at 20 weeks LMP (with very limited exceptions), which is before viability. I also understand that the State claims that the law is justified because "there is substantial medical evidence that an unborn child is capable of experiencing pain by 20 weeks," as measured from the first day of a patient's last menstrual period ("LMP"), and asserts a "compelling state interest in protecting the lives of" fetuses from "the stage at which substantial medical evidence indicates that they are capable of feeling pain."

3. I have reviewed the expert declaration submitted in this case by Robin Pierucci, M.D., M.A, as well as the portions of the expert declaration submitted by Ingrid Skop, M.D. that concern fetal pain.¹

4. It is my medical opinion that a fetus is not able to experience pain before at least 24 weeks LMP because key connections to the brain do not develop before that time. The scientific evidence also indicates that a fetus likely never experiences pain in utero because fetuses never experience true wakefulness in utero and that many environmental factors inherent to the uterus keep fetuses in a continuous, sleep-like state. This reflects the consensus in the medical community, based on the most up-to-date and reliable evidence and research.

5. Both Drs. Skop and Pierucci opine that fetal pain is possible before 24 weeks LMP. Their opinions do not reflect the medical consensus but instead conflict with the conclusions of major medical organizations such as the American College of Obstetricians and Gynecologists (ACOG),² the Royal College of Obstetricians and Gynaecologists (RCOG),³ the Society for Maternal-Fetal Medicine (SMFM), and the Society of Family Planning (SFP).⁴ Their opinions are also at odds with the conclusions on fetal pain in a widely cited review of the

¹ The fact that I do not address every statement or issue raised in these declarations does not suggest that I agree with them.

² ACOG, *Facts Are Important – Fetal Pain*, <https://www.acog.org/advocacy/facts-are-important/fetal-pain> (last visited Sept. 16, 2021).

³ RCOG, *Fetal Awareness: Review of Research and Recommendations for Practice* (Mar. 2010) [hereinafter “RCOG Review”].

⁴ SMFM, SFP, Mary E. Norton, Arianna Cassidy, Steven J. Ralston, Debnath Chatterjee, Diana Farmer, Anitra D. Beasley & Monica Dragoman, *Society for Maternal-Fetal Medicine (SMFM) Consult Series #59: The Use of Analgesia and Anesthesia for Maternal-Fetal Procedures*, Am. J. Obstetrics & Gynecology (2021) [hereinafter “SMFM & SFP Review”].

scientific literature on the subject published in the Journal of the American Medical Association (JAMA).⁵

Experience and Background

6. I am currently the Chief of Obstetrics and Vice Chair of OB/GYN at Howard University Hospital in Washington, D.C., where I provide care to patients as a Maternal-Fetal Medicine specialist in both inpatient and outpatient settings. I also serve as the Director of Quality for the Obstetrics and Gynecology department and the Interim Program Director of the Obstetrics and Gynecology residency. As part of my practice, I provide in utero fetal diagnostic and therapeutic procedures. I also supervise, train, and mentor OB/GYN residents and medical students, among other responsibilities.

7. I am also a Professor of Clinical Obstetrics and Gynecology at Howard University. I previously held faculty appointments at the University of Pennsylvania, Harvard Medical School, Tufts University School of Medicine, and Northeastern University. Over the past 20 years, I have trained hundreds of medical students, residents, and fellows to be OB/GYNs and/or Maternal-Fetal Medicine physicians.

8. In addition to providing obstetrical care to patients with wanted pregnancies, I provide abortion care to patients who have made the decision to end a pregnancy. I provide medical and surgical abortions up to 23 weeks, 6 days LMP.

9. I received my medical degree in 1990 from Columbia University (Columbia College of Physicians and Surgeons). I completed my OB/GYN residency at Yale–New Haven Hospital in 1994, and completed a fellowship in maternal-fetal medicine at Tufts–New England

⁵ Susan J. Lee et al., *Fetal Pain: A Systematic Multidisciplinary Review of the Evidence*, 294 JAMA 947 (2005) [hereinafter “JAMA Review”].

Medical Center (now known as Tufts Medical Center) in 1998. As mentioned above, I am board certified in both obstetrics and gynecology and maternal-fetal medicine, an area of obstetrics that focuses on the medical and surgical management of high-risk pregnancies.

10. In addition to my clinical experience in prenatal diagnosis and high-risk obstetrics, I also have a specialty in medical ethics. I received a Masters of Public Health in Health Law, Bioethics & Human Rights from Boston University. I have served on the Committee on Ethics for the American College of Obstetricians and Gynecologists, including serving as Chair from 2009 to 2012; the Committee on Bioethics of the American Academy of Pediatrics; and the Ethics Committee of the American Society of Reproductive Medicine. Through these positions, I have authored and/or edited a number of ethics opinions that set national standards of practice and serve as guidelines for clinicians throughout the country. I have served on the Ethics Committee for Tufts Medical Center for thirteen years, and have served on the Ethics Committee for Pennsylvania Hospital since 2017. I have served as a reviewer for the Journal of Law, Medicine, and Ethics. I have also been an ethics educator at Tufts, Harvard, and the University of Pennsylvania.

11. A copy of my curriculum vitae, which sets forth my experience and credentials in greater detail and contains a full list of my publications, is attached hereto as Exhibit A.

**All Available Medical Evidence Indicates That Fetal Pain
Is Not Possible Before 24 Weeks of Pregnancy**

12. There is a consensus in the medical community, based on the most up-to-date and reliable evidence and research, that it is not possible for a fetus to feel pain before at least 24 weeks LMP. Key connections to the brain do not develop before that time. This consensus is

based on input from physicians and scientists from a variety of fields and areas of expertise,⁶ and was reaffirmed just a few months ago by SMFM, SFP, and RCOG (in a publication on which I was a co-author).⁷ It is also consistent with my own medical opinion, which is based on my education, research, decades of clinical experience, attendance at conferences, and familiarity with the scientific literature on prenatal development.

13. Pain is more than just a reflexive (or involuntary physiologic) response to a noxious external stimulus; it is a complex process that requires “peripheral sensory receptors (nociceptors), a somatosensory cortex able to interpret these stimuli as painful, and intact pathways to relay these messages from nociceptors to the cortex.”⁸ The internationally accepted understanding of pain—supported by the International Association of Pain (IASP), the leading medical organization of pain specialists—requires not only sensory perception but also conscious awareness, which in turn requires cortical development.⁹ In other words, pain is a subjective experience involving cognition, sensation, and affective processes.

14. A fetus does not have the necessary neural circuitry to perceive pain before 24 weeks LMP—and even after 24 weeks LMP is not in a physiologic state to experience pain. It is the consensus view among neuroscientists that the cortex, the highest region of the brain, is necessary for pain perception.¹⁰ Specifically, experiencing pain from physical trauma requires an

⁶ See, e.g., RCOG Review, *supra* note 3; JAMA Review, *supra* note 5; ACOG, *Facts Are Important*, *supra* note 2.

⁷ SMFM & SFP Review, *supra* note 4, at lines 256–58 (“24 to 25 weeks of gestation [is] the minimum gestational age at which in utero pain awareness by the fetus is developmentally plausible.”); *id.* at line 10 (“The Royal College of Obstetricians and Gynaecologists (RCOG) supports this document.”).

⁸ SMFM & SFP Review, *supra* note 4, at lines 47–49.

⁹ See, e.g., RCOG Review, *supra* note 3, at 6; SMFM & SFP Review, *supra* note 4, at lines 82–89.

¹⁰ See, e.g., A. Vania Apkarian et al., *Human Brain Mechanisms of Pain Perception and Regulation in Health and Disease*, 9 Eur. J. Pain 463 (2005); Irene Tracey & Patrick W. Mantyh,

intact neural pathway from the periphery of the body (the skin), through the spinal cord, into the thalamus and on to regions of the cerebral cortex. Connections from the periphery to the cortex are not intact before 24 weeks LMP. As the RCOG Review explains, “[a]ctivity in the spinal cord, brainstem and subcortical midbrain structures are sufficient to generate reflexive behaviors¹¹ and hormonal responses but *are not sufficient to support pain awareness.*”¹² Accordingly, the best evidence leads to the conclusion that a fetus cannot experience pain before at least 24 weeks LMP because the circuitry that would allow for the experience of pain is absent.

15. Indeed, the scientific evidence indicates that a fetus *never* experiences pain in utero, even after 24 weeks. Even with key neural connections between the subcortex and cortex present at 24 weeks LMP, the still-nascent cortex of the fetus may not be sufficiently developed and complex to support conscious pain perception, as cortical development continues throughout the remainder of the pregnancy.¹³ Additionally, increasing evidence indicates that the fetus never experiences true wakefulness in utero and that many environmental factors inherent to the uterus keep the fetus in a continuous, sleep-like state.¹⁴ This includes the chemical environment in the

The Cerebral Signature for Pain Perception and Its Modulation, 55 *Neuron* 377 (2007); Brian Key, *Why Fish Do Not Feel Pain*, 3 *Animal Sentience* 1 (2016).

¹¹ As the RCOG Review explains, “Sensory reflex responses are relatively simple, central nervous reactions to external events, some of which provide simple protection against damage.” RCOG Review, *supra* note 3, at 5.

¹² RCOG Review, *supra* note 3, at 7 (emphasis added).

¹³ See, e.g., SMFM & SFP Review, *supra* note 4, at lines 135–38 (“Sensory stimuli, including nociceptive stimuli, can reach the cortical level at approximately 24 to 25 weeks of gestation. Although these pathways are necessary, they are unlikely to generate a pain experience due to the lack of functional connections between cortical structures at this stage of development.”); see also Ivica Kostović & Nataša Jovanov-Milošević, *The Development of Cerebral Connections During the First 20–45 Weeks’ Gestation*, 11 *Seminars in Fetal & Neonatal Med.* 415 (2006); RCOG Review, *supra* note 3, at 8–10.

¹⁴ RCOG Review, *supra* note 3, at 10–11; see also, e.g., Henrique Rigatto et al., *Fetal Breathing & Behavior Measured Through a Double-Wall Plexiglass Window in Sheep*, 61 *J.*

uterus, as well as the physical environment, such as the warmth and buoyancy in which the fetus develops, and the lack of tactile stimulation.¹⁵ The uterine environment (primarily due to hypoxia, i.e., a low supply of oxygen) would not allow for the complex metabolic state and neural networking that consciousness requires. Accordingly, evidence that a baby born prematurely at a certain gestational age can experience pain does not indicate that a fetus of the same gestational age can experience pain in utero.¹⁶

16. As I discuss in greater detail below, as part of my practice, I perform in utero fetal diagnostic and therapeutic procedures. Before 24 weeks LMP, I do not provide anesthesia or analgesia directly to the fetus while performing such procedures nor do I counsel my obstetric patients that anesthesia or analgesia for the fetus is necessary in such circumstances. In my experience, where anesthesia or analgesia is administered to fetuses for fetal surgery and procedures, it is to prevent fetal movement, not fetal pain.¹⁷

Dr. Pierucci's and Dr. Skop's Opinions on Fetal Pain Are Contrary to the Consensus in the Medical Community and Represent an Outlier View

17. Dr. Pierucci believes the connections necessary to feel pain are in place “as early as 12 weeks,” Pierucci Decl. ¶ 44; Dr. Skop says seven weeks, Skop Decl. ¶ 35. Their opinions are not well supported and do not reflect the medical consensus. To the contrary, their opinions conflict with the conclusions of major medical organizations, such as ACOG and RCOG.

Applied Physiology 160 (1986); Stuart W.G. Derbyshire, *Can Fetuses Feel Pain?*, 332 Brit. Med. J. 909 (2006); David J. Mellor et al., *The Importance of “Awareness” for Understanding Fetal Pain*, 49 Brain Res. Rev. 455 (2005).

¹⁵ RCOG Review, *supra* note 3, at 10–11.

¹⁶ See, e.g., Mellor et al., *supra* note 14, at 465 (“The assumption that the newborn can act as a surrogate for the fetus is wrong, for it denies that the environment in which the fetus lives is unique, and that the fetus itself responds quite differently to many challenges.”).

¹⁷ See also SMFM & SFP Review, *supra* note 4, at lines 27–28 (“In maternal-fetal surgical procedures, fetal analgesia is used primarily to blunt fetal autonomic responses and minimize fetal movement.”).

18. Both Drs. Pierucci and Skop inappropriately equate pain to nociception—e.g., unconscious reflexes or hormonal responses. *See* Pierucci Decl. ¶¶ 24–25, 31–32, 35, 43; Skop Decl. ¶¶ 35–36.¹⁸ This understanding of pain contradicts the broadly accepted, medical definition of pain as a subjective, psychological experience involving cognition, sensation, and affective processes.¹⁹ Nociceptor pathways that are used in spinal reflexes are *necessary* for some pain sensations, but they are not *sufficient* in and of themselves for the conscious recognition that the IASP definition of pain requires. *See supra* ¶ 13. As the SMFM & SFP Review makes clear, nociception is “not the same as pain,” nor is it “sufficient for the experience of pain”; instead, pain “requires activity in a number of cortical structures, as well as functional connections between these structures.”²⁰ Likewise, the RCOG Review notes in summarizing the available research:

[T]he presence of nociceptors alone . . . is not a sufficient condition for pain experience. The electrical activity that is generated at nociceptor terminals by tissue damage must also be conducted along nerve fibers from the skin and into the spinal cord and brain. It is only when the brain receives information about the damage that the fetus can have any potential awareness of it.²¹

Thus, the “stress” response (i.e., the release of hormones) or the “recoiling” reflex that a fetus may exhibit in utero on an ultrasound are not indications of pain. Dr. Skop’s and Dr. Pierucci’s outlier view on this issue cannot overcome the established views of the IASP and numerous scientific articles and reviews.

¹⁸ I understand that H.B. 136 similarly claims that as early as “8 weeks after fertilization” a fetus “reacts to stimuli that would be recognized as painful . . . for example, by recoiling,” and that “application of painful stimuli [to a fetus] is associated with significant increases in stress hormones known as the stress response.”

¹⁹ *See, e.g.,* RCOG Review, *supra* note 3, at 3; JAMA Review, *supra* note 5, at 948; Derbyshire (2006), *supra* note 14, at 911.

²⁰ SMFM & SFP Review, *supra* note 4, at lines 59–62.

²¹ RCOG Review, *supra* note 3, at 5.

19. Dr. Pierucci admits that the “cerebral cortex is the anatomical location for humans having conscious awareness,” and so must rely on the theory that connections to the cortex are not required to experience pain. Pierucci Decl. ¶¶ 36–39 (“[T]here is now evidence that pain does not require the cortex, subcortical structures are sufficient [sic].”). But again, the consensus of the medical community is against her: it is well accepted that to experience pain, we must be cognitively aware of the stimulus (a cortical process).²² This does not mean, as Dr. Pierucci argues, that one must have “adult-level conscious awareness” or the “ability to describe an experience.” Pierucci Decl. ¶¶ 30, 33, 35.

20. Rather than grapple with the conflicts between their views and the conclusions of major medical organizations, both Drs. Pierucci and Skop repeatedly contend that the 2005 JAMA Review is outdated, *see* Pierucci Decl. ¶¶ 26, 36; Skop Decl. ¶ 37—despite the fact that both the 2010 RCOG Review and 2021 SMFM & SFP Review came to the same conclusions. Dr. Pierucci references the RCOG Review only in passing, *see* Pierucci Decl. ¶ 21; Dr. Skop does not reference it at all. Neither expert even acknowledges the existence of the 2021 SMFM & SFP Review, which certainly does not belong to the “previous generation” of scholars and physicians. Pierucci Decl. ¶ 7.

21. The state’s experts dismiss the weight of medical opinion by accusing several medical organizations of pro-abortion bias. Dr. Skop, for example, refers to ACOG as an “[a]bortion advocacy medical organization[].” Skop Decl. ¶ 65.²³ With more than 60,000

²² *See, e.g.,* Mellor et al., *supra* note 14, at 456.

²³ *See also* Pierucci Decl. ¶ 34 (accusing the IASP of bias because an individual associated with the organization, in Dr. Pierucci’s eyes, “is known for taking a dim view of the immature”); Skop Decl. ¶ 37 (arguing that the definition of pain put forth by the IASP is instead an “extreme interpretation” advanced only by the authors of the 2005 JAMA review, who she also regards as “[a]bortion advocates”).

members, ACOG is the nation's leading group of OB-GYNs.²⁴ This organization reflects the spectrum of practitioners in this field. The state's experts provide no evidence that ACOG, simply because it supports access to abortion care, is biased in its assessment of current scientific evidence related to fetal development. In any event, Dr. Skop's CV lists her association with the American Association of Pro-Life Obstetricians and Gynecologists, an organization whose stated mission is to "inform[] and enable[] the public to better understand the medical and biological fact that life begins at fertilization and that the willful destruction of innocent human lives *has no place in the practice of medicine.*"²⁵

22. Dr. Pierucci (at ¶¶ 44–45) cites a 2020 article that calls into question the necessity of the cortex for what the authors call the "apprehension" of pain. However, even the authors of that article (which did not add any new data) concede that the "apprehension" of pain is not the same as experiencing conscious pain and that conscious pain depends on cortical activity.²⁶ As a result, to reach their opinion regarding the "apprehension" of pain, the authors, like Dr. Pierucci, depart from the IASP's scientific definition of pain. According to the IASP's definition, if it is not comprehended, it is not pain. And the cortex is needed for that comprehension. Everything below the cortex (the subcortex, the thalamus) does play a role in sending and coordinating these impulses to the cortex, but until these impulses get to the cortex, they cannot be comprehended, and they cannot be understood as pain.

²⁴ ACOG, *About*, <https://www.acog.org/about> (last visited Sept. 16, 2021).

²⁵ American Association of Pro-Life Obstetricians and Gynecologists, *Mission & Vision*, <https://aaplog.org/about-us/our-mission-statement/> (last visited Sept. 16, 2021).

²⁶ Stuart W.G. Derbyshire & John C. Brockmann, *Reconsidering Fetal Pain*, 46 J. Med. Ethics 3, 5 (2020). Derbyshire in fact published an earlier article stating that the fetus does not experience conscious pain and that conscious pain depends on cortical activity. See Derbyshire (2006), *supra* note 14.

23. As noted above, even apart from limitations in fetal development prior to 24 weeks, environmental factors inherent to the uterus keep the fetus in a continuous, sleep-like state *throughout* pregnancy. Dr. Pierucci's opinion regarding fetal pain rests on the concept that a fetus is arousable and that, with a sufficiently strong stimulus, the fetus would wake up and consciously feel pain in utero. Pierucci Decl. ¶¶ 22–23. However, there is absolutely no scientific or empirical evidence that fetuses “awaken” in utero. Contrary to Dr. Pierucci's contention, which relies, e.g., on a recent article by Bellieni and colleagues,²⁷ cyclical states of fetal activity during pregnancy do not support the view that a fetus is truly conscious and capable of experiencing pain. In fact, the uterine environment (primarily due to hypoxia, i.e., a low supply of oxygen) would not allow for the complex metabolic state and neural networking that consciousness requires.

24. For this reason, studies of premature babies cannot be extrapolated to fetuses in utero. *Contra* Pierucci Decl. ¶¶ 19–20, 31–32. The SMFM & SFP Review explains that while “[s]ome indirect measures used to assess potential pain in neonates have been extrapolated to the fetus,” none “have been validated”; “[i]n addition, the fetal environment and fetal experiences are far different than those of a neonate, even at the same developmental age, so extrapolation is not appropriate.”²⁸ In other words, Dr. Pierucci's extrapolation is inappropriate because the uterine environment is entirely different from the environment outside the uterus.²⁹

25. Because the fetus does not have the neural circuitry necessary to perceive pain before at least 24 weeks LMP, and even after 24 weeks LMP is not in a physiologic state to

²⁷ See Carlo V. Bellieni et al., *Is Fetal Analgesia Necessary During Prenatal Surgery?*, 31 J. Maternal-Fetal & Neonatal Med. 1241 (2018).

²⁸ SMFM & SFP Review, *supra* note 4, at lines 152–55.

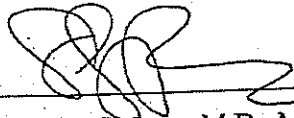
²⁹ RCOG Review, *supra* note 3, at TK.

experience pain, anesthesia or analgesia is never medically indicated in utero to reduce pain; rather, it is medically indicated for other reasons like ensuring immobility of the fetus or blunting reflexive responses that may impair healing. For instance, in my clinical practice, I provide in utero fetal diagnostic and therapeutic procedures such as fetal blood transfusion, fetal bladder shunting, fetal pleurocentesis (removing fluid from the chest cavity), and fetal thoracic shunting, and often consult with other physicians who provide more extensive fetal surgery. Before 24 weeks LMP, I do not provide anesthesia or analgesia directly to the fetus while performing such procedures, nor do I counsel my obstetric patients that anesthesia or analgesia for the fetus is necessary in such circumstances. In the procedures that I perform during the third trimester (i.e., after 27 weeks LMP), administering anesthesia or analgesia to the fetus before fetal surgery or other in utero procedures is not unreasonable, but not because the fetus can feel pain. Instead, I use fetal anesthesia or analgesia at this point of the pregnancy to blunt fetal autonomic responses and minimize fetal movement.³⁰ Accordingly, Dr. Pierucci's conclusion that anesthesia administration during fetal surgery is evidence of fetal pain, *see, e.g.*, Pierucci Decl. ¶ 18, is misplaced.

26. In short, although Dr. Pierucci puts forward various theories in her opinions, her views simply do not alter the fact that a widespread consensus exists in the medical and scientific community that fetal pain is not possible before at least 24 weeks LMP. For the same reasons identified above, I also disagree with the more cursory discussion and opinions regarding fetal pain put forward in the declaration of Dr. Skop.

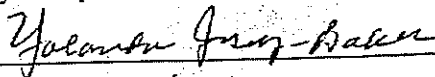
³⁰ Similarly, Dr. Skop is incorrect in suggesting that anesthesia is administered for purposes of pain prevention to people who have experienced brain death. Skop Decl. ¶ 38. In these cases, anesthesia is administered to stabilize the patient hemodynamically.

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

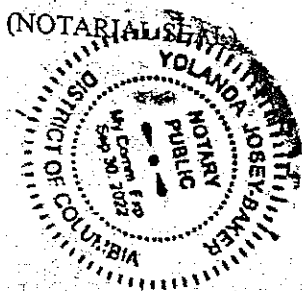


Steven J. Ralston, M.D., M.P.H.

Subscribed and sworn to before me this 16th day of September, 2021.



Printed Name: Yolanda Josey-Baker



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DISTRICT COURT
TERRY HALPIN

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EXHIBIT A

Curriculum Vitae

Date Prepared: 9/7/21

Name: Steven Joseph Ralston, MD, MPH

Office Address: [REDACTED] Washington, DC 20060

Work Phone: [REDACTED]

Work E-Mail: [REDACTED]

Work FAX: [REDACTED]

Place of Birth: Passaic, NJ

Education

1985	B.S.	Molecular Biophysics & Biochemistry <i>Honors: Summa Cum Laude Phi Beta Kappa Distinction in Major</i>	Yale College
1990	MD	Medicine <i>Honors: Alpha Omega Alpha</i>	Columbia
2011	MPH	Health Law, Bioethics, & Human Rights <i>Honors: Capstone Award</i>	Boston University

Post Doctoral Training

06/90-06/94	Resident	OB/GYN	Yale-New Haven Hospital
07/96-06/98	Fellow	Maternal-Fetal Medicine	Tufts-NEMC

Faculty Academic Appointments

1994-1996	Assistant Clinical Professor	OB/GYN	Tufts Univ. Sch. of Med.
1998-2005	Assistant Professor	OB/GYN	Tufts Univ. Sch. of Med.
2005-2011	Associate Professor	OB/GYN	Tufts Univ. Sch. of Med.
2007-2011	Adjunct Clinical Professor		Northeastern University
2012	Lecturer	OB/GYN	Harvard Medical School
2012-2016	Associate Professor	OB/GYN	Harvard Medical School
2016-2021	Professor	OB/GYN	University of Pennsylvania
2021 – present	Professor	OB/GYN	Howard University

Appointments at Hospitals/Affiliated Institutions

Past

1994-1996	Attending Staff	OB/GYN	Beverly Hospital
1994-1996	Attending Staff	OB/GYN	Lynn Community Health Center
1996-1999	Attending Staff	OB/GYN	Cambridge Hospital
1998-2003	Attending Staff	OB/GYN	South Shore Hospital

Present

1998-2011	Attending Staff	OB/GYN	Tufts Medical Center
1998-2011	Attending Staff	OB/GYN	Lawrence General Hospital
1998-2011	Attending Staff	OB/GYN	Lowell General Hospital
2000-2011	Attending Staff	OB/GYN	Melrose-Wakefield Hospital
2012 – 2016	Attending Staff	OB/GYN	Beth Israel Deaconess Medical Ctr.
2012 – 2016	Attending Staff	OB/GYN	Harvard Vanguard Associates
2016 – 2021	Attending Staff	OB/GYN	Pennsylvania Hospital
2016 – 2021	Attending Staff	OB/GYN	Hospital of the U of Pennsylvania
2021 — present	Attending Staff	OB/GYN	Howard University Hospital

Other Professional Positions

2008 – 2015	Board Member	Planned Parenthood League of Massachusetts
2021 – present	Board Member	Planned Parenthood of Maryland

Major Administrative Leadership Positions***Local***

2000 – 2007	Director, OB/GYN 3 rd -Year Clerkship	Tufts Univ. Sch. of Med.
2004 – 2007	Chair, Core Collaborators Group	Tufts Univ. Sch. of Med.
2006 – 2010	Director, Medical Ethics Course	Tufts Univ. Sch. of Med.
2006 – 2011	Medical Director, Prenatal Diagnosis Center	Tufts Medical Center
2007 – 2011	Director, Ethics Grand Rounds (small groups)	Tufts Medical Center
2008 – 2011	Director, OB/GYN 3 rd -Year Clerkship	Tufts Univ. Sch. of Med.
2009 – 2010	Interim Division Chief, MFM	Tufts Medical Center
2010 – 2011	Chair, Core Collaborators Group	Tufts Univ. Sch. of Med.
2010 – 2011	Assoc. Dir., Med. Ethics & Professionalism	Tufts Univ. Sch. of Med.
2010 – 2011	Associate Director, Ethics Key Theme	Tufts Univ. Sch. of Med.
2011 – 2011	Director, 4 th year Elective (MFM)	Tufts Medical Center
2012 – 2016	Division Director, Maternal-Fetal Medicine	Beth Israel Deaconess
2012 – 2016	Fellowship Director, Maternal-Fetal Medicine	Beth Israel Deaconess
2016 – 2020	Chair, Department of OB/GYN	Pennsylvania Hospital
2016 – 2020	Vice Chair, Obstetrics	Penn Medicine
2021 — present	Vice Chair, Chief of Obstetrics	Howard University Hospital
2021 – present	Interim Program Director, OB/GYN Residency	Howard University Hospital
2021 – present	Director of Quality, OB/GYN	Howard University Hospital

Regional

1994 – 1996	OB/GYN Coordinator Family Practice Residency	Beverly Hospital
2009 – 2011	Director, Family Med Ob Fellowship	Lawrence General Hosp.

National

2012-present	Board Examiner, American Board of Obstetrics and Gynecology
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Committee Service***Local***

1998 – 2009	Credentials Committee	Tufts Medical Center
	1998 – 2009	Member
1998 – 2011	Ethics Committee	Tufts Medical Center

	1998 – present	Member
2000 – 2011	Core Collaborators Committee	Tufts Univ. Sch. of Med
	2000 – 2003	Member
	2003 – 2007	Chair
	2008 – 2010	Member
	2010 – present	Chair
2003 – 2007	LCME Committee	Tufts Univ.Sch. of Med.
	2003 – 2007	Member
2003 – 2007	University Wide Ethics Committee (ad hoc)	Tufts University
	2003 – 2007	Member
2009 – 2011	Ctr for Compassionate Care & Perinatal Hospice	Tufts Medical Center
	2009 – 2011	Director
2017 – 2021	Ethics Committee	Pennsylvania Hospital
		Member
2017 – 2021	IRB6	University of Pennsylvania
		Member

Professional Societies

Local

2002 – 2017	MA DPH Sharing Arrangement Committee	Member
2012 – 2017	New England Perinatal Society	Member
	President, 2014-present	
2013 – 2017	Boston Obstetrical Society	Vice President
2017 – 2021	Philadelphia Obstetrical Society	Member

National

2007 – 2012	American College of OB/GYN Ethics Committee	
	2007–2009	Member
	2009 – 2012	Chair
2009 – 2012	American Academy of Pediatrics Committee on Bioethics	
	2009 – 2012	Liaison Member
2009 – 2012	American Society of Reproductive Medicine Ethics Committee	
	2009 – 2012	Liaison Member
2014 – 2017	American College of OB/GYN Genetics Committee	Member
2017 – 2019	American College of OB/GYN Genetics Committee	Vice Chair
2019 – 2021	American College of OB/GYN Genetics Committee	Chair
2017 – 2021	American College of OB/GYN Ethics Committee	Liaison Member
		SMFM
2021 – present	American College of OB/GYN Ethics Doc.Review Com.	Member

Editorial Activities

Reviewer

American Journal of Obstetrics and Gynecology
 Obstetrics and Gynecology
 Prenatal Diagnosis
 American Journal of Human Genetics
 Journal of Law, Medicine, and Ethics
 Contraception
 New England Journal of Medicine
 Developing World Bioethics

Journal of Immigrant and Minority Health

Licenses

Active: PA, NJ, MD, DC

Inactive: MA, SC

Honors and Prizes

1985	Phi Beta Kappa	Yale College
1985	Summa Cum Laude	Yale College
1987	Research Prize	New York City Dept. of Public Health
1990	Alpha Omega Alpha	Columbia College
1994	Outstanding Resident Award	Hospital of St. Raphael
1994	Resident Research Award	Yale-New Haven Hospital
1994	Humanistic Medicine Award	Yale-New Haven Hospital
1994	Outstanding Housestaff Award	Yale School of Medicine
1996	Outstanding Teaching Award	Beverly Hospital
1998	Outstanding Teaching Award	Tufts - New England Medical Center
1999	Outstanding Teaching Award	Tufts - New England Medical Center
2000	Outstanding Teaching Award	Tufts - New England Medical Center
2001	APGO Excellence in Teaching	Tufts - New England Medical Center
2003	Outstanding Teaching in Clinical Sciences	Tufts University School of Medicine
2003	Outstanding Teaching Award	Tufts - New England Medical Center
2003	Philip McGovern Faculty Teaching Award	Tufts - New England Medical Center
2004	Award for Excellence in Teaching	Tufts University School of Medicine
2005	Award for Excellence in Teaching	Tufts University School of Medicine
2006	Award for Excellence in Teaching	Tufts University School of Medicine
2007	Award for Excellence in Teaching	Tufts University School of Medicine
2007	Chief Resident Teaching Award	Tufts-New England Medical Center
2010	Outstanding Lecturer	Tufts University School of Medicine
2010	Capstone Presentation Award	Boston University School of Public Health
2012	Named to Best of Boston – Top Physicians,	<i>Boston Magazine</i>
2013	Certificate of Excellence in Tutoring	Harvard Medical School
2013	Named to Best of Boston – Top Physicians,	<i>Boston Magazine</i>
2014	Certificate of Excellence in Tutoring	Harvard Medical School
2014	Named to Best of Boston – Top Physicians,	<i>Boston Magazine</i>
2015	Certificate of Excellence in Tutoring	Harvard Medical School
2015	Named to Best of Boston – Top Physicians,	<i>Boston Magazine</i>
2016	"Best Article in Past Year" <i>Obstetrics and Gynecology</i> , Ethics Section	
2018	Patient Advocacy Award	Pennsylvania Hospital

Report of Local Teaching and Training

Teaching of Students in Courses

1997 – 2001	Problem Based Learning 1 st and 2 nd year medical students	Tufts University School of Medicine 1-2hrs/wk x 12 weeks
1999 – 2007	Reproductive Pathophysiology 2 nd year medical students	Tufts University School of Medicine 1.5hr lecture
2000 – 2011	3 rd year clerkship didactic sessions	Tufts University School of Medicine

	3 rd year medical students	4 lectures @ 1hr x 8 rotations/yr
2006 – 2009	Medical Ethics 1 st and 2 nd year medical students	Tufts University School of Medicine 5 lectures @ 1.5hrs 5 small group sessions @ 1.5hrs
2007 – 2011	Ethics Grand Rounds	Tufts Medical Center 2 lectures @ 1hr 10 small group sessions @ 1hr
2009 – 2011	Medical Ethics and Professionalism 1 st and 2 nd year medical students	Tufts University School of Medicine 5 lectures @ 1.5hrs 8 small group sessions @ 1.5hrs
2012	Medical Ethics and Professionalism 1 st year medical students	Harvard Medical School 2 small group sessions @ 2 hours
2012	Patient-Doctor III 3 rd year medical students	Harvard Medical School 1 small group session @ 2 hours
2013	Medical Ethics and Professionalism 1 st year medical students	Harvard Medical School 8 small group sessions @ 2 hours
2013	Patient-Doctor III 3 rd year medical students	Harvard Medical School 1 small group session @ 2 hours
2013	Pregnancy Physiology 2 nd year HST students	Harvard Medical School 3 hour lecture
2014	Medical Ethics and Professionalism 1 st year medical students	Harvard Medical School 8 small group sessions @ 2 hours
2014	Patient-Doctor III 3 rd year medical students	Harvard Medical School 2 small group sessions @ 2 hours
2014	OB/GYN Boot Camp Ethics in OB/GYN	Harvard Medical School 1 small group session @ 1 hour
2014	HST Functional Human Anatomy Female Pelvic Model Building	Harvard Medical School 4 hours
2014	Delivering Bad News	Harvard Medical School OSCE 3hrs
2014	Ethics in Obstetrics 2 nd year HST students	Harvard Medical School 3 hour lecture
2015	Medical Ethics and Professionalism 1 st year medical students	Harvard Medical School 8 small group sessions @ 2 hours
2015	Patient-Doctor III	Harvard Medical School

	3 rd year medical students	2 small group sessions @ 2 hours
2015	Ethics in Obstetrics 2 nd year HST students	Harvard Medical School 3 hour lecture
2016	Essentials of the Profession 1 st year medical students	Harvard Medical School 8 small group sessions @ 2 hours
2016	Patient-Doctor III 3 rd year medical students	Harvard Medical School 2 small group sessions @ 2 hours
2017 – 2021	OB/GYN Clerkship Lecturer 2 nd and 3 rd year medical students	Perelman School of Medicine 4-5 lectures per year
2018 – 2020	FR601: Bioethics & Professionalism 4 th year medical students	Perelman School of Medicine 16 hours of Seminar One Hour Lecture
2018 – 2021	Facilitator, Doctoring Course 1 st and 2 nd year medical students	Perelman School of Medicine 10-12 3hr- seminars per year

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs):

1999 – 2000	Perinatal Infections Residents and Fellows	Tufts Medical Center One hour lecture
2000 – 2001	Hypertension in Pregnancy Residents and Fellows	Tufts Medical Center One hour lecture
2001 – 2002	Isoimmunization Residents and Fellows	Tufts Medical Center One hour lecture
2001 – 2002	Holoprosencephaly Residents and Fellows	Tufts Medical Center One hour lecture
	Herpes in Pregnancy Residents and Fellows	Tufts Medical Center One hour lecture
	Non-Invasive Diagnosis of Fetal Anemia Residents and Fellows	Tufts Medical Center One hour lecture
2002 – 2003	Complications of Fetal Blood Sampling Residents and Fellows	Tufts Medical Center One hour lecture
2002 – 2003	Abortion Residents and Fellows	Tufts Medical Center One hour lecture
2004 – 2005	Controversies in Abortion Residents and Fellows	Tufts Medical Center One hour lecture
2005 – 2006	Pregnancy Physiology Residents and Fellows	Tufts Medical Center One hour lecture
2007 -2008	Update on Abortion Laws Residents and Fellows	Tufts Medical Center One hour lecture
2007 – 2008	Predictors of Neurologic Outcome Residents and Fellows	Tufts Medical Center One hour lecture
2008 -2009	Abortion and Preterm Labor	Tufts Medical Center

	Residents and Fellows	One hour lecture
	Healthcare Reform and Human Rights	Tufts Medical Center
	Residents and Fellows	One hour lecture
2009 – 2010	Abortion Myths and Controversies	Tufts Medical Center
	Residents and Fellows	One hour lecture
2010 – 2011	Ethical Issues in Maternal-Fetal Medicine	Tufts Medical Center
	Residents and Fellows	One hour lecture
2011-2012	Isoimmunization	Beth Israel Deaconess
	Residents	One hour lecture
2011-2012	CREOG review	Beth Israel Deaconess
	Residents	One hour lecture
2011-2012	Ethics of Prenatal Screening	Beth Israel Deaconess
	Residents	One hour lecture
2011-2012	Ventriculomegaly	Beth Israel Deaconess
	Maternal-Fetal Medicine Fellows	One hour lecture
2011-2012	Herpes Simplex Infection in Pregnancy	Beth Israel Deaconess
	Maternal-Fetal Medicine Fellows	One hour lecture
2011-2012	Prostaglandins	Beth Israel Deaconess
	Maternal-Fetal Medicine Fellows	One hour lecture
2012	Ethics issues in Maternal-Fetal Medicine	Beth Israel Deaconess
	Maternal-Fetal Medicine Fellows	One hour lecture
2013	Ethics at the Limits of Viability	Beth Israel Deaconess
	Maternal-Fetal Medicine Fellows	One hour lecture
2013	Evolving Prenatal Genetic Technologies	Beth Israel Deaconess
	Maternal-Fetal Medicine Fellows	One hour lecture
2013	CMV in Pregnancy	Beth Israel Deaconess
	Maternal-Fetal Medicine Fellows	One hour lecture
2014	Ethics of Elective Cesarean Delivery	Beth Israel Deaconess
	Maternal-Fetal Medicine Fellows	One hour lecture
2014	New Genetic Technologies	Beth Israel Deaconess
	Maternal-Fetal Medicine Fellows	One hour lecture
2014	Isoimmunization	Beth Israel Deaconess
	Residents	One hour lecture
2015	Hypertension in Pregnancy	Beth Israel Deaconess
	OB Anesthesiology Fellows	One hour lecture
2015	Pregnancy Physiology	Beth Israel Deaconess
	Maternal-Fetal Medicine Fellows	One hour lecture
2015	Universal Access for NIPT	Beth Israel Deaconess
	Maternal-Fetal Medicine Fellows	One hour lecture
2015	Periviable Gestations	Beth Israel Deaconess
	Maternal-Fetal Medicine Fellows	One hour lecture
2015	Gifts from Patients	Beth Israel Deaconess
	Maternal-Fetal Medicine Fellows	One hour lecture
2017	Periviability	Pennsylvania Hospital
	OB/GYN Residents	One hour lecture
2017	Clinical Teaching Skills	Pennsylvania Hospital
	OB/GYN Residents	One hour lecture
2017	Operative Vaginal Delivery	Pennsylvania Hospital
	OB/GYN Residents	One hour lecture
2018	Cord Blood Gases	Pennsylvania Hospital
	OB/GYN Residents	One hour lecture

2019	Ethical Issues in OB/GYN OB/GYN Residents	Pennsylvania Hospital One hour lecture
2019	FHR Tracings OB/GYN Residents	Pennsylvania Hospital One hour lecture
2020	Thromboembolism OB/GYN Residents	Pennsylvania Hospital One hour lecture
2020	Perinatal Infections	Pennsylvania Hospital One hour lecture
2021	Ethics in OB/GYN	Howard University Hospital Two Hour Lecture
2021	HTN in Pregnancy	Howard University Hospital One Hour Lecture
2021	Diabetes in Pregnancy	Howard University Hospital One Hour Lecture

Clinical Supervisory and Training Responsibilities:

1994 – 1996	Supervision of Family Practice Residents Beverly Hospital/Lynn Health Center	10 hours/week
1996 – 2011	Supervision & Training of OB residents Tufts Medical Center	6 hours/week
1996 – 2011	Supervision & Training of MFM Fellows Tufts Medical Center	8 hours/week
1996 – 2011	Supervision & Training of 3 rd year students Tufts Medical Center	6 hours/week
2006 – 2011	Supervision & Training of OB Fellows Lawrence General Hospital	2 hours/week
2007 – 2011	Interclerkship Clinical Skills Evaluation Tufts University School of Medicine	10 hours/year
2012 – 2016	Supervision & Training of MFM Fellows Beth Israel Deaconess Medical Center	15 hours/week
2012 – 2016	Supervision & Training of OB residents Beth Israel Deaconess Medical Center	6 hours/week
2017 – present	Supervision & Training of OB residents Pennsylvania Hospital	6 hours/week
2017 – present	Supervision & Training of MFM Fellows Pennsylvania Hospital	3 hours/week

Laboratory and Other Research Supervisory and Training Responsibilities:

2001 – 2002	Supervision of Resident Research	One hour/wk for 6 months
2002 – 2003	Supervision of Resident Research	One hour/wk for 12 months
2003 – 2004	Supervision of Resident Research	One hour/wk for 6 months
2004 – 2005	Supervision of Resident Research	One hour/wk for 3 months
2007 – 2008	Supervision of Resident Research	One hour/wk for 6 months
2012 – 2016	Supervision of Fellow Research	One hour/wk

Formally Supervised Trainees

<u>Date</u>	<u>Name</u>	<u>Level of Trainee</u>	<u>Activity</u>
2000-2003	Leslie Bizovi, MD	Resident	Clinical Advisor <i>Met monthly to discuss clinical progression in residency and career guidance.</i>
2001-2002	Emily Sikking, MD	Resident	Research Advisor <i>Helped design and implement a research study on the treatment of postpartum endometritis.</i>
2002-2003	Deirdre Kato, MD	Resident	Research Advisor <i>Continued implementation of above research study on the treatment of postpartum endometritis.</i>
2003-2004	Julie Vogel, MD	Resident	Research Advisor <i>Helped design and implement a research study on gender disparity in medical student evaluation and grading. Abstract submitted and accepted to Association of Professors of Gynecology and Obstetrics meeting in 2005</i>
2004-2005	Josh Berger, MD	Resident	Research Advisor <i>Helped design and implement a research study on changes in student attitudes and knowledgebase about abortion during 3rd year clerkship in OB/GYN.</i>
2004-2005	Garfield Clunie, MD	Fellow	Research Advisor <i>Helped design and implement a research study on evaluation of fetal karyotype following pregnancy termination for fetal anomalies. Abstract submitted and accepted to the Society for Maternal-Fetal Medicine meeting in 2005.</i>
2009-2011	Alon Neidich	Medical Student	Faculty Advisor <i>Faculty advisor for medical student interest group in medical ethics. Helped write and submit abstract for 2012 American Society of Bioethics and Humanities Meeting.</i>
2009-2011	Sally Green	Medical Student	Faculty Advisor <i>Faculty advisor for medical student interest group in medical ethics.</i>
2012-2012	Michelle Silasi, MD	Fellow	Program Director <i>Acted as advisor for final presentation for fellowship thesis on markers of preeclampsia in pregnancies complicated by fetal trisomy.</i>
2012-2013	William Schnettler, MD	Fellow	Program Director <i>Supervised research on factors affecting cervical length measurement.</i>
2012-2014	Melissa March, MD	Fellow	Program Director <i>Supervised research on new diagnostic criteria for gestational diabetes and a second project on the impact of cord milking on premature babies.</i>
2012-2015	Kedak Baltajian, MD	Fellow	Program Director <i>New fellow as of July 2012; weekly meetings to discuss research interests.</i>
2013-present	Scott Shinker, DO	Fellow	Program Director <i>New fellow as of July 2013; weekly meetings to discuss research interests</i>
2014-present	Melissa Spiel, DO	Fellow	Program Director <i>New fellow as of July 2014; weekly meetings to discuss research interests</i>
2015-present	Bethany Mulla, MD	Fellow	Program Director <i>New fellow as of July 2015; weekly meetings to discuss research interests</i>
2015-present	Ai-Ris Collier, MD	Fellow	Program Director <i>New fellow as of July 2015; weekly meetings to discuss research interests</i>

Formal Teaching of Peers (e.g., CME and other continuing education courses):

No presentations below were sponsored by outside entities

1998	Ethics of Prenatal Diagnosis (CME Conference) New England Medical Center
2011	Ethics in Obstetrics (CME Conference) Tufts Medical Center
2012	Medical Complications in Pregnancy (Internal Medicine CME Conference) Westin Hotel, Boston, MA
2013	Medical Complications in Pregnancy (Internal Medicine CME Conference) Renaissance Hotel, Boston, MA
2017	Ethics in OB/GYN Pennsylvania Hospital
2017	Conscience and Complicity Hospital of the University of Pennsylvania
2019	Prenatal Diagnosis: Ethical Issues Philadelphia Prenatal Diagnosis Course

Local Invited Presentations:

No presentations below were sponsored by outside entities

1997	Pregnancy Induced Hypertension (Grand Rounds) New England Medical Center
2003	Partial Birth Abortion (Grand Rounds) Tufts-New England Medical Center
2004	Ethics of Prenatal Diagnosis (Pediatric Grand Rounds) Tufts-New England Medical Center
2007	Ethics Issues on the OB/GYN Service (Grand Rounds) Tufts-New England Medical Center
2007	Prenatal Diagnosis Emergencies (Grand Rounds) Tufts-New England Medical Center
2010	Health Care Reform, Abortion, and Human Rights (Grand Rounds) Tufts Medical Center
2011	The Blessing of the Fetus (Schwartz Rounds Panelist) Tufts Medical Center
2012	Cesarean Section on Demand (Grand Rounds) Beth Israel Deaconess Medical Center
2013	Gifts from Patients (Ethics Grand Rounds) Tufts-New England Medical Center
2013	Cytomegalovirus Infection Beth Israel Deaconess Medical Center
2013	Lupus in Pregnancy Beth Israel Deaconess Medical Center
2015	Lupus in Pregnancy Beth Israel Deaconess Medical Center
2016	Gifts from Patients Beth Israel Deaconess Medical Center
2016	Gifts from Patients Beth Israel Deaconess Medical Center
2021	What's New In Preeclampsia Management Howard University Hospital

Report of Regional, National & International Invited Teaching & Presentations

Regional

No presentations below were sponsored by outside entities

1998	Pregnancy Induced Hypertension (Grand Rounds) Lowell General Hospital
1998	Pregnancy Induced Hypertension (Grand Rounds) St. Elizabeth's Medical Center
1998	Lupus in Pregnancy (Invited Talk) North Shore Lupus Foundation
1998	The Effect of a Maternal Transport Population on a Tertiary Center's C/S Rate (Oral Presentation, Abstract) New England Perinatal Society
1999	Perinatal Infections (Grand Rounds) Beverly Hospital
1999	Perinatal Infections (Grand Rounds) Cambridge Hospital
2000	Screening for Aneuploidy in the First Trimester (Grand Round) Melrose-Wakefield Hospital
2000	HSV in Pregnancy (Grand Round) Lowell General Hospital
2000	Preconception Counseling (CME Conference) New England Medical Center
2000	Pregnancy Induced Hypertension (Grand Rounds) Norwood Hospital
2000	Pregnancy Induced Hypertension (CME Conference) South Shore Hospital
2000	Chronic Hypertension in Pregnancy (Grand Rounds) Mount Auburn Hospital
2001	Fetal Monitoring (Grand Rounds) Lawrence General Hospital
2002	Isoimmunization South Shore Hospital
2002	Prenatal Diagnosis: Ethical Considerations (CME Conference) Mount Auburn Hospital
2003	Hypertension in Pregnancy (Grand Rounds) Holy Family Hospital
2003	Partial Birth Abortion (Invited Talk) Medical Students for Choice, Boston, MA
2004	Postdates Pregnancy (Grand Rounds) Winchester Hospital
2004	Prenatal Diagnosis: Ethical Considerations (Grand Rounds) Boston Medical Center
2004	Down Syndrome Screening (Grand Rounds)

	Norwood Hospital
2005	Prenatal Diagnosis: Ethical Considerations (Grand Rounds)
	South Shore Hospital
2005	Down Syndrome Screening (CME Conference)
	Norwood Hospital
2005	Cardiac Disease in Pregnancy (Medical Grand Rounds)
	Holy Family Hospital
2006	Prostaglandins: Myths and Controversies (CME Conference)
	Mouth Auburn Hospital
2006	Ethics of Prenatal Diagnosis (Invited Speaker)
	Yale University School of Medicine
2006	Ethics of Prenatal Diagnosis (Grand Rounds)
	Mount Auburn Hospital
2006	Ethics of Prenatal Diagnosis (Invited Speaker)
	Medical Students for Choice, Worcester, MA
2007	Ethics of Prenatal Diagnosis (Grand Rounds)
	Metrowest Medical Center
2007	Ethics of Prenatal Diagnosis (Grand Rounds)
	Dartmouth Medical Center
2007	Ethics of Prenatal Diagnosis (Grand Rounds)
	Brigham and Women's Hospital
2007	Ethics of Prenatal Diagnosis (Grand Rounds)
	Emerson Hospital
2007	Ethics of Prenatal Diagnosis (Grand Rounds)
	St. Elizabeth's Medical Center
2007	Obstetrics Clinical Problem Solving (Grand Rounds)
	Lawrence General Hospital
2007	Prenatal Diagnosis Emergencies (CME Conference)
	Mouth Auburn Hospital
2008	Hypertension in Pregnancy (Grand Rounds)
	Lawrence General Hospital
2008	Prostaglandins: Myths and Controversies (Grand Rounds)
	North Shore Medical Center
2008	Cesarean Section on Demand (Grand Rounds)
	Lawrence General Hospital
2009	Abortion (Keynote Speaker)
	Medical Students for Choice, Regional Conference, Boston, MA
2009	Preconception Counseling of the Obese Patient (CME Conference)
	Mouth Auburn Hospital
2009	Intrapartum Management of the Obese Patient (CME Conference)
	Mouth Auburn Hospital
2009	Prostaglandins: Myths and Controversies (Grand Rounds)
	Winchester Hospital
2009	Obstetrics Clinical Problem Solving (Grand Rounds)
	Lawrence General Hospital
2010	Health Care Policy (Invited Panelist)
	American College of OB/GYN (MA Regional Conference)
2010	Health Care, Abortion, and Human Rights (Grand Rounds)
	Cambridge Health Alliance
2011	Health Care, Abortion, and Human Rights (Invited Speaker)
	Medical Students of Choice, Boston University

2011	First Trimester Screening for Down Syndrome (CME Conference) Mouth Auburn Hospital
2011	Cesarean Section on Demand (CME Conference) Mouth Auburn Hospital
2011	Cesarean Section on Demand (Invited Speaker) New England OB/GYN Society
2011	Ethics of Prenatal Diagnosis (Grand Rounds) Winchester Hospital
2011	New Genetic Technologies (Grand Rounds) Cambridge Health Alliance
2012	Teaching Rare Obstetrical Procedures (CME Conference) Mouth Auburn Hospital
2013	Hypertension in Pregnancy (Grand Rounds) Mouth Auburn Hospital
2013	Disability: Prevention, Detection, Accommodation? Boston University School of Public Health
2014	Ethics of New Genetic Technologies Partners in Perinatal Health Conference
2014	Ethics of New Genetic Technologies (Grand Rounds) Tufts Medical Center
2014	Perinatal Infections: CMV and HSV (Grand Rounds) Mouth Auburn Hospital
2015	Ethics of New Genetic Technologies (Grand Rounds) Emerson Hospital
2015	Ethics of New Genetic Technologies (Grand Rounds) Cambridge Health Alliance
2016	Gifts from Patients (Grand Rounds) Mouth Auburn Hospital Cambridge Health Alliance
2017	Perivable Gestations (Grand Rounds) Rutgers University
2018	Complicity and Conscience (Grand Rounds) Rutgers University
2021	Perinatal Hospice: Ethical Issues (Grand Rounds) Rutgers University

Supported by Outside Entities

2013	New Genetic Technologies: Ethical Considerations New England Regional Genetics Group Paid Speaker for Ariosa Labs
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National

No presentations below were sponsored by outside entities

2004	Prenatal Diagnosis: Ethical Considerations (Grand Rounds) University of California, San Francisco, CA
2006	Prostaglandins: Myths and Controversies (Invited Speaker)

2006	Mountain Area Health Education Center, Asheville, NC Prenatal Diagnosis: Ethical Considerations (Invited Speaker)
2007	Mountain Area Health Education Center, Asheville, NC Second Trimester Termination of Pregnancy (Panelist)
2008	National Abortion Federation, National Meeting, Boston, MA Ethics of Prenatal Diagnosis (Grand Rounds)
2010	Albert Einstein College of Medicine, New York, NY Ethics of Prenatal Diagnosis (Grand Rounds)
2011	Medical University of South Carolina, Charleston, SC Cesarean Section on Demand (Ware-Dunn Conference)
2011	Virginia Commonwealth University, Richmond, VA Ethics of Prenatal Diagnosis (Patricia Hays Lecture)
2012	Virginia Commonwealth University, Richmond, VA Evolving Prenatal Genetic Technologies
2013	Case Western Reserve Ethics at the Limits of Viability (Keynote Lecture)
2013	New England Perinatal Society, Newport RI Ethics of Prenatal Diagnosis (Keynote Speaker)
2013	Wisconsin Association for Perinatal Care Waukesha, WI The Epigenetics of Obesity (Special Interest Group)
2014	Wisconsin Association for Perinatal Care Waukesha, WI Ethical Dilemmas in the Practice of OB/GYN and Reproductive Biology
2016	Cleveland Clinic, Cleveland, OH Guest speaker: A Primer on Ethics in OB/GYN Small Group Leader: Reimaging the Maternal-Fetal Dyad Clinical Ethics at the Bedside: A Primer for the OB/GYN
2017	ACOG National Meeting, 2016 Washington, DC Perivable Gestations: New Data, New Ethics?
2018	Maurice Grier Symposium, Creighton University Keynote Speaker Complicity and Conscience (Grand Rounds)
2019	Montefiore Medical Center Complicity and Conscience (Grand Rounds/Resident Research Day)
2019	University of Kentucky The Ethics of Uterine Transplantation, an MFM Perspective
2020	Uterine Transplantation Meeting, Cleveland Clinic Foundation The Ethics of Uterine Transplantation, an MFM Perspective
	Tufts Medical Center (Grand Rounds/Resident Research Day)

Supported by Outside Entities

2017	Perivable Gestations: New Data, New Ethics? Southeastern Conference on Perinatal Research
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International

No presentations below were sponsored by outside entities

2000	Does Prenatal Diagnosis Improve Outcomes for Women Who Choose Not to
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Terminate Pregnancy (Oral presentation, abstract)
International Society for Prenatal Diagnosis, Barcelona, Spain

Report of Clinical Activities and Innovations

Current Licensure and Certification:

1994	Massachusetts Medical License
1996	Board Certified in OB/GYN
2000	Board Certified in Maternal-Fetal Medicine
2010	South Carolina Licensure (temporary)
2016	Pennsylvania Medical License
2018	New Jersey Licensure
2020	Maryland Licensure
2021	District of Columbia Licensure

Practice Activities:

1994 – 1996	Ambulatory OB/GYN Practice	Lynn Health Center	3 days/week
1994 – 1996	Inpatient OB/GYN	Beverly Hospital	2 days/week
1998 – 2011	Inpatient and Outpatient Maternal-Fetal Medicine	Tufts Medical Center	3 days/week
1998 – 2011	Outpatient Consultations	Lawrence General Hospital	1 day/week
2000 – 2009	Outpatient Consultations	Beverly Hospital	1 day/week
2011 – 2016	Inpatient and Outpatient Maternal-Fetal Medicine	Beth Israel Deaconess	4 days/week
2016 – 2021	Inpatient and Outpatient Maternal-Fetal Medicine	Penn Medicine	2-3 days/week
2021 — present	Inpatient and Outpatient Maternal-Fetal Medicine	Howard University Hospital	3-4 days/week

Clinical Innovations:

Center for Compassionate Care and Perinatal Hospice	Brought together a multidisciplinary group of practitioners (including obstetricians, pediatricians, nurses, social workers, chaplains) to deliver care to patients whose fetuses or neonates have very poor prognoses.
Innovative technique for chorionic villous sampling	Instituted a technique used to access the placenta more facilely when inconveniently located for routine transabdominal access. Taught colleagues at my institution this technique.
Co-Director of the New England Center for Placental Disorders	Headed a multidisciplinary team to streamline evaluation and and treatment services for women with abnormal placentation.

Report of Education of Patients and Service to the Community

Activities

No activities below were sponsored by outside entities

2008 – 2016	Board Member, Planned Parenthood League of MA
2010 – 2016	Chair, Medical Advisory Committee, Planned Parenthood League of MA
2010 – 2016	Founding Member, Boston Gay Medical Faculty interest group Goal of group is to provide role models and resources for students & residents

Educational Material for Patients and the Lay Community:

No educational materials below were sponsored by outside entities

2004	Echogenic Focus in the Heart	Co-Author	Patient Education Pamphlet
2004	Choroid Plexus Cysts	Co-Author	Patient Education Pamphlet
2004	Hydronephrosis	Co-Author	Patient Education Pamphlet
2010	Perinatal Hospice Care	Co-Author	Patient Education Pamphlet

Recognition:

2005 – 2008	Best Doctors in America
2007	Top Doctors (Best of Boston)
2011	Compassionate Doctor Award
2012	Top Doctors (Best of Boston)
2013	Top Doctors (Best of Boston)
2014	Top Doctors (Best of Boston)
2015	Top Doctors (Best of Boston)

Report of Scholarship

Peer-Reviewed Publications in print or other media

Research investigations

1. Thomas PA, **Ralston SJ**, Bernard M, Williams R, O'Donnell R. Pediatric AIDS: An Unusually High Incidence of Twinning. *Pediatrics*, 1990;86:(5) 774-6.
2. Farina A, Sekizawa A, **Ralston SJ**, D'Alton ME, Bianchi DW. Latent Class Analysis Applied to Patterns of Fetal Sonographic Abnormalities: Definition of Phenotypes Associated with Aneuploidy. *Prenat Diagn*. 1999;Sep;19(9):840-5.
3. **Ralston SJ**, Wertz D, Chelmow D, Craig SD, Bianchi DW. Pregnancy Outcomes After Prenatal Diagnosis of Aneuploidy. *Obstet Gynecol* 2001;97:729-33.
4. Samura O, Sohda S, Johnson KL, Pertl B, **Ralston S**, Delli-Bovi LC, Bianchi DW. Diagnosis of trisomy 21 in fetal nucleated erythrocytes from maternal blood by use of short tandem repeat sequences. *Clinical Chemistry*. 2001;47(9):1622-6.
5. Volpe MA, Pham L, Lessin M, **Ralston SJ**, Bhan I, Cutz E, and Nielsen HC. Expression of Hoxb-5 during human lung development and in congenital lung malformations. *Birth Defects Research (Part A)* 67: 550-556 (2003).
6. Luks FI, Carr SR, Plevyak M, Craig SD, Athanasiou A, **Ralston SJ**, Tracy TF, Jr. Limited prognostic value of a staging system for twin-to-twin transfusion syndrome. *Fetal Diagn Ther* 2004;19:301-304
7. Volpe MA, Chung E, Ulm P, Gilchrist BF, **Ralston S**, Wang KT, Nielson HC. "Aberrant Cell Adhesion Molecule Expression in Human Bronchopulmonary Sequestration and Congenital Cystic Adenomatoid Malformation" *AJP-Lung Cell Mol Physiol*; 2009; vol 297
8. Vora NL, Johnson KL, Peter I, Tighiouart H, **Ralston SJ**, Craig SD, Bianchi DW. "Circulating cell-free DNA levels increase variably following chorionic villus sampling." *Prenat Diagn*. 2010 Feb 2
9. Rana S, Cerdeira AS, Wenger J, Salahuddin S, Lim KH, **Ralston SJ**, Thadhani RI, Karumanchi SA. Plasma concentrations of soluble endoglin versus standard evaluation in patients with

suspected preeclampsia. PLoS One. 2012;7(10):e48259. doi: 10.1371/journal.pone.0048259. Epub 2012 Oct 26.

10. Schnettler W, Dukhovny D, Wenger J, Salahuddin S, **Ralston SJ**, Rana S. Cost and resource implications with serum angiogenic factor estimation in the triage of pre-eclampsia BJOG 2013
11. Shainker SA, Raghuraman N, Modest AM, Schnettler WT, Hacker MR, **Ralston, SJ**. The utility of midtrimester ultrasound assessment of the subcutaneous space in predicting cesarean would complications. The Journal of Maternal-Fetal and Neonatal Medicine. 2014.
12. March MI, Modest AM, **Ralston SJ**, Hacker MR, Gupta M, Brown FM. The effect of adopting the IADPSG screening guidelines on the risk profile and outcomes of the gestational diabetes population. J Matern Fetal Neonatal Med 2015;
13. **Ralston SJ**, Farrell R. The Ethics of Access: Who is Offered a Cesarean Section and Why? Hastings Center Report, Vol 45, No 6, Nov-Dec 2015
14. Shainker SA, Modest AM, Hacker MR, **Ralston SJ**. The effect of a universal cervical length screening program on antepartum management and birth outcomes. Journal of Perinatology Reports, 2016. PMID 27280063
15. Schnettler WT, Goldberger AL, Ralston SJ, Costa M, Complexity analysis of fetal heart rate preceding intrauterine demise, European Journal of Obstetrics and Gynecology and Reproductive Biology (2016), <http://dx.doi.org/10.1016/j.ejogrb.2016.06.025> 27400426
16. Sugarman J et al. Ethical Considerations Concerning Amnioinfusions for Treating Fetal Bilateral Renal Agenesis. Obstet Gynecol 2017
17. Burris HH, Just AC, Haviland MJ, Neo DT, Baccarelli AA, Dereix AE, Brennan KJ, Rodosthenous RS, **Ralston SJ**, Hecht JL, and Hacker MR. Long non-coding RNA expression in the cervix mid-pregnancy is associated with the length of gestation at delivery. Epigenetics. 2018;13(7):742-750. doi: 10.1080/15592294.2018.1503490. Epub 2018 Aug 10. PMID: 30045669
18. Tarui T, Im K, Madan N, et al. Quantitative MRI analyses of regional brain growth in living fetuses with Down syndrome. Cereb Cortex. 2019 Jul 2. pii: bhz094. doi: 10.1093/cercor/bhz094. 31264685
19. Gerson KD, Haviland MJ, Neo D, Hecht JL, Baccarelli AA, Brennan KJ, Dereix AE, Ralston SJ, Hacker MR, Burris HH. Pregnancy-associated changes in cervical noncoding RNA..Epigenomics. 2020 Jun;12(12):1013-1025. doi: 10.2217/epi-2019-0231. Epub 2020 Aug 18.PMID: 32808540

Reviews, chapters, monographs and editorial

1. **Ralston SJ**, Schwaitzberg SD. "Liver hematoma and rupture in pregnancy." Semin Perinatol. 1998 Apr;22(2):141-8.

2. **Ralston SJ**, D'Alton ME, "General Obstetrical Care" in Oski's Pediatrics: principles and practice, 1999 Lippincott Williams & Wilkins, MacMillan, DeAngelis, Feigin, & Warshaw, Editors..
3. **Ralston SJ** and Craigo SD. "Ultrasound-Guided Procedures for Prenatal Diagnosis and Therapy" in Obstetrics and Gynecologic Clinics of North America, March 2004; 31: 101-123.
4. **Ralston SJ**. "Herpes in Pregnancy" in "Medical Complications in Pregnancy", 2005 McGraw Hill, Craigo & Baker Editors.
5. **Ralston SJ**, Spillman MA, Mitchell M, Mitchell MF, Mahoney J, Joseph GF. "Obstetricians: Women's Advocates, Not Adversaries" Am J of Bioethics, 11(12): 1-3, 2011
6. **Ralston SJ**, Leuthner S, The American Academy of Pediatrics Committee on Bioethics and the American College of Obstetricians and Gynecologist Committee on Ethics. "Maternal-Fetal Interventions and Fetal Care Centers." Pediatrics 2011;128:e473
7. **Ralston SJ**, "Ethics of Multifetal Pregnancy Reduction" Lahey Clinic Journal of Medical Ethics Fall 2011, Vol 18, Issue 3
8. Fallat ME, Herweck P, **Ralston SJ**, "Surgical and Ethical Challenges in Disorders of Sexual Development." Advances in Pediatrics 59 (2012) 283-302
9. **Ralston SJ**. Presenting Unwelcome Research Findings. <http://virtualmentor.ama-assn.org/2014/02/ecas2-1402.html>. Virtual Mentor. 2014; 16:98-102. Accessed February 5, 2014
10. Johnson KM, Shainker SA, Estroff JA, **Ralston SJ**. Prenatal diagnosis of congenital epulis: implications for delivery. J Ultrasound Med. 2016.
11. **Ralston SJ**. The Conscience of an MFM. Am J Obstet Gynecol. 2018 Jun;218(6):596.e1-596.e2. doi: 10.1016/j.ajog.2018.03.010. Epub 2018 Mar 9. PMID: 29530675
12. **Ralston SJ**, Farrell RM. "Ethical Issues Faced by the OB/GYN Hospitalist." OBGYN Hospital Medicine: principals and practice. New York: McGraw-Hill 2019

Letters to the Editor

1. Malone FD, **Ralston SJ**, D'Alton ME. Increased Nuchal Translucency and Fetal Chromosomal Defects, NEJM 1998; 338 (17)

Clinical Guidelines and Reports

1. ACOG Committee Opinion No. 401: Relationships with industry. American College of Obstetricians and Gynecologists Committee on Ethics. Obstet Gynecol. 2008 Mar;111(3):799-804
2. ACOG Committee Opinion No. 410: Ethical issues in genetic testing. Committee on Ethics, American College of Obstetricians and Gynecologists; Committee on Genetics, American College of Obstetricians and Gynecologists. Obstet Gynecol. 2008 Jun;111(6):1495-502.

3. ACOG Committee Opinion No. 409: Direct-to-consumer marketing of genetic testing. Committee on Genetics, American College of Obstetricians and Gynecologists; Committee on Ethics, American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2008 Jun;111(6):1493-4.
4. ACOG Committee Opinion No. 422: at-risk drinking and illicit drug use: ethical issues in obstetric and gynecologic practice. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2008 Dec;112(6):1449-60.
5. American Society for Reproductive Medicine: defining embryo donation. Ethics Committee of the American Society for Reproductive Medicine. *Fertil Steril.* 2009 Dec;92(6):1818-9.
6. ACOG Committee Opinion No. 439: Informed consent. ACOG Committee on Ethics. *Obstet Gynecol.* 2009 Aug;114(2 Pt 1):401-8**
7. Access to fertility treatment by gays, lesbians, and unmarried persons. Ethics Committee of the American Society for Reproductive Medicine. *Fertil Steril.* 2009 Oct;92(4):1190-3. Epub 2009 Sep 3. Review.
8. Fertility treatment when the prognosis is very poor or futile. Ethics Committee of the American Society for Reproductive Medicine. *Fertil Steril.* 2009 Oct;92(4):1194-7. Epub 2009 Sep 1. Review.
9. Child-rearing ability and the provision of fertility services. Ethics Committee of the American Society for Reproductive Medicine. *Fertil Steril.* 2009 Sep;92(3):864-7. Epub 2009 Aug 5
10. Committee Opinion No. 466: ethical considerations for performing gynecologic surgery in low-resource settings abroad. *Obstet Gynecol.* 2010 Sep;116(3):793-9.**
11. Committee Opinion No. 456: Forming a just health care system. American College of Obstetricians and Gynecologists Committee on Ethics. *Obstet Gynecol.* 2010 Mar;115(3):672-7.**
12. Committee Opinion No. 500: Professional responsibilities in obstetric-gynecologic medical education and training. American College of Obstetricians and Gynecologists. Committee on Ethics. *Obstet Gynecol.* 2011 Aug;118(2 Pt 1):400-4.*
13. Committee Opinion No. 480: Empathy in women's health care. American College of Obstetricians and Gynecologists Committee on Ethics. *Obstet Gynecol.* 2011 Mar;117(3):756-61.**
14. Disclosure of medical errors involving gametes and embryos. Ethics Committee of the American Society for Reproductive Medicine. *Fertil Steril.* 2011 Oct 21.
15. Ritual genital cutting of female minors. Committee on Bioethics, Davis DS. *Pediatrics.* 2010 May;125(5):1088-93. Epub 2010 Apr 26.
16. Human immunodeficiency virus and infertility treatment. Ethics Committee of the American Society for Reproductive Medicine. *Fertil Steril.* 2010 Jun;94(1):11-5. Epub 2010 Mar 16.

17. Consent for emergency medical services for children and adolescents. Committee on Pediatric Emergency Medicine and Committee on Bioethics. Pediatrics. 2011 Aug;128(2):427-33. Epub 2011 Jul 25.
18. Committee Opinion No. 501: Maternal-fetal intervention and fetal care centers. American College of Obstetricians and Gynecologists. Committee on Ethics; American Academy of Pediatrics. Committee on Bioethics. Obstet Gynecol. 2011 Aug;118(2 Pt 1):405-10.*
19. Committee Opinion NO. 682: Microarrays and Next-Generation Sequencing Technology: The Use of Advanced Genetic Diagnostic Tools in Obstetrics and Gynecology. Obstet Gynecol. 2016 Dec;128(6):e262-e268. doi: 10.1097/AOG.0000000000001817. PMID: 27875474
20. Practice Advisory: Response to FDA's Authorization of BRCA1 and BRCA2 Gene Mutation Direct-to-Consumer Testing. ACOG Committee on Genetics 2018
21. Modern genetics in obstetrics and gynecology. ACOG Technology Assessment in Obstetrics and Gynecology No. 14. American College of Obstetricians and Gynecologists. Obstet Gynecol 2018;132:e143-68
22. Perinatal Palliative Care*. ACOG Committee Opinion No. 786. American College of Obstetricians and Gynecologists. Obstet Gynecol 2019; 134:e84-9 31441826
23. The use of analgesia and anesthesia for maternal-fetal procedures. Society for Maternal-Fetal Medicine (SMFM) Consult Series #59 Society for Maternal-Fetal Medicine (SMFM); Society of Family Planning (SFP); Mary E. Norton, MD; Arianna Cassidy, MD; Steven J. Ralston, MD, MPH; Debnath Chatterjee, MD; Diana Farmer, MD; Anitra D. Beasley, MD, MPH; Monica Dragoman, MD, MPH

The above were all developed through my activities on the Committee on Ethics or Genetics for the American College of Obstetricians and Gynecologists, the Committee on Bioethics of the American Academy of Pediatrics, The Publications Committee for the Society for Maternal-Fetal Medicine, and the Ethics Committee of the American Society of Reproductive Medicine. These guidelines are used as references for clinicians. My involvement ranged from authorship to editing. An asterix(*) indicates opinions on which I am the primary author. A double asterix (**) indicates opinion on which I served as senior author in my role as Chair of the Committee.

Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings (last 3 years):

1. Mukland-Cerro I, Carcia-Moliner M, **Ralston SJ**, Cowen J. "P57 and Ploidy in Placental Mesenchymal Dysplasia, a Mimicker of Hydatidiform Mole." College of American Pathologists, 2011
2. Vogel J, **Ralston SJ**, Strosnitter W. "Gender Bias in Medical Student Evaluation" Association of Professors of Gynecology and Obstetrics, 2008
3. March MI, Hacker MR, Merport Modest A, Gupta M, **Ralston SJ**, Brown FM. Early Adopters: The BIDMC experience with the new IADPSG guidelines for GDM. Accepted for

poster presentation at the 7th International DIP Symposium - Diabetes, Hypertension, Metabolic Syndrome & Pregnancy: March, 2013 in Florence, Italy

4. March MI, Merport Modest A, Gupta M, **Ralston SJ**, Brown FM. Does a change in screening guidelines change the risk profile and outcomes of the gestational diabetes population? Poster Presentation, 34th Annual meeting of SMFM, New Orleans, LA, Feb. 3-8, 2014.
5. Shainker SA, Raghuraman N, Modest AM, Schnettler WT, Hacker MR, **Ralston, SJ**. The utility of midtrimester ultrasound assessment of the subcutaneous space in predicting cesarean wound complications. New England Perinatal Society, Newport, Rhode Island, March 2014
6. Shainker SA, Modest AM, Hacker MR, **Ralston SJ**. The effect of a routine cervical length screening program on antepartum management and birth outcomes. 2015. Presented as an oral presentation at the annual meeting of the New England Perinatal Society, Newport, RI
7. **Ralston SJ**. Universal Access for NIPT. International Society for Prenatal Diagnosis, July 2015, Washington, DC
8. Tarui T et al. Comparative quantitative MRI analyses of regional brain growth and cerebral sulcal development in living fetuses with isolated ventriculomegaly and Down syndrome. Pediatric Academic Societies Meeting 2018
9. Compliance with Repeat Antibiotic Dosing in Selected Cesarean Deliveries. **ACOG 2019**

Narrative Report

I see myself as a caregiver, scientist, and educator. I spend approximately 50% of my time providing oversight to clinical programs and directing clinical care, and the remaining 50% is divided between work on ethics and teaching. I entered medicine with a firm foundation in the scientific method and natural curiosity about human disease, medicine in society, and social change. My most formative experience in medical school was in a refugee camp on the Thai/Cambodian border, in a fellowship to teach medical students about health care delivery in regions of the world suffering political strife. In this resource deplete environment, I saw human suffering and a nobility of purpose on the part of providers that has made me the clinician I am today.

Obstetrics was my great love, and during my fellowship, I participated in a series sponsored by the ELSI (Ethics, Law, and Social Implications) branch of the Human Genome Project to address the ethics of prenatal diagnosis. This catalyzed my longstanding interest in medical ethics. I went on to develop a medical ethics curriculum at Tufts, creating and directing the Ethics and Professionalism course, serving as lecturer, group facilitator, and curriculum director. I buttressed this interest by pursuing an MPH with a concentration in Health Law, Bioethics, and Human Rights. This culminated my participation on the national level in the ACOG Ethics Committee since 2006, and as chair of this committee in 2009-2012. Some of my greatest contributions are the Committee Opinions published during my tenure as Chair.

My clinical expertise is in prenatal diagnosis and high-risk obstetrics. I developed consultative programs in numerous hospitals in the community and have been the medical director of the Tufts Center for Perinatal Diagnosis from 2006-2011. I was also instrumental in forming the Tufts Center for

Compassionate Care and Perinatal Hospice, which helps women and families whose fetuses or children have extremely poor prognoses.

My role as an educator has traversed all tiers of medical education ranging from students to residents to fellows to faculty and has intertwined my clinical expertise in prenatal diagnosis and high-risk obstetrics with my work on ethics. I have facilitated small groups of 1st and 2nd year medical students in problem-based learning, I have lectured in medical ethics and pregnancy pathophysiology, I directed the 3rd year clerkship in OB/GYN at Tufts for over a decade, and I have mentored both residents in OBGYN and fellows. My work in ethics has afforded me the opportunity to teach faculty throughout the country, and to help set the standards for ethical practice in reproductive medicine and pediatrics. I have garnered numerous teaching awards, and believed that to engage learners at any level, you need to show them why you find your subject compelling and to show them passion for what you do.

In 2012 I joined the faculty at Harvard Medical School where I continued my work teaching medical ethics. My clinical responsibilities at Beth Israel Deaconess Medical Center ranged from creating a high risk pregnancy unit (the Center for Maternal-Fetal Medicine), maintaining and extending our outpatient referral network, and running a fellowship program while remaining active in the clinical education of residents and students.

In 2016, I left Harvard to become Chair of OB/GYN at Pennsylvania Hospital. We are the busiest obstetrical service in Philadelphia with both academic and non-academic physician staff. This job has afforded me the opportunity to learn about the complexities of large organizations (Penn Medicine), organize and run a quality assurance and improvement program, recruit (and retain) physicians across a broad swath of subspecialties as well as midwives and other advanced practice providers. I have also continued my passion for clinical medicine and education in this role.

In 2021, I assumed the position of Vice Chair and Chief of Obstetrics at Howard University Hospital where I have also taken on the role of residency program director and director of quality.

My career has afforded me opportunities to help individual women, and as an advocate for women's health I have been fortunate to be able to participate nationally with organizations whose scope reaches well beyond the individual clinics and labor floors. The social and economic disparities between the sexes continue to be huge hurdles in women's ability to receive adequate care throughout the world and I hope to continue to address these issues throughout all aspects of my professional life.