I, ARMAND H. MATHENY ANTIMMARRIA, MD, PhD, FAAP, HEC-C, have been retained by counsel for Plaintiffs as an expert in connection with the above-captioned litigation.

1. This declaration provides the following expert opinions, which are explained in further detail below:

2. 2021 Arkansas House Bill 1570 (HB 1570) singles out gender transition procedures, which I will refer to as gender-affirming medical care, for anomalous treatment, prohibiting healthcare professionals from providing gender-affirming medical care to minors or referring minors for such care. I am unaware of any instances—apart from HB 1570—in which the government categorically prohibits minors and their parents or guardians from accessing a treatment supported by evidence of efficacy, let alone treatment that is widely endorsed by medical professional organizations.

3. The legislative findings in HB 1570 cite a lack of “long-term longitudinal studies” and “randomized clinical trials” to support prohibiting gender-affirming medical care. This characterization, even if it were accurate, which it is not, holds gender-affirming medical care for
adolescents with gender dysphoria to an inappropriately high standard, a standard that many accepted medical treatments do not attain.

4. The legislative findings also mischaracterize the potential benefits and risks of gender-affirming medical care to treat gender dysphoria and fail to demonstrate why the decision to undergo such treatment should uniquely be removed from adolescents, their parents or guardians, and their healthcare professionals. The legislation again establishes a double standard between permitted and prohibited treatment.

5. As a result, HB 1570 puts clinicians in the untenable position of either following state law and not providing essential treatment, or facing professional discipline, including permanent revocation of their licenses. Either outcome results in harm to patients.

6. I have actual knowledge of the matters stated in this declaration. In preparing this declaration, I reviewed the materials listed in the attached Bibliography (Exhibit B) as well as the relevant legislation. I may rely on those documents as additional support for my opinions. I have also relied on my years of research and other experience, as set out in my curriculum vitae (Exhibit A), and on the materials listed therein. The materials I have relied upon in preparing this declaration are the same types of materials that experts in medicine and bioethics regularly rely upon when forming opinions on the subject. I may wish to supplement these opinions or the bases for them as a result of new scientific research or publications, or in response to statements and issues that may arise in my area of expertise.

**BACKGROUND AND QUALIFICATIONS**

7. I am the Director of the Ethics Center, the Lee Ault Carter Chair of Pediatric Ethics, and an Attending Physician in the Division of Hospital Medicine at Cincinnati Children’s
Hospital Medical Center ("Cincinnati Children’s"). I am also a Professor in the Departments of Pediatrics and Surgery at the University of Cincinnati College of Medicine.

8. I received my medical degree from Washington University School of Medicine in St. Louis, Missouri in 2000. I received my PhD in Religious Ethics from The University of Chicago Divinity School in 2000. I completed my Pediatrics residency at the University of Utah in 2003.

9. I have been licensed to practice medicine since 2001 and am currently licensed to practice medicine in Ohio. I have been Board Certified in General Pediatrics since 2004 and in Pediatric Hospital Medicine since the inception of this certification in 2019. I have been certified as a Healthcare Ethics Consultant since the inception of this certification in 2019.

10. I have extensive experience as a pediatrician and as a bioethicist. I have been in clinical practice since 2003 and 30% of my current effort is dedicated to caring for hospitalized patients. I was Chair of the Ethics Committee at Primary Children’s Medical Center in Salt Lake City, Utah from 2005 to 2012 and have been Director of the Ethics Center at Cincinnati Children’s since 2012. I regularly consult on cases at the Transgender Health Clinic at Cincinnati Children’s and participate in the Clinic’s monthly multidisciplinary team meetings. I am also part of Cincinnati Children’s team that cares for patients born with intersex traits, also known as differences or disorders of sex development (DSD). I am also the Chair of Cincinnati Children’s Fetal Care Center’s Oversight Committee which provides the Center recommendations on the use of innovative treatments and experimental interventions.

11. I am a member of the American Academy of Pediatrics, the American Society for Bioethics and Humanities, the Association of Bioethics Program Directors, and the Society for Pediatric Research. I was a member of the American Academy of Pediatrics Committee on
Bioethics from 2005 to 2011 and am currently the Associate Editor of the Ethics Rounds section of the Academy’s lead journal *Pediatrics*. I have also served as a member of the American Society for Bioethics and Humanities’ Clinical Ethics Consultation Affairs Committee from 2009 to 2014 and currently serve on its Healthcare Ethics Consultant Certification Commission.

12. I am the author of 37 peer-reviewed journal articles, 11 non-peer-reviewed journal articles, 6 book chapters, and 25 commentaries. My peer-reviewed journal articles have been published in high-impact journals including the *Journal of the American Medical Association* and *Annals of Internal Medicine*. I am also an author of 17 policy statements and technical reports, including 4 as lead author, by the American Academy of Pediatrics.

13. I have not previously testified as an expert in either deposition or at trial. I am being compensated at an hourly rate of $250 per hour for preparation of expert declarations and reports, and $400 per hour for time spent preparing for or giving deposition or trial testimony. My compensation does not depend on the outcome of this litigation, the opinions I express, or the testimony I provide.

**BACKGROUND ON MEDICAL DECISION-MAKING IN PEDIATRICS**

*Research and evidence*

14. Clinical practice and research or experimentation are distinguished by their goals and methods. Clinical practice’s goal is to benefit individual patients and its method is individualized decision-making. Research’s goal is to contribute to generalizable knowledge and research is conducted using formal protocols that describe its objective and procedures. New or innovative medical interventions are not research or experimentation by virtue of being innovative. They should, however, eventually be the object of research to evaluate their safety and efficacy. See National Commission for the Protection of Human Subjects of Biomedical and


16. A variety of study designs are used to evaluate innovations. They include observational studies, which include cross-sectional and longitudinal studies, and randomized trials. In cross-sectional studies, investigators collect data at a single point in time. Cross-sectional design permits investigators to examine potential associations between factors, but it cannot prove one factor caused the other. In longitudinal studies, researchers follow particular individuals over time, making continuous or repeated measures. In a randomized trial, participants are randomly assigned to a treatment or a comparison group. The major benefit of a randomized trial is that it decreases the likelihood that any differences in the outcomes between the groups is the result of baseline differences between the groups rather than the result of the intervention. Each of these study designs have their strengths and weaknesses and selecting among them depends on a variety of factors including the study question, ethical considerations, feasibility, and cost. See Guyatt G, Rennie D, Meade MO, et al., eds. *Users’ Guide to the Medical Literature: A Manual for Evidence-Based Clinical Practice*. 3rd ed. McGraw Hill
The diffusion of innovation in health care is a complex process. Many innovations fail to diffuse and are not widely adopted. Factors that influence diffusion include competing or complementary innovations, the innovation’s benefits and detriments, influential members of the social system’s behavior, and potential adopters’ innovativeness. See Dearing JW, Cox JG. Diffusion of innovations theory, principles, and practice. *Health Aff* (Millwood). 2018;37(2):183-190. Some have described adoption as occurring in waves or phases: clinical study, leading practice, majority adoption, and general access. Following clinical study, the practice may spread to and then beyond a limited group of pioneering institutions. It may eventually reach underserved communities. See Balas EA, Chapman WW. Road map for diffusion of innovation in health care. *Health Aff* (Millwood). 2018;37(2):198-204.


19. The quality of evidence is “the extent to which one can be confident that an estimate of effect is correct (Atkins D, Best D, Briss PA, et al. Grading quality of evidence and strength of recommendations. *BMJ*. 2004;328(7454):1490).” The quality of evidence is based on four factors: study design, study quality, consistency, and directness. With respect to study design, randomized trials generally provide “high” quality evidence and observational studies, in comparison, “low.” There are, however, times when randomized trials are not feasible and instances in which observational studies provide higher quality evidence than randomized trials. Furthermore, the quality of studies’ methods and execution, consistency in outcomes across studies, and similarity between the people, interventions, and outcomes in the study and in clinical practice—also called directness—should be considered. Limitations in quality, consistency, and directness may result in randomized trials moving from “high” to “moderate” or “low” levels of evidence. See Atkins D, Best D, Briss PA, et al. Grading quality of evidence and strength of recommendations. *BMJ*. 2004;328(7454):1490.

20. When making recommendations, the authors of guidelines consider whether the intervention in question does more good than harm. The quality of the evidence is only one factor considered in making recommendations. Other considerations include the baseline risk in the population, the trade-offs between the benefits and harms, and differences between the research and actual practice. “Moderate” or “low” quality evidence may be sufficient to make a recommendation. See Atkins D, Best D, Briss PA, et al. Grading quality of evidence and strength of recommendations. *BMJ*. 2004;328(7454):1490.
21. In the field of pediatrics, parents or guardians and their children must often make decisions about medical care without the benefit of randomized trials. Clinical research focusing on children is less likely to use randomized trials than is clinical research for adults. Potential reasons for this disparity include the low prevalence of childhood disease, small market share for therapeutic agents in children, low level of National Institutes of Health funding, and difficulty enrolling children in research. See Martinez-Castaldi C, Silverstein M, Baucher H. Child versus adult research: The gap in high-quality study design. *Pediatrics*. 2008;122(1):52-57.

22. In addition, it may, at times, be unethical to conduct randomized trials. For randomized trials to be ethical, clinical equipoise must exist; there must be uncertainty about whether the efficacy of the intervention or the control is greater. Otherwise, it would be unethical to knowingly expose trial participants to an inferior intervention or control. Trials must also be feasible; it would also be unethical to expose individuals to the risks of trial participation without the benefit of the trial generating generalizable knowledge. A randomized trial that is unlikely to find enough people to participate because they believe they might be randomized to an inferior intervention would be unethical because it could not produce generalizable knowledge due to an inadequate sample size. See Emanuel EJ, Wendler D, Grady C. What makes clinical research ethical? *JAMA*. 2000;283(20):2701-2711.

**Principles of informed consent and shared decision-making in pediatric medicine**

23. As a general matter, when deciding on a particular course of treatment, patients and their healthcare providers should participate in a shared decision-making process, in which they discuss scientific evidence, and the patient’s own values, goals, and preferences. See Kon AA, Morrison W. Shared decision-making in pediatric practice: A broad view. *Pediatrics*. 2018;142(Suppl 3):S129-S132. Within this framework, healthcare providers should recommend
treatments when their potential benefits outweigh their risks and they are likely to promote the patient’s values, preferences, and goals, and they should recommend against treatments when their potential risks outweigh their benefits and they are likely to frustrate achieving the patient’s values, preferences, and goals. In cases in which the risks and benefits are relatively balanced or the evaluation of the risks and benefits is highly contingent on individual’s preferences, the provider may describe the benefits, risks, and alternatives without making a recommendation. The decision ultimately rests with the patient.

24. Shared decision-making in pediatrics is more complex than in adult medicine because it involves both minor patients and their parents or guardians. Parents and guardians are afforded substantial, but not unlimited, discretion in making medical decisions for their minor children based on their assessment of the individual child’s best interest. They, for example, generally care about their children and best understand their children’s unique needs. See Diekema DS. Parental refusals of medical treatment: the harm principle as threshold for state intervention. *Theor Med Bioeth.* 2004;25(4):243-264.

25. Healthcare providers also have an ethical obligation to include children in medical decision-making to the extent that it is developmentally appropriate. For example, a provider examining a toddler for a possible ear infection should not ask a toddler for permission to look in the child’s ear, but the provider could ask the toddler which ear the child would like to have looked in first. As a minor becomes older, the minor should participate more actively in shared decision-making. In early adolescence, individuals typically have developed a sense of identity, individual values and preferences, and are developing medical decision-making capacity. Capacity entails the ability to (i) understand the indications and the potential benefits, risks, and alternatives to a treatment, including declining treatment; (ii) appreciate the implications of a

26. I am unaware of any instances—apart from the Arkansas statute at issue in this case—in which the government categorically prohibits minors and their parents or guardians from accessing treatment supported by evidence of efficacy.

27. State action in medical decision-making for minors is usually a positive intervention to provide medical care to a minor following a parent’s refusal to consent to recommended treatment and, even then, such decisions are exceptional and highly individualized. For example, a court may order a blood transfusion for a child over parental objections if the child would die or be seriously disabled without a transfusion or another intervention that a transfusion would enable. See Jenny C, Committee on Child Abuse and Neglect, American Academy of Pediatrics. Recognizing and responding to medical neglect. *Pediatrics*. 2007;120(6):1385-1389.

**ARKANSAS’S STATED REASONS FOR PROHIBITING TREATMENT RELATED TO GENDER TRANSITION FOR MINORS**

28. The legislative findings in HB 1570 do not provide a sound medical or ethical basis for outlawing the provision of gender-affirming medical care for adolescents with gender dysphoria. The state’s criticisms of gender-affirming medical care for minors mischaracterize the evidence base for gender-affirming medical treatment, are contrary to generally accepted principles of medical ethics, and would also apply to many other well-accepted medical treatments.
Asserted lack of adequate medical research supporting the banned medical care

29. Although the act is entitled the “Arkansas Save Adolescents from Experimentation (SAFE) Act,” adolescents with gender dysphoria are not being subject to research or experimentation; they are being provided clinical care directed toward their best interests and based on individualized decision-making.

30. The General Assembly’s findings in HB 1570 suggest that there is inadequate evidence to support the prevailing paradigm for the treatment of adolescents with gender dysphoria. They specifically cite a lack of “long-term longitudinal studies” on puberty blocking drugs and a lack of “randomized clinical trials” of cross-sex hormone therapy. As discussed above, study design is not the sole factor to be considered in rating the quality of evidence or grading the strength of recommendations. Therefore, even if the legislature’s assertions were correct, they would not provide a sound justification for a blanket ban on the prevailing medical protocols for the treatment of adolescents with gender dysphoria. In any case, the legislature mischaracterizes the evidence.

32. The Endocrine Society “suggest[s] that adolescents who meet diagnostic criteria for GD [gender dysphoria]/gender incongruence, fulfill criteria for treatment, and are requesting treatment should initially undergo treatment to suppress pubertal development (Hembree WC, Cohen-Kettenis PT, Gooren L, et al. Endocrine treatment of gender-dysphoric/gender-incongruent persons: An Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab*. 2017;102(11):3871).” The evidence for this recommendation includes a longitudinal study of a cohort of 70 transgender adolescents who were evaluated using objective measures prior to both pubertal suppression and sex hormone treatment. The mean length of time between the start of pubertal suppression and sex hormone treatment was 1.88 years and ranged from 0.42 to 5.06 years. The study showed statistically significant decreases in behavioral and emotional problems and depressive symptoms, and increases in general functioning. See de Vries AL, Steensma TD, Doreleijers TA, Cohen-Kettenis PT. Puberty suppression in adolescents with gender identity disorder: a prospective follow-up study. *J Sex Med*. 2011;8(8):2276-2283.


34. Additional longitudinal studies of the psychosocial effects of pubertal suppression to treat gender dysphoria include Costa R, Dunsford M, Skagerberg E, Holt V, Carmichael P, Colizzi M. Psychological support, puberty suppression, and psychosocial functioning in

35. There are, therefore, longitudinal studies evaluating the risks and benefits of pubertal suppression for the treatment of gender dysphoria. The cited studies are of appropriate duration given puberty suppression is only intended to occur between the first physical changes of puberty, and confirmation of the persistence of gender dysphoria/gender incongruence and development of the individual’s capacity to give informed consent to hormone therapy. See Hembree WC, Cohen-Kettenis PT, Gooren L, et al. Endocrine treatment of gender-dysphoric/gender-incongruent persons: An Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab.* 2017;102(11):3871. Cohen-Kettenis and colleagues have conducted longer-term follow-up of individuals through sex hormone and gender-affirming surgical treatment. Participants’ mean age at their initial assessment was 13.6 year and their mean age at their final assessment was 20.7 years. See de Vries AL, McGuire JK, Steensma TD, Wagenaar EC, Doreleijers TA, Cohen-Kettenis PT. Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics.* 2014;134(4):696-704.

36. In addition, contrary to the General Assembly’s findings in HB 1570, there are randomized clinical trials to evaluate the efficacy and safety of sex hormone treatment for gender dysphoria. Pelusi and colleagues randomized transgender men (individuals assigned female at birth who identify as male) to one of 3 different testosterone formulations. They evaluated anthropometric, metabolic, bone, hematological, and biochemical parameters at baseline and after 12 months of treatment. See Pelusi C, Costantino A, Martelli V, et al. Effects of three

37. While such comparative effectiveness trials (trials comparing different, established pharmacological treatments to one another) should continue, randomized, placebo-controlled trials (trials that compare pharmacological treatment to no pharmacological treatment) in gender dysphoria are currently unethical. Potential investigators do not have equipoise between pharmacological treatment and no pharmacological treatment; they believe that pharmacological treatment is superior. It is also highly unlikely that a sufficient number of participants would enroll in randomized controlled trials for them to be informative. See Chew D, Anderson J, Williams K, May T, Pang K. Hormonal treatment in young people with gender dysphoria: A systematic review. *Pediatrics.* 2018;141(4) and Reisner SL, Deutsch MB, Bhasin S, et al. Advancing methods for US transgender health research. *Curr Opin Endocrinol Diabetes Obes.* 2016;23(2):198-207.

38. Even if such studies could be conducted ethically, they would provide a lower quality of evidence because of intrinsic limitations in their design. For example, it would be impossible to blind the investigators or the participants to whether the participants were receiving the active treatment or a placebo. They would know if they were in the intervention or other control arm of the study due to the physical changes in their bodies, or the lack thereof, over time.

39. While attempting to support HB1570 by asserting a lack of randomized controlled trials, the law permits other treatments that also lack such evidence. The law permits the use of gonadotropin-releasing hormone (GnRH) agonists, colloquially called puberty blockers, to treat central precocious puberty because the treatment is not performed for the purpose of affirming a
gender identity different from a minor’s sex assigned at birth. Central precocious puberty is the premature initiation of puberty, before 8 years of age in people assigned female at birth and before 9 in people assigned male, by the central nervous system. Its negative effects include impairment of final adult height as well as antisocial behavior and lower academic achievement.

40. There are no randomized trials evaluating the adult height of treated and untreated individuals. Most studies are observational and compare pretreatment predicted final height with actual final height. These studies have additional limitations including small sample sizes. This “low quality” evidence nonetheless is sufficiently strong to support the use of GnRH agonists as treatment for central precocious puberty. See Mul D, Hughes IA. The use of GnRH agonists in precocious puberty. *Eur J Endocrinol.* 2008;159 Suppl 1:S3-8.

41. HB 1570’s therefore subjects the use of puberty blockers to a double standard. There are no randomized clinical trials for the use of puberty blockers to treat precocious puberty or gender dysphoria, but the evidence is deemed sufficient for the former but not the latter.

**Asserted interest in protecting “vulnerable children” from the risks of gender-affirming medical care**

42. The legislative findings of HB 1570 indicate that it is intended to protect the health and safety of “vulnerable” children and that “the risks of gender transition procedures far outweigh any benefit at this stage of clinical study on these procedures.” The legislative findings neglect the risks of inadequately treated gender dysphoria, and the benefits of gender-affirming medical care. They also fail to provide evidence for why, for just this one type of medical care, the legislature’s evaluation of the potential benefits and risks is to be preferred to that of adolescents, their parents or guardians, and healthcare professionals.

43. Transgender individuals experience significant risks to their well-being. They have higher rates of depression, anxiety, suicidal ideation, and suicide attempts. See, for

44. The potential benefits of gender-affirming medical care include improved physical and psychological outcomes. Starting pubertal suppression in early puberty prevents the development of undesirable secondary sex characteristic which may be difficult, if not impossible, to eliminate. Sex hormone therapy permits the development of secondary sex characteristics consistent with individuals’ gender identity. Potential psychological benefits include increased quality of life and decreased depression, suicidal ideation and suicide attempts, and anxiety. See, for example, Baker KE, Wilson LM, Sharma R, Dukhanin V, McArthur K, Robinson KA. Hormone Therapy, Mental Health, and Quality of Life Among Transgender People: A Systematic Review. *J Endocr Soc.* 2021;5(4):bvab011. For some transgender adolescents, gender-affirming medical care is lifesaving.

45. For many transgender individuals, the potential benefits of gender-affirming medical care substantially outweigh the risks. In addition to the Endocrine Society’s and World Professional Association for Transgender Health’s guidelines, see Rafferty J, Committee on Psychosocial Aspects of Child and Family Health, Committee on Adolescence, et al. Ensuring comprehensive care and support for transgender and gender-diverse children and adolescents. *Pediatrics.* 2018;142(4) and American Psychiatric Association. Position statement on treatment of transgender (trans) and gender diverse youth. 2020. Weighing the potential benefits and risks
of the treatment for gender dysphoria is a prudential judgment similar to other judgments made by adolescent patients and their parents or guardians as part of general ethical principles of shared decision-making. Indeed, adolescent patients and their parents or guardians often make decisions about treatments with less evidence and/or greater risks than gender-affirming care.

46. The current treatment paradigm for treating gender dysphoria in minors is consistent with general ethical principles instantiated in the practices of informed consent and shared decision-making. The Endocrine Society clinical practice guideline extensively discusses the potential benefits, risks, and alternatives to treatment, and its recommendations regarding the timing of interventions are based in part on the treatment’s potential risks and the adolescent’s decision-making capacity. The guidelines recommend that informed consent for pubertal blockers and sex hormones include a discussion of the implications for fertility and options for fertility preservation. The Endocrine Society clinical guideline also advises delaying gender-affirming hormone treatment, which results in partly irreversible physical changes, until an adolescent is capable of consenting. While the guideline suggests delaying gender-affirming genital surgery involving removal of the testes, ovaries, and/or uterus until the patient is at least 18 years old, it states clinicians should individualize decision-making for breast or chest surgery in transgender males (individuals assigned female at birth who identify as male) and that chest surgery may be considered in individuals under 18 years old. See Hembree WC, Cohen-Kettenis PT, Gooren L, et al. Endocrine treatment of gender-dysphoric/gender-incongruent persons: An Endocrine Society clinical practice guideline. J Clin Endocrinol Metab. 2017;102(11):3869-3903.

47. While HB 1570 would prohibit chest surgery to treat transgender males, minors are permitted to undergo many comparable surgeries, such as those for gynecomastia, pectus
excavatum or carinatum, and breast reconstruction. Gynecomastia is the proliferation of ductal or glandular breast tissue, as opposed to adipose tissue or fat, in individuals assigned male at birth. Pectus excavatum and carinatum are chest wall anomalies in which the sternum is depressed or protrudes, respectively. While surgeries to treat these conditions, as well as breast reduction and augmentation for individuals assigned female at birth who identify as female, may at times be performed to lessen physical symptoms, such as pain or exercise intolerance, they are commonly performed to reduce psychosocial distress. Risks include bleeding, infection, scarring and poor cosmetic outcome, loss of sensation, and impaired breast/chest feeding. Some surgeries have unique risks such as catastrophic perforations of the heart or lungs in some forms of pectus repair, or capsule formation around a breast implant causing hardening and pain. See Buziashvili D, Gopman JM, Weissler H, et al. An evidence-based approach to management of pectus excavatum and carinatum. Ann Plast Surg. 2019;82(3):352-358, Nordt CA, DiVasta AD. Gynecomastia in adolescents. Curr Opin Pediatr. 2008;20(4):375-382, and Zuckerman D, Abraham A. Teenagers and cosmetic surgery: Focus on breast augmentation and liposuction. J Adolesc Health. 2008;43(4):318-324.

48. As these examples of chest surgeries in adolescence illustrate, surgeries for minors can require weighing short- and long-term effects and benefits and risks in the face of uncertainty. Individuals’ values and beliefs shape these evaluations and, therefore, the adolescents’ participation is essential. There is nothing unique about chest surgery for gender dysphoria that justifies singling out this and similar procedures for prohibition based on the risk-benefit ratio, or concern for adolescents’ inability to assent or parents or guardians’ inability to consent. Medical decisions regarding treatment for gender dysphoria should continue to be left to
the discretion of transgender adolescents, their parents or guardians, and their healthcare professionals.

49. Ironically, at the same time that HB 1570 prohibits gender-affirming medical care for minors in the name of protecting vulnerable children, the statute expressly allows doctors to perform irreversible genital surgeries on infants and children with intersex conditions or differences or disorders in sexual development (DSD) at ages when they are unable to meaningfully participate in medical decision-making. The evidence base for these surgeries is poor and they are highly controversial when performed at such an early age. See Jesus LE. Feminizing genioplasties: Where are we now? *J Pediatr Urol*. 2018;14(5):407-415 and Frader J, Alderson P, Asch A, et al. Health care professionals and intersex conditions. *Arch Pediatr Adolesc Med*. 2004;158(5):426-428. This double standard is difficult to explain.

CONCLUSION

50. Treating adolescents with gender dysphoria with pubertal suppression, sex hormones, and chest surgery under clinical practice guidelines, like the Endocrine Society’s, is sufficiently evidence-based and its benefits and risks are well within the range of other medical decisions that adolescents and their parents or guardians have the discretion to make in consultation with their healthcare professionals.

51. Based on my research and experience as a pediatrician and bioethicist, there is no sound medical or ethical basis to prohibit healthcare professionals from providing gender-affirming medical care to minors or referring their patients to other doctors to receive this care. Doing so puts clinicians in the untenable position of having to either follow state law or risk losing their licenses; either outcome harms their patients.
I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on June 11, 2021

ARMAND H. MATHENY ANTOMMARIA, MD, PhD
EXHIBIT A
Curriculum Vitae

Last Updated: June 11, 2021

PERSONAL DATA
Armand H. Matheny Antommaria, MD, PhD, FAAP, HEC-C
Birth Place: Pittsburgh, Pennsylvania
Citizenship: United States of America

CONTACT INFORMATION
Address: 3333 Burnet Ave, ML 15006, Cincinnati, OH 45229
Telephone Number: (513) 636-4939
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EDUCATION
1983-1987 BSEE Valparaiso University, with High Distinction
Valparaiso, IN
1983-1987 BS Valparaiso University (Chemistry), with High Distinction
Valparaiso, IN
1987-1989 MD Washington University School of Medicine
1998-2000 Saint Louis, MO
1989-2000 PhD The University of Chicago Divinity School (Religious Ethics)
Chicago, IL
2000-2003 Resident University of Utah (Pediatrics)
Salt Lake City, UT
Salt Lake City, UT

BOARD CERTIFICATION
2019 Pediatric Hospital Medicine, American Board of Pediatrics
2019 Healthcare Ethics Consultant-Certified, Healthcare Ethics Consultation Certification Commission
2004 General Pediatrics, American Board of Pediatrics

PROFESSIONAL LICENSES
2012-Present Doctor of Medicine, Ohio
2006-2010 Alternative Dispute Resolution Provider—Mediator, Utah
2001-2014 Physician and Surgeon, Utah
2001-2014 Physician and Surgeon Controlled Substance, Utah

PROFESSIONAL EXPERIENCE
Full Time Positions
2019-Present Professor
Cincinnati Children’s Hospital Medical Center, Cincinnati, OH
Department of Surgery
2019-Present Professor of Clinical-Affiliated
University of Cincinnati, Cincinnati, OH
Department of Surgery
2017-Present Professor
Cincinnati Children’s Hospital Medical Center, Cincinnati, OH
Division of Pediatric Hospital Medicine
2017-Present  Professor of Clinical-Affiliated  
University of Cincinnati, Cincinnati, OH  
Department of Pediatrics  

2016-2017  Associate Professor of Clinical-Affiliated  
University of Cincinnati, Cincinnati, OH  
Department of Pediatrics  

2012-2017  Associate Professor  
Cincinnati Children’s Hospital Medical Center, Cincinnati, OH  
Division of Pediatric Hospital Medicine  

2012-Present  Lee Ault Carter Chair in Pediatric Ethics  
Cincinnati Children’s Hospital Medical Center  

2012-2016  Associate Professor-Affiliated  
University of Cincinnati, Cincinnati, OH  
Department of Pediatrics  

2010-2012  Associate Professor of Pediatrics (with Tenure)  
University of Utah School of Medicine, Salt Lake City, UT  
Divisions of Inpatient Medicine and Medical Ethics  

2010-2012  Adjunct Associate Professor of Medicine  
University of Utah School of Medicine, Salt Lake City, UT  
Division of Medical Ethics and Humanities  

2004-2010  Assistant Professor of Pediatrics (Tenure Track)  
University of Utah School of Medicine, Salt Lake City, UT  
Divisions of Inpatient Medicine and Medical Ethics  

2004-2010  Adjunct Associate Professor of Medicine  
University of Utah School of Medicine, Salt Lake City, UT  
Division of Medical Ethics and Humanities  

2003-2004  Instructor of Pediatrics (Clinical Track)  
University of Utah School of Medicine, Salt Lake City, UT  
Divisions of Inpatient Medicine and Medical Ethics  

2003-2004  Adjunct Instructor of Medicine  
University of Utah School of Medicine, Salt Lake City, UT  
Division of Medical Ethics  

Part Time Positions  

2021  Expert Witness  
Dylan Brandt, et al., v. Leslie Rutledge, et al., Civil Action Case No. 4:21CV450-JM  

2019  Consultant  
Sanofi Genzyme, Cambridge, MA  

2018-Present  Consultant  
Center for Conflict Resolution in Healthcare, Memphis, TN  

2017-2020  Consultant  
Amicus Therapeutics, Cranbury, NJ  

2017  Expert Witness  
Robert J. Klickovich, MD, PLLC v. Tristate Arthritis & Rheumatology, PSC, et al.,  
Commonwealth of Kentucky, Boone Circuit Court, Division III, Civil Action No. 16-CI- 01690  

2017  Consultant  
Sarepta Therapeutics, Cambridge, MA  

2014  Consultant  
Genzyme, A Sanofi Company, Cambridge, MA
Editorial Experience

Editorial Board
2020-Present  Pediatrics, Associate Editor for Ethics Rounds and Member of the Executive Editorial Board
2015-2020  Journal of Clinical Ethics
2009-2020  Journal of Medical Humanities

Guest Academic Editor
2017  PLOS|ONE


SCHOLASTIC AND PROFESSIONAL HONORS

2021  Hidden Gem Award, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH
2019  Presidential Citation, American Society for Bioethics and Humanities, Chicago, IL
2016  Laura Mirkinson, MD, FAAP Lecturer, Section on Hospital Medicine, American Academy of Pediatrics, Elk Grove Village, IL
2016, 2018  Certificate of Excellence, American Society for Bioethics and Humanities, Glenview, IL
2013, 2016  Senior Resident Division Teaching Award, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH
2012  Role Model, Quality Review Committee, Primary Children’s Medical Center, Salt Lake City, UT
2011  Member, Society for Pediatric Research, The Woodlands, TX
2011, 2020  Presidential Citation Award, American Society for Bioethics and Humanities, Glenview, IL
2009  Role Model, Quality Review Committee, Primary Children’s Medical Center, Salt Lake City, UT
2008  Nominee, Physician of the Year, Primary Children’s Medical Center, Salt Lake City, UT
2005-2006  Fellow, Medical Scholars Program, University of Utah School of Medicine, Salt Lake City, UT
1995-1997  Doctoral Scholar, Crossroads, A Program of Evangelicals for Social Action, Philadelphia PA
1989-1992  Fellow, The Pew Program in Medicine, Arts, and the Social Sciences, University of Chicago, Chicago, IL
ADMINISTRATIVE EXPERIENCE

Administrative Duties

<table>
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<tr>
<td>2019-Present</td>
<td>Chair</td>
<td>Oversight Committee, Cincinnati Fetal Center, Cincinnati, OH</td>
<td></td>
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<tr>
<td>2014-Present</td>
<td>Chair</td>
<td>Ethics Committee, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH</td>
<td></td>
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<tr>
<td>2012-Present</td>
<td>Director</td>
<td>Ethics Center, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH</td>
<td></td>
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<tr>
<td>2012-Present</td>
<td>Chair</td>
<td>Ethics Consultation Subcommittee, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>Co-Chair</td>
<td>Ethics Subcommittee, Work Group for Emergency Mass Critical Care in Pediatrics, Centers for Disease Control and Prevention, Atlanta, GA</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>Chair</td>
<td>Ethics Working Group, H1N1 and Winter Surge, Primary Children’s Medical Center, Salt Lake City, UT</td>
<td></td>
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<tr>
<td>2005-2012</td>
<td>Chair</td>
<td>Ethics Committee, Primary Children’s Medical Center, Salt Lake City, UT</td>
<td></td>
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<tr>
<td>2005-2012</td>
<td>Chair</td>
<td>Ethics Consultation Subcommittee, Primary Children’s Medical Center, Salt Lake City, UT</td>
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<tr>
<td>2003-4</td>
<td>Chair</td>
<td>Clinical Pertinence Committee, Primary Children’s Medical Center, Salt Lake City, UT</td>
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</tbody>
</table>

Professional & Scientific Committees

<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Organization</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>Member</td>
<td>EMCO Capacity Collaboration, Ohio Hospital Association, Columbus, OH</td>
<td></td>
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<tr>
<td>2020-2021</td>
<td>Member</td>
<td>Allocation of Scarce Resources Work Group, Ohio Hospital Association, Columbus, OH</td>
<td></td>
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<tr>
<td>2020-Present</td>
<td>Member</td>
<td>Literature Selection Technical Review Committee, National Library of Medicine, Bethesda, MD</td>
<td></td>
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<tr>
<td>2020</td>
<td>Member</td>
<td>Crisis Standards of Care Workgroup, The Health Collaborative, Cincinnati, OH</td>
<td></td>
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<tr>
<td>2019-Present</td>
<td>Member</td>
<td>Healthcare Ethics Consultant Certification Commission, Oak Park, IL</td>
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<tr>
<td>2019</td>
<td>Member</td>
<td>Expert Panel, Pediatric Oncology End-of-Life Care Quality Markers, Institute for Cancer Outcomes &amp; Survivorship, University of Alabama at Birmingham, Birmingham, AL</td>
<td></td>
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<tr>
<td>2018</td>
<td>Member</td>
<td>Resource Planning and Allocation Team Implementation Task Force, Ohio Department of Health, Columbus, OH</td>
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<tr>
<td>2012-Present</td>
<td>Member</td>
<td>Gaucher Initiative Medical Expert Committee, Project HOPE, Millwood, VA</td>
<td></td>
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<tr>
<td>2009-2014</td>
<td>Member</td>
<td>Clinical Ethics Consultation Affairs Committee, American Society for Bioethics and Humanities, Glenview, IL</td>
<td></td>
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<tr>
<td>2005-2011</td>
<td>Member</td>
<td>Committee on Bioethics, American Academy of Pediatrics, Oak Park, IL</td>
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Data Safety and Monitoring Boards

<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Organization</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-Present</td>
<td>Member</td>
<td>Data and Safety Monitoring Board, Sickle Cell Domestic Trials, National Heart, Lung, and Blood Institute, Bethesda, MD</td>
<td></td>
</tr>
<tr>
<td>2018-Present</td>
<td>Member</td>
<td>Standing Safety Committee for P-188-NF (Carmeseal-MD™) in Duchenne Muscular Dystrophy, Phrixus Pharmaceuticals, Inc., Ann Arbor, MI</td>
<td></td>
</tr>
<tr>
<td>2017-Present</td>
<td>Member</td>
<td>Observational Study Monitoring Board, Sickle Cell Disease Observational Monitoring Board, National Heart, Lung, and Blood Institute, Bethesda, MD</td>
<td></td>
</tr>
<tr>
<td>2016-2018</td>
<td>Member</td>
<td>Observational Study Monitoring Board, Long Term Effects of Hydroxyurea in Children with Sickle Cell Anemia, National Heart, Lung, and Blood Institute, Bethesda, MD</td>
<td></td>
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</tbody>
</table>

Reviewer

<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Organization</th>
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<tbody>
<tr>
<td>2020-Present</td>
<td>Abstract Reviewer</td>
<td>American Society for Bioethics and Humanities Annual Meeting</td>
</tr>
<tr>
<td>2020</td>
<td>Grant Reviewer</td>
<td>The Croatian Science Foundation, Hvatska zaklada za znanost (HRZZ)</td>
</tr>
<tr>
<td>2018</td>
<td>Book Proposal Reviewer</td>
<td>Elsevier</td>
</tr>
</tbody>
</table>
2018-2019  **Category Leader**, Religion, Culture, and Social Sciences, American Society for Bioethics and Humanities Annual Meeting

2017  **Timekeeper**, American Society for Bioethics and Humanities Annual Meeting

2017-Present  **Abstract Reviewer**, Pediatric Academic Societies Annual Meeting

2016-Present  **Workshop Reviewer**, Pediatric Academic Societies Annual Meeting

2016  **Grant Reviewer**, Innovation Research Incentives Scheme, The Netherlands Organisation for Health Research and Development

2016-2017  **Abstract Reviewer**, American Society for Bioethics and Humanities Annual Meeting

2014, 2016  **External Peer Reviewer**, PSI Foundation, Toronto, Ontario, Canada

2014  **Member**, Scientific Committee, International Conference on Clinical Ethics and Consultation

2013  **Abstract Reviewer**, American Society for Bioethics and Humanities Annual Meeting

2013  **Reviewer**, Open Research Area Plus, Agence Nationale de la Research, Deutsche Forschungsgemeinschaft, Economic and Social Research Council, National Science Foundation, and Organization for Scientific Research

2011-2012  **Abstract Reviewer**, Pediatric Academic Societies Annual Meeting

2011-2013  **Workshop Reviewer**, Pediatric Academic Societies Annual Meeting

2011-Present  **Abstract Reviewer**, Pediatric Hospital Medicine Annual Meeting

2011-2012  **Religious Studies Subcommittee Leader**, Program Committee, American Society for Bioethics and Humanities Annual Meeting

2010  **Abstract Reviewer**, American Society for Bioethics and Humanities Annual Meeting

**Other**

2019  **Mentor**, Early Career Advising Program, American Society for Bioethics and Humanities

2018  **Passing Point Determination**, Healthcare Ethics Consultant-Certified Examination, Healthcare Ethics Consultant Certification Commission

2018  **Member**, Examination Committee, Healthcare Ethics Consultant-Certified Examination, Healthcare Ethics Consultant Certification Commission

2018  **Item Writer**, Healthcare Ethics Consultant-Certified Examination, Healthcare Ethics Consultant Certification Commission

**UNIVERSITY COMMUNITY ACTIVITIES**

**Cincinnati Children’s Hospital Medical Center**

2020-Present  **Member**, Faculty Diversity and Inclusion Steering Committee

2020-Present  **Member**, Caregiver Refusal Team

2020-Present  **Member**, COVID-19 Vaccine Allocation Committee

2020-Present  **Member**, Medical Management of COVID-19 Committee

2020  **Member**, Personal Protective Equipment Subcommittee of the COVID-19 Steering Committee

2018-2019  **Member**, Planning Committee, Center for Clinical & Translational Science & Training Research Ethics Conference

2017  **Member**, Root Cause Analysis Team

2017-2020  **Member**, Employee Emergency Fund Review Committee

2016-2017  **Member**, Planning Committee, Center for Clinical & Translational Science & Training Research Ethics Conference

2015-2019  **Member**, Destination Excellence Medical Advisory Committee

2015-Present  **Member**, Disorders of Sexual Development Case Review Committee

2015-2019  **Member**, Destination Excellence Case Review Committee

2014-2018  **Member**, Genomics Review Group, Institutional Review Board

2014-2017  **Member**, Center for Pediatric Genomics Leadership Committee

2013-2017  **Member**, Genetic Testing Subcommittee, Health Network
2013-2016  Member, Schwartz Center Rounds Planning Committee
2013-2014  Member, Genomics Ad Hoc Subcommittee, Board of Directors
2012-Present Member, Cincinnati Fetal Center Oversight Committee
2012-Present Member, Ethics Committee
2012-Present Member, G-23
2012-2016 Member, Integrated Solid Organ Transplant Steering Committee

University of Utah
2009-2012 Member, Consolidated Hearing Committee

University of Utah School of Medicine
2010-2012 Member, Medical Ethics, Humanities, and Cultural Competence Thread Committee
2008-2010 Member, Fourth Year Curriculum Committee

University of Utah Department of Pediatrics
2010-2011 Member, Planning Committee, 25th Annual Biological Basis of Children’s Health Conference, “Sex, Gender, and Sexuality”
2009-2012 Member, Medical Executive Committee
2005-2012 Member, Retention, Promotion, and Tenure Committee
2004-2012 Interviewer, Residency Program
2003-2012 Member, Education Committee

Intermountain Healthcare
2009-2012 Member, System-Wide Bioethics Resource Service
2009-2012 Member, Pediatric Guidance Council

Primary Children’s Medical Center
2012-2012 Member, Shared Accountability Organization Steering Committee
2009 Member, H1N1 and Winter Surge Executive Planning Team
2005-2010 Member, Continuing Medical Education Committee
2005-2010 Member, Grand Rounds Planning Committee
2003-2012 Member, Ethics Committee

ACTIVE MEMBERSHIPS IN PROFESSIONAL SOCIETIES
2012-Present Association of Bioethics Program Directors
2011-Present Society for Pediatric Research
2000-Present American Academy of Pediatrics
1999-Present American Society of Bioethics and Humanities

FUNDING
Past Grants
Percent Effort: 9%
National Human Genome Research Institute
Grant Number: 1U01 HG008666-01
Role: Investigator
2015-2016  “Ethics of Informed Consent for Youth in Foster Care”  
Direct Costs: $10,000  
Ethics Grant, Center for Clinical and Translational Science and Training  
University of Cincinnati Academic Health Center  
Role: Co-Investigator

Direct Costs: $11,640  
Center for Environmental Genetics  
University of Cincinnati College of Medicine  
Role: Investigator

Direct Costs: $4,434  
Ethics Grant, Center for Clinical and Translational Science and Training, University of Cincinnati Academic Health Center  
Role: Principal Investigator

Percent Effort: 5%  
National Human Genome Research Institute  
Grant Number: 3U01HG006828-0251  
Role: Investigator

2004-2005  "Potential Patients' Knowledge, Attitudes, and Beliefs Regarding Participating in Medical Education: Can They be Interpreted in Terms of Presumed Consent?"  
Direct Costs: $8,000  
Interdisciplinary Research in Applied Ethics and Human Values, University Research Committee, University of Utah  
Role: Principal Investigator

TEACHING RESPONSIBILITIES/ASSIGNMENTS
Course and Curriculum Development
2003-2012  Medical Ethics, Internal Medicine 7560, University of Utah School of Medicine, Taught 1 time per year, Taken by medical students, Enrollment 100

Course Lectures
2018-Present  Biomedical Ethics, “Conscientious Objection in Healthcare” and “Ethical Issues in the Care of Transgender Adolescents,” MEDS 4035 & MEDS 4036, University of Cincinnati College of Medicine, Taught 1 time per year, Taken by senior undergraduate students, Enrollment 52.


2014-Present  Physicians and Society, “Transfusion and the Jehovah’s Witness Faith,” “Obesity Management: Ethics, Policy, and Physician Implicit Bias,” “Embryos and Ethics: The Ethics of Designer Babies,” “Ethics and Genetic Testing,” and “Ethics and Direct to Consumer Genetic Testing,” 26950112 and 26950116, University of Cincinnati School of Medicine, Taken by first and second year medical students, Enrollment 100.

2014-Present  Ethical Issues in Health Care, “Ethical Issues in Managing Drug Shortages: The Macro,
Meso, and Micro Levels,” HESA 583, College of Social Sciences, Health, and Education Health Services Administration, Xavier University, Taken by health services administration students, Enrollment 25.

2009
Physical Diagnosis II, Internal Medicine 7160, University of Utah School of Medicine, Taught 1 time per year, Taken by medical students, Enrollment 100

2003-2012
Medical Ethics, Internal Medicine 7560, University of Utah School of Medicine, Taught 1 time per year, Taken by fourth year medical students, Enrollment 100

Small Group Teaching
2018-Present
Ethics in Research, GNTD 7003-001, University of Cincinnati School of Medicine, Taught 1 time per year, Taken by fellows, MS, and PhD students, Enrollment 110.

2007
Physical Diagnosis I, Internal Medicine 7150, University of Utah School of Medicine, Taught 1 time per year, Taken by medical students, Enrollment 100

2003-2012
Medical Ethics, Internal Medicine 7560, University of Utah School of Medicine, Taught 1 time per year, Taken by fourth medical students, Enrollment 100

2003
Pediatric Organ System, Pediatrics 7020, University of Utah School of Medicine, Taught 1 time per year, Taken by medical students, Enrollment 100

Graduate Student Committees
2018-Present
Chair, Scholarship Oversight Committee, William Sveen, Pediatric Critical Care Fellowship, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH

2018-2020
Member, Scholarship Oversight Committee, Anne Heueman, Genetic Counseling, University of Cincinnati, Cincinnati, OH

2017-2019
Chair, Scholarship Oversight Committee, Bryana Rivers, Genetic Counseling, University of Cincinnati, Cincinnati, OH

2013-2015
Mentor, Sophia Hufnagel, Combined Pediatrics/Genetics Residency, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH

2013-2015
Co-Chair, Scholarship Oversight Committee, Andrea Murad, Genetic Counseling, University of Cincinnati, Cincinnati, OH

2013-2014
Member, Scholarship Oversight Committee, Grace Tran, Genetic Counseling, University of Cincinnati, Cincinnati, OH

2011-2012
Chair, Scholarship Oversight Committee, Kevin E. Nelson, MD, PhD, Pediatric Inpatient Medicine Fellowship, University of Utah, Salt Lake City, UT

Continuing Education Lectures
2008
Choosing Healthplans All Together (CHAT) Exercise Facilitator, 18th Annual Intermountain Medical Ethics Conference, “Setting Priorities for Healthcare in Utah: What Choices are We Ready to Make?,” Salt Lake City, Utah, October 3.

2007
Speaker, Infant Medical Surgical Unit, Primary Children’s Medical Center, “Withholding and Withdrawing Artificial Nutrition and Hydration: Can It Be Consistent With Care?,” Salt Lake City, Utah, September 6.

2007
Faculty Scholar-in Residence, Summer Seminar, “The Role of Religion in Bioethics,” Utah Valley State College, Orem, Utah, May 1.

2006
Workshop Leader, Faculty Education Retreat, “Publications and Publishing in Medical Education,” University of Utah School of Medicine, Salt Lake City, Utah, September 15.

2006
Other Educational Activities
2008 Instructor, Contemporary Ethical Issues in Medicine and Medical Research, Osher Lifelong Learning Institute, University of Utah, “Religion and Bioethics: Religiously Based Demands for and Refusals of Treatment,” Salt Lake City, Utah, February 7.

PEER-REVIEWED JOURNAL ARTICLES


NON PEER-REVIEWED JOURNAL ARTICLES

REVIEW ARTICLES

BOOKS

BOOK CHAPTERS


OTHER
Policy Statements and Technical Reports


**Ethics Rounds**


**Continuing Medical Education**


**Editorials**


**Commentaries**


Letters

Case Reports

Book Reviews


**Newspaper Articles**


**UNPUBLISHED POSTER PRESENTATIONS**


**ORAL PRESENTATIONS**

**Keynote/Plenary Lectures**

**International**


National

5. 2016, Invited Speaker, American Academy of Pediatrics National Conference & Exhibition, Joint Program: Section on Hospital Medicine and Section on Bioethics, “Resource Allocation: Do We Spend Money to Save One Patient with Ebola or Over a 1,000?” San Francisco, California, October 23.
Regional/Local


3. 2019, *Speaker*, Evening Ethics, Program in Medical Ethics and Humanities, University of Utah School of Medicine, “Patients, Parents, and Professionals: Ethical Issues in the Treatment of Trans Adolescents,” Salt Lake City, Utah, December 4.


22. 2011, Speaker, 15th Annual Conference, Utah Chapter of the National Association of Pediatric Nurse Practitioners, “Ethical Issues in Pediatric Practice,” Salt Lake City, Utah, September 22.
23. 2011, Speaker, Code Silver! Active Shooter in the Hospital, Utah Hospitals & Health Systems Association, Salt Lake City, Utah, March 21.

Meeting Presentations

International

National
1. 2021, Panelist, Pediatric Endocrine Society Annual Meeting, Difference of Sex Development Special Interest Group, Virtual Conference, April 29.
2. 2020, Speaker, American Society for Bioethics and Humanities Annual Meeting, “Is This Child Dead? Controversies Regarding the Neurological Criteria for Death,” Virtual Conference, October 17.


19. 2011, Speaker, American Society for Bioethics and Humanities Annual Meeting, “The Intersection of Policy, Medicine, and Ethics during a Public Health Disaster: Special Considerations for Children and Families,” Minneapolis, Minnesota, October 13.


Invited/Visiting Professor Presentations
2. 2010, Visiting Professor, Program in Bioethics and Humanities and Department of Pediatrics, “What to Do When Parents Want Everything Done: ‘Futility’ and Ethics Facilitation,” University of Iowa Carver College of Medicine, Iowa City, September 10.

Grand Round Presentations
1. 2019, David Green Lectureship, “Establishing Goals of Care and Ethically Limiting Treatment,” Primary Children’s Hospital, Salt Lake City, Utah, December 5.
4. 2018, Bioethics, “Reversibility, Fertility, and Conflict: Ethical Issues in the Care of Transgender and Gender Nonconforming Children and Adolescents,” Cleveland Clinic, Cleveland, Ohio, April 9.
5. 2017, Heart Institute, “Have you ever thought about what you would want—if god forbid—you became sicker?: Talking with adult patients about advance directives,” Cincinnati Children’s Hospital Medical Center, Cincinnati, Ohio, October 16.
6. 2017, Pediatrics, “Respectful, Effective Treatment of Jehovah’s Witnesses,” with Judith R. Ragsdale, PhD, MDiv and David Morales, MD, Cincinnati Children’s Hospital Medical Center, Cincinnati, Ohio, March 14.
11. 2013, Heart Institute, “No Not Months. Twenty-Two Years-Old: Transiting Patients to an Adult Model of Care,” Cincinnati Children’s Hospital Medical Center, Cincinnati, Ohio, October 21.
12. 2013, Division of Neonatology, “This Premature Infant Has a BRCA1 Mutation?: Ethical Issues in Clinical Whole Exome Sequencing for Neonatologists,” Cincinnati Children’s Hospital Medical Center, Cincinnati, Ohio, October 11.

13. 2013, Department of Pediatrics, “Adults are Not Large Children: Ethical Issues in Caring for Adults in Children’s Hospitals,” Cincinnati Children’s Hospital Medical Center, Cincinnati, Ohio, February 26.

14. 2012, “Mandate or Moratorium?: Persisting Ethical Controversies in Donation after Circulatory Death,” Cedars-Sinai Medical Center, Los Angeles, California, May 16.

15. 2011, Division of Pediatric Neurology Friday Lecture Series, “Inducing or Treating ‘Seizures’ with Placebos: Is It Ever Ethical?,” University of Utah, Salt Lake City, Utah, October 7.

16. 2011, Department of Surgery, “DNR Orders in the OR and other Ethical Issues in Pediatric Surgery: Case Discussions,” Primary Children’s Medical Center, Salt Lake City, Utah, October 3.

17. 2009, Department of Pediatrics, “What to Do When Parents Want Everything Done: ‘Futility’ and Bioethical Mediation,” Primary Children’s Medical Center, Salt Lake City, Utah, September 17.

18. 2008, Division of Pulmonology and Critical Care, “Futility: May Clinicians Ever Unilaterally Withhold or Withdraw Medical Treatment?” Utah Valley Regional Medical Center, Provo, Utah, April 17.


**Outreach Presentations**


2. 2019, **Speaker**, Adult Forum, Indian Hill Church, “Medical Ethics,” Indian Hill, Ohio, March 24.


