The Courts' Role in Evaluating Medical Evidence in Gender-Affirming Care Ban Litigation: Lessons from *L.W. v. Skrmetti*

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I. INTRODUCTION

This Article analyzes the role that courts play in evaluating medical evidence in cases challenging bans on gender-affirming care for minors.

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Gender-affirming care is medically necessary, evidence-based care that improves the physical and mental health of transgender and gender diverse people.[1] Gender-affirming care is used to treat gender dysphoria, which is "a serious medical condition characterized by clinically significant distress caused by incongruence between a person's gender identity and the sex they were designated at birth."[2] Bills targeting access to gender-affirming care have proliferated since 2018, with 185 bills targeting gender-affirming care introduced in 2023 alone.[3] Litigation has been filed challenging bans on gender-affirming care in seventeen states.[4] Central to these lawsuits is the debate over whether gender-affirming care is dangerous and therefore should be banned, as these states allege, or whether it is safe and medically necessary, as plaintiffs allege.[5] Plaintiffs generally allege that these bans violate the Equal Protection and Due Process clauses of the Fourteenth Amendment[6] and that the bans do not survive heightened scrutiny because gender-affirming care is safe and effective, and hence total bans on such care are not narrowly tailored.[7]

1. Robert Mills, *AMA Reinforces Opposition to Restrictions on Transgender Medical Care,* AM. MED. ASS'N (June 15, 2021), https://perma.cc/AN4L-3Q7J.

2. Complaint for Declaratory and Injunctive Relief at 2, L.W. v. Skrmetti, No. 3:23-cv-00376 (M.D. Tenn. June 28, 2023).

3. *2024 Anti-Trans Bill Tracker*, TRANS LEGIS. TRACKER, https://perma.cc/G9WK-GSVU (last visited Apr. 8, 2024).

4. Eknes-Tucker v. Governor of Alabama, 80 F.4th 1205 (11th Cir. Aug. 21, 2023); Brandt v. Rutledge, 677 F. Supp. 3d 877 (E.D. Ark. 2023); Doe v. Ladapo, 676 F. Supp. 3d 1205 (N.D. Fla. 2023); Koe v. Noggle, 688 F. Supp. 3d 1321 (N.D. Ga. 2023); Poe v. Labrador, 709 F. Supp. 3d 1169 (D. Idaho 2023); K.C. v. Med. Licensing Bd. of Ind., 677 F. Supp. 3d 802 (S.D. Ind. 2023); Doe 1 v. Thornbury, 75 F.4th 655 (6th Cir. 2023); Soe v. La. State Bd. of Med. Exam'r (La. Dist. Ct. filed Jan. 8, 2024); Noe v. Parson, No. 23AC-CC04530 (Cole Cnty. Cir. Ct. Mo. filed July 25, 2023); Van Garderen v. Montana, No. DV-23-541 (Dist. Ct. Missoula Cnty. Mont. Sept. 27, 2023) (order granting preliminary injunction); Voe v. Mansfield, No. 1:23-cv-00864–(M.D.N.C. filed Oct. 11, 2023); T.D. v. Wrigley, No. 08-2023-CV-02189 (S. Cent Dist. Ct. N.D. filed Sept. 14, 2023); Planned Parenthood of the Heartland v. Hilgers, No. CI 23-1820 (Dist. Ct. Lancaster Cnty. Neb. Aug. 11, 2023) (order denying temporary injunction and summary judgment); Moe v. Yost, No. 24-cv-002481 (Ohio Ct. Com. Pl., Franklin Cnty. filed Mar. 26, 2024); Poe v. Drummond, 697 F. Supp. 3d 1238 (N.D. Okla. 2023); L.W. v. Skrmetti, 83 F.4th 460 (6th Cir. 2023); Loe v. Texas, No. D-1-GN-23-003616 (Travis Cnty. Dist. Ct. Tex. Aug. 25, 2023) (order granting temporary injunction); Abbott v. Doe, 691 S.W.3d 55 (Tex. App. 2024); Muth v. Voe, 691 S.W.3d 93 (Tex. App. 2024).

5. William Melhado, *Legal Fight over Texas Law Banning Transgender Health Care for Youth Centers on Whether Treatments Help or Hurt*, TEX. TRIB. (Aug. 15, 2023), https://perma.cc/G9H7-KA5K.

6. Some cases are based on state law but sue under the state law equivalent to these federal constitutional rights. *See, e.g.*, Loe v. Texas, No. D-1-GN-23-003616 (Travis Cnty. Dist. Ct. Tex. Aug. 25, 2023).

7. *See, e.g. L.W.*, 83 F.4th at 460.

States generally respond that gender-affirming care is dangerous, and hence such care is at least rationally related to a state interest in protecting minors, if not narrowly tailored to a compelling interest in protecting minors.[8] Medical evidence has hence played an enormous role in the briefing and outcome of these cases as it is central to determining the extent to which such bans are or are not tailored to state interests.

This Article analyzes a key case challenging a ban on gender-affirming care, *L.W. v. Skrmetti*, which the Supreme Court will issue a decision on in the 2024-2025 term in *United States v. Skrmetti*.[9] It focuses on how the district and appellate court assessed the medical evidence and approached the Tennessee legislature's allegation of medical uncertainty in the field of gender-affirming care for minors more generally. I argue that the Sixth Circuit in *L.W. v. Skrmetti* made medical judgments that are beyond the competency of an appellate court and that questions about medical evidence, like all questions of fact, should be decided by district courts and reviewed by appellate courts under the "clearly erroneous" standard.

Section II.A of this Article examines the existing medical evidence on gender-affirming care, looking to World Professional Association of Transgender Health (WPATH) Standards of Care[10] as well as to what major medical associations have said on the issue.[11] Section II.B summarizes what the alleged risks of gender-affirming care for minors. Section III.A of this Article provides an overview of the role district courts play in analyzing evidence and Section III.B discusses how courts in other contexts resolve issues of medical uncertainty. Section IIII.A discussed why *L.W. v. Skrmetti* serves as an appropriate case study of the important role district courts play in cases challenging bans on gender-affirming

8. *Id.*

9. *Id.*; *U.S. Supreme Court Will Hear Challenge from United States, Families, and Doctors Against Transgender Health Care Ban*, ACLU (June 24, 2024), https://perma.cc/S69U-Y5A2.

10. Eli Coleman et al., *Standards of Care for the Health of Transgender and Gender Diverse People, Version 8*, 23 INT. J. TRANSGENDER HEALTH, S1, S1-S258 (2022) [hereinafter *WPATH Standards of Care*].

11. The Endocrine Society also publishes a set of guidelines for endocrine treatment of gender dysphoria, which largely overlap with the guidelines created by WPATH. *See* Wylie Hembree et al., *Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society* Clinical Practice Guideline*, 102(11) J. CLINICAL ENDOCRINOLOGY & METABOLISM, 3869, 3869-3903 (2017). WPATH co-sponsors the Endocrine Society Guidelines. *Id.* For purposes of brevity, this Article focuses on the WPATH Guidelines, but it should be noted courts have looked to both WPATH and Endocrine Society guidelines in examining the recommended treatment for gender dysphoria in minors. *See* L.W. v. Skrmetti, 679 F. Supp. 3d 668 (M.D. Tenn. 2023), *rev'd and remanded*, 83 F.4th 460 (6th Cir. 2023).

care for minors. Section IV.B.1 discusses the legislative findings of the Tennessee Legislature and Sections IV.B.2 and IV.B.3 compare the approaches made by the Middle District of Tennessee and the Sixth Circuit in *L.W. v. Skrmetti* in analyzing evidence related to medical uncertainty. Section IV.C argues that the Sixth Circuit erred in *L.W. v. Skrmetti* by giving more deference to the Tennessee legislature's findings than to the district court's findings and by not reviewing the district court's findings of fact using the clearly erroneous standard. I conclude that the Sixth Circuit overstepped its authority by overturning findings of fact that were not clearly erroneous in *L.W. v. Skrmetti*, and that courts retain an independent duty to determine whether scientific or medical uncertainty truly does exist when states claim such uncertainty as the basis for regulation.

II. MEDICAL EVIDENCE ON GENDER-AFFIRMING CARE FOR MINORS

Any discussion of gender-affirming care bans necessarily requires a review of the medical evidence supporting such care. As discussed below, gender-affirming care is safe, effective, and evidence-based care that is supported by every major medical organization and by peer-reviewed medical research. The standards of care for gender-affirming care recommend different forms of care based on the stage of development of the adolescent receiving the care and recommend that providers work closely with multidisciplinary teams, parents, and the minors themselves to ensure any transgender minor receiving care is informed of any risks of such care and remains healthy. Plaintiffs cite this strong evidence in support of the safety and efficacy of gender-affirming care to challenge bans on gender-affirming care for minors. Conservative lawmakers, in contrast, argue that gender-affirming care for minors must be banned because of the alleged negative effects of gender-affirming care on fertility, the potential regret of minors who pursue this care, the side effects of care on other aspects of health, and the alleged disagreement within the medical community about the safety and efficacy of gender-affirming care. Ultimately, these alleged drawbacks to gender-affirming care are not supported by medical evidence.

A. Standard of Care for Gender Dysphoria

Legislation banning gender-affirming care for minors typically defines the banned treatments broadly. Tennessee's SB1, the law at issue in *L.W. v. Skrmetti*, prohibits health care providers from performing or offering to perform any medical procedures on a minor "if the

performance or administration of the procedure is for the purpose of" either "enabling a minor to identify with, or live as, a purported identity inconsistent with the minor's sex" or "treating purported discomfort or distress from a discordance between the minor's sex and asserted identity."[12] "Medical procedure" is defined as either "surgically removing, modifying, altering, or entering into tissues, cavities, or organs of a human being" or "prescribing, administering, or dispensing any puberty blocker or hormone to a human being."[13] SB1 permits administration of medical procedures if the purpose of the procedures is to treat a congenital defect or precocious puberty, but such procedures are banned if meant to affirm a minor transgender patient's gender.[14]

The WPATH Standards of Care Version 8 [hereinafter "WPATH Standards"] defines gender-affirming care as "medically necessary gender-affirming interventions" which include but are not limited to:

> hysterectomy +/- bilateral salpingo-oophorectomy; bilateral mastectomy, chest reconstruction or feminizing mammoplasty, nipple resizing or placement of breast prostheses; genital reconstruction, for example, phalloplasty and metoidioplasty, scrotoplasty, and penile and testicular prostheses, penectomy, orchiectomy, vaginoplasty, and vulvoplasty; hair removal from the face, body, and genital areas for gender affirmation or as part of a preoperative preparation process; gender-affirming facial surgery and body contouring; voice therapy and/or surgery; as well as puberty blocking medication and gender-affirming hormones; counseling or psychotherapeutic treatment as appropriate for the patient and based on a review of the patient's individual circumstances and needs.[15]

The WPATH Standards recommend different forms of care depending on the stage of development of the adolescent receiving the care. For prepubescent children, the WPATH Standards do not recommend any medical interventions.[16] Children who have not yet started puberty may pursue social transition, which might include choosing a new name, new pronouns, or changing how they dress or style their hair.[17]

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12. Tenn. Code Ann. § 68-33-103(a)(1)(2) (2023).
13. Tenn. Code Ann. § 68-33-102(5)(A) & (5)(B) (2023).
14. Tenn. Code Ann. § 68-33-103 (b)(1)(A); *L.W.*, 679 F. Supp. 3d at 677.
15. *WPATH Standards of Care*, *supra* note 10, at S18.
16. *Id.* at S69.
17. Kiara Alfonseca, *Transgender Youth Care Misconceptions Lead Physicians, Researchers to Set the Record Straight*, ABC NEWS (Feb. 9, 2024), https://perma.cc/2RXN-Y6HV.

For adolescents who have begun puberty, gender-affirming generally falls into two categories: puberty blockers and hormone therapy.[18] Puberty blockers "pause" puberty and the resulting development of secondary sex characteristics, such as the growth of facial hair or breasts.[19] The WPATH Standards recommend that puberty blockers only be prescribed once the transgender child has first exhibited any of the physical changes of puberty—typically at age 11 for people assigned female at birth (AFAB) and age 12 for people assigned male at birth (AMAB).[20] Once puberty blockers are stopped, puberty resumes with little to no proven long-term side effects.[21] Gender-affirming hormone therapy includes use of masculinizing hormones for those assigned female at birth, and feminizing hormones for those assigned male at birth.[22] Although the past versions of the WPATH Standards required adolescents to be at least age 16 before being prescribed hormone therapy, all age restrictions have since been removed.[23]

The WPATH Standards provide many safeguards to ensure minors receiving gender-affirming care have a persistent gender identity, are treated for any underlying mental health conditions, have the consent of their parents, and are informed of any potential adverse risks of such care. Adolescents must have a marked and sustained experience of gender diversity/incongruence over time and they must show the emotional and cognitive maturity required to provide informed assent before pursuing gender-affirming care.[24] The WPATH Standards recommend that health care professionals working with gender diverse adolescents undertake "a comprehensive biopsychosocial assessment of adolescents who present with gender identity-related concerns and seek medical/surgical transition-related care."[25] The standards also recommend that health care professionals consult professionals in relevant disciplines, including "adolescent medicine/primary care, endocrinology, psychology, [and] psychiatry" before adolescents may begin gender-affirming medical or surgical treatment.[26] They must also involve parents or guardians

18. Though gender-affirming surgery is no longer explicitly disallowed for minors under the Standards of Care, it is exceedingly rare and only performed on a case-by-case basis. *Id.*; *WPATH Standards of Care*, *supra* note 10, at S66.

19. Alfonseca, *supra* note 17; *WPATH Standards of Care*, *supra* note 10, at S112.

20. *WPATH Standards of Care*, *supra* note 10, at S64.

21. Alfonseca, *supra* note 17.

22. *Id.*

23. *WPATH Standards of Care*, *supra* note 10, at S65.

24. *Id.* at S48.

25. *Id.*

26. *Id.* at S56.

throughout the assessment and treatment process, unless their involvement is determined to be harmful to the adolescent or not feasible.[27] Health care professionals are also encouraged to inform adolescents of the potential reproductive effects of hormone therapy.[28]

Notably, all major medical organizations agree that gender-affirming care is safe and effective for minors.[29] There is substantial scientific evidence to back up these assertions. Puberty blockers are fully reversible and have been shown to reduce the distress associated with the onset of puberty for transgender adolescents.[30] The only short-term adverse side effect of puberty blockers recognized by the WPATH Standards is hypertension.[31] The long-term effect of using puberty blockers on bone mass has not been studied sufficiently, but data collection is ongoing.[32] The use of puberty blockers for transgender youth is off-label (the on-label use is for adolescents with precocious puberty), but studies on transgender youth prescribed puberty blockers in similar doses and fashions to those prescribed to cisgender youth with precocious puberty, demonstrating that this off-label use is effective in delaying the

27. *Id.* at S48.

28. *Id.*

29. *See, e.g.,* Mills, *supra* note 1; Alyson Sulasi Wyckoff, *AAP Continues to Support Care of Transgender Youths as More States Push Restrictions*, AM. ACAD. PEDIATRICS (Jan. 6, 2022), https://perma.cc/3Z8S-7YBA. In 2023, the AMA House of Delegates passed a resolution to protect access to evidence-based gender-affirming care. *AMA Strengthens Its Policy on Protecting Access to Gender-Affirming Care*, ENDOCRINE SOC'Y (June 12, 2023), https://perma.cc/QW25-TKBP. The resolution was introduced by the Endocrine Society and co-sponsored by the American Academy of Pediatrics, the American College of Obstetricians and Gynecologists, the American Urological Association, the American Society for Reproductive Medicine, the American College of Physicians, the American Association of Clinical Endocrinology, GLMA: Health Professionals Advancing LGBTQ+ Equality, and AMA's Medical Student Section. *Id.*

30. *WPATH Standards of Care*, *supra* note 10, at S112; Jack Turban et al., *Pubertal Suppression for Transgender Youth and Risk of Suicidal Ideation*, 145 PEDIATRICS (2020) https://doi.org/10.1542/peds.2019-1725.

31. *WPATH Standards of Care*, *supra* note 10, at S113; Henriette Delemarre-van de Waal & Peggy Cohen-Kettenis, *Clinical Management of Gender Identity Disorder in Adolescents: A Protocol on Psychological and Paediatric Endocrinology Aspects*, 155(Supp. 1) EUR. J. ENDOCRINOLOGY S131-S137 (2006), https://doi.org/10.1530/eje.1.02231; Daniel Klink et al., *Arterial Hypertension as a Complication of Triptorelin Treatment in Adolescents with Gender Dysphoria*, 2(1) ENDOCRINOLOGY & METABOLISM INT'L J. 36-38 (2015), https://doi.org/10.15406/emij.2015.02.00008.

32. *WPATH Standards of Care*, *supra* note 10, at S114; Daniel Klink et al., *Bone Mass in Young Adulthood Following Gonadotropin-Releasing Hormone Analog Treatment and Cross-Sex Hormone Treatment in Adolescents with Gender Dysphoria*, 100(2) J. CLINICAL ENDOCRINOLOGY & METABOLISM E270-E275 (2015), https://doi.org/10.1210/jc.2014-2439; Maartje Klaver et al., *Hormonal Treatment and Cardiovascular Risk Profile in Transgender Adolescents*, 145(3) PEDIATRICS 1-9 (2020), https://doi.org/10.1542/peds.2019-0741.

onset of puberty.[33] Prolonged use of puberty blockers as monotherapy (without addition of sex steroid hormones) may pose a significant risk to skeletal health, which is why the WPATH Standards recommend that a multidisciplinary team and an ongoing clinical relationship with the adolescent and the family should be maintained when initiating puberty blockers.[34] Effects of puberty blockers on bone density generally dissipate once someone either stops taking them or begins hormone therapy.[35]

In addition to being safe, gender-affirming care for minors can substantially improve the mental health of transgender youth. A 2022 study published in the *Journal of Adolescent Health* found that access to hormone therapy reduces the risk of suicidal ideation, depression, and suicide attempts in transgender youth.[36] Menstrual suppression treatment such as birth control pills, IUDs, or medroxyprogesterone injections is recommended for transgender adolescents assigned female at birth who experience distress related to their period.[37] The Standards recommend that adolescents only begin hormone therapy after a team of medical and mental health professionals has confirmed the persistence of gender dysphoria or gender incongruence and has established that the adolescent has the mental capacity to give informed assent, along with the informed consent of their parents.[38] Additionally, medical providers are encouraged to monitor the physical and mental effects of hormone therapy every three months during the first year of treatment and once to twice a year once an adult maintenance dose of hormones is attained.[39] Providers are explicitly encouraged to monitor patients for any adverse effects of hormone therapy.[40] Hence, while the WPATH Standards recognize that there may be some risks to gender-affirming care, the risks are generally comparable

33. *WPATH Standards of Care*, *supra* note 10, at S114; Klink et al., *supra* note 32.

34. *WPATH Standards of Care*, *supra* note 10, at S114; Stephen Rosenthal, *Challenges in the Care of Transgender Youth: An Endocrinologist's View*, 17 NATURE REVS. ENDOCRINOLOGY 581-91 (2021), https://doi.org/10.1038/s41574-021-00535-9.

35. Giulia Giacomelli & Maria C. Meriggiola, *Bone Health in Transgender People: A Narrative Review*, 13 THERAPEUTIC ADVANCES IN ENDOCRINOLOGY & METABOLISM 1-15 (2022).

36. Amy Green et al., *Association of Gender-Affirming Hormone Therapy with Depression, Thoughts of Suicide, and Attempted Suicide Among Transgender and Nonbinary Youth*, 70 J. ADOLESCENT HEALTH 643, 643-49 (2022).

37. *WPATH Standards of Care*, *supra* note 10, at S116; Shashwati Pradhan & Veronica Gomez-Lobo, *Hormonal Contraceptives, Intrauterine Devices, Gonadotropin-Releasing Hormone Analogues and Testosterone: Menstrual Suppression in Special Adolescent Populations*, 32(5S) J. PEDIATRIC & ADOLESCENT GYNECOLOGY S23-S29 (2019), https://doi.org/10.1016/j.jpag.2019.04.007.

38. *WPATH Standards of Care*, *supra* note 10, at S116.

39. *Id.* at S117.

40. *Id.*

to pediatric care for cisgender children, and doctors receive informed consent from parents and informed assent from patients before providing such care. Plaintiffs challenging bans on gender-affirming care cite to the strong medical evidence just described to demonstrate that gender-affirming care for minors is evidence-based, safe, and effective. Conservative lawmakers and attorneys general, in contrast, argue that gender-affirming care for minors is unsafe and poses dangerous side effects, often relying on discredited studies and fringe medical organizations to support their claims.

B. Alleged Risks of Gender-Affirming Care for Minors

Conservative lawmakers pushing to ban gender-affirming care for minors focus on four alleged risks to youth gender-affirming care: an adverse effect on fertility, the potential for regret, negative side effects of care on other aspects of health, and alleged disagreement within the medical community.[41] Temporary use of puberty blockers has demonstrated no adverse effects on fertility, although the long-term effects of puberty blockers are still being studied.[42] The WPATH Standards do recognize that hormone therapy may have adverse effects on future fertility, which is why providers are encouraged to discuss potential effects of hormone treatment on fertility and fertility preservation options with their patients.[43] Overall, studies on the effects of hormone therapy on fertility are inconclusive—neither fertility nor infertility is guaranteed.[44]

Anti-transgender lawmakers also suggest that transgender adolescents are simply too young to make decisions about pursuing treatment that may have long-term effects on their bodies and that they will one day come to regret their decision to transition.[45] While there are a few high-profile examples of people coming to regret their decision to pursue gender-affirming care and choosing to "detransition," such cases are in reality exceedingly rare.[46] A 2021 study found the rate of regret for

41. Alfonseca, *supra* note 17.

42. *Id.*

43. *WPATH Standards of Care*, *supra* note 10, at S118.

44. *Id.*; Philip Cheng et al., *Fertility Concerns of the Transgender Patient*, 8(3) TRANSLATIONAL ANDROLOGY & UROLOGY 209, 209-218 (2019); Isabelle Stuyver et al., *Ten Years of Fertility Treatment Experience and Reproductive Options in Transgender Men*, 22(3) INT'L J. TRANSGENDER HEALTH 294, 294-303 (2020).

45. Alfonseca, *supra* note 17.

46. Sally Lockwood, *'Hundreds' of Young Trans People Seeking Help to Return to Original Sex*, SKY NEWS (Oct. 5, 2019), https://perma.cc/BP77-KNJ5; Liam Knox, *Media's*

gender-affirming surgeries to be about one percent.[47] The 2015 U.S. Transgender Survey, the most recent large study available of transgender people that asks about detransitioning in the United States, found that only 0.4% of nearly 28,000 respondents reported detransitioning.[48] Of adults who do report having detransitioned at some point, the vast majority reported that they detransitioned due to external pressures, such as pressure from family, pressure from an employer, and loss of health insurance coverage for gender-affirming hormones—not due to a feeling of regret.[49] Similarly, the 2022 U.S. Transgender Survey Early Insights Report found that less than one percent of respondents who were currently receiving hormone treatment reported that receiving hormones for their gender identity/transition made them "a little less" or "a lot less" satisfied with their lives after receiving hormones.[50] Of the respondents who had at least one form of surgery for their gender identity/transition, less than one percent were "a little less satisfied," and one percent were "a lot less satisfied" with their life.[51] Hence, rates of regret after pursuing gender-affirming care are exceedingly low.

Advocates for gender-affirming care bans also allege that gender-affirming care can have dangerous side effects. Some focus on the alleged

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'Detransition' Narrative Is Fueling Misconceptions, Trans Advocates Say, NBC NEWS (Dec. 19, 2019), https://perma.cc/K8E2-J78R.

47. Valeria P. Bustos et al., *Regret After Gender-Affirmation Surgery: A Systematic Review and Meta-Analysis of Prevalence*, 9(3) PLASTIC & RECONSTRUCTIVE SURGERY—GLOB. 1, 1-12 (2021). There are no studies currently available on the regret rate of trans minors alone who have received gender-affirming care; the studies available cited in this Article surveyed both minors and adults. This rate of regret is far lower than those for other common mandatory and elective surgeries; for example, the rate of regret for breast reconstruction after mastectomy is about forty-seven percent. Joanne Sheehan et al., *Regret Associated with the Decision for Breast Reconstruction: The Association of Negative Body Image, Distress and Surgery Characteristics with Decision Regret*, 23(2) PSYCHOLOGY & HEALTH 207, 207-19 (2008). The rate of regret for prostate surgery has been found to be nineteen percent. Florian R. Schroeck et al., *Satisfaction and Regret After Open Retropubic or Robot-Assisted Laparoscopic Radical Prostatectomy*, 54(4) EUR. UROLOGY 785, 785-93 (2008). The rate of satisfaction for dermal fillers is only ninety-two percent, meaning that eight percent of people are neutral/not satisfied, a rate of regret eight times that of gender-affirming surgery. Philippe Kestemont et al., *Sustained Efficacy and High Patient Satisfaction After Cheek Enhancement with a New Hyaluronic Acid Dermal Filler*, 11(1) J. DRUGS IN DERMATOLOGY 9, 9-16 (2012).

48. Knox, *supra* note 46.

49. Jack L. Turban et al., *Factors Leading to 'Detransition' Among Transgender and Gender Diverse People in the United States: A Mixed-Methods Analysis*, 8(4) LGBT HEALTH, 273, 273-80 (2021); Siena Hohne, *How to Win the War on 100 Fronts: What Caused the Rise of Anti-Trans Bills and How to Defeat Them*, 25(1) GEO. J. GENDER & L. 1, 13 (2023).

50. SANDY E. JAMES ET AL., NAT'L CTR. FOR TRANS EQUAL., EARLY INSIGHTS: A REPORT OF THE 2022 U.S. TRANSGENDER SURVEY 18 (2024).

51. *Id.*

impact of gender-affirming care on bone density.[52] As discussed above, while puberty blockers do have a modest effect on bone density while a patient is actively taking them, once patients stop taking blockers and either begin endogenous puberty or begin taking hormones, bone mineral density typically restores.[53] While there are cases of bone density not returning to pre-blocker levels, scientists are investigating ways to minimize any potential impact of puberty blockers on bone density. One proposal is to induce puberty at the age of 15 (about a year before the average starting age) for transgender youth who are mentally ready for it and who have clearly persistent gender dysphoria.[54] Doctors are also encouraged to monitor patients' bone density and discuss bone health with patients, including the need for active weight-bearing exercise, healthy diet, calcium, and vitamin D supplementation.[55]

Conservatives also allege that gender-affirming care can have detrimental effects on cardiovascular health. However, studies suggest that even *before* beginning hormone therapy, transgender young people have an increased risk of cardiovascular disease.[56] Further, currently available studies on the impact of hormone therapy on cardiovascular risks present conflicting findings.[57] Oral estrogen has been shown to increase risk of blood clots, but that is true for both transgender and cisgender youth.[58] Advocates for and against banning gender-affirming care for youth agree that more research is needed; however, banning this care will make conducting such research more difficult. Additionally, doctors emphasize that *all* medical care has risks, and gender-affirming care is no different.[59] Doctors issuing gender-affirming care follow the same practices as do all other doctors providing care to youth, including assessing the biopsychosocial capacity of patients, obtaining informed consent from parents and informed assent from patients, and explaining

52. Alfonseca, *supra* note 17.

53. Giacomelli & Meriggiola, *supra* note 35.

54. Wylie Hembree et al., *Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline*, 102(11) J. CLINICAL ENDOCRINOLOGY & METABOLISM 3869-3903 (2017), https://doi.org/10.1210/jc.2017-01658.

55. *WPATH Standards of Care*, *supra* note 10, at S153.

56. Damian Krebs et al., The Care of Transgender Young People, 95(5) Hormone Research in Pediatrics 405, 405-14 (2022).

57. *Compare* Darios Getahun et al., *Cross-Sex Hormones and Acute Cardiovascular Events in Transgender Persons*, 169(4) ANNALS OF INTERNAL MEDICINE 205, 205-13 (2018), *with* Maartje Klaver et al., *Hormonal Treatment and Cardiovascular Risk Profile in Transgender Adolescents*, 145(3) PEDIATRICS 1, 1-10 (2020).

58. Mouhamed Yazan Abou-Ismail et al., *Estrogen and Thrombosis: A Bench to Bedside Review*, 192 THROMBOSIS RSCH. 40, 40-51 (2020).

59. Alfonseca, *supra* note 17.

to patients and their parents the risks associated with the care provided.[60] Doctors also emphasize that there may be significant risks to *not* treating gender dysphoria, specifically the risks to mental health, and the irreversibility of the onset of endogenous puberty.[61]

The final drawback to gender-affirming care alleged by conservatives is supposed disagreement within the medical community over the nature of gender identity. Conservatives claim that there is scientific evidence to prove that so-called "transgenderism" is a "social contagion."[62] The source for this claim is a paper published in 2017 by author Lisa Littman titled "Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria."[63] Rapid onset gender dysphoria (ROGD) is a made-up diagnosis that attributes gender dysphoria or incongruence in adolescents to the exposure of such adolescents to transgender people through friends or social media.[64] Notably, while Littman is a doctor, she does not specialize in mental health, and her paper was based solely on research collected from parents of transgender adolescents, not the adolescents themselves or their doctors.[65] The article has since been republished with a series of corrections and updates, including the statements that ROGD is not a "formal mental health diagnosis" at this time and that "[t]his report did not collect data from the adolescents and young adults (AYAs) or clinicians and therefore does not validate the phenomenon."[66] Another paper purporting to support the ROGD claim, also surveying only parents of transgender adolescents rather than adolescents themselves, has since been retracted.[67] Despite these corrections and retractions, legislators still cite ROGD as a legitimate diagnosis and a reason to ban gender-affirming care for transgender youth.[68]

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60. *WPATH Standards of Care*, *supra* note 10, at S48; Nisarg Bakshi & Kiara Alfonseca, *What Is Gender Dysphoria and What Does Transgender Youth Care Consist of?*, ABC NEWS (Mar. 19, 2023), https://perma.cc/2BE3-5G9Q.

61. Bakshi & Alfonseca, *supra* note 60.

62. Timmy Broderick, *Evidence Undermines 'Rapid Onset Gender Dysphoria' Claims*, SCI. AM. (Aug. 24, 2023), https://perma.cc/4BTF-KFU3.

63. Lisa Littman, *Correction: Parent Reports of Adolescents and Young Adults Perceived to Show Signs of a Rapid Onset of Gender Dysphoria,* 13(8) PLOS ONE 1, 1-26 (2018).

64. Broderick, *supra* note 62.

65. Dell Cameron & Dhruv Mehrotra, *An Anti-Trans Group Leaked 10,000 Confidential Files*, WIRED (May 2, 2023), https://www.wired.com/story/american-college-pediatricians-google-drive-leak/.

66. Lisa Littman, *Correction: Parent Reports of Adolescents and Young Adults Perceived to Show Signs of a Rapid Onset of Gender Dysphoria,* 14(3) PLOS ONE 1, 1-7 (2019).

67. Broderick, *supra* note 62.

68. *Id.*

Politicians also point to fringe medical organizations to support their claim that gender-affirming care is not, in fact, widely supported by the medical community. The American College of Pediatricians is one such organization with an authoritative-sounding name (easily confused with the American Academy of Pediatrics) that disputes the safety and efficacy of gender-affirming care. In reality, the organization is a small fringe group that seeks to validate evangelical beliefs about same-sex marriage, abortion, and gender identity.[69] The organization has been designated a hate group by the Southern Poverty Law Center and has only 700 members.[70] In stark contrast, the American Academy of Pediatrics, the American Medical Association, and over twenty other leading medical organizations have released statements expressing their beliefs that gender-affirming care is safe, effective, beneficial, and medically necessary.[71] Given the abundance of evidence supporting the importance of access to gender-affirming care for youth and the rise of "alternative facts" in studies such as Littman's, the district courts play an essential role in analyzing conflicting medical evidence in cases challenging bans on gender-affirming care.

III. THE ROLE OF THE DISTRICT COURT IN ANALYZING MEDICAL EVIDENCE

This section analyzes the important role district courts play in analyzing medical evidence, whether that evidence is presented in legislative findings of fact or in the briefings. As discussed below, district courts are not required to defer to legislative factual findings when those findings are based on incorrect statements of fact or when constitutional rights are implicated. Additionally, in today's age of "alternative facts," relying solely on legislative fact-finding may not be appropriate given the potential for misinformation. Federal district courts, in contrast, are much better equipped to produce a superior factual record, as the adversarial nature of litigation encourages challenges to misinformation and courts may rely on qualified expert witnesses to provide additional context to medical evidence. District courts' competence in analyzing medical evidence is demonstrated by case studies discussed below, including the teaching of "intelligent design" in public schools, cases involving experimental treatments for COVID-19, and challenges to the FDA's

69. Cameron & Mehrotra, *supra* note 65.

70. *Id.*

71. Alfonseca, *supra* note 17; *Medical Organization Statements*, TLDEF, https://transhealthproject.org/resources/medical-organization-statements/ (last visited Apr. 15, 2024).

relaxation of restrictions on access to the abortifacient mifepristone. Given district court judges' experience with analyzing medical evidence and their role as preliminary finders of fact, district court findings of fact are owed significant deference.

A. The Jurisprudence of Deference to Legislative Findings of Fact

District courts play an essential role in reviewing legislative facts, parsing expert testimony, and determining what weight competing scientific claims are due. Because legislatures often produce legislative findings of fact rife with misinformation to justify bans on gender-affirming care,[72] district courts determining the constitutionality of these bans must determine what deference is owed to this legislative fact-finding. While it is "traditionally assumed" that the role of ascertaining and evaluating the facts underlying statutes belongs to the legislatures, meaning district courts are expected to give broad deference to legislative fact-finding, scholars such as Caitlin Borgmann argue that this approach "does not capture the Supreme Court's incoherent approach to legislative fact-finding."[73] In reality, Ari Ezra Waldman argues, doctrines of deference are "not set in stone;" instead, the rules and norms governing deference to legislative facts are "murky at best," and judges often decide from case to case whether to defer to legislative fact-finding.[74] For example, "courts have sometimes looked skeptically to legislative fact-finding supporting legislation purportedly entitled to deferential review."[75] Additionally, the Supreme Court has never clarified whether "deference" to legislative fact-finding allows courts to go beyond the legislative record to corroborate or supplement the facts.[76] Moreover, when legislatures think that courts will defer to their factual findings, they are likely to present what are really moral positions as factual findings, e.g. the moral position that affirming minors' transgender identity is

72. *See, e.g.,* Tenn. Code Ann. § 68-33-101 (2023); Joana Wuest & Briana Last, *Agents of Scientific Uncertainty: Conflicts over Evidence and Expertise in Gender-Affirming Care Bans for Minors*, 344 SOC. SCI. & MED. 1, 1-7 (2024).

73. Caitlin E. Borgmann, *Rethinking Judicial Deference to Legislative Fact-Finding*, 84 IND. L.J. 1, 3-40 (2009).

74. Ari Ezra Waldman, *Manufacturing Uncertainty in Constitutional Law*, 91 FORDHAM L. REV. 2249, 2249-2261 (2023).

75. Borgmann, *supra* note 73, at 15; *See, e.g.,* Lamprecht v. FCC, 958 F.2d 382, 391 (D.C. Cir. 1992) ("although we are 'to give great weight to the decisions of Congress and to the experience of the Commission,' we are still obliged in the end to review the government's policy—both the judgment of law that the policy is constitutional *and the findings of fact that underlie it*.") (internal quotation omitted) (emphasis added).

76. Borgmann, *supra* note 73, at 8.

wrong, and hence the "risks" of gender-affirming care for minors don't outweigh the benefits.[77] As discussed below, the Court has not applied this deference to legislative findings of fact when those findings are factually incorrect. Further, the rationales often put forth to justify judicial deference to legislative fact-finding do not make sense in the age of alternative facts; proponents of judicial deference to legislative fact-finding argue that legislatures are better than courts at fact-finding and some even claim that courts lack the legitimacy or authority to question legislative findings of fact.[78] However, this does not reflect the reality today that many legislatures rely on scientific and medical evidence that is poorly (if at all) researched, not peer reviewed, and unaccepted by the medical community at large. In other words, in today's age of alternative facts, "[n]ot only do legislators lack the incentives to sort the good facts from the bad ones, but now they are actually further incentivized to tell the people what they want to believe."[79]

In contrast, as Borgmann argues, "the process of fact-finding in federal trial courts ensures that they produce a superior factual record."[80] The adversarial nature of litigation allows plaintiffs to counter medical misinformation relied on by legislatures with legitimate medical evidence, and the broad power that the Federal Rules of Evidence grants to judges in determining who qualifies as an expert witness ensures that expert witnesses may not rely on faulty medical evidence in providing expert testimony.[81] Legislatures, in contrast, "are subject to political pressures beyond their control that are markedly different from those faced by courts, and these pressures profoundly affect the nature of legislative fact-finding."[82] Hence, the facts relied on by legislatures are often one-sided, whereas courts have built-in mechanisms to ensure misinformation is combatted and the qualifications of experts are thoroughly examined prior to giving weight to their testimony.

States defending gender-affirming care bans often cite to the Supreme Court's decision in *Gonzalez v. Carhart*, which states that courts defer to the judgments of legislatures in areas where there is "medical and scientific uncertainty."[83] This deference means district courts must defer

77. *Id.* at 9.

78. *Id.* at 16.

79. Allison Orr Larsen, *Constitutional Law in an Age of Alternative Facts*, 93 N.Y.U. L. REV. 175, 221-225 (2018).

80. Borgmann, *supra* note 73, at 4.

81. *See, e.g.*, FED. R. EVID. 702.

82. Borgmann, *supra* note 73, at 40.

83. Gonzalez v. Carhart, 550 U.S. 124, 163 (2007).

to legislative judgments rather than engaging in an independent determination of facts, hence undermining the role of the district court as the preliminary finder of fact in litigation.[84] This deference to legislative judgments in areas "fraught with" medical and scientific uncertainty was recently reaffirmed by the Supreme Court in *Dobbs v. Jackson Women's Health Organization*.[85] However, this blind reliance on *Carhart* by states defending bans on gender-affirming care ignores a key holding of the Court in that very case. First, the Court held that despite such deference to legislative judgments, the Court does not place "dispositive weight" on those findings.[86] Second, the Court also found that:

> As respondents have noted, and the District Courts recognized, *some recitations in the* [Partial Birth Abortion] *Act are factually incorrect*. Whether or not accurate at the time, some of the important findings have been superseded. Two examples suffice. Congress determined no medical schools provide instruction on the prohibited procedure. The testimony in the District Courts, however, demonstrated intact D & E is taught at medical schools. Congress also found there existed a medical consensus that the prohibited procedure is never medically necessary. The evidence presented in the District Courts contradicts that conclusion. *Uncritical deference to Congress' factual findings in these cases is inappropriate*.[87]

Hence, the Court held that where factual findings by Congress were factually incorrect, as proven by conflicting evidence presented at the district court, uncritical deference to Congress' factual findings is inappropriate. And although the Court did affirm that the "normal rule" is to "defer to the judgments of legislatures 'in areas fraught with medical and scientific uncertainties'" in *Dobbs*, that statement was made in the context of critiquing the Court in *Roe v. Wade* for not "explain[ing] why it departed from" this normal rule, suggesting that deference is not always owed to legislative fact-finding, but that when medical uncertainty exists and such deference to legislative findings is not given by a district court, the district court must explain why it departed from that rule, as it did in *Carhart* by explaining that there, the legislature relied on factually incorrect information.[88]

84. *Id.*; *K.C.*, 677 F. Supp. 3d at 817.

85. Dobbs v. Jackson Women's Health Org., 597 U.S. 215, 274 (2022).

86. *Carhart*, 550 U.S. at 165; Whole Woman's Health v. Hellerstedt, 579 U.S. 582, 608 (2016).

87. *Carhart*, 550 U.S. at 165-166 (internal citations omitted) (emphasis added).

88. *Dobbs*, 597 U.S. at 274.

Requiring deference to legislative findings of fact in cases challenging bans on gender-affirming care also applies the wrong standard of scrutiny to these cases. Both *Carhart* and *Dobbs* dealt with legislative efforts to regulate abortion—which the Court held in *Dobbs* does not involve heightened scrutiny, but rather the same standard of review applied to other health and safety measures, namely a rational basis review.[89] Bans on gender-affirming care, however, arguably use sex-based classifications on their face, implicating constitutional rights.[90] In *Carhart*, the Supreme Court explained that courts retain "an independent constitutional duty to review factual findings [by legislatures] where constitutional rights are at stake," meaning district courts have a duty *not* to blindly defer to legislative findings of fact when statutes implicate constitutional rights.[91] This is in contrast to the deference typically owed to legislative findings of fact, though as stated, that deference has not been applied by district judges or the Supreme Court consistently even in cases which do not implicate constitutional rights.

Though the Supreme Court has yet to weigh in on the constitutionality of gender-affirming care bans or to clarify the level of scrutiny applied to cases that classify based on transgender status, bans on gender-affirming care at a minimum implicate liberty interests for a particular minority group, which should at a minimum trigger the rational basis with bite standard of review used by the Court in *Lawrence v. Texas*.[92] This approach is consistent with Borgmann's argument that a paradigm of judicial deference to legislative fact-finding must be sufficiently flexible to account for evolving rights.[93] Hence, when district courts find that legislation implicates constitutional rights, e.g., by using a suspect classification such as sex on the face of the legislation, district courts review the factual basis for legislative findings of fact rather than giving these findings blind deference. District courts have applied this principle to cases challenging bans on gender-affirming care by examining the medical evidence supporting the safety and efficacy of gender-affirming care and the states' claims that gender-affirming care is medically controversial and unsupported by sufficient research of sufficient strength.[94] Hence, courts don't merely accept legislatures' claim

89. *Id.* at 236.
90. *K.C.*, 677 F. Supp. 3d at 817.
91. *Carhart*, 550 U.S. at 165.
92. Borgmann, *supra* note 73, at 37.
93. *Id.* at 4.
94. *Koe*, 688 F. Supp. 3d. at 1349.

that medical uncertainty exists or give blind deference to legislative findings of fact when constitutional rights are at stake, and instead conduct independent examinations of the evidence to determine whether medical uncertainty does indeed exist.[95] This examination is necessary to determine whether banning youth gender-affirming care truly serves the state interest in protecting children through regulation of the medical profession and whether the policy is substantially related to that interest.[96]

This significant role of the district courts in fact-finding and reviewing legislative findings of fact is further affirmed by the standard of review owed to district court findings of fact by appellate courts. Rule 52(a)(6) of the Federal Rules of Civil Procedure (FRCP) states that a district court's findings of fact must not be set aside unless clearly erroneous for cases tried without a jury.[97] The Supreme Court has stated that "a finding is 'clearly erroneous' when although there is evidence to support it, the reviewing court on the entire evidence is left with the definite and firm conviction that a mistake has been committed."[98] This standard of review is significantly more deferential than the *de novo* or substantial evidence standards. This deferential standard means that when district courts analyze issues of fact, including medical evidence, their determinations are binding on the appellate courts unless a clear mistake has been made. This standard of review applies to motions for preliminary injunctions, and as discussed in further detail in Section IV.C.2, the Advisory Committee Note on the 1985 Amendment to Rule 52(a) makes clear that the clearly erroneous standard of review is meant to apply to decisions made solely based on documentary evidence.[99] There are good reasons for this level of deference to district court findings of fact—as Allison Orr Larsen notes, "trial courts are used to getting their hands dirty with facts; appellate courts are not."[100] Further, as the Advisory Committee Notes state, there are strong policy interests in not disturbing district court findings of fact, including "the public interest in the stability and judicial economy that would be promoted by recognizing that the trial court, not the appellate tribunal, should be the finder of the facts."[101]

95. *Id.*

96. *Id.*

97. FED. R. CIV. P. 52(a)(6).

98. United States v. United States Gypsum Co., 333 U.S. 364, 395 (1948).

99. FED. R. CIV. P. 52(a)(6); FED. R. CIV. P. 52(a) advisory committee's note to 1985 amendment.

100. Larsen, *supra* note 79, at 225.

101. FED. R. CIV. P. 52(a) advisory committee's note to 1985 amendment.

District courts therefore play an essential role in analyzing medical evidence, and appellate courts should respect that role.

B. Case Studies

As demonstrated by the case studies below, district courts are well-equipped to sort legitimate from sham medical evidence.[102] Efforts to recharacterize religious teachings as scientifically based education is one such example. In *Kitzmiller v. Dover Area School District*,[103] the Middle District of Pennsylvania enjoined a school district from teaching so-called "intelligent design" as a valid scientific theory.[104] "Intelligent design" in reality was the biblical creation story recharacterized as a valid scientific theory by a religious organization called the Discovery Institute.[105] As Ames Grawert notes, the district court heard from expert witnesses on both sides, meaning both mainstream scientists and "intelligent design" advocates, and used *Daubert*-like factors such as general scientific acceptance and quality of peer review to determine the weight of each expert's testimony.[106] The district court noted that intelligent design "has failed to gain acceptance in the scientific community, it has not generated peer-reviewed publications, nor has it been the subject of testing and research," hence finding that the intelligent design advocates did not have sufficient qualifications to be considered expert witnesses.[107] Judging medical evidence by whether it has found mainstream acceptance in the medical community, whether it is supported by peer-reviewed studies, and whether it has been sufficiently tested and researched are standards equally applicable to analyzing the safety and efficacy of gender-affirming care. Similarly, expert witnesses can provide essential context to counter misinformation in legislative history in cases challenging bans on gender-affirming care.

Further, the COVID-19 pandemic provided many opportunities for courts to assess controversial medical evidence and make factual determinations about the safety and efficacy of alternative treatments for COVID-19. The use of hydroxychloroquine and ivermectin as treatments for the COVID-19 virus has been hailed by politicians such as President

102. Ames Grawert, *The Fundamental Meaning of "Medical Uncertainty": Judicial Deference to Selective Science in* Gonzales v. Carhart, 12 N.Y.U. J. LEGIS. & PUB. POL'Y 379, 398-99 (2009).

103. Kitzmiller v. Dover Area Sch. Dist., 400 F. Supp. 2d 707 (M.D. Pa. 2005).

104. *Id.* at 706.

105. *Id.* at 719-22.

106. Grawert, *supra* note 102, at 399.

107. *Id.* at 735.

Trump[108] and Robert F. Kennedy, Jr.[109] Support for hydroxychloroquine as a COVID-19 treatment originated in an open-label, nonrandomized study with only thirty-six participants.[110] On April 4, 2020, President Trump authorized the U.S. government to purchase and stockpile twenty-nine million pills of hydroxychloroquine for use in COVID-19 treatment.[111] No federal government health official endorsed the use of hydroxychloroquine due to a concern about adverse side effects and a lack of robust data about the purported benefits of the drug.[112] On March 28, 2020, the U.S. Food and Drug Administration (FDA) issued an early use authorization for the use of hydroxychloroquine as a treatment for COVID-19, but revoked that authorization mere months later on June 15, 2020, as further data became available.[113] Some fringe doctors' groups like the Front Line COVID-19 Critical Care Alliance have continued to champion the use of ivermectin as a treatment for COVID-19.[114] This is despite the fact that a 2021 analysis of available studies on ivermectin found that of fifty-two studies, thirty-eight had faults in methodology such as no control group or an inappropriate control group, and the remaining fourteen studies did not support the use of ivermectin for preventing or treating COVID-19.[115] Hence, despite some fringe groups or political actors claiming hydroxychloroquine and ivermectin as effective treatments for COVID-19, the consensus of the medical community since at least June 2020 has been that such treatment is not based in science.

The District Court of Minnesota had a unique opportunity to analyze these competing claims about hydroxychloroquine and ivermectin in *Salier v. Walmart, Inc*.[116] The case dealt with several tort claims against Walmart and Hy-Vee arising out of the refusal of Walmart and Hy-Vee pharmacists to fill the Saliers' prescriptions for ivermectin and hydroxychloroquine, which they sought to treat their COVID-19

108. Nikki Carvajal & Kevin Liptak, *Trump Says He Is Taking Hydroxychloroquine Though Health Experts Question Its Effectiveness*, CNN (May 19, 2020), https://perma.cc/HH34-96M9.

109. Sheera Frenkel, *Where Robert F. Kennedy Jr. Delivers His Fringe Views: Not on the Trail*, N.Y. TIMES (Sept. 12, 2023), https://perma.cc/35QP-DN2Y.

110. Michael Saag, *Misguided Use of Hydroxychloroquine for COVID-19: The Infusion of Politics into Science*, 324(21) JAMA 2161, 2161-62 (2020).

111. *Id.*

112. *Id.*

113. *Id.*

114. Christina Szalinski, *Fringe Doctors' Groups Promote Ivermectin for COVID Despite a Lack of Evidence*, SCI. AM. (Sept. 29, 2021), https://perma.cc/V64B-ES9S.

115. *Id.*

116. Salier v. Walmart, Inc., 622 F. Supp. 3d 772 (D. Minn. 2022).

infections.[117] The Saliers first fell ill in October 2021, over a year after hydroxychloroquine and ivermectin were discredited as effective treatment for COVID-19. The Saliers were prescribed this treatment by Dr. Mollie James, a Missouri doctor the District Court for Minnesota described as "controversial" and who describes herself as "an activist for medical freedom, patients [sic] right to choose, and physicians [sic] right to practice medicine unencumbered."[118] The Walmart and Hy-Vee pharmacies refused to fill the prescriptions, stating that ivermectin and hydroxychloroquine were not appropriate treatments for COVID-19.[119] The Saliers sought to recover damages against Walmart and Hy-Vee under three theories: a purported "common law right to self-determination," intentional infliction of emotional distress, and interference with contract by impeding Dr. James' performance of her obligation to "provide [the Saliers] medical treatment to the best of her knowledge, skills, ability, and experience."[120] As part of their emotional distress claim, the Saliers alleged that the Walmart and Hy-Vee pharmacists substituted their "political judgments" "for Dr. James' reasoned and qualified judgment at the risk of" the Saliers' lives and health.[121]

The court rejected the Saliers' claims on all three theories and carefully examined medical evidence when analyzing the intentional infliction of emotional distress allegation.[122] The court found that at the time Walmart and Hy-Vee refused to prescribe ivermectin to the Saliers, "every major medical authority and government agency that had addressed the issue had said that ivermectin and hydroxychloroquine should not be used to treat COVID-19," citing the FDA, the Centers for Disease Control, the American Medical Association, the World Health Organization, and the Infectious Disease Society of America—organizations whose statements on ivermectin and hydroxychloroquine the court took judicial notice of.[123] The court further held:

> nothing alleged by the Saliers makes plausible their claim that the reason the pharmacists at Walmart and Hy-Vee refused to fill their prescriptions was not that *doing so would contravene the overwhelming weight of*

117. *Id.* at 775.
118. *Id.*
119. *Id.* at 776.
120. *Id.*
121. *Id.*
122. Salier, 622 F. Supp. 3d at 784.
123. *Id.* at 779.

> *medical authority*, but because of political beliefs or corporate policies that were unrelated to that authority.[124]

This case demonstrates the importance of analyzing medical evidence at the trial level and taking judicial notice of medical authority consensus on the care at issue in a case, as such evidence can demonstrate a lack of medical uncertainty in a given field.

One final area of the law where district courts examine competing medical evidence is in cases related to abortion. *Carhart* itself dealt with so-called partial birth abortion and *Dobbs*, which reaffirmed the principles of *Carhart*, struck down *Roe v. Wade*. Judge Kacsmaryk of the Northern District of Texas gained nationwide attention recently for his ruling in a case related to abortion. The case, *Alliance for Hippocratic Medicine v. U.S. Food and Drug Administration*,[125] challenged the FDA's decisions in 2016 and 2021 to relax restrictions on accessing the abortifacient mifepristone.[126] The plaintiffs, "a recently formed coalition of anti-abortion national medical associations and doctors,"[127] challenged the FDA approval of allowing mifepristone to be shipped by mail under the theory that the drug is unsafe.[128] Judge Kacsmaryk found that mifepristone can have "many intense side effects" on patients.[129] To support this claim, Judge Kacsmaryk relied[130] on two studies[131] written by researcher James Studnicki, both of which have since been retracted.[132] The case has since been appealed to the Supreme Court, and in oral argument, Justice Ketanji Brown Jackson asked the lawyer for Danco Labs, which has intervened in the case as a manufacturer of mifepristone, whether she has concerns "about judges parsing medical and scientific

124. *Id.* at 780 (emphasis added).

125. Alliance for Hippocratic Med. v. U.S. Food and Drug Admin., 668 F. Supp. 3d 507 (N.D. Tex. 2023).

126. *Id.*

127. Chenelle Hammonds, *10 Things to Know About Alliance for Hippocratic Medicine v. FDA*, Cong. Progressive Caucus Ctr. (Apr. 25, 2023), https://perma.cc/4HPY-GZUT.

128. *Alliance for Hippocratic Med.*, 668 F. Supp. 3d at 522.

129. *Id.* at 525.

130. *Id.* at 524, 537.

131. James Studnicki et al., *A Longitudinal Cohort Study of Emergency Room Utilization Following Mifepristone Chemical and Surgical Abortions, 1999-2015*, 8 HEALTH SERVS. RSCH. MGMT. EPIDEMIOLOGY 1, 1-11 (2021); James Studnicki et al., *A Post Hoc Exploratory Analysis: Induced Complications Mistaken for Miscarriage in the Emergency Room Are a Risk Factor for Hospitalization*, 9 HEALTH SERVS. RSCH. MGMT. EPIDEMIOLOGY 1, 1-4 (2022).

132. *Retraction Notice: A Longitudinal Cohort Study of Emergency Room Utilization Following Mifepristone Chemical and Surgical Abortions, 1999-2015*, 11 HEALTH SERVS. RSCH. MGMT. EPIDEMIOLOGY 1 (2024), https://doi.org/10.1177/23333928231216699.

studies."[133] While this might suggest district court judges should get less, rather than more, deference from appellate courts when it comes to analysis of medical evidence, I suggest that instead it demonstrates how important it is that medical evidence be thoroughly examined by judges for its legitimacy. It also demonstrates the important role expert witnesses can play in countering medical misinformation and providing additional context to district court judges, as demonstrated in the discussion of *L.W. v. Skrmetti* below. So long as bad actors introduce medical evidence that relies on improper research methods, includes misleading conclusions, or is otherwise faulty, courts will need to determine whether medical evidence is sufficiently reliable, and district court judges are best suited to make this determination as the triers of fact. This is no less true in the context of gender-affirming care ban litigation.

IV. GENDER-AFFIRMING CARE BAN LITIGATION: A CASE STUDY OF *L.W. V. SKRMETTI*

The case challenging Tennessee's ban on gender-affirming care for minors, *L.W. v. Skrmetti*, demonstrates why it is so important district courts independently examine legislative factual findings when those findings are based on incorrect statements of fact, as well as the danger posed to constitutional rights, stability, and judicial economy when appellate courts do not apply the correct standard of review to district court findings of fact. In *L.W.*, the Middle District of Tennessee, upon reviewing a voluminous record including legislative factual findings, competing affidavits from experts, and briefings including medical evidence, determined that a total ban on gender-affirming care for minors was not substantially related to an important governmental interest, and hence issued a statewide preliminary injunction against its enforcement. On appeal, the Sixth Circuit reversed after finding that the district court should have deferred to the legislative findings rather than the briefings or expert testimony, even though this evidence demonstrated the ban was based on incorrect statements of fact about the risks of gender-affirming care for minors. In finding that the Tennessee ban on gender-affirming care for minors survived rational basis review, the Sixth Circuit made medical judgments that are beyond the competency of an appellate court. The Sixth Circuit's decision improperly deferred to the legislative findings of fact, ignoring the district court's finding that the ban was unsupported by medical evidence, and did not apply the correct standard

133. Mark Sherman, *Supreme Court Seems Likely to Preserve Access to the Abortion Medication Mifepristone*, AP (Mar. 26, 2024), https://perma.cc/SK5Y-ZK2W.

of review to the district court's findings in contravention of the clear meaning of the Federal Rules of Civil Procedure. *L.W.* demonstrates that questions about medical evidence, like all questions of fact, should be decided by district courts and reviewed by appellate courts under the clearly erroneous standard, even when district court decisions are based on purely documentary evidence.

A. Why This Case

This Article analyzes *L.W. v. Skrmetti* because this case encapsulates the important role district courts play when analyzing the medical evidence presented in support of and opposition to gender-affirming care bans for minors, as well as the danger to constitutional rights, stability, and judicial economy posed by appellate courts when they do not appropriately review district court factual findings under the clearly erroneous standard. In *L.W.*, the Middle District of Tennessee conducted a rigorous review of the factual record, including declarations offered by expert witnesses, and made important credibility determinations about the weight of the state's expert testimony.[134] As discussed below, these factual determinations were determinative to the district court's finding that the state did not have a sufficiently important interest to justify banning gender-affirming care for minors. On appeal, the Sixth Circuit failed to apply the clearly erroneous standard of review to the district court's factual findings as required by the Federal Rules of Civil Procedure.[135] Instead, the Sixth Circuit either ignored or explicitly disagreed with these factual findings without a preliminary determination that the findings were clearly erroneous.

In ignoring or explicitly disagreeing with the district court's factual findings, the Sixth Circuit overstepped its authority in *L.W.* As stated, the standard of review for factual findings is the clearly erroneous standard, which is far more deferential than the *de novo* standard for conclusions of law. As I will discuss below, the Sixth Circuit implies that the medical risks of procedures banned by SB1 outweigh the benefits for transgender children, but not for cisgender children. This is a medical judgment that should not be made at the appellate level; this analysis of risks and benefits of medical treatment is a factual finding that should be made by the district courts and not disturbed unless clearly erroneous. The Sixth

134. This case was decided on a motion for a preliminary injunction. District courts may rely on affidavits and other hearsay evidence in deciding a motion for a preliminary injunction. *L.W.*, 679 F. Supp. 3d at 680.

135. FED. R. CIV. P. 52(a)(6).

Circuit did not determine that the district court's findings were clearly erroneous. Additionally, the substantial scientific and medical support for the benefits of gender-affirming care and the district court's findings that the risks of gender-affirming care are either unsupported by medical evidence or equal to the risks of procedures for cisgender children demonstrate that the district court's factual findings are not clearly erroneous. Further, the district court is best positioned to determine whether expert testimony merits deference,[136] and the Sixth Circuit overstepped its authority in deferring to expert testimony that the district court found to be completely lacking factual support. *L.W.* hence demonstrates the extremely important role that district courts play in evaluating medical evidence in cases challenging bans on gender-affirming care for minors and the dangers posed by appellate courts when they do not review these findings with the appropriate standard of review.

B. The Litigation

In *L.W. v. Skrmetti*, plaintiffs challenged the Tennessee ban on gender-affirming care for minors, SB1.[137] SB1 prohibits any minor in Tennessee from receiving certain medical procedures if the purpose of receiving those procedures is to enable that minor to live with a gender identity that is inconsistent with that minor's sex at birth.[138] The text of SB1 reads:

> 68-33-103. Prohibitions.
>
> (a)
>
> (1) A healthcare provider shall not knowingly perform or offer to perform on a minor, or administer or offer to administer to a minor, a medical procedure if the performance or administration of the procedure is for the purpose of:
>
> (A) Enabling a minor to identify with, or live as, a purported identity inconsistent with the minor's sex; or

136. The district court did note that typically, "credibility determinations in resolving a motion for a preliminary injunction can be made only where a court has held an evidentiary hearing." *L.W.*, 679 F. Supp. 3d at 699. However, the court provided the parties an opportunity to have an evidentiary hearing, and neither party indicated to the court "that they found such a hearing necessary before the resolution of the [motion for a preliminary injunction]." *Id.* Hence, the district court found that the parties had "waived any argument that the Court cannot make credibility findings based on the written evidence of the parties' experts." *Id.*

137. *Id.* at 677.

138. *Id.*

(B) Treating purported discomfort or distress from a discordance between the minor's sex and asserted identity.

(2) Subdivision (a)(1) applies to medical procedures that are:

(A) Performed or administered in this state; or

(B) Performed or administered on a minor located in this state, including via telehealth, as defined in § 63-1-155.[139]

SB1 permits administration of medical procedures if the purpose of the procedures is to treat a congenital defect or precocious puberty, but such procedures are banned if meant to affirm a minor transgender patient's gender.[140]

The plaintiffs challenged SB1 under the Equal Protection and Due Process Clauses of the Fourteenth Amendment.[141] The Middle District of Tennessee found that SB1 was likely unconstitutional on its face and issued a statewide preliminary injunction against its enforcement.[142] The State of Tennessee appealed the injunction to the Sixth Circuit, which reversed, holding that plaintiffs had not established a likelihood of success on the merits, and remanded the case for further proceedings.[143] The plaintiffs and the United States as intervenor sought certiorari in the United States Supreme Court, and the Court granted the United States' certiorari petition in *United States v. Skrmetti* in June 2024.[144]

1. The Legislative Findings

The Tennessee Legislature's findings of fact included factually incorrect statements at odds with the previously discussed generally accepted standards of care. As stated, the exact level of deference courts typically owe to legislative findings of fact is not entirely clear, but at a minimum, the Supreme Court has stated that legislative factual findings are not owed deference when constitutional rights are at stake, or when statutes include factual findings that are factually incorrect. Given that the plaintiffs' experts introduced sufficient medical evidence to contradict the legislative findings of fact at the district court level, the district court did not owe deference to the legislative findings below. The Tennessee

139. Tenn. Code Ann. § 68-33-103(a)(1)(2) (2023).

140. Tenn. Code Ann. § 68-33-103(b)(1)(A); *L.W.*, 679 F. Supp. 3d at 678.

141. *L.W.*, 679 F. Supp. 3d at 680.

142. *Id.* at 718-19.

143. *L.W.*, 83 F.4th at 491.

144. L.W. v. Skrmetti, 83 F.4th 460 (6th Cir. 2023), *petition for cert. filed*, No. 23-466 (U.S. Nov. 1, 2023); United States v. Skrmetti, 83 F.4th 460 (6th Cir. 2023), *petition for cert. filed*, No. 23-477 (U.S. Nov. 6, 2023); *see* AMERICAN CIVIL LIBERTIES UNION, *supra* note 9.

legislature's reliance on the factually incorrect legislative findings below reaffirms the value of the district court's role in gatekeeping and setting out preliminary findings of fact in litigation.

The Tennessee Legislature's findings are codified at Tenn. Code Ann. § 68-33-101.[145] The legislature found that:

> [M]edical procedures that alter a minor's hormonal balance, remove a minor's sex organs, or otherwise change a minor's physical appearance are harmful to a minor when these medical procedures are performed for the purpose of enabling a minor to identify with, or live as, a purported identity inconsistent with the minor's sex or treating purported discomfort or distress from a discordance between the minor's sex and asserted identity.[146]

The legislature cited irreversible sterilization, increased risk of illness, and adverse psychological consequences as adverse side effects to gender-affirming care for minors and stated that the adverse side effects of such care are not yet fully known.[147] The legislature further found that "many of these procedures" are "experimental in nature and not supported by high-quality, long-term medical studies."[148] Additionally, the legislature stated that gender-affirming care is "not consistent with professional medical standards . . . because a minor's discordance can be resolved by less invasive approaches that are likely to result in better outcomes for the minor."[149] Contrary to WPATH standards, the legislature also found that "minors lack the maturity to fully understand and appreciate the life-altering consequences of such procedures" and cited the "many individuals" who have expressed regret over pursuing gender-affirming care as a minor.[150] Analogizing to the opioid crisis, the legislature stated that "healthcare providers in this state have sought to perform such surgeries on minors because of the financial incentive associated with the surgeries, not necessarily because the surgeries are in a minor's best interest."[151] Concluding, the legislature summarized its interests as follows:

> The legislature declares that the integrity and public respect of the medical profession are significantly harmed by healthcare providers performing or

145. Tenn. Code Ann. § 68-33-101 (2023).
146. *Id.* at 101(b).
147. *Id.*
148. *Id.*
149. *Id.* at 101(c).
150. Tenn. Code Ann. § 68-33-101(h) (2023).
151. *Id.* at 101(j).

> administering such medical procedures on minors. This state has a legitimate, substantial, and compelling interest in protecting minors from physical and emotional harm. This state has a legitimate, substantial, and compelling interest in protecting the ability of minors to develop into adults who can create children of their own. This state has a legitimate, substantial, and compelling interest in promoting the dignity of minors. This state has a legitimate, substantial, and compelling interest in encouraging minors to appreciate their sex, particularly as they undergo puberty. This state has a legitimate, substantial, and compelling interest in protecting the integrity of the medical profession, including by prohibiting medical procedures that are harmful, unethical, immoral, experimental, or unsupported by high-quality or long-term studies, or that might encourage minors to become disdainful of their sex.[152]

Based on these findings, the Tennessee Legislature banned all forms of gender-affirming care for minors. Shortly after, L.W., a fifteen-year-old transgender girl, along with her parents, two anonymous plaintiff families, and Memphis-based board-certified gynecologist Dr. Susan Lacy filed suit.[153]

2. The District Court Findings

L.W. and her fellow plaintiffs brought this case on a motion for a preliminary injunction. Hence, the plaintiffs had to show "a likelihood of success on the merits; irreparable harm in the absence of the injunction; that the balance of equities favors them; and that public interest favors an injunction."[154] In deciding a motion for a preliminary injunction, courts are permitted to "rely on affidavits and hearsay materials which would not be admissible evidence for a permanent injunction, if the evidence is appropriate given the character and objectives of the injunctive proceeding."[155] Neither party indicated that they found an evidentiary hearing necessary so that their respective expert witnesses could provide in-court testimony, so the court found that the parties had waived any argument that the court could not make credibility findings based on the written evidence of the parties' experts, and proceeded to decide the case solely based on the written record.[156] This written record included declarations submitted by eight expert witnesses, four writing on behalf

152. *Id.* at 101(m).
153. *L.W.*, 679 F. Supp. 3d at 678.
154. *Id.* at 679.
155. *Id.*
156. *Id.* at 699.

of plaintiffs and six writing on behalf of defendants, and seven declarations submitted by the individual plaintiffs themselves.[157] Hence, though the court did not hold an evidentiary hearing, the court had voluminous evidentiary record on which to decide the case, particularly for a motion for a preliminary injunction.[158]

The court first found that since none of the plaintiffs had plans to pursue gender-affirming surgery, because it was prohibited for minors under SB1, they did not have standing to challenge the surgery portion of the ban.[159] The court nonetheless held that plaintiffs had standing to challenge the remaining clauses of SB1.[160]

Plaintiffs based their Due Process Clause challenge to SB1 on the allegation that SB1 infringes on a parent's fundamental right to direct the medical care of their child.[161] The court found that SB1 did infringe on the fundamental right of parents to direct the medical care of their child.[162] Plaintiffs also challenged SB1 based on the Equal Protection Clause, alleging that SB1 "treats transgender minors differently from non-transgender minors, and that in doing so, SB1 targets the quasi-suspect class of transgender persons and the quasi-suspect classification of sex."[163] Holding that SB1 classified based on transgender status and on sex and thus the law was subject to intermediate scrutiny, the court turned to whether defendants had met their burden of showing that SB1 is substantially related to an important government interest.[164]

To support their argument that the policy of banning youth gender-affirming care serves the important state interest of protecting children, the state argued that the WPATH and Endocrine Society guidelines (hereinafter "the guidelines") on gender-affirming care are unreliable.[165] The court first acknowledged that the guidelines are comparable to other clinical practice guidelines used by doctors treating pediatric conditions

157. *Id.* at 698-99.

158. Because this was not yet a trial on the merits and instead a decision to grant a motion for a preliminary injunction, the district court did not frame its findings explicitly as "findings of fact." The district court's findings outlined in this section come from the district court's memorandum opinion discussion of the plaintiffs' likelihood of success on the merits. *Id.* at 682-712.

159. *L.W.*, 679 F. Supp. 3d at 682.

160. *Id.* at 681.

161. *Id.* at 683.

162. *Id.* at 684.

163. *Id.* at 685.

164. *Id.* at 698.

165. *L.W.*, 679 F. Supp. 3d at 700.

such as Congenital Adrenal Hyperplasia and Polycystic Ovarian Syndrome.[166]

Responding to the state's argument that the guidelines are based on "low-quality evidence," the court found that the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) system[167] allows conclusions to be drawn on "low-quality" evidence and that other pediatric treatment is based on similar quality evidence, such as the American Heart Association's Guideline for Pediatric Basic and Advanced Life Support.[168] The court also noted that many other courts analyzing similar bans have relied on the WPATH and Endocrine Society guidelines.[169]

The court primarily examined the medical evidence presented by plaintiffs and defendants in the section of the opinion dedicated to analyzing whether SB1 survives intermediate scrutiny. In order to survive intermediate scrutiny, the state must demonstrate that SB1 "is substantially related to an important state interest" and that the policy serves that state interest.[170] The state argued that SB1 serves the important state interest in "protecting minors from the risks associated with the medical procedures banned by SB1 because ultimately the risks outweigh the benefits."[171] The court did not accept this argument at face value, instead choosing to thoroughly examine the evidentiary record, as demonstrated by the excerpt below:

> The Court finds it prudent to make a few initial observations about what some may expect the effects to be of the medical procedures banned by SB1. It is feasible that one might assume that because these procedures are intended to have the treated minor's body do something that it otherwise would not do (rather than allow the body to function in a purportedly "natural" manner), the procedure must be "bad" or "harmful" to the minor. But assumptions are not a sufficient evidentiary basis on which to resolve a motion for a preliminary injunction. And unlike individuals that may base their conclusions about the effects of the procedures banned under SB1 on mere assumptions, the Court fortunately has a voluminous (albeit still preliminary) evidentiary record on which to base its current conclusions.

166. *Id.*

167. The GRADE system is the most widely adopted tool for grading the quality of evidence and for making recommendations. *What Is GRADE*, BMJ BEST PRAC., https://bestpractice.bmj.com/info/us/toolkit/learn-ebm/what-is-grade/ (last visited Apr. 15, 2024).

168. *L.W.*, 679 F. Supp. 3d at 700.

169. *Id.* at 700-01.

170. *Id.* at 701.

171. *Id.*

> Thus, the Court can, must, and does base its current conclusions on the record to date, without resort to any unsupported, bare medical assumptions.[172]

The state alleged that the negative side effects of gender-affirming care "include risk of 'delayed development, permanent sterilization, loss of sexual function, decreased bone density, increased risk of cardiovascular disease and cancer, negative psychological consequences, and a lifetime dependence on these drugs.'"[173] The court examined each of these alleged side effects. As for the delayed development allegation, the court found that the state's expert did not provide sufficient evidence to support the claim, whereas the plaintiffs' expert provided sufficient evidence to disprove it.[174] Turning to the alleged risk of infertility, the court found that "the evidence of record overwhelmingly demonstrates that many individuals receiving puberty blockers or cross-sex hormones will remain fertile for procreation purposes, and that the risk of negative impacts on fertility can be mitigated."[175] The court based this conclusion on testimony provided by the plaintiffs' experts and the fact that such testimony is consistent with the guidelines.[176] Turning to the diminished sexual response claim, the court found that the state's expert did not cite studies or research in support of this claim, nor did he specify what percentage of youth receiving gender-affirming care experience such side effects, and that his claims were at odds with the evidence in the guidelines.[177] The state's claims regarding bone density were similarly lacking in evidentiary support and the district court found that the state's expert on the issue made illogical inferences, such that the treatment cannot be considered "safe" despite the fact that the available evidence is "limited and conflicting."[178] Regarding the state's claims regarding cardiovascular health, the court found that there is insufficient evidence connecting the use of cross-sex hormones to cardiovascular disease.[179] The court also relied on the plaintiffs' expert's testimony that an increased risk of cardiovascular disease in transgender women is "usually only present when a patient is denied care and self-administers the treatment without appropriate clinical supervision," that transgender men "do not

172. *Id.* at 702.
173. *Id.*
174. *L.W.*, 679 F. Supp. 3d at 703.
175. *Id.*
176. *Id.*
177. *Id.* at 703-04.
178. *Id.* at 704.
179. *Id.* at 705.

have more cardiovascular disease like stroke or heart attack than cisgender men," and that risks of cardiovascular disease in transgender women "can be ameliorated through being closely monitored by a physician."[180] Based on the state's experts, the plaintiffs' experts, and the WPATH guidelines, the court concluded that "any increased risk of cardiovascular disease in patients receiving treatment for gender dysphoria is either speculative or, to the extent that such risk exists, it can be mitigated by the treating physician."[181] Finally, turning to the alleged increased risk of cancer, the court found that the plaintiffs' expert opinion, which is based on clinical experience and consistent with the guidelines, that gender-affirming care is not linked to cancer, is more persuasive than the state's expert opinions to the contrary, especially given that the state's expert opinions were not based on clinical experience.[182] The court held that "ultimately the weight of the evidence of record does not support Defendants' allegation that the medical procedures banned by SB1 increase an individual's risk of certain cancers."[183] The court concluded that "as with virtually all medical procedures, treatment for gender dysphoria carries with it the risk of negative side effects," but that "ultimately Defendants' allegations of these harms and their prevalence is not supported by the record and that "the record reflects that there is at best conflicting evidence as to whether the relevant procedures increase a person's likelihood of experiencing certain illnesses, and that even if there is an increased risk, that it can be mitigated."[184]

Turning to the alleged benefits of gender-affirming care, the court found that "the medical procedures banned by SB1 confer important benefits on recipients (i.e. the patients)."[185] The court found, based on the plaintiffs' expert witness testimony, that gender-affirming care improves psychological outcomes (e.g. anxiety and depression), can eliminate or reduce the need for surgical treatment, and can lower odds of lifetime suicidal ideation.[186] Though one state expert alleged that gender-affirming care does not improve mental health outcomes, the court noted that the expert had never actually treated a patient for gender dysphoria, and that there was sufficient evidence in the record to demonstrate that "treatment for gender dysphoria lowers rates of depression, suicide, and additional

180. *L.W.*, 679 F. Supp. 3d at 705.
181. *Id.* at 706.
182. *Id.*
183. *Id.*
184. *Id.* at 706-07.
185. *Id.* at 707.
186. *L.W.*, 679 F. Supp. 3d at 707-08.

mental health issues faced by transgender individuals."[187] The court hence concluded that the benefits of gender-affirming care are "well-established by the existing record."[188]

In summarizing the evidence on the alleged harms and benefits of gender-affirming care, the court found that:

> either 1) the risks identified by Defendants are not more prevalent in transgender individuals receiving the procedures banned by SB1 than in individuals not receiving these procedures; 2) to the extent that individuals receiving these procedures experience the negative side effects raised by Defendants, that the prevalence of these effects is low, or 3) the risk of negative side effects resulting from the use of such medical procedures banned by SB1 can be mitigated. And the fact that some pediatric treatments may pose certain risks is not sufficient, in the Court's view, to support a finding that the state has an important interest in banning these treatments.[189]

The court also noted that if the risks posed by gender-affirming care were sufficient to justify banning it for all minors, then far more pediatric treatments could be banned.[190] The court ultimately held that the state had failed to demonstrate an important state interest.[191]

Though the court could have concluded there, it chose to address whether there was a substantial relation between the interest and the ban.[192] The court found that the state had not demonstrated that SB1 was substantially related to its asserted interest.[193] The court noted first that the same procedures banned under SB1 for treatment of gender dysphoria are permitted to treat other conditions, such as precocious puberty.[194] The state justified banning these treatments for gender dysphoria but not for other conditions by asserting that the FDA had approved the use of certain hormone therapies for precocious puberty but has not yet done the same for gender dysphoria.[195] The court relied on testimony from plaintiffs' expert Dr. Jack Turban in rebutting this explanation.[196] Dr. Turban testified that off-label prescribing (when a doctor prescribes medications

187. *Id.* at 708.
188. *Id.* at 708.
189. *Id.* at 708-09.
190. *Id.*
191. *Id.*
192. *L.W.*, 679 F. Supp. 3d at 709-712.
193. *Id.* at 712.
194. *Id.* at 710.
195. *Id.* at 710-11.
196. *Id.* at 711.

approved by the FDA for conditions other than those the medications are indicated to treat) is common in medicine generally and in pediatrics especially, and that off-label use is not the same as an improper, illegal, contraindicated, or investigational use.[197] The district court concluded that:

> SB1 objectively is severely underinclusive in terms of the minors it protects from the alleged medical risks of the banned procedures; it bans these procedures for a tiny fraction of minors, while leaving them available for all other minors (who would be subjected to the very risks that the state asserts SB1 is intended to eradicate).[198]

Hence, in striking down SB1, the Middle District of Tennessee carefully analyzed the medical evidence produced by both sides, and ultimately concluded that SB1 was unconstitutional.[199]

3. The Sixth Circuit Decision

Just three months after the Middle District of Tennessee issued a preliminary injunction in *L.W. v. Skrmetti*, Chief Judge Sutton of the Sixth Circuit reversed.[200] The Sixth Circuit examined Tennessee's ban in conjunction with a similar ban passed by Kentucky, which had also been enjoined in district court.[201] In reversing the lower court injunctions, the Sixth Circuit ignored the factual findings of the lower courts and relied on unsubstantiated science without a preliminary finding that the district court's factual findings were clearly erroneous.

The Sixth Circuit opened its opinion with a reference to a 1979 study finding that cross-sex hormones and sex reassignment surgery used on adults "did not alleviate the mental distress caused by [gender dysphoria]."[202] The court proceeded with a history of the development of the WPATH guidelines, which initially did not allow minors to pursue any form of gender-affirming care and had stringent requirements for the adults who did want to pursue such care.[203] Emphasizing that gender-affirming care for minors was not permitted by the WPATH guidelines until 1998, the court noted that for decades, only non-physical treatments such as cross-dressing or chest binding were available for minors

197. *Id.*
198. *L.W.*, 679 F. Supp. 3d at 712.
199. *Id.* at 718.
200. *L.W.*, 83 F.4th at 491.
201. *Id.* at 466.
202. *Id.*
203. *Id.*

diagnosed with gender dysphoria (or "gender identity disorder," the diagnosis used at the time).[204] Further, the court emphasized that once gender-affirming care became available for minors, this access came with many restrictions.[205] The Sixth Circuit contrasted these restrictions to the 2022 WPATH guidelines, which in the court's words, "have become less restrictive over the course of time so that fewer procedures require mental health evaluation, fewer recommendation letters are required, and more types of professionals are viewed as capable of providing such evaluations."[206]

I argue that the Sixth Circuit applied the wrong standard of review to the district court's factual findings, choosing to disregard the factual findings of the district court rather than applying the correct clearly erroneous standard of review. The Sixth Circuit's analysis of the loosening of the WPATH guidelines without a corresponding analysis of the development of the research that informed the guidelines suggests, without saying so outright, that the current WPATH guidelines are unreasonably lenient.[207] It is completely at odds with the district court's finding that the guidelines on gender-affirming care are based on rigorous research.

The reasoning of the Sixth Circuit's ruling makes clear that the court did not think that gender-affirming care provides substantial benefits to transgender youth. The court stated:

> [f]ailure to allow [bans on gender-affirming care] to go into effect would start to grind these all-over-the-map gears to a halt. Given the high stakes of these nascent policy deliberations—the long-term health of children facing gender dysphoria—sound government usually benefits from more rather than less debate, more rather than less input, more rather than less consideration of fair-minded policy approaches.[208]

This suggests that democratic deliberation over whether to ban gender-affirming care is somehow more important than any benefits minors receive from such care. The disregard for the benefits of gender-affirming care is especially clear in how the Sixth Circuit frames the question presented: "whether the Constitution is neutral about legislative regulations of *new and potentially irreversible* medical treatments for

204. *Id.* at 467.
205. *Id.*
206. *L.W.*, 83 F.4th at 468.
207. *Id.*
208. *Id.* at 472.

minors."[209] The question presented completely ignores that such treatments are safe, effective, and even medically necessary—conclusions which the district court found strong factual support for in the record. The Sixth Circuit did not find that the district court's factual findings on the strong evidence in support of the safety and efficacy of gender-affirming care for minors was clearly erroneous. Further, the Sixth Circuit also ignored that the procedures prohibited for transgender minors are allowed for cisgender minors (a factual finding made by the district court, not reviewed under the clearly erroneous standard), even though the use of such treatments on cisgender minors has equal risks and has similarly only started to be used recently, as the district court found. By not reviewing the factual findings of the district court with the correct standard of review and instead outright ignoring the factual findings of the district court, the Sixth Circuit turned medical facts into "policy deliberations," treating the medical evidence submitted by the plaintiffs' and defendants' experts as equally weighty, despite the district court's finding that the state's experts were not entitled to any weight given the lack of factual support for their testimony. Framing the issue as one of policy rather than one of fact collapses two distinct legislative functions into each other: Legislatures first make determinations of fact and *then* they make policy determinations as to whether action is warranted in light of the facts.[210] The choice to ban gender-affirming care for minors is a policy judgment, but the finding that gender-affirming care for minors is unsafe is one of *fact*. The district courts play an essential role in reviewing these legislative findings of fact, and the appellate courts should not disturb these findings unless clearly erroneous.

Further, the court relied on *Gonzalez v. Carhart* in stating that the "presumption of legislative authority to regulate healthcare gains strength in areas of 'medical and scientific uncertainty.'"[211] This assumption that medical uncertainty in fact does exist completely disregards the district court's findings that the state's experts' opinions were entirely without scientific basis and that all major medical organizations support the WPATH and Endocrine Society guidelines. The court did recognize that enumerated constitutional rights limit states' abilities to regulate or ban medical technologies they deem unsafe, but found that no constitutional rights are implicated by the Tennessee and Kentucky bans.[212] In rejecting the due process claim, the court analogized to a D.C. Circuit case, *Abigail*

209. *Id.* (emphasis added).
210. Borgmann, *supra* note 73, at 8.
211. *L.W.*, 83 F.4th at 473.
212. *Id.* at 474.

Alliance for Better Access to Developmental Drugs v. von Eschenbach, a case where plaintiffs alleged a constitutional right to use "experimental drugs that the FDA had not yet deemed safe and effective"—an analogy completely at odds with the findings of the district court that gender-affirming care is not experimental, is safe and effective, and has been found to be so by the FDA when used to treat other conditions.[213]

The court addressed head-on the plaintiffs' arguments that gender-affirming care is safe and effective in the section of its opinion rejecting the due process claim, stating that European countries which pioneered gender-affirming care "now express caution about [hormone treatments] and have pulled back on their use" and that given this, "[u]ntil more time has passed, it is difficult to gauge the risks [of gender-affirming care] to children—whether by physically transitioning as a child or not—making it reasonable for accountable democracies to consider, reconsider, and if need be reconsider again the best approach to these issues."[214]

> Again, the court completely disregards the district court's factual findings that the purported risks of gender-affirming care do not outweigh the clearly established benefits of such care. Further, the appellate court found that "[c]hanging the sex characteristics of a child's body . . . carries material risks in either direction" and given these competing risks, states may "reasonably exercise caution in these circumstances, with some States focusing on the *near-term* risk of increasing the symptoms of gender dysphoria and other States focusing on the *irreversible* risks of providing such care to a minor."[215]

Referring to increasing symptoms of gender dysphoria as a "near-term risk" and potential side effects of such care as "irreversible" again completely ignores the lower court's factual findings. First, it ignores the reality that puberty itself is irreversible, and that children suffering from gender dysphoria experience suicidal ideation—suicide being a clearly irreversible side effect of not treating gender dysphoria. Second, it ignores the findings that the effects of puberty blockers and hormones on fertility are by no means guaranteed.

The Sixth Circuit also ignored the district court's factual findings, without finding that the district court's findings were clearly erroneous, in finding that "the relevant medical and regulatory authorities are not of one mind about the cost-benefit tradeoffs of" gender-affirming care. In

213. *Id.*
214. *Id.* at 477.
215. *Id.* (emphasis added).

addressing the plaintiffs' claims that FDA-approved medications need not be used on-label, the court stated:

> the Constitution does not require [Kentucky and Tennessee] to view these treatments in the same way as the majority of experts or to allow drugs for all uses simply because the FDA approved them for others . . . It is difficult to maintain that the medical community is of one mind about the use of these hormones for gender dysphoria when the FDA is not prepared to put its credibility and testing protocols behind the use.[216]

This ignores the district court's findings that it does not appear any pharmaceutical company has submitted gender-affirming care to be approved for on-label use by the FDA, meaning the FDA would have no reason to "put its credibility and testing protocols behind the use" of hormones to treat gender dysphoria.[217] It also undermines the district court's findings that off-label use is common across pediatric medicine, thus showing that fears about off-label use of medications are not a reasonable basis for banning such care. These findings should not be disturbed unless clearly erroneous, yet the Sixth Circuit made no determination that these findings are clearly erroneous. Further, the Sixth Circuit rejected the argument that the best evidence of the correct standard of care comes from the WPATH standards, stating that Kentucky and Tennessee's bans *do* align with the WPATH standards—at least, the standards WPATH used until 2012.[218] Again, this argument is at odds with the lower court's finding that the current WPATH standards are supported by substantial research, and is also plainly at odds with how science works—certainly the claim that ivermectin is an evidence-based treatment for COVID-19 would not hold up in court just because it at one time received emergency authorization by the FDA because of new research leading to that authorization being revoked. Based on these arguments, the Sixth Circuit concluded that the bans do not implicate any due process rights.[219]

Turning to the equal protection claim, the Sixth Circuit held that SB1 does not discriminate on the basis of sex, meaning the law need only pass rational basis review.[220] The court found that banning treatments only when used for gender dysphoria but not for other conditions is "reasonable" given that the treatments are "potentially irreversible," again

216. *Id.* at 478.
217. *L.W.*, 83 F.4th at 478.
218. *Id.* at 478-79.
219. *Id.* at 479.
220. *Id.* at 480.

ignoring that puberty blockers are completely reversible, and the side effects of cross-sex hormones are not guaranteed to be irreversible.[221] In rejecting the argument that the bans necessarily discriminate based on sex because, for example, a cisgender boy could obtain testosterone treatment whereas a transgender boy could not, the court stated:

> The key to the constitutionality of today's laws, moreover, has nothing to do with groups; it's that they do not disadvantage "persons" based on their sex. The availability of testosterone, estrogen, and puberty blockers does not turn on invidious sex discrimination but on the age of the individual and *the risk-reward assessment of treating this medical condition* (as opposed to another) with these procedures.[222]

Despite reference to the "risk-reward assessment" of treating gender, the court completely ignored the rewards of gender-affirming care, and implied those rewards are not as weighty as the rewards of treating conditions such as precocious puberty. This conclusion completely disregards the factual findings of the lower court that gender-affirming care has significant benefits, despite the fact that the Sixth Circuit did not find that the district court's findings on the benefits of gender-affirming care were clearly erroneous.

In explaining its refusal to defer to the trial court's factual findings, the Sixth Circuit stated that "rational basis review applies [here], and it requires deference to legislatures, not to medical experts or trial court findings."[223] The court's holding that the ban satisfied rational basis review was based on the alleged risks of gender-affirming care, all alleged by the state's experts.[224] Again, the court completely disregarded the benefits of gender-affirming care. The court concluded,

> No one in these consolidated cases debates the existence of gender dysphoria or the distress caused by it. And no one doubts the value of providing psychological and related care to children facing it. The question is whether certain additional treatments—puberty blockers, hormone treatments, and surgeries—should be added to the mix of treatments available to those age 17 and under. This is a relatively new diagnosis with ever-shifting approaches to care over the last decade or two. Under these circumstances, it is difficult for anyone to be sure about predicting the long-term consequences of abandoning age limits of any sort for these treatments. That is precisely the kind of situation in which life-tenured

221. *Id.*
222. *Id.* at 483 (emphasis added).
223. *L.W.*, 83 F.4th at 488.
224. *Id.* at 489.

> judges construing a difficult-to-amend Constitution should be humble and careful about announcing new substantive due process or equal protection rights that limit accountable elected officials from sorting out these medical, social, and policy challenges.[225]

This conclusion assumes that psychological care for gender dysphoria alone is sufficient, contrary to the findings at the district court level that gender-affirming care improves mental health outcomes even for those who have socially transitioned.

Hence, the Sixth Circuit's ruling ignored the factual findings made by the district court that Tennessee's ban was not based on credible medical evidence and that the benefits of gender-affirming care outweigh the risks. Further, the court's framing of the safety and efficacy of gender-affirming care for minors as a policy matter rather than a factual one disregarded the strong evidence presented at the district court level. The decision to reverse the district court's grant of a preliminary injunction clearly could not have been made had the Sixth Circuit applied the proper standard of review to those factual findings.

C. What L.W. v. Skrmetti Teaches Us

As demonstrated below, the Sixth Circuit's blind deference to the fact-finding of the Tennessee legislature while simultaneously ignoring the factual findings of the district court was an overstep of its authority and is inconsistent with the standard of review as framed by the drafters of the FRCP. Throughout its opinion, the Sixth Circuit made medical judgments not meant to be made at the appellate level, such as the judgment that that the medical risks of procedures banned by SB1 outweigh the benefits for transgender children, but not for cisgender children. This is at odds with the factual findings made by the district court, which the Sixth Circuit did not find to be clearly erroneous. And while the district court did not defer to the legislature's factual findings, district courts should not apply such deference to legislative findings of fact when those findings are based on faulty medical evidence. *L.W. v. Skrmetti* demonstrates the essential role district courts play in making preliminary findings of fact and the danger posed to the efficacy of the judicial process when appellate courts do not apply the proper standard of review to district court findings of fact.

225. *Id.* at 491.

1. Deference to Legislative Factual Findings

In cases challenging bans on gender-affirming care, the factual findings of legislatures, based on faulty evidence, are not dispositive. The Sixth Circuit insisted that a rational basis review is applicable to *L.W.* and that deference is due to the legislature's factual findings given the existence of medical and scientific uncertainty in the field of gender-affirming care; however, this argument suffers a major flaw: Just because a legislature *claims* there is "scientific and medical uncertainty" does not necessarily mean that such uncertainty actually exists. If the determination that scientific or medical uncertainty exists was left solely to the legislature, it would be subject to the politics of legislative decision-making. There would be no safeguard against bad actors manufacturing uncertainty and misinformation to persuade legislatures to regulate medicine in a way that completely contradicts widely accepted standards of care. Though the Sixth Circuit makes a strong argument in favor of the role of the democratic process in regulating the medical field, in today's era of misinformation and manufactured uncertainty, courts have an independent duty to investigate whether legislatures are correct in determining that scientific or medical uncertainty exists.

The line between real and manufactured uncertainty may not always be clearly drawn, but it is quite easily drawn in *L.W. v. Skrmetti*. The term "uncertainty" implies reasonable differences in opinion among equally qualified experts, meaning conflicting testimony is based on equally rigorous research that has met widely accepted standards for procedure, peer review, and bias. As the district court found, the state's "experts" in *L.W.* were, for the most part, anything but—three out of four of the experts had no experience treating the condition they testified on. As for the one expert who did have such experience, they were unable to support their testimony with medical research, and were certainly unable to counter the strength of the medical research introduced by the plaintiffs' experts. The Sixth Circuit's finding that there are genuine risks to gender-affirming care is based on the testimony of these experts that the district court found entirely unqualified or not deserving of deference.

The Sixth Circuit's reliance on the factual findings of the Tennessee legislature, rather than the findings of the district court, suffers another major flaw. Even assuming *arguendo* that such uncertainty exists, deference to legislative findings is not dispositive, especially when those findings include factually incorrect statements, as was the case in *Carhart* and as is the case here. The Tennessee legislature relied on misstatements of the proper standards of care and cited purported risks to gender-

affirming care that the district court found had no evidentiary basis. Further, under *Carhart*, courts retain an independent constitutional duty to review factual findings of legislatures where constitutional rights are at stake.[226] The Sixth Circuit held that no constitutional rights were at stake here, meaning only a rational basis review applied. However, the only way the Sixth Circuit got to that determination was by completely misconstruing what counts as sex discrimination. As the plaintiffs argue in their brief in support of the petitioner (the United States), the Sixth Circuit's reasoning improperly collapses equal protection's two-step analysis: First, the court must determine whether a sex classification exists, and second, the court determines whether the law survives heightened scrutiny.[227] A ban that prohibits medical procedures for minors of one sex but not minors of another sex clearly facially discriminates on the basis of sex, and all such classifications warrant heightened scrutiny.[228] Because these bans facially discriminate on the basis of sex, the constitutional right to equal protection of the laws is at stake, and the courts have an independent duty to review the factual findings of the legislatures.

Hence, even assuming gender-affirming care involves medical and scientific uncertainty, the Tennessee legislature's findings are not dispositive.

2. Deference to District Court Factual Findings

District courts are best situated to determine whether medical or scientific uncertainty does in fact exist, not appellate courts, which is why the Sixth Circuit should have reviewed the district court's findings under the clearly erroneous standard. Whether medical or scientific uncertainty exists is purely a question of fact that is determined by examining the weight of the evidence presented by both sides. District courts are well suited to conduct this inquiry as they are well trained in sifting through exhaustive records and making detailed findings of fact. It is because of the district courts' expertise in analyzing factual evidence that the Federal Rules of Civil Procedures dictates that factual findings made by district court judges in cases tried without a jury should be reviewed under the clearly erroneous standard.[229] The Sixth Circuit, however, stated that deference is not owed to district courts when the district court's decision

226. *Carhart*, 550 U.S. at 165.

227. Brief for Respondents in Support of Petitioner at 35, *United States v. Skrmetti*, 144 S.Ct. 2679 (2024) (No. 23-477).

228. *Id.*

229. FED. R. CIV. P. 52(a)(6).

is made based entirely on a paper record, stating "[r]ational basis review applies, and it requires deference to legislatures, not to medical experts or trial court findings. At any rate, no such deference applies to a written record like this one and the dueling affidavits that accompany it."[230]

This is consistent with the Sixth Circuit's practice of not applying the clearly erroneous standard when reviewing a purely documentary record, meaning cases where a trial court's findings do not rest on demeanor evidence and evaluation of a witness' credibility.[231] The Third Circuit has applied the clearly erroneous standard when documentary evidence is supplemented by conflicting expert testimony.[232] The other circuits, however, have adopted the view that the "clearly erroneous" rule applies when findings are based solely on documentary evidence.[233] The Supreme Court has stated, in dicta, that the clearly erroneous standard applies "even when the district court's findings do not rest on credibility determinations, but are based on physical or documentary evidence or inferences from other facts," and circuit courts have cited to this dicta in holding that the clearly erroneous standard applies to documentary evidence.[234]

Circuit courts should still apply the clearly erroneous standard of review to district court decisions made based on a purely documentary record. The practice of not applying the clearly erroneous standard to findings made based on a purely documentary record is entirely at odds with the plain meaning and intent of the Federal Rules of Civil Procedure's dictate that factual findings be set aside only when clearly erroneous. The rules state clearly, "Findings of fact, whether based on oral *or other evidence*, must not be set aside unless clearly erroneous, and the reviewing court must give due regard to the trial court's opportunity to judge the witnesses' credibility."[235] The clearly erroneous standard hence

230. *L.W.*, 83 F.4th at 488-89.

231. FED. R. CIV. P. 52(a) advisory committee's note to the 1985 amendment.

232. Heasley v. Belden & Blake Corp., 2 F.3d 1249, 1254 (3rd Cir. 1993).

233. See, *e.g.,* Reliance Steel Prods. Co. v. Nat'l Fire Ins. Co. of Hartford, 880 F.2d 575, 576 (1st Cir. 1989); Ceraso v. Motiva Enters., LLC, 326 F.3d 303, 316 (2nd Cir. 2003); Walsh v. Vinoskey, 19 F.4th 672, 677 (4th Cir. 2021); DeJoria v. Maghreb Petroleum Exploration, S.A., 935 F.3d 381, 391 (5th Cir. 2019); Stewart v. Peters, 958 F.2d 1379, 1382 (7th Cir. 1992); Taylor Corp. v. Four Seasons Greetings, LLC, 403 F.3d 958, 965 (8th Cir. 2005); Krehl v. Baskin-Robbins Ice Cream Co., 664 F.2d 1348, 1352 (9th Cir. 1982); United States v. Craine, 995 F.3d 1139, 1155 (10th Cir. 2021); Johnson & Johnson Vision Care, Inc. v. 1-800 Contacts, Inc., 299 F.3d 1242, 1246 (11th Cir. 2002); Bailey v. Federal Nat'l Mortg. Ass'n, 209 F.3d 740, 743 (D.C. Cir. 2000).

234. Anderson v. City of Bessemer City, N.C., 470 U.S. 564, 565 (1985). *See*, *e.g., Reliance Steel Prods. Co*., 880 F.2d at 576; *Ceraso*, 326 F.3d at 316; *Bailey*, 209 F.3d at 743.

235. FED. R. CIV. P. 52(a)(6) (emphasis added).

applies to decisions made based on a purely documentary record. This is made particularly clear by the Advisory Committee Notes to the FRCP. The Advisory Committee Note on the 1985 Amendment to Rule 52(a) states:

> Rule 52(a) has been amended (1) to avoid continued confusion and conflicts among the circuits as to the standard of appellate review of findings of fact by the court, (2) to eliminate the disparity between the standard of review as literally stated in Rule 52(a) and the practice of some courts of appeals, and (3) to promote nationwide uniformity . . . . The principal argument advanced in favor of a more searching appellate review of findings by the district court based solely on documentary evidence is that the rationale of Rule 52(a) does not apply when the findings do not rest on the trial court's assessment of credibility of the witnesses but on an evaluation of documentary proof and the drawing of inferences from it, thus eliminating the need for any special deference to the trial court's findings. These considerations are outweighed by the public interest in the stability and judicial economy that would be promoted by recognizing that the trial court, not the appellate tribunal, should be the finder of the facts. To permit courts of appeals to share more actively in the fact-finding function would tend to undermine the legitimacy of the district courts in the eyes of litigants, multiply appeals by encouraging appellate retrial of some factual issues, and needlessly reallocate judicial authority.[236]

While the Advisory Committee Notes may not be binding, they are useful in understanding the meaning of the rules, and this note clearly shows that the intent of the rule drafters was that appellate courts do not review findings of fact *de novo*, even when made on the basis of a paper record. The Sixth Circuit's reasoning for not applying the clearly erroneous standard to findings made based on a purely documentary record does not seem applicable here, where neither party found an evidentiary hearing necessary for the resolution of the motion for a preliminary injunction, and where both parties introduced significant expert testimony in the form of written declarations. The district court here seemed capable of making credibility determinations of the expert witnesses with only a paper record.[237] Further, the drafters' warning of the

236. FED. R. CIV. P. 52(a) advisory committee's note to the 1985 amendment (internal citations omitted) (emphasis added).

237. *L.W.*, 679 F. Supp. 3d at 699. While one potential solution to this problem would be to recommend that all gender-affirming care ban cases have an evidentiary hearing with expert witness testimony, it is not clear how feasible this would be when the posture of the case is a motion for a preliminary injunction. Though this would ensure there is more than a mere paper

dangers of re-litigation are clearly present in *L.W.*, where a substantial share of the Sixth Circuit's opinion is dedicated to overturning the factual findings of the lower court despite such findings not being clearly erroneous. The drafters' concerns about judicial economy are also relevant here; it seems unlikely both parties would have declined an evidentiary hearing had they known it would mean the appellate court would completely disregard the voluminous record prepared for the trial court, and a poor use of the district court's time to carefully examine this record only for their factual determinations to be given no deference. The Sixth Circuit thus clearly overstepped its authority by reviewing the factual findings of the district court *de novo*, and the Sixth Circuit's conclusion that the bans were substantially related to an important state interest could not have been made had the court given the district court's factual findings the level of review properly owed.

V. CONCLUSION

In the era of scientific and medical misinformation and disinformation, the courts play an extremely important role in analyzing medical evidence. As the finders of fact in cases tried without a jury, district court judges play an essential gatekeeping role in determining what evidence is credible and what evidence should be disregarded. In cases challenging bans on gender-affirming care, district courts have taken this role extremely seriously, sifting through dozens of pages in the record to determine what medical support for and against gender-affirming care is meritorious. Because this judicial authority is allocated to the district courts, appellate courts have a responsibility not to disturb factual findings unless clearly erroneous. The Sixth Circuit abdicated this responsibility in *L.W. v. Skrmetti*.

The Sixth Circuit's refusal to apply the proper standard of review has implications far beyond the context of bans on youth gender-affirming care. First, states have already begun efforts to limit such care for transgender people of majority age, and cases challenging such laws will surely require that courts examine medical evidence from both sides.[238] As anti-transgender critics gain more sway with legislatures and fringe medical organizations get more clout, studies attempting to legitimate

record, it could also delay litigation, resulting in these bans staying in place and minors losing care in the meantime.

238. *See* H.B. 4754, 88th Leg., Reg. Sess. (Tex. 2023) (banning gender-affirming care for people under 26); S.B. 12, 2023 Leg., Reg. Sess. (Kan. 2023) (banning gender-affirming care for people under 21); S.B. 345, 59th Leg., 1st. Sess. (Okla. 2023) (same); S.B. 274, 2023 Gen. Assemb., 125th Sess. (S.C. 2023) (same).

gender-affirming care bans will surely proliferate, and judges will need to determine whether such studies include faulty or distorted evidence.[239] Moreover, scientific and medical uncertainty (manufactured or legitimate) has and will continue to play a role in litigation related to important issues such as birth control, abortion, COVID-19 treatment (including treatment for long COVID), and environmental regulation efforts.

Though the Sixth Circuit's refusal to apply the proper standard of review in *L.W.* is alarming, there is room for hope. In a case challenging the first gender-affirming care ban for minors, the Eighth Circuit applied the proper standard of review to the Eastern District of Arkansas' factual findings.[240] The Eastern District of Arkansas found that the ban was unconstitutional after examining a lengthy record full of faulty and distorted medical evidence[241] and deciding that the state's purported health concerns regarding the risks of gender transition procedures were pretextual.[242] Holding that the district court did not clearly err in finding that this evidence lacked merit, the Eighth Circuit affirmed.[243]

Still, there may be drawbacks to applying too deferential a standard of review to district court findings of fact. One notable example, mentioned earlier, is Judge Kacsmaryk's ruling in *Alliance for Hippocratic Medicine v. FDA*, which was based on two studies on the side effects of mifepristone that were retracted after he issued his ruling. Scholars have noted that opportunistic judges like Kacsmaryk who manufacture factual uncertainty when there is none demonstrate that misinformation in the law is a problem not limited to legislatures, amici, or appellate courts.[244] Ari Ezra Waldman argues that these judges reframe doctrines of constitutional scrutiny as demands for scientific infallibility and because few, if any, scientific studies are perfect, this strategy "opens the door for any study, any screed, or any claim, no matter how dubious or unproven, to put rights at risk."[245] Waldman argues that the solution is not to give judges more power to distinguish among factual claims, but instead to focus on political, economic, doctrinal, and institutional

239. For an examination of how faulty and distorted evidence played a role in *Brandt v. Rutledge*, the case challenging the first gender-affirming care ban for minors, *see* Wuest & Last, *supra* note 72.

240. *Brandt v. Rutledge*, 47 F.4th 661, 661 (8th Cir. 2022).

241. Wuest & Last, *supra* note 72 at 5.

242. *Brandt v. Rutledge*, 551 F. Supp. 3d 882, 891 (E.D. Ark. 2021).

243. *Brandt*, 47 F.4th at 670.

244. Waldman, *supra* note 74, at 2249.

245. *Id.*

change.[246] While I agree with Waldman's argument that judges alone are not the solution to pervasive manufactured uncertainty, the Sixth Circuit's refusal to apply the proper standard of review to the district court's interrogation of the factual predicates of SB1 is an overreach of judicial authority that cannot be ignored and should not be repeated. And while Waldman's fears about opportunistic, partisan, or ideologically driven judges subverting tiers of scrutiny to require scientific infallibility from only one set of litigants are valid,[247] these fears have so far not borne out at the district court level in cases challenging bans on gender-affirming care. Of the nine federal district courts that have heard a challenge to these bans, all but one have struck them down as unconstitutional.[248] And should such a judge at the district court level accept faulty scientific evidence as fact, the clearly erroneous standard of review ensures that appellate courts have the ability to overturn such erroneous findings.

Litigation against gender-affirming care bans is ongoing, and the Supreme Court will weigh in on the constitutionality of gender-affirming care bans this summer in *United States v. Skrmetti*. The Supreme Court may address the issue of the Sixth Circuit's failure to apply the correct standard of review to the district court's factual findings, or it may sidestep the issue altogether. Regardless, these cases and other litigation involving manufactured medical uncertainty will provide fruitful opportunities for further research.

Merchants of doubt have won over legislatures across the nation in their efforts to roll back transgender youths' rights, and in these cases and others, the courts play an essential role as protectors of constitutional rights and arbiters of truth. This requires that courts do not just accept legislatures' claims that an area of regulation involves medical uncertainty; instead, courts must investigate whether such uncertainty truly does exist, which requires a close examination of competing medical evidence and the legislature's findings of fact. The district courts are best equipped to produce factual findings based on this evidence, and so long as such findings are not clearly erroneous, they should not be set aside by appellate courts. Any other standard would render the district courts

246. *Id.* at 2250.

247. *Id.* at 2252.

248. *See* Eknes-Tucker v. Marshall, 603 F. Supp. 3d 1131 (M.D. Ala. 2022); *Brandt*, 677 F. Supp. 3d at 877; *Ladapo*, 676 F. Supp. 3d at 1205; *Koe*, 688 F. Supp. 3d. at 1328; *Labrador*, 709 F. Supp. 3d at 1178; *K.C.*, 677 F. Supp. 3d at 802; *Doe 1 v. Thornbury*, Civil Action No. 3:23-cv-230-DJH, 2023 WL 4230481 (W.D. Ky. June 28, 2023); *L.W.*, 2023 WL 4232308, at *1. *But see Drummond*, 697 F. Supp. 3d at 1244.

superfluous, increase the power of opportunistic appellate judges, and make constitutional rights the next victim of the misinformation wars.