No. 24-539

In the
Supreme Court of the United States

KALEY CHILES,

Petitioner,

v.

PATTY SALAZAR, in Her Official Capacity as Executive Director of the Colorado Department of Regulatory Agencies, *et al.*,

Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Tenth Circuit

BRIEF OF DO NO HARM, INC. AS AMICUS CURIAE IN SUPPORT OF PETITIONER

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INTEREST OF AMICUS CURIAE[1]

Do No Harm, Inc., is a nonprofit membership organization that includes over 17,000 physicians, nurses, medical students, patients, and policymakers. Do No Harm is committed to ensuring that the practice of medicine is driven by scientific evidence rather than ideology. Part of Do No Harm's mission is to ensure that courts have a proper understanding of the evidence (or lack thereof) related to the psychosocial, medical, and surgical interventions for minors with gender dysphoria. Do No Harm has frequently filed *amicus* briefs on this topic in the federal courts, including in this Court. *See* Brief for Do No Harm, Inc., as *Amicus Curiae* Supporting Respondents, *United States v. Skrmetti*, No. 23-477 (U.S. Oct. 15, 2024); Brief for Do No Harm, Inc. as *Amicus Curiae* Supporting Petitioners, *West Virginia v. BPJ*, No. 24-43 (U.S. Aug. 22, 2024); Brief for Do No Harm, Inc. as *Amicus Curiae* Supporting Petitioners, *Little v. Hecox*, No. 24-38 (U.S. Aug. 14, 2024). Do No Harm submits this brief to provide the Court with an accurate analysis of the lack of evidence justifying Colorado's enactment of its purported ban on "conversion therapy," COLO. REV. STAT. § 12-245-202(3.5)(a) (the Counseling Ban), and to explain that the most reliable evidence-based guidelines and recommendations all conclude that psychosocial support should be the primary approach for helping minors with gender dysphoria.

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[1] Pursuant to SUP. CT. R. 37.6, amicus certifies that no counsel for any party authored this brief in whole or in part, no party or party's counsel made a monetary contribution to fund its preparation or submission, and no person other than amici or their counsel made such a monetary contribution.

SUMMARY OF THE ARGUMENT

Colorado has adopted an unconstitutional prohibition on speech to outlaw the only responsible approach for helping minors overcome gender dysphoria. The Tenth Circuit upheld this constitutional violation on the basis of unreliable research and a misunderstanding of an appellate court's role in adjudicating constitutional claims that turn on legislative facts. Specifically, the Tenth Circuit stated that "the district court found conversion therapy is harmful to minors" and that this "finding" could be reviewed only for clear error. Pet.App.29a. That is wrong, and this case shows why it must be.

The state of the scientific evidence—especially in constitutional adjudication—is a legislative fact subject to de novo review. The state of the evidence does not change from case to case or from circuit to circuit. Nor does it turn on considerations within the exclusive province of the trial court, as this case amply demonstrates. The district court did not put the experts on the stand to study their demeanor in determining the state of the science. It simply read one expert's declaration that was filed with a brief—just as any appellate judge can do. To insulate with clear-error review all "findings" that are based on reading a declaration would subvert the hierarchy of Article III in a constitutional case where the science is developing.

But here, the Tenth Circuit's error is all the more jarring because the science is not a close call. Researchers conducting "systematic reviews," which represent the highest form of medical evidence, have concluded that the best evidence-based guidelines for

treating minors with gender dysphoria all recommend psychosocial support, including counseling, as the primary approach for helping minors deal with gender dysphoria. Moreover, a systematic review of studies analyzing the use of psychosocial support, including counseling, with minors suffering from gender dysphoria found *no evidence* that psychosocial support causes harm.

The "research" relied upon by the lower courts and Colorado's expert is junk pseudoscience. The primary data in support of the "finding" that counseling causes harm to minors suffering from gender dysphoria comes from anonymous online surveys with participants recruited through social media by transgender advocacy groups. As a matter of scientific study design, these surveys are subject to so many forms of scientific bias, and thus are so unreliable, as to make them meaningless. And as a matter of common sense, when an advocacy group is able to stack the deck with participants who support its mission as part of a purportedly objective "survey," it is unsurprising when the anonymous survey results ultimately support the group's political aims. Finally, the WPATH Guidelines invoked by Colorado's expert have been thoroughly discredited, leading one federal appellate judge to conclude that "WPATH's lodestar is ideology, not science." *Eknes-Tucker v. Governor of Ala.*, 114 F.4th 1241, 1261 (11th Cir. 2024) (Lagoa, J., concurring in the denial of rehearing en banc).

There is no reliable evidence supporting Colorado's Counseling Ban, and the best evidence-based guidelines and recommendations all state that psychosocial support should be the primary approach for helping minors suffering from gender dysphoria.

ARGUMENT

I. The State of the Scientific Evidence Regarding Counseling Is A Legislative Fact That This Court Reviews De Novo.

"Legislative facts are established truths, facts or pronouncements that do not change from case to case but apply universally, while adjudicative facts are those developed in a particular case." *United States v. Gould*, 536 F.2d 216, 220 (8th Cir. 1976). The state of the scientific evidence on a particular question falls squarely within the category of legislative facts. As "'general facts'" not specific to any party, science "'help[s] the tribunal decide questions of law and policy and discretion.'" *Langevin v. Chenango Ct., Inc.*, 447 F.2d 296, 300 (2d Cir. 1971) (quoting Kenneth Culp Davis, *Administrative Law Treatise* § 7.02, at 413 (1958)). Because such legislative facts "give shape to legal rules that bind the world," Haley N. Proctor, *Rethinking Legislative Facts*, 99 NOTRE DAME L. REV. 955, 957 (2024), this Court retains the authority to review lower courts' scientific determinations de novo.

This Court has long acknowledged the role that science plays in judicial decisionmaking. "[T]heories that are so firmly established as to have attained the status of scientific law, such as the laws of thermodynamics, properly are subject to judicial notice under Federal Rule of Evidence 201." *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 592 n.11 (1993). Indeed, social science has featured prominently in this Court's jurisprudence. In *Brown v. Board of Education*, the Court cited numerous psychological studies to prove that racial discrimination generates a feeling of inferiority in black students. 347 U.S. 483, 494 &

n.11 (1954) ("Whatever may have been the extent of psychological knowledge at the time of *Plessy v. Ferguson*, this finding is amply supported by modern authority."). Similarly, in *Roper v. Simmons*, the Court referenced "scientific and sociological studies [presented by] respondent and his *amici*" to demonstrate that juveniles are more susceptible to peer pressure. 543 U.S. 551, 569 (2005). And most recently, in *Obergefell v. Hodges*, the Court relied on the American Psychological Association's *amicus* brief for the proposition that some "psychiatrists and others [had] recognized that sexual orientation is both a normal expression of human sexuality and immutable." 576 U.S. 644, 661 (2015) (citing Br. for Am. Psych. Ass'n et al. as *Amici Curiae* at 7-17). Therefore, to decline to draw upon scientific analysis set forth by *amicus* here would be inconsistent with this Court's prior treatment of scientific evidence.

Because science can be integral to the judicial process in certain cases, the Court has noted that it is "far from persuaded" that a "clearly erroneous" standard of review applies to scientific legislative facts. *Lockhart v. McCree*, 476 U.S. 162, 168 n.3 (1986). In *McCree*, the parties had put forward dueling studies from social scientists. *See id.* The Court highlighted the "difficulty" of using a clear-error standard for "'legislative' facts" like scientific studies given "that at least one other Court of Appeals," the Fifth Circuit, "reviewing the same social science studies as introduced" by the Respondent "ha[d] reached a conclusion contrary to that of the Eighth Circuit," which had decided the judgment below. *Id.* If the Court were bound by clear-error review in that scenario, "the science" in

Louisiana would potentially be different from "the science" just across the border in Arkansas.

The skepticism that clear-error review applies to legislative facts like these is heightened when those facts underpin constitutional decisionmaking. "[Q]uestions of 'constitutional fact' . . . require *de novo* review." *Jacobellis v. Ohio*, 378 U.S. 184, 190 n.6 (1964); *see also Muller v. Oregon*, 208 U.S. 412, 420-21 (1908) ("We take judicial cognizance of all matters of general knowledge" when "the extent to which a special constitutional limitation goes is affected by the truth" of "a question of fact [that] is debated and debatable."); *Women's Med. Pro. Corp. v. Voinovich*, 130 F.3d 187, 192 (6th Cir. 1997), *abrogated on other grounds by Dobbs v. Jackson Women's Health Org.*, 597 U.S. 215 (2022) ("[A]n appellate court is to conduct an independent review of the record when constitutional facts are at issue.").[2] Declining to review these facts de novo would permit lower courts to

[2] The Courts of Appeals share this understanding. *See Latta v. Otter*, 771 F.3d 456, 469 (9th Cir. 2014) ("Unsupported legislative conclusions as to whether particular policies will have societal effects of the sort at issue in this case—determinations which often, as here, implicate constitutional rights—have not been afforded deference by the Court."); *Bloedorn v. Grube*, 631 F.3d 1218, 1229 (11th Cir. 2011) (reviewing "core constitutional facts de novo"); *United States v. Friday*, 525 F.3d 938, 949 (10th Cir. 2008) (holding that "constitutional facts" are "subject to our independent examination" (internal quotations omitted)); *United States v. Israel*, 317 F.3d 768, 770 (7th Cir. 2003) (requiring an "independent examination of the whole record" by "appellate courts" when "First Amendment concerns are at issue"); *New Life Baptist Church Acad. v. Town of E. Longmeadow*, 885 F.2d 940, 941 (1st Cir. 1989) (Breyer, J., for the panel) (holding that "First Amendment questions of constitutional fact compel the Court's *de novo* review" (cleaned up)).

impose "a constitutional straightjacket" whenever there is "medical and scientific uncertainty." *L.W. ex rel. Williams v. Skrmetti*, 83 F.4th 460, 473 (6th Cir. 2023), *cert. granted sub nom. United States v. Skrmetti*, 144 S. Ct. 2679 (2024) (quoting *Gonzales v. Carhart*, 550 U.S. 124, 163 (2007)). And appellate courts would "become spectators rather than referees in construing our Constitution." *L.W.*, 83 F.4th at 479.

Moreover, such independent review is only logical. Consider the application of heightened scrutiny in the First Amendment context, where the Court must determine whether there are "less restrictive alternatives" to a particular regulation of speech. *See Ashcroft v. ACLU*, 542 U.S. 656, 666 (2004). In *Ashcroft v. ACLU*, the Court assessed the constitutionality of the Child Online Protection Act (COPA) by analyzing the effectiveness of "blocking and filtering software." *Id.* at 666-67. The effectiveness of such software—as evidenced by research and data—*must* be a legislative fact subject to de novo review; otherwise, this Court would be unable to resolve a circuit split as to whether a federal statute like COPA violates the First Amendment. Or consider a claim of cruel and unusual punishment under the Eighth Amendment, where a prisoner opposing a method of execution must show there is an alternative method that "would . . . significantly reduc[e] a substantial risk of pain." *See Bucklew v. Precythe*, 587 U.S. 119, 138 (2019). If the science regarding the pain resulting from a particular lethal-injection protocol is a close call, this Court would similarly be unable to resolve a circuit split on the issue. Under clear-error review, "[l]aw would come to turn on fact and be susceptible to two right answers." 2 McCormick on Evid. § 334 (9th ed. 2025). This

outcome would nullify the Court's duty and ability to ensure the uniform application of the Constitution.

Here, the lower courts' "fact finding"—which consisted of merely reading an expert's declaration—shows why this question is subject to de novo review. There was no evidentiary hearing below. The district court did not assess the credibility of Colorado's expert by scrutinizing her demeanor on the stand. Instead, the court merely read the expert's declaration. The court stated: "The preliminary injunction record demonstrates that conversion therapy is ineffective and harms minors who identify as gay, lesbian, bisexual, transgender, or gender non-conforming." Pet.App.158a. In support of this "finding," the district court cited only Colorado's brief and its expert's declaration. *See, e.g.*, Pet.App.158-159a & n.10 (citing both as "[t]he preliminary injunction record"). The Tenth Circuit then held that this "finding"—*i.e.*, the district court's reading of a legal brief and a filed declaration—could only be reviewed "for clear error." Pet.App.29a. That cannot be right.

There is no plausible justification for deferring to a district court's act of simply reading an expert's declaration. An appellate court is equally well situated to read briefs and an accompanying declaration. *See L.W.*, 83 F.4th at 488-89 ("In a case such as this, where the district court's decision was made on the basis of a paper record, without an evidentiary hearing, we are in as good a position as the district judge to determine the propriety of granting a preliminary injunction." (cleaned up)). And the appellate court *must* retain the ability to review de novo the legislative facts underpinning a constitutional ruling. To do otherwise is to turn the hierarchy of Article III on its head and

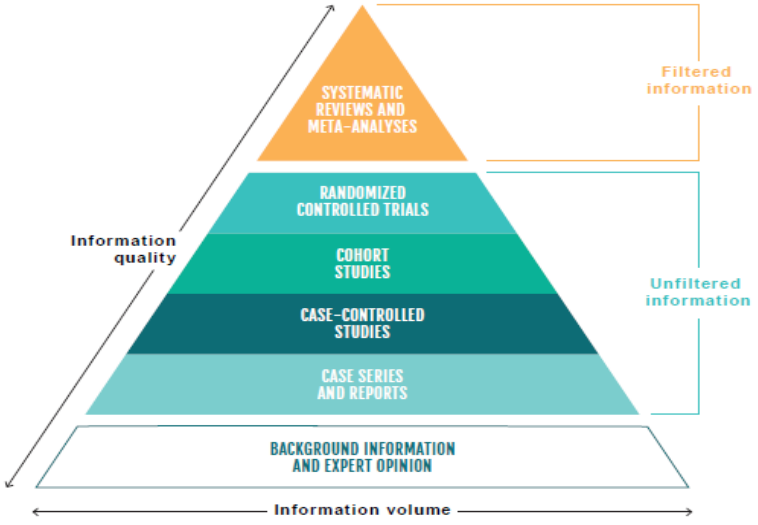
nullify this Court's ability to finally resolve constitutional questions. *See Ramos v. Louisiana*, 590 U.S. 83, 124 n.5 (2020) (Kavanaugh, J., concurring in part) ("[V]ertical *stare decisis* is absolute, as it must be in a hierarchical system with 'one supreme Court.'" (quoting U.S. CONST. art. III, § 1)). The state of the scientific evidence regarding counseling—a legislative fact underpinning the lower courts' constitutional rulings—is subject to de novo review.

II. Under The Principles Of Evidence-Based Medicine, Psychosocial Support Is The Only Appropriate Treatment For Gender Dysphoria.

The highest form of medical evidence is a "systematic review," which is a structured research process permitting a full assessment of all the evidence on a given topic. Here, two systematic reviews are relevant. The first is a systematic review of the clinical guidelines for treatment of gender dysphoria in minors. This review found that only two sets of guidelines were reliable, and both of them recommend psychosocial support as the leading approach for helping minors suffering from gender dysphoria. The second relevant review specifically assessed the evidence around the effects of psychosocial interventions for minors with gender dysphoria. The researchers concluded there was no evidence showing that psychotherapy caused any harm.

A. Under The Principles Of Evidence-Based Medicine, Systematic Reviews Are The Highest Form Of Medical Evidence.

The principles of evidence-based medicine guide clinicians in determining whether particular medical evidence is reliable. *See* GORDON GUYATT ET AL., USERS' GUIDES TO THE MEDICAL LITERATURE: ESSENTIALS OF EVIDENCE-BASED CLINICAL PRACTICE, JAMAEVIDENCE 10 (3d ed. 2015), https://perma.cc/H46Z-NKEC ("Evidence-Based Medicine User Guide") (Evidence-based medicine "provides guidance to decide whether evidence is more or less trustworthy."). One principle of evidence-based medicine is the hierarchy of medical evidence with "systematic reviews" at the top. *See Independent Review of Gender Identity Services for Children and Young People: Final Report*, NAT'L HEALTH SERV. ENG. 55 (Apr. 2024) ("Cass Review").



See id.; *see also* Evidence-Based Medicine User Guide at 15 fig. 2-3.

As the pyramid shows, the following types of medical evidence are arranged in descending order of reliability—with the most reliable form (systematic reviews) at the top and the least reliable (clinical experience) at the bottom. "When searching for evidence to answer a clinical question," then, "it is preferable to seek a systematic review." Evidence-Based Medicine User Guide at 274.

A systematic review is a study that involves the "identification, selection, appraisal, and summary of primary studies that address a focused clinical question using methods to reduce the likelihood of bias." *Id.* at 484. The process of conducting a systematic review begins with formulating the relevant question to be researched and identifying selection criteria for relevant studies. *See id.* at 274-75. Then "reviewers will conduct a comprehensive search of the literature in all relevant medical databases, which typically yields a large number of potentially relevant titles and abstracts." *Id.* "They then apply the selection criteria to the titles and abstracts, arriving at a smaller number of articles that they retrieve." *Id.* at 275.

"Having completed the culling process, the reviewers assess the risk of bias of the individual studies and abstract data from each study." *Id.* This stage of the systematic review process—assessing individual studies for bias—is a critical part of understanding the evidence base for a particular intervention. As a general matter, "bias" in this context means a study's results are a "deviation from the underlying truth because of a feature of the design or conduct of a research study." *Id.* at 422. If the data comes from studies with a high risk of bias, then the data is less reliable. And "[e]ven if the results of different studies are consistent,

determining their risk of bias is still important" because "[c]onsistent results are less compelling if they come from studies with a high risk of bias." *Id.* at 283. The end result of a systematic review is a study of studies—a comprehensive look at the evidence on a given question that accounts for the reliability of the studies forming the evidence base.

B. A Systematic Review Found That The Only Reliable Clinical Guidelines Recommend Psychosocial Support For Minors With Gender Dysphoria.

As part of the Cass Review commissioned by the U.K.'s National Health Service, researchers from York University conducted a series of systematic reviews for questions related to the treatment of gender dysphoria in minors. One of those reviews assessed the reliability of the existing clinical guidelines for treating minors with gender dysphoria. *See* Jo Taylor et al., *Clinical Guidelines for Children and Adolescents Experiencing Gender Dysphoria or Incongruence: A Systematic Review of Guideline Quality (Part 1)*, 109 ARCHIVES DISEASE CHILDHOOD s65 (2024), https://perma.cc/ULJ7-UTE4 ("Taylor Review Part I"); Jo Taylor et al., *Clinical Guidelines for Children and Adolescents Experiencing Gender Dysphoria or Incongruence: A Systematic Review of Recommendations (Part 2)*, 109 ARCHIVES DISEASE CHILDHOOD s73 (2024), https://perma.cc/SWF4-YRMW ("Taylor Review Part II"). This review identified 23 sets of clinical guidelines that related to treatments for gender dysphoria in minors. Taylor Review Part I at s65. The researchers then used a validated instrument to assess the quality of these guidelines across six different domains, including the rigor of development. *Id.* at s66.

Three independent reviewers appraised each guideline and determined whether the reviewer would recommend the guideline for use in practice. *Id.* at s66-67.

"Only two guidelines were recommended for practice by all three appraisers: the Swedish and Finnish guidelines." *Id.* at s69 (citations omitted). These two guidelines ranked the highest "for rigour of development due to their evidence-based approach and transparent reporting of" their methodology. *Id.*; *see also id.* at s70 ("These are the only guidelines to publish details of how developers reviewed and utilized the evidence-base and the decision-making behind their recommendations."). "They were also the only guidelines" that "included a formal ethics review." *Id.* at s69.

But their quality is not the only thing that set these two guidelines apart. The Swedish and Finnish guidelines—*i.e.*, the only guidelines to adequately follow principles of evidence-based medicine—are also the only two guidelines to list psychosocial care as the "first-line treatment for childhood gender dysphoria/incongruence." Taylor Review Part II at s78. Relatedly, both the Swedish and Finnish guidelines recommend that *medical* transitions (*i.e.*, the use of puberty blockers and cross-sex hormones) be limited to the research context. *Id.* at S80; *see also* Taylor Review Part I at s69.

England has now also reached the same conclusion through the same process. As mentioned, this systematic review was performed by researchers at York University in support of the Cass Review, and the UK has now joined Sweden and Finland in recommending psychosocial support as the primary approach for

helping minors suffering from gender dysphoria. The United States Department of Health and Human Services recently cataloged the position of each health authority:

- Per England's National Health Service (NHS): "The first-line treatment for gender dysphoria is psychosocial support and, as necessary, psychotherapy and treatment of possible comorbid psychiatric disorders."

- Per Finland's Council for Choices in Health Care in Finland (COHERE): "The primary intervention for children and young people . . . is psychosocial (including psychoeducation) and psychological support and intervention; the main objective is to alleviate distress associated with gender dysphoria and promote the individual's global functioning and well-being."

- Per Sweden's National Guidelines: "The psychosocial care of young people with gender dysphoria needs to be adapted to the needs of the individual adolescent. Psychosocial support that helps adolescents deal with natal puberty without medication needs to be the first option when choosing care measures. For those suffering from mental health problems, measures such as supportive counseling, psychotherapy, child psychiatric treatment, and suicide prevention need to be offered and adapted to the nature and severity of the mental health problem and the young person's overall situation."

Treatment for Pediatric Gender Dysphoria: Review of Evidence and Best Practices, U.S. DEP'T OF HEALTH & HUM. SERVS. 246-47 (May 1, 2025), https://perma.cc/8WKX-BPSK ("HHS Report") (citations omitted). Therefore, the guidelines and recommendations that are based on an assessment of the available scientific evidence all recommend psychosocial support as the primary approach for helping minors with gender dysphoria.

C. Another Leading Systematic Review Found No Basis For Concluding That Psychosocial Interventions Harm Minors With Gender Dysphoria.

In addition to the systematic review discussed above, the researchers at York University also conducted a systematic review focused specifically on the effect of psychosocial interventions, including counseling, on minors with gender dysphoria. *See* Claire Heathcote et al., *Psychosocial Support Interventions for Children and Adolescents Experiencing Gender Dysphoria or Incongruence: A Systematic Review*, 109 ARCHIVES DISEASE CHILDHOOD s19 (2024), https://perma.cc/9SR9-WFNF ("Heathcote Review"). In this review, researchers located studies that analyzed the effects of psychosocial support on minors with gender dysphoria. *Id.* at s20. These studies were then assessed for reliability through use of a research instrument "designed to appraise methodological quality." *Id.*

The researchers found that not a single study suggested that psychosocial support was harmful when used to treat gender dysphoria in minors. There was "no indication of adverse or negative effects" in any

study. *Id.* at s31. In other words, there is zero evidence to support Colorado's view that psychotherapy as a treatment for gender dysphoria is harmful for minors.

It is no answer for Colorado to suggest that its law permits "neutral" counseling so long as that counseling does not seek to "change" a minor's gender identity. True, the Counseling Ban says the defined term "Conversion therapy" does not include "identity exploration." COLO. REV. STAT. § 12-245-202(3.5)(b). But the statute simultaneously *prohibits* any counseling that would promote a change in an individual's "gender expressions," *id.*, which is defined as "an individual's way of reflecting and expressing the individual's gender to the outside world, typically demonstrated through appearance, dress, behavior, chosen name, and how the individual chooses to be addressed," *id.* § 24-34-301(9). Therefore, a counselor would potentially be accused of engaging in "conversion therapy" by suggesting that the individual change "behavior" when trying to deal with gender dysphoria. It is unclear how a counselor could encourage "identity exploration" (apparently lawful) without encouraging any "change" in "behavior" (unlawful). And if there were any doubt that Colorado's law offers kids a one-way ticket to "affirmation," that doubt is dispelled by the law's carve-out for any and all "[a]ssistance to a person undergoing a gender transition." *Id.* § 12-245-202(3.5)(b)(II). Thus, even if Colorado purports to offer a sliver of hope to counselors attempting to care for minors suffering from gender dysphoria, the vagueness in the Counseling Ban would chill any reasonable practitioner from doing so.

Nor can Colorado defend the lack of evidence supporting its law on the basis that it is "unethical" to

even perform a study of this issue. The Tenth Circuit remarkably endorsed this proposition on the say-so of Colorado's counsel at oral argument. *See* Pet. App. 71a n.47. But as a logical matter, to say that an approach cannot be studied because there is no evidence supporting that approach is obviously circular—as the dissent below recognized. Pet. App. 122a n.26 (describing the "logic of this argument [a]s something Lewis Carroll would love"). And as a scientific matter, it is wrong. To be sure, there is a situation where research is unethical—*e.g.*, when it would violate the principle of clinical "equipoise." HHS Report at 234. But under this principle, a research subject will not receive an intervention only when it is "*known* to be less effective or to have a higher risk than an available alternative." *Id.* (emphasis added). And here, the consequences of this principle run entirely the other way: *gender transitions* "have a higher risk" than psychosocial interventions and given the low evidence of benefit for either, the principle of clinical equipoise would foreclose providing *gender transitions* to research subjects. *Id.* There is no ethical bar to researching the effects of psychosocial support on minors suffering from gender dysphoria.

Moreover, there is reason to think that laws like Colorado's Counseling Ban chill additional research on this issue. As HHS recently explained, "characterizing as 'conversion therapy' any approach focused on reducing a minor's distress about their body or social role is a problematic and potentially harmful rhetorical device." *Id.* at 253; *see also* Cass Review at 150 (noting the "unhelpfully polarised debate around conversion practices" in the context of "psychological therapies" for "supporting children and young people

with gender incongruence or distress"). And "[t]here is evidence that the specter of being labeled a 'conversion therapist' . . . has created a climate of anxiety among mental health professionals." HHS Report at 253-54. "In this way, the denigration of psychotherapy" as conversion therapy "has a chilling effect on the ethical psychotherapists' willingness to take on complex [gender dysphoria] patients, which will make it much harder for [gender dysphoric] individuals to access quality mental health care." *Id.* at 255-56 (internal quotation marks omitted). Therefore, Colorado's Counseling Ban not only lacks any evidentiary support, but it also perversely punishes those committed to providing the only approach justified by the scientific evidence.

III. The Lower Courts' Scientific Analysis Is Clearly Flawed.

Against the backdrop of the evidence-based research outlined above, the lower courts' errors are glaring. First, both courts endorse the idea that Colorado's legislators relied on studies to support their enactment of the law, but the studies Colorado's expert cited to show harm from counseling for gender dysphoria did not even exist when Colorado passed the Counseling Ban. Second, the studies Colorado's expert did cite were primarily anonymous online surveys that should carry no weight in the face of the systematic reviews outlined above. And third, the Guidelines that Colorado's expert relied on have been thoroughly discredited over the last two years.

A. The Studies Colorado's Expert Cited To Show Harm From Counseling For Gender Dysphoria Did Not Even Exist When Colorado Passed Its Ban.

The Tenth Circuit concluded that "[t]he district court made a factual finding that 'Colorado considered the body of medical evidence' demonstrating the harms of conversion therapy before passing the" Counseling Ban. Pet.App.40a. That quote comes from the district court's opinion. *See* Pet.App.158a. And in support of it, the district court cited page 30 of Colorado's brief in opposition to the preliminary injunction. *Id.* That page, in turn, cites several paragraphs from the declaration of Colorado's lone expert, Dr. Glassgold. *See* Suppl. App. Vol. I at 77, *Chiles v. Salazar*, Nos. 22-1445 & 23-1002, (10th Cir. May 1, 2023), ECF Nos. 79-1 & 73-1 ("CA10 Suppl. App."). Specifically, it cites paragraphs 72, 75-76, and 79-83 from the Glassgold declaration. *Id.*

But there is a problem. Not one of the studies cited in those paragraphs relating to gender dysphoria *even existed* when Colorado enacted the Counseling Ban in May 2019. *See Prohibit Conversion Therapy for a Minor*, HB19-1129, 75th Gen. Assemb., Reg. Sess. (Colo. 2019), *available at* https://perma.cc/JS6P-E8LM (showing the "Final Act" was passed on May 9, 2019, and was signed on May 31, 2019). And it does not take much sleuthing to see this:

- Paragraph 72 discusses an article limited exclusively to "sexual orientation" and does not assess counseling for gender dysphoria. CA10 Suppl. App. 136-37.

- Paragraphs 75-76 discuss an article published "[i]n 2020." *Id.* at 138.

- Paragraph 79 discusses "[a] 2021 study." *Id.* at 139.

- Paragraph 80 discusses two studies from "2020" that are limited exclusively to "sexual orientation" and do not assess counseling for gender dysphoria. *Id.* at 139-40 & nn. 95, 97.

- Paragraph 81 discusses a study published "[i]n 2020." *Id.* at 140.

- Paragraph 82 discusses a study published "[i]n 2020." *Id.* at 141.

- Paragraph 83 cites a study published in "2021." *Id.* at 141 & n.100.

In sum, there is zero support in the record suggesting that "Colorado considered" *any* "medical evidence demonstrating the harms of conversion therapy" in the context of gender dysphoria "before passing" the Counseling Ban. Pet.App.40a (internal quotation marks omitted). Thus, even if the Court declines to view the state of the science as a legislative fact subject to de novo review, this "finding" below was clearly erroneous in any event.

B. The Post-Enactment Online Surveys Cited By Colorado's Expert Are So Unreliable As To Be Meaningless.

The post-enactment studies relating to gender dysphoria cited by Colorado's expert do nothing to help its case. To start, six of the seven "studies"

relating to gender dysphoria are *online surveys*.[3] That is as unscientific as it sounds. The remaining study is even less reliable: the researchers conducted "interviews" ("most" of which "were conducted remotely" through Skype or Zoom) of 22 people in Canada who personally identified as "2SLGBTQ+."[4] *Id*. at 5. Setting aside the idea of deciding a constitutional question based on zoom interviews of fewer than two dozen "2SLGBTQ+" Canadians, the surveys that form the foundation of the district court's finding that counseling to help minors overcome gender dysphoria causes harm are so unreliable as to be meaningless. Indeed, surveys do not even appear on the pyramid of evidence. Anonymous online surveys are not thought of as real scientific medical evidence because this type of "research" is subject to numerous potential biases.

The surveys underpinning the studies relied on below are no exception. For example, paragraphs 75-77 of Dr. Glassgold's declaration discuss an article by Green, *et al.*, from 2020.[5] The anonymous online survey on which this article is based was conducted by "The Trevor Project," an LGBTQ activist organization

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[3] *See* CA10 Suppl. App. 138-41 (reprinting ¶¶ 75-79, 81-83).

[4] According to the authors, this acronym stands for "Two-Spirit," lesbian, gay, bisexual, transgender, and "other queer." Trevor Goodyear et al., *"They Want You to Kill Your Inner Queer but Somehow Leave the Human Alive": Delineating the Impacts of Sexual Orientation and Gender Identity and Expression Change Efforts*, 59 J. SEX RSCH. 1, 2 & n.1 (2022) (author's manuscript).

[5] Amy E. Green et al., *Self-Reported Conversion Efforts and Suicidality Among US LGBTQ Youths and Young Adults, 2018*, 110 AM. J. PUB. HEALTH 1221 (2020), https://perma.cc/8LNM-5HQT.

that engages in "legislation, litigation, and public education." *See Advocacy & Government Affairs*, THE TREVOR PROJECT, https://perma.cc/FW3J-UV78; *see also* Green, *supra*, at 1221 ("The authors are with The Trevor Project, West Hollywood, CA."). The participants in the survey were recruited "through targeted advertisements" on Facebook and Instagram. Green, *supra*, at 1222. "The advertisements targeted those who interacted with material deemed to be relevant to the LGBTQ community." *Id.*

This design suffers from several obvious risks of bias. First, the survey is subject to "sampling bias," which "occurs when different members of a population have unequal probabilities of being included in a study"—for example, "when recruitment strategies have unequal reach for different groups." Keven Joyal-Desmarais et al., *How Well Do Covariates Perform When Adjusting for Sampling Bias in Online COVID-19 Research? Insights from Multiverse Analyses*, 37 EUR. J. OF EPIDEMIOLOGY 1233, 1234 (2022), https://perma.cc/95W8-C62U. As noted above, the article recruited participants on social media who had engaged with "material deemed to be relevant to the LGBTQ community." Green, *supra*, at 1222. This tactic obviously makes it highly unlikely that the survey would include anyone who *benefitted* from counseling to help them overcome gender dysphoria—*i.e.*, those whose gender dysphoria resolved thanks to psychosocial support—since those individuals are unlikely to be engaging with "material" that the Trevor Project deems "relevant to the LGBTQ community." In other words, the survey was designed (intentionally or otherwise) to recruit only those individuals for whom psychosocial support *did not help*, and the survey

reported those results as evidence of everyone who had been subjected to "conversion therapy." The data resulting from that one-sided approach tells us almost nothing about the effects of counseling.

Second, the survey is subject to bias from the "good subject effect," which is bias resulting from a participant's desire to be helpful by confirming the researcher's hypothesis, *see* Austin Lee Nichols & Jon K. Maner, *The Good-Subject Effect: Investigating Participant Demand Characteristics*, 135 J. GEN. PSYCH. 151 (2008), https://perma.cc/K2TV-D9AW. Participants knew this survey was conducted by The Trevor Project. *See* Green, *supra*, at 1222 ("Young people . . . were recruited for a cross-sectional online survey conducted by The Trevor Project."). Given participants' engagement with social media posts that are "relevant to the LGBTQ community," it is highly likely participants supported The Trevor Project's mission. Therefore, participants would potentially desire to answer the questions in a way that would be helpful to the organization—leading to the "good subject effect." And for an organization whose goal is to eliminate so-called "conversion therapy," it is fairly straightforward to understand that linking suicidality to "conversion therapy" would be helpful to The Trevor Project's mission.

Finally, surveys are incapable of ruling out confounding variables, and that is an especially large problem in *this* context given the number of psychological comorbidities present in those with gender dysphoria. As HHS recently recognized, the "current patient population" of individuals with gender dysphoria "has a high rate (relative to the general population) of comorbid mental health problems, including

depression, anxiety, suicidality, self-harm, and eating disorders[.]" HHS Report at 65. Researchers in the UK likewise found that "rates of depression, anxiety and eating disorders were higher in the gender clinic referred population"—*i.e.*, those referred to the UK's major gender clinic—"than in the general population." Cass Review 91. Finnish researchers "found that 75% of patients" presenting to Finnish pediatric gender clinics "in the mid-2010s had severe mental health problems that appeared to have *predated* the emergence of [gender dysphoria]." HHS Report at 67. The Trevor Project survey is incapable of determining whether the suicidality reported by the anonymous online participants was the result of supposed "conversion therapy" or the myriad other psychological comorbidities that have been found to be overrepresented in this patient population. Indeed, the survey's conclusions rest on participants' answers to two questions: (1) "Have you ever undergone reparative therapy or conversion therapy?"; and (2) "During the past 12 months, did you ever seriously consider attempting suicide?" Thus, the survey did not even ask participants whether the "conversion therapy"—which the survey did not define and thus left to participants' interpretation—was related to the suicidality present in the preceding 12 months. No serious scientific conclusions can be drawn from this sort of pseudoscience.

Other surveys relied on below are equally unreliable. For example, immediately after discussing the Green study, Dr. Glassgold discussed the Turban article from 2020.[6] *See* CA10 Suppl. App. 139. The

[6] Jack Turban et al., *Association Between Recalled Exposure to Gender Identity Conversion Efforts and Psychological*

methodology of the survey underlying Turban's article will sound familiar. The 2015 United States Transgender Survey was conducted by "the National Coalition for Transgender Equality." *See Executive Summary* at 2, U.S. TRANS SURVEY (Dec. 2016), https://perma.cc/M8TM-WLVK. The recurring survey identifies itself as "the largest survey of trans people, by trans people, in the United States." *2022 U.S. Trans Survey*, U.S. TRANS SURVEY (2022), https://perma.cc/GY4G-5GV3. The organizations that partner to help conduct the survey currently include the "National Queer Asian Pacific Islander Alliance," the "National Black Trans Advocacy Coalition," and the "TransLatin@ Coalition." *Team & Partners*, U.S. TRANS SURVEY (2022), https://perma.cc/M38K-U5NK. And the "Outreach Council"—*i.e.*, the organizations who help recruit the survey participants—include the "Trans Justice Funding Project," and "GLMA Health Professionals Advancing LGBTQ Equality." *Id.* It takes little imagination to see why a survey with participants recruited by these organizations is subject to both sampling bias and the "good subject effect" discussed above. Moreover, only individuals who identified as transgender *at the time of the survey* were counted—meaning anyone who had previously been diagnosed with gender dysphoria, received psychosocial support, and then had their gender dysphoria resolve was not included. Finally, this survey design is also incapable of distinguishing between suicidality resulting from anonymously reported conversion

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Distress and Suicide Attempts Among Transgender Adults, 77 JAMA PSYCHIATRY 68 (2020).

therapy or the various other psychological comorbidities that arise in this patient population.

In sum, dressing up anonymous online surveys from a cherrypicked group of participants who are sympathetic to your cause is not scientific evidence. The *real* scientific evidence is analyzed in the systematic reviews discussed above. And those clearly demonstrate that the best evidence available leads to a conclusion that (1) there is no basis for the proposition that counseling to help a minor overcome gender dysphoria causes harm, and (2) psychosocial support should be the primary approach for helping minors suffering from gender dysphoria.

C. The WPATH Guidelines That Colorado's Expert Invoked Have Been Completely Discredited.

To say Colorado's expert relied on the WPATH Standards of Care to support her opinion is an understatement. Throughout her declaration, she championed the WPATH guidelines at every turn. *See, e.g.*, CA10 Suppl. App. 107 (invoking the "WPATH Standards of Care" as "the internationally recognized guidelines" that inform "psychological and medical treatment throughout the world"); *id.* ("The WPATH Standards of Care are formulated . . . by the foremost experts in the care of transgender and gender-diverse individuals."); *id.* at 110 (providing assurance that Colorado's "[l]aw is also consistent with WPATH's Standards of Care" (citation omitted)). But these guidelines have been thoroughly discredited.

Over the last two years, the WPATH Standards of Care version 8 (SOC-8) has been publicly exposed as an ideological project with no evidentiary support.

As HHS recently reiterated, "the guidelines issued by the World Professional Association for Transgender Health (WPATH) have been rated among the lowest in quality and have not been recommended for implementation by systematic reviews of guidelines." HHS Report at 151. The Taylor systematic review discussed above, *see* Part II.B, *supra*, determined that the WPATH guidelines "lack developmental rigour and transparency." Taylor Review Part I at s71. "The extensive problems in the SOC-8 development process, which included the failure to base recommendations on [systematic reviews] and numerous other serious limitations in the process, ultimately led to this low rating and the status of 'not recommended for implementation.'" HHS Report at 138-39.

In addition, "recent revelations indicate that WPATH's lodestar is ideology, not science." *Eknes-Tucker*, 114 F.4th at 1261 (Lagoa, J., concurring in the denial of rehearing en banc). "Internal documents reveal that SOC-8 authors manipulated guideline language with the explicit aim of shaping court rulings, legislative actions, and insurance coverage decisions, revealing a clear departure from the principles of unbiased, evidence-driven clinical guideline development." HHS Report at 172. For example, contributors to one chapter of the SOC-8 "disclosed that 'social justice lawyers' had advised them against rigorous evidence reviews, stating that such reviews might reveal limited or insufficient evidence, placing them 'in an untenable position in terms of affecting policy or winning lawsuits.'" *Id.* (citation omitted). It should go without saying, but HHS had to say it anyway: "Incorporation of legal advocacy goals into guideline language, explicitly for purposes of influencing policy and

litigation outcomes, conflicts sharply with accepted international standards emphasizing scientific rigor and impartiality." *Id.* at 174.

One of the more shocking episodes in the SOC-8 process involved HHS itself under the prior administration. "In July 2022, WPATH faced significant pressure from Admiral Rachel Levine, the U.S. Assistant Secretary for Health, whose office communicated concern that listing specific, minor ages would trigger restrictive legislative actions." *Id.* at 175. Although some SOC-8 members expressed hesitation about "allowing U.S. politics to dictate international professional clinical guidelines," "WPATH's apparent investment in securing endorsement from the Biden administration led it to agree to downgrade the age guidelines from 'recommendations' to 'suggestions.'" *Id.* at 175-76 (citations omitted). That is raw politics, not evidence-based science.

* * *

In sum, the lower courts determined that the Colorado legislature relied on studies that did not exist at the time Colorado enacted the Counseling Ban. And the post-enactment "studies"—essentially online anonymous surveys where participants were recruited by trans advocacy groups—do not make up for the lack of science supporting Colorado's law. Finally, the WPATH Guidelines held up by Colorado's expert (and surely forthcoming *amici* supporting Colorado) have been thoroughly discredited by both external systematic reviews that have found a lack of evidentiary support for the guidelines and by WPATH's own internal communications, which reveal the political and ideological process it used to develop its

recommendations. No reliable evidence supports Colorado's ban on counseling to help minors overcome gender dysphoria.

CONCLUSION

For these reasons, the Court should reverse the judgment below.

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Respectfully submitted,

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