IN THE UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF ARKANSAS
CENTRAL DIVISION

DYLAN BRANDT, et al.,

PLAINTIFFS,

v. **No. 4:21-CV-00450-JM**

LESLIE RUTLEDGE, et al.,

DEFENDANTS.

SUPPLEMENTAL DECLARATION OF STEPHEN B. LEVINE, M.D.

Pursuant to 28 U.S.C. 1746, I declare:

1. I have been retained by counsel for Defendants as an expert witness in connection with this litigation. I have actual knowledge of the matters stated in this declaration. My training, credentials, extensive experience, and significant history as an expert witness are detailed in my declaration in this matter dated July 8, 2021.

2. My opinions set forth in this declaration are based upon my knowledge and direct professional experience in the matters discussed. The material that I have relied upon are the same types of materials that other experts in my field rely upon when forming opinions on the subject, including hundreds of published, peer-reviewed scientific research (and clinical) articles.

3. I have reviewed the newly submitted supplemental declarations by Dr. Deanna Adkins (dated July 15, 2021) and Dr. Armand Antommaria (dated July 15, 2021), as well as the declaration submitted by the plaintiffs' new witness, Dr. Jack Turban (dated July 16, 2021). The declarations submitted by the plaintiffs' experts, and by Dr. Turban, in particular, contain numerous errors on matters that I have already addressed in my first declaration and that could be addressed beyond what I say here. Therefore, this declaration does not exhaust my opinions.

4. As I explain, Dr. Turban's account of the evidence is demonstrably distorted by his advocacy of experimental gender-transition procedures on minors and his opposition to other

approaches to treatment, which functions to harm youth with gender dysphoria by limiting access to psychotherapy. Dr. Turban would dismiss the international consensus that claims concerning safety and effectiveness of gender-transition procedures are not supported by the evidence because they threaten his life's work thus far. A fundamental issue that is not being addressed is what is the adult fate of teens treated with hormones and prepared for further surgery, if they so elect. This glaring unanswered question is central for two reasons: first is the fact that multiple objective scientific reviews have pointed out a lack of convincing evidence of improved mental health during adolescence; and, second, every study of adult trans populations indicates a high prevalence of various mental health problems.[1] Finally, the scientific community is moving to prioritize psychotherapy as the indicated treatment for adolescents with gender dysphoria.

I. DR. TURBAN'S MISEVALUATION OF THE EVIDENCE IS DRIVEN BY ITS THREAT TO HIS LIFE'S WORK.

5. Dr. Turban advocates for treating gender dysphoria throughout life with medical and surgical interventions first. Much of his research output is designed to prove the value of these treatments and to discredit any other approach. Relevant to this legal matter, he is likely the country's most visible advocate of performing gender-transition procedures on minors. His work reflects a single-minded focus on these procedures as treatment for adolescents with gender dysphoria. Indeed, his work has been soundly criticized for his "problematic analysis" and "flawed conclusions," which he has "use[d] to justify the misguided notion that anything other than 'affirmative' psychotherapy for gender dysphoria (GD) is harmful and should be banned." Further, his "notion that all therapy interventions for GD can be categorically classified" into a

[1] Dhejne, C., Van Vlerken, R., Heylens, G., & Arcelus, J. (2016). Mental health and gender dysphoria: A review of the literature. *Intl. Rev. Psychiatry (Abingdon, England)*, *28*(1), 44–57. https://doi.org/10.3109/09540261.2015.1115753

"simplistic 'affirmation' versus 'conversion' binary" betrays "a misunderstanding of the complexity of psychotherapy."[2] His use of a survey to suggest that puberty blockers reduce suicidality has been refuted.[3] The regrettable outcome of Dr. Turban's efforts is to "limit access to ethical psychotherapy for individuals suffering from GD, further disadvantaging this already highly vulnerable population."

6. In a recent article Dr. Turban frankly recognizes that "[s]ince the publication of the WPATH Standards of Care and the Endocrine Society guidelines, the use of pubertal suppression for transgender youth has become more common in the United States. There are limited data, however, regarding the mental health outcomes of pubertal suppression."[4] Unfortunately, Dr. Turban's description of the evidence in his declaration here does not display that same candor. His commitment to the cause of promoting "affirmative" gender-transition treatment distorts his evaluation of the actual state of the evidence. This is reflected in both his overstated assessment of low-quality studies that he claims "taken together" indicate that gender-transition procedures "improve[] mental health" and his dismissiveness of the international consensus that the safety and effectiveness of such procedures are not supported by the evidence.

7. Notably, neither Dr. Turban nor the plaintiffs' other witnesses claim that gender-transition procedures *reduce gender dysphoria itself*. Instead, Turban picks through a handful of

[2] Robert D'Angelo, Ema Syulnik, Sasha Aya, Lisa Marchiano, Dianna Theadora Kenny, and Patrick Clarke, Letter to the Editor: "One Size Does Not Fit All: In Support of Psychotherapy for Gender Dysphoria," *Arch. Sex. Behav.*, vol. 50, p. 7 (2021), https://doi.org/10.1007/s10508-020-01844-2

[3] Biggs, M. Puberty Blockers and Suicidality in Adolescents Suffering from Gender Dysphoria. *Arch. Sex. Behav.* 49**,** 2227–2229 (2020). https://doi.org/10.1007/s10508-020-01743-6

[4] Turban, J. L., King, D., Carswell, J. M., & Keuroghlian, A. S. (2020). Pubertal Suppression for Transgender Youth and Risk of Suicidal Ideation. *Pediatrics, 145*(2), e20191725. https://doi.org/10.1542/peds.2019-1725

low-quality studies for findings of any reduction (however insignificant) in various forms of psychopathology.[5] And, repeatedly, when such findings are absent, Dr. Turban claims the study was "underpowered"—suggesting that the contrary findings are merely the result of how the study was performed or how many subjects it included (Turban pars. 13, 14). Indeed, Dr. Turban's description ignores these studies' reports of continuing high rates of poor functionality[6] as well as suicidal ideation, suicide attempts, and completed suicides.

8. Revealingly, Dr. Turban dismisses as irrelevant the outcome of the one long-term study that sought to ascertain mental-health outcomes of gender-transition surgery. The publication of that study by Bränström and Pachankis in the *American Journal of Psychiatry* resulted in a correction.[7] That correction was published along with a comment from the editor, seven letters to the editor noting the study's serious methodological errors, and a retraction by the authors explaining that their conclusion that gender-transition surgery improves mental health was incorrect.[8] The data from that study actually *contradicts* claims that gender-transition surgery im-

[5] Dr. Antommaria's declarations recognize that the Endocrine Society guidelines' suggestions concerning the use of puberty blockers are based on very low quality, or at best, "low quality" evidence. By those guidelines' own terms, the weakness of such suggestions indicate doubt that those "who receive [puberty blockers] will derive, on average, more benefit than harm." Wylie C. Hembree, et al., Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline, *J. Clin. Endocr. & Metabolism*, vol. 102, p. 3872 (Nov. 2017).

[6] Zeluf, G., Dhejne, C., Orre, C., Nilunger Mannheimer, L., Deogan, C., Höijer, J., & Ekéus Thorson, A. (2016). Health, disability and quality of life among trans people in Sweden-a web-based survey. *BMC public health*, *16*(1), 903. https://doi.org/10.1186/s12889-016-3560-5

[7] Correction to Bränström and Pachankis, *Am. J. Psychiatry*, vol. 177, p. 734 (Aug. 2020), https://doi.org/10.1176/appi.ajp.2020.1778correction

[8] Ned H. Kalin, Reassessing Mental Health Treatment Utilization Reduction in Transgender Individuals After Gender-Affirming Surgeries: A Comment by the Editor on the Process, *Am. J. Psychiatry*, vol. 177, p. 764 (Aug. 2020), https://doi.org/10.1176/appi.ajp.2020.20060803

proves mental health. This important study is very inconvenient for Dr. Turban's efforts to advocate for "affirmative" gender-transition treatment. So it is not surprising that he seeks to minimize its significance.

9. Bränström and Pachankis are not the only advocates who have noted that there is a need for more evidence that gender confirming surgeries improve mental health. In their 2021 study in *JAMA Surgery*,[9] Almazan and Keuroghlian write: "Despite the growing demand for and access to gender confirming surgery, there is a paucity of high quality evidence regarding the effects on mental health of TGN [i.e., transgender and gender diverse] people." Methodological concerns focus on the reliance of retrospective self-report among a diverse group of clinically unknown trans-identified people and the lack of both a meaningful control group and measures of continuing gender dysphoria, psychological distress, or psychosocial functioning.[10] Even though most forms of gender-transition surgery are not performed on adolescents, discussion of surgery matters for treating adolescents because a significant minority of patients undergoing hormonal treatment will pursue surgery, and some actually undergo mastectomies before reaching 18 years old.

10. Claiming, as Dr. Turban does, that the data shows that "affirming" gender-transition treatment improves mental health is a distortion of all of the evidence. But even if there were reliable evidence of short-term improvements in adolescents' mental health, that would not

[9] Almazan, A. N., & Keuroghlian, A. S. (2021). Association Between Gender-Affirming Surgeries and Mental Health Outcomes. *JAMA surgery*, *156*(7), 611–618. https://doi.org/10.1001/jamasurg.2021.0952

[10] Biggs has criticized the limitations of Turban's data set, which was the same data set used by Almazan and Keuroghlian. See Biggs M. (2020). Puberty Blockers and Suicidality in Adolescents Suffering from Gender Dysphoria. *Archives of sexual behavior*, *49*(7), 2227–2229. https://doi.org/10.1007/s10508-020-01743-6

be sufficient to recommend gender-transition procedures. The issue is not simply whether adolescents feel better in the short term—which can be caused by cross-sex hormone-fueled euphoria or a misplaced adolescent conviction that such procedures will ameliorate psychosocial problems (including gender dysphoria itself). Rather, the important issue from a responsible psychiatric perspective is whether individuals who undergo gender-transition procedures have improved outcomes over their *life course*. But neither Dr. Turban nor the plaintiffs' other experts produce any evidence to support claims that there is such improvement. Puberty suppression began in the US in earnest only in 2014 and while it has been employed in many urban gender medicine clinics, there are no long-term follow-up data available. There is only belief that it is the proper treatment. The adult outcomes remain to be seen. And one can see from Dr. Turban's CV that he lacks years of experience of following adults patients and attempting to help them with their various symptoms and dilemmas.

11. Contrary to Drs. Turban and Antommaria, the "off-label" use of drugs is the least of the problems with "affirmative" gender-transition treatment. It is generally accepted by the scientific community that the outcomes of the so-called Dutch protocol (i.e., providing puberty blockers and cross-sex hormones to adolescents with early-onset gender dysphoria) are simply unknown and that the risks are significant. Only a few months ago, there was a sensation when Thomas Steensma, who helped develop the Dutch protocol, reportedly raised the alarm that "the rest of the world is blindly adopting our research" when in fact "[l]ittle research has been done so far on treatment with puberty blockers and hormones in young people. That is why it is also seen as experimental."[11] Indeed, in the United States, these "affirmative" treatments are being

[11] More Research is Urgently Needed into Transgender Care for Young People: "Where Does the Large Increase of Children Come From?" https://www.voorzij.nl/more-research-is-urgently-needed-into-transgender-care-for-young-people-where-does-the-large-increase-of-children-come-from/

performed even on adolescents with *late*-onset gender dysphoria—a group with a different developmental pathway that were unstudied by the Dutch protocol investigators. Indeed, De Vries, one of the main investigators who produced the Dutch protocol, has warned that their research does not "apply to adolescents who more recently present in overwhelmingly large numbers for transgender care, including those that come at an older age, possibly without a childhood history of [gender incongruence]." She urged "caution" because "some eventually detransition."[12] If the current practices of the gender transition industry do not qualify as *experimental*, then that word simply has no meaning.

12. Dr. Turban's claim that the national reviews from the UK, Sweden, and Finland are "not peer-reviewed" is perverse. When a study is submitted to a peer-reviewed journal, it is reviewed by—at most—three people in the field. The national reviews from the UK, Sweden, and Finland have more than three reviewers, and they each considered numerous studies in the field, not just a single paper. The national reviews also include experts with greater expertise in study design and scientific method than the typical clinicians who review individual studies for a journal. These reviews speak with one voice that using puberty blockers and cross-sex hormones for gender transition is unsupported by reliable evidence of safety and effectiveness. That consensus is very inconvenient for Dr. Turban's life work, which is perhaps why his declaration would mislead the court to believe that these reviews are unreliable.[13]

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[12] Annelou L.C. de Vries, Challenges in Timing Puberty Suppression for Gender-Nonconforming Adolescents, *Pediatrics*, vol. 146(4) (October 2020), https://doi.org/10.1542/peds.2020-010611

[13] As if the national reviews were not enough, a peer-reviewed summary of the evidence came to a similar conclusion, finding "no long-term outcome data for either pre-pubertal or adolescent transgender youth . . . . Significant gaps in knowledge exist in nearly all aspects of gender variance, gender dysphoria and transgender experiences of children, adolescents and young adults." J. Olson-Kennedy, P.T. Cohen-Kettenis, B.P.C. Kreukels, H.F.L. Meyer-Bahlburg, R. Garofalo, W. Meyer, and S.M. Rosenthal, Research Priorities for Gender Nonconforming/Transgender Youth: Gender Identity Development and Biopsychosocial Outcomes, *Curr. Opin. Endocrinol. Diabetes Obes.*, vol. 23(2), p. 172 (April 2016), doi:10.1097/MED.0000000000000236

13. The international consensus is further bolstered by the Cochrane systematic review that Dr. Turban barely acknowledges. Cochrane researchers exhaustively combed through six medical databases, three "grey literature" databases, five clinical trial registries, and the scientific abstracts of the last two meetings of 14 different professional organizations. They contacted 15 different manufacturers of hormones and other experts in the field. After initially identifying 1057 studies, removing duplicates, screening, and inspecting them, the researchers concluded, "This systematic review has shown that well-designed, sufficiently robust randomised controlled trials (RCTs) and controlled-cohort studies do not exist." "Despite more than four decades of ongoing efforts to improve the quality of hormone therapy for women in transition, [the review] found that no RCTs or suitable cohort studies have yet been conducted to investigate the efficacy and safety of hormonal treatment approaches for transgender women in transition." The review further noted that the Endocrine Society, the UK National Health Service, and the NHS Guideline Panel had all reached the same conclusion. It highlighted the all-important issue: "If hormone therapy is highly valued in the treatment of gender dysphoria, then this raises the question: why are there no RCTs or appropriate cohort studies for this clinical condition?"[14]

II. THE SCIENTIFIC COMMUNITY IS MOVING TO PRIORITIZE PSYCHOTHERAPY FOR ADOLESCENTS WITH GENDER DYSPHORIA.

14. In asserting that I have misrepresented the "watchful waiting" approach, Dr. Turban actually misrepresents my position. The initial approach to youth with gender dysphoria, whether young children or adolescents, should be extended evaluation and therapy to address the post-natal forces that may be contributing to their self-understanding so that they can eventually make an informed decision about how to present themselves to the world.

[14] Claudia Haupt, et al., *Antiandrogen or Estradiol Treatment or Both during Hormone Ther-apy in Transitioning Transgender Women*, Cochrane Database of Systematic Reviews (Nov. 28, 2020).

15. This approach is also different from so-called conversion therapy. Indeed, there is a world of difference between trying to change how a patient identifies (on one hand) and providing psychotherapy that recognizes that how a patient identifies often does change as a result of maturation, life experience, intellectual growth, etc. (on the other). This is consistent with what Finland has recently discovered, that adolescents are still likely to undergo significant changes, some of which may cause them to find adaptations that render undesirable drastic bodily alterations. Indeed, the Finnish guidelines warn that "[b]rain development continues until early adulthood—about age 25, which also affects young people's ability to assess the consequences of their decisions on their own future selves for [the] rest of their lives." Those guidelines further note that it is uncertain whether puberty blockers *themselves* impair young peoples' judgment and decision making, which could negatively impact the ability to provide informed consent to subsequent hormonal and surgical stages of the intervention. "[T]hese factors," they explain, "are key reasons for postponing any [medical] interventions until adulthood" and instead prioritizing psychotherapy for adolescents.[15]

16. My colleagues and I note that most adolescents presenting with gender dysphoria have considerable indicators of underlying mental health problems before gender has become an issue for them. Therefore, they benefit greatly from psychotherapy. In contrast, Dr. Turban completely fails to address the role played by mental health comorbidities in the genesis of gender dysphoria. He does not deal with autism spectrum disorders, the impact of childhood adversities or preexisting depression, social anxiety, self-hatred, etc. He implausibly blames all resid-

[15] Palveluvalikoima, Recommendation of the Council for Choices in Health Care in Finland (PALKO / COHERE Finland), https://segm.org/sites/default/files/Finnish_Guidelines_2020_Minors_Unofficial%20Translation.pdf

ual problems that transgender-identifying persons have on society—i.e., the minority stress theory. Dr. Turban's ignoring of post natal experience in shaping a search for a comfortable sense of self reflected in the symptoms of gender dysphoria is facilitated by his belief that all gender dysphoria is prenatally biologically determined. He uses his biological causality hypothesis to ignore the problematic developmental experiences of so many of these trans teens, despite his research fellowship in child and adolescent psychiatry.

17. Neither Dr. Turban nor the plaintiffs' other experts provide any reliable evidence concerning how to determine which adolescents will persist in a transgender identification into adulthood. Persistence rates of the adolescents undergoing medical transition may be high, but that does not reflect the adolescents who only transiently identify as transgender, those who agree that time or psychotherapy is the best approach, those who recognize their intense fears and conflicts about cross gender expression, and those who know that they are deeply depressed and anxious but do not know why. Also, contrary to Dr. Turban, a high persistence rate for adolescents who have undergone medical transition is explained by the medical transition itself, which reinforces a transgender identity. The Endocrine Society guidelines recognize that "social transition (in addition to GD/gender incongruence) has been found to contribute to the likelihood of persistence."[16] It would strain credulity to maintain that social transition has this effect but medical transition does not.

18. In view of the indisputable fact that how a person identifies can change, Dr. Adkins draws a meaningless distinction between how one identifies (which she claims is "fixed") and how one "*understand*[*s*]" how one identifies (which, she claims, may "evolve"). In any

[16] Wylie C. Hembree, et al., Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons, p. 3879.

case, Dr. Adkins now claims that gender identity is "fixed" only in the sense that it cannot be changed simply at will or by "external" factors. That is very far from claiming that gender identity is immutable, and it obviously allows that a person's identification can change based on *internal* experiential factors and maturation itself. Most aspects of human identity evolve throughout life.[17] Those who return to presenting themselves as a member of their biological sex after hormones or surgery starkly contradict Dr. Adkins' belief system.

19. Dr. Adkins' claims that using puberty blockers for gender-transition procedures is "reversible" or that they merely "pause" puberty are also false and misleading. Based on concerns that virtually all adolescents who begin puberty blockers proceed to cross-sex hormones, the UK National Health Service has officially recommended against such language, stating that "[r]esearchers and clinical staff working in gender identity development should consider carefully the terms that they use in describing treatments e.g. avoid referring to puberty suppression as providing a 'breathing space,' to avoid risk of misunderstanding."[18] This is a wise recommendation, and it should be followed. Further, besides puberty blockers' physical side effects like inhibiting increase of height and bone density, the drugs also have irreversible psychosocial effects. That is because puberty blockers also halt the normal social and psychological process of maturation at that developmentally crucial stage, with lifelong effects. The Endocrine Society guidelines rightly recognize both "the sense of social isolation from having the timing of puberty to

[17] Levine SB. (2020). "The Gender Revolution" in Psychotherapeutic Approaches to Sexual Problems: An essential guide for mental health professionals. American Psychiatric Association Publications, Washington, DC., pp 81-98.

[18] Investigation into the Study "Early Pubertal Suppression in a Carefully Selected Group of Adolescents with Gender Identity Disorders," National Health Service Health Research Authority (October 14, 2019), https://www.hra.nhs.uk/about-us/governance/feedback-raising-concerns/investigation-study-early-pubertal-suppression-carefully-selected-group-adolescents-gender-identity-disorders/

be so out of sync with peers" and the "potential harm to mental health (emotional and social isolation) if initiation of secondary sex characteristics must wait until the person has reached 16 years of age."[19]

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

Executed on July 19, 2021.

Stephen B. Levine, M.D.

[19] Wylie C. Hembree, et al., Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons, p. 3885.