

IN THE UNITED STATES DISTRICT COURT FOR  
THE EASTERN DISTRICT OF ARKANSAS

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DYLAN BRANDT, et al.,		:
	Plaintiffs,	:
	v.	:
LESLIE RUTLEDGE, et al.,		:
	Defendants.	:
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		:
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Case No.: 4:21-CV-00450-JM-01

**DECLARATION OF JACK TURBAN, MD, MHS  
IN SUPPORT OF PLAINTIFFS’ MOTION FOR A PRELIMINARY INJUNCTION**

1. I have been retained by counsel for Plaintiffs as an expert in connection with the above-captioned litigation.

2. The purpose of this declaration is to respond to some of the points made in the declarations filed by Drs. Levine, Regnerus, Hruz and Lappert in Opposition to Plaintiffs’ Motion for Preliminary Injunction.

3. I have actual knowledge of the matters stated in this declaration. In preparing this declaration, I reviewed the declarations and other supporting material filed by Defendants in Opposition to the Plaintiffs’ Motion for Preliminary Injunction as well as the materials cited herein. I may rely on those documents as additional support for my opinions. I have also relied on my years of research and other experience, as set out in my curriculum vitae (Exhibit A), and on the materials listed therein. The materials I have relied upon in preparing this declaration are the same types of materials that experts in my field of study regularly rely upon when forming opinions on the subject. I may wish to supplement these opinions or the bases for them as a result



of new scientific research or publications or in response to statements and issues that may arise in my area of expertise.

### **BACKGROUND AND QUALIFICATIONS**

4. I am currently a Fellow in Child and Adolescent Psychiatry at Stanford University, where I research the mental health of transgender youth.

5. I received my undergraduate degree in neuroscience from Harvard College. I received both my MD and Master of Health Science degree from Yale University School of Medicine. I am writing in my capacity as a mental health researcher. I completed residency training in general psychiatry at The Massachusetts General Hospital and McLean Hospital (Harvard Medical School).

6. My research focuses on the mental health of transgender youth. While at Yale, I was awarded the Ferris Prize for my thesis entitled “Evolving Treatment Paradigms for Transgender Youth.” In 2017, I received the United States Preventative Health Services Award for Excellence in Public Health based on my work related to the mental health of transgender youth. I have lectured on the mental health of transgender youth at Yale School of Medicine and Massachusetts General Hospital (a teaching hospital of Harvard Medical School). I have given grand rounds presentations on this topic around the country and have presented nationally and internationally on the topic.

7. I have served as a manuscript reviewer for numerous professional publications including *The Journal of The American Medical Association (JAMA)*, *JAMA Pediatrics*, *The Journal of The American Academy of Child & Adolescent Psychiatry*, *Pediatrics*, *The Journal of Adolescent Health*, and *The American Journal of Public Health*. I have served as lead author for textbook chapters on the mental health of transgender youth, including for *Lewis’s Child &*

*Adolescent Psychiatry: A Comprehensive Textbook* and the textbook of The International Academy for Child & Adolescent Psychiatry and Allied Professionals. I am co-editor of the textbook, *Pediatric Gender Identity: Gender-affirming Care for Transgender and Gender Diverse Youth*.

8. I have published extensively on the topic of transgender youth, including seven articles in peer-reviewed journals in the past two years alone.

9. I have never testified as an expert at trial or in deposition. I am being compensated at an hourly rate of \$250 per hour for preparation of expert declarations and reports, and \$400 per hour for time spent preparing for or giving deposition or trial testimony. My compensation does not depend on the outcome of this litigation, the opinions I express, or the testimony I provide.

#### **SUMMARY OF OPINIONS**

10. In this declaration, I cite relevant literature to support my opinions that: (1) the views set forth by the state's experts in this case are outlier views not supported by the medical community at large, (2) all existing evidence indicates that gender-affirming medical interventions improve mental health outcomes for transgender adolescents and it would be dangerous and unethical to prohibit these medical services, (3) the state's experts have mischaracterized the risks of gender-affirming medical interventions, (4) the state's experts have inappropriately applied research about prepubertal children to adolescents who have reached puberty when explaining what they claim is a high likelihood of "desistence", (5) there is no evidence that gender-affirmation makes "persistence" in a transgender identity more likely, (6) the state's experts have omitted key literature regarding "detransition" and transition regret, while misrepresenting other studies, (7) the state's experts have misrepresented the "watchful

waiting model,” which refers only to prepubertal children, who are not candidates for gender-affirming medical interventions under any existing guidelines, (8) the state’s experts have misrepresented and omitted key research showing that gender identity has a strong innate biological basis, (9) the state’s experts’ discussion of gender-affirming genital surgery is incorrect and irrelevant to gender-affirming medical care for transgender youth, (10) the state’s experts misrepresent the informed consent process for gender-affirming medical care for transgender adolescents, (11) the state’s experts’ assertion that gender-affirming treatments for transgender adolescents are “experimental” is incorrect, (12) the scientific current understanding regarding the increase in referrals to pediatric gender clinics and the shift in sex ratio does not focus on “social contagion,” (13) gender identity conversion therapy has a clear definition and is dangerous and unethical, (14) some of the state’s experts have demonstrated key gaps in their knowledge regarding the field of psychiatry, and (15) recent non-peer-reviewed reports from The United Kingdom, Sweden, and Finland do not accurately summarize the scientific evidence regarding gender-affirming medical care for adolescents with gender dysphoria.

**THE VIEWS SET FORTH BY THE STATE’S EXPERTS ARE OUTLIER VIEWS NOT SUPPORTED BY THE MEDICAL COMMUNITY AT LARGE**

11. The state’s experts have claimed that gender-affirming medical interventions for transgender adolescents (pubertal suppression, gender-affirming hormone treatment, and gender-affirming top surgery) should be prohibited. Their views are not supported by any of the leading medical organizations and are expressly rejected by the following groups: The American Medical Association, The American College of Physicians, The American Academy of Family Physicians, The American College of Obstetricians and Gynecologists, The American Osteopathic Association, The American Psychiatric Association, The American Academy of Pediatrics, The American Osteopathic Association, The American Academy of Child &

Adolescent Psychiatry, The Endocrine Society, The Pediatric Endocrine Society, and The World Professional Association for Transgender Health.<sup>1</sup> The state's experts have set forth an implausible theory that these twelve national medical organizations (among others) have all come to the same incorrect conclusion and that these large national organizations of medical professionals are all "activist organizations" that, based on ideological views, are supporting treatments that are harmful to transgender adolescents.

**ALL EXISTING EVIDENCE INDICATES THAT GENDER-AFFIRMING  
MEDICAL INTERVENTIONS IMPROVE MENTAL HEALTH OUTCOMES  
FOR TRANSGENDER ADOLESCENTS**

12. All studies in medicine have strengths and limitations, and no one study design can answer all questions regarding an intervention. However, there have been a number of studies, several of which the state's experts failed to mention, showing that gender-affirming medical care is linked to favorable mental health outcomes. Each has strengths and limitations; however, taken together, these studies indicate that gender-affirming medical care improves mental health. I will briefly review several of them here.

13. First, in the realm of pubertal suppression, there have been eight studies. The first was a longitudinal study of 55 transgender adolescents that found a statistically significant decrease in depression following pubertal suppression.<sup>2</sup> The second was a longitudinal cohort study of 70 adolescents who received pubertal suppression that found improvements in internalizing psychopathology (anxiety and depression), externalizing psychopathology (e.g.,

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<sup>1</sup> Links to the statements from these medical organizations have been collated in Turban, J. L., Kraschel, K. L., & Cohen, I. G. (2021). Legislation to Criminalize Gender-Affirming Medical Care for Transgender Youth. *JAMA*. 325(22): 2251-2252.

<sup>2</sup> De Vries, A. L., McGuire, J. K., Steensma, T. D., Wagenaar, E. C., Doreleijers, T. A., & Cohen-Kettenis, P. T. (2014). Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics*, 134(4), 696-704.

disruptive behaviors), and global functioning.<sup>3</sup> Of note, some of the patients in this study appear to have also been included in the first study. The third was a study that compared 89 transgender adults who had accessed pubertal suppression during adolescence to 3405 transgender adults who wanted but were unable to access pubertal suppression during adolescence.<sup>4</sup> After adjusting for a range of potentially confounding variables, it found that those who accessed pubertal suppression had a statistically significant lower odds of lifetime suicidal ideation. The fourth was a study that compared 272 adolescents who had not yet received pubertal suppression with 178 transgender adolescents who had already been treated with pubertal suppression. Those who had received pubertal suppression had statistically significant lower “internalizing psychopathology” scores (a measure of anxiety and depression) than those who had not received pubertal suppression.<sup>5</sup> The fifth was a longitudinal cohort study of 50 adolescents who received pubertal suppression, gender-affirming hormones, or both, and that found a statistically significant decrease in depression for transgender females following pubertal suppression.<sup>6</sup> The sixth study was a longitudinal cohort study of 148 adolescents who received gender-affirming hormones, pubertal suppression, or both.<sup>7</sup> When examining all participants together, it found improvements

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<sup>3</sup> De Vries, A. L., Steensma, T. D., Doreleijers, T. A., & Cohen-Kettenis, P. T. (2011). Puberty suppression in adolescents with gender identity disorder: A prospective follow-up study. *The Journal of Sexual Medicine*, 8(8), 2276-2283.

<sup>4</sup> 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).

<sup>5</sup> van der Miesen, A. I., Steensma, T. D., de Vries, A. L., Bos, H., & Popma, A. (2020). Psychological functioning in transgender adolescents before and after gender-affirmative care compared with cisgender general population peers. *Journal of Adolescent Health*, 66(6), 699-704.

<sup>6</sup> Achille, C., Taggart, T., Eaton, N. R., Osipoff, J., Tafuri, K., Lane, A., & Wilson, T. A. (2020). Longitudinal impact of gender-affirming endocrine intervention on the mental health and well-being of transgender youths: preliminary results. *International journal of pediatric endocrinology*, 2020(1), 1-5.

<sup>7</sup> Kuper, L. E., Stewart, S., Preston, S., Lau, M., & Lopez, X. (2020). Body dissatisfaction and mental health outcomes of youth on gender-affirming hormone therapy. *Pediatrics*, 145(4).

in body dissatisfaction, depressive symptoms, anxiety symptoms. It appeared to be underpowered to detect differences for individual interventions. The seventh was a longitudinal cohort study of 44 patients that appeared to be underpowered to detect improvements in mental health.<sup>8</sup> However, on qualitative interviews, participants tended to have improved mood following treatment. The eighth was a study of 201 transgender adolescents in which 100 received pubertal suppression along with psychotherapy and 101 received psychotherapy alone. The study found a statistically significant increase in global functioning for those who received pubertal suppression. Additionally, patients receiving pubertal suppression had greater improvements in global functioning compared to those who did not receive pubertal suppression, though this difference was not statistically significant, likely due to the study being underpowered. To my knowledge, these are all of the studies to date that have examined the impact of pubertal suppression on the mental health of transgender adolescents.<sup>9</sup> Taken together, these studies strongly indicate that pubertal suppression improves the mental health of transgender adolescents.

14. In the realm of gender-affirming hormone treatment (e.g., estrogen or testosterone), there have been six studies to date. The first was the study by deVries et al. mentioned above. In addition to examining the impact of pubertal suppression, this study of 55 transgender adolescents found that before and after gender-affirming hormones and surgery,

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<sup>8</sup> Carmichael, P., Butler, G., Masic, U., Cole, T. J., De Stavola, B. L., Davidson, S., ... & Viner, R. M. (2021). Short-term outcomes of pubertal suppression in a selected cohort of 12 to 15 year old young people with persistent gender dysphoria in the UK. *PloS One*, *16*(2), e0243894.

<sup>9</sup> One additional study, Staphorsius et al. 2015 *Psychoendocrinology*, measured Child Behavior Checklist scores and found that adolescents on pubertal suppression had lower scores than those receiving pubertal suppression, suggesting better mental health for those receiving pubertal suppression. However, as this study was primarily focused on cognition, it did not conduct statistical comparisons between the two groups and thus I do not include it here.

participants had a statistically significant decrease in internalizing psychopathology (i.e., anxiety and depression).<sup>10</sup> The second study was a longitudinal cohort study of 47 transgender adolescents and found a statistically significant decrease in suicidality following gender-affirming hormone treatment.<sup>11</sup> The third study was the study by Kuper et al. mentioned above, a longitudinal cohort study of 148 adolescents who received gender-affirming hormones, pubertal suppression, or both.<sup>12</sup> When examining all participants together, it found statistically significant improvements in body dissatisfaction, depressive symptoms, and anxiety symptoms. It appeared to be underpowered to detect differences for individual interventions. The fourth was the study by Achille et al. mentioned above, which found statistically significant improvements in depression for all participants (pubertal suppression and gender-affirming hormones) but appeared to be underpowered to detect differences for individual interventions.<sup>13</sup> The fifth was the study by Lopez de Laura et al. of 23 adolescents who received gender-affirming hormones and found a statistically significant decrease in anxiety and depression.<sup>14</sup> The sixth was the study by Kaltiala et al. of 52 adolescents who received gender-affirming hormones and found statistically significant decreases in need for specialist level psychiatric treatment for depression

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<sup>10</sup> De Vries, A. L., McGuire, J. K., Steensma, T. D., Wagenaar, E. C., Doreleijers, T. A., & Cohen-Kettenis, P. T. (2014). Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics*, *134*(4), 696-704.

<sup>11</sup> Allen, L. R., Watson, L. B., Egan, A. M., & Moser, C. N. (2019). Well-being and suicidality among transgender youth after gender-affirming hormones. *Clinical Practice in Pediatric Psychology*, *7*(3), 302.

<sup>12</sup> Kuper, L. E., Stewart, S., Preston, S., Lau, M., & Lopez, X. (2020). Body dissatisfaction and mental health outcomes of youth on gender-affirming hormone therapy. *Pediatrics*, *145*(4).

<sup>13</sup> Achille, C., Taggart, T., Eaton, N. R., Osipoff, J., Tafuri, K., Lane, A., & Wilson, T. A. (2020). Longitudinal impact of gender-affirming endocrine intervention on the mental health and well-being of transgender youths: preliminary results. *International Journal of Pediatric Endocrinology*, *2020*(1), 1-5.

<sup>14</sup> de Lara, D. L., Rodríguez, O. P., Flores, I. C., Masa, J. L. P., Campos-Muñoz, L., Hernández, M. C., & Amador, J. T. R. (2020). Psychosocial assessment in transgender adolescents. *Anales de Pediatría (English Edition)*, *93*(1), 41-48.



(decreased from 54% to 15%), anxiety (decreased from 48% to 15%), and suicidality or self-harm (decreased from 35% to 4%).<sup>15</sup>

15. The state's experts have focused on a Cochrane review abstract from 2020 examining gender-affirming hormone therapy among transgender women. All this abstract revealed was that there are no randomized-controlled trials (RCT) examining gender-affirming interventions for transgender women. As Dr. Antonmarria noted in his statement, it would be unethical to conduct a randomized-controlled trial of gender-affirming medical interventions for transgender adolescents, given the principle of equipoise, which dictates that one may not randomize a patient to placebo when there is strong evidence that the intervention being offered to the treatment arm is superior. No Institutional Review Board (IRB) would approve such an RCT in this field. Furthermore, studies of gender-affirming medical interventions cannot be double-blinded, given their obvious impacts on physical development. Dr. Regnerus's assertion that "[there] would be no obstacle to randomized trials *without* placebo groups to compare different types, dosages, and methods of administrations of active treatments" is irrelevant, as such a trial would only tell investigators if one dose or administration of an intervention were superior to another. It would not answer the question regarding the efficacy or effectiveness of the class of medications in general, which is the relevant question.

16. The state's experts have made a range of assertions regarding the existing evidence base for gender-affirming medical care that warrant particular attention. The first is regarding Turban et al. 2020, in which Dr. Levine states, "It has been rigorously criticized for not emphasizing that both those treated and not treated with puberty blockers had high suicidal

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<sup>15</sup> Kaltiala, R., Heino, E., Työläjäarvi, M., & Suomalainen, L. (2020). Adolescent development and psychosocial functioning after starting cross-sex hormones for gender dysphoria. *Nordic Journal of Psychiatry*, 74(3), 213-219.

ideation rates.” This result is not surprising. The study showed that rates of lifetime suicidality are lower for those who accessed pubertal suppression, suggesting, as the other studies above do, that pubertal suppression improves the mental health of transgender adolescents. But one would not expect past-year suicidality rates to drop to the rates of the general population, given that transgender people who receive pubertal suppression are still exposed to other variables that negatively impact mental health (harassment, discrimination, etc.). In reference to the same study, Dr. Levine states, “It has been rigorously criticized for not emphasizing that... more children on these drugs were hospitalized for suicidal plans than the untreated.” This statement reflects a basic misunderstanding of statistics: one does not draw conclusions from raw frequencies when no statistically significant differences are present. The study found no statistically significant difference in rates of suicide attempts requiring hospitalization between the two groups, owing to this outcome being relatively infrequent, which limits statistical power. Dr. Hruz goes on to present an unusual conspiracy theory, that “a handful of political advocates could have faked the entire study.” For this to be possible, these presumed “political advocates” would have needed to fill out the over 27,000 responses to the study used. They would also, presumably, need to be privy to the study design for a study that was conducted 4 years after they completed the survey. They also would have needed to realize that questions that were asked during remote portions of the survey would later be linked for analysis. For context, the study questionnaire is 117 pages long and the relevant questions (i.e., exposure to pubertal suppression and measures of suicidality) are separated by 58 questions.

17. Dr. Hruz criticizes deVries et al. 2011 by stating, “It is also important to note that gender dysphoria itself did not diminish in study subjects.” When he states, “gender dysphoria,” he is referring to the Utrecht Gender Dysphoria Scale, which measures one’s discordance

between their gender identity and their sex assigned at birth (e.g., “I wish I had been born as my affirmed gender”). It would not be expected to decrease following treatment. As noted above, the study did find statistically significant improvement in a number of relevant mental health outcomes including internalizing psychopathology (i.e., anxiety and depression) and externalizing psychopathology (e.g., disruptive behaviors).

18. All existing published data, along with clinical experience from around the world, points to the fact that gender-affirming medical interventions improve mental health for transgender adolescents. To take these treatment options away from families and their physicians is unconscionable and dangerous. This is the very reason that the twelve major medical organizations listed above have opposed legislative bans on gender-affirming medical care for transgender adolescents.

**THE STATE’S EXPERTS HAVE MISCHARACTERIZED THE RISKS OF  
GENDER-AFFIRMING MEDICAL INTERVENTIONS**

19. The state’s experts have incorrectly asserted that gender-affirming medical interventions result in a range of adverse outcomes. They asserted that gender-affirming medical interventions negatively impact sexual functioning when, in reality, research has shown that sexual functioning (along with romantic development) improves.<sup>16</sup> They note that pubertal suppression results in delayed bone mineralization; however, a recent peer-reviewed article in the journal *Pediatrics* calculated the actual risk of an adverse clinical outcome from this (e.g., a fracture) to be extremely low (1-2% over 5-10 years and only with prolonged use of pubertal suppression past what is generally recommended by current guidelines).<sup>17</sup> They claim that

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<sup>16</sup> Bungener, S. L., de Vries, A. L., Popma, A., & Steensma, T. D. (2020). Sexual experiences of young transgender persons during and after gender-affirmative treatment. *Pediatrics*, 146(6).

<sup>17</sup> Pang, K. C., Notini, L., McDougall, R., Gillam, L., Savulescu, J., Wilkinson, D., ... & Lantos, J. D. (2020). Long-term puberty suppression for a nonbinary teenager. *Pediatrics*, 145(2).

pubertal suppression and hormone therapy result in infertility, but such a categorical declaration is demonstrably untrue. Pubertal suppression does not impair fertility; research has shown that patients who received pubertal suppression for another pediatric indication, precocious puberty, had no impaired fertility.<sup>18</sup> Similarly, a 2019 study found that fertility was similar between transgender men who had been on testosterone treatment and cisgender women.<sup>19</sup> That being said, there is a possibility (though still unproven) that going directly from early pubertal suppression onto gender-affirming hormones may impair fertility. For that reason, both the WPATH Standards of Care and The Endocrine Society Guidelines recommend that all pediatric patients be counseled regarding and offered fertility preservation prior to starting gender-affirming medical interventions. Dr. Levine has also made some unusual and frankly offensive statements including, “transgender individuals commonly become strongly narcissistic, unable to give the level of attention to the needs of another that is necessary to sustain a loving relationship” that are not substantiated by extant research. He provides no quantitative data to support his assertion. As noted above, gender-affirming medical interventions resulted in improved romantic development for transgender people. The state’s experts also stated that estrogen treatment for transgender women increases cardiovascular risk. However, a 2021 scientific statement from The American Heart Association noted that this risk is not established, “The use of gender-affirming hormone therapy may be associated with cardiometabolic changes,

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<sup>18</sup> Neely EK, Lee PA, Bloch CA, Larsen L, Yang D, Mattia-Goldberg C, et al. (2011) Leuprolide acetate 1-month depot for central precocious puberty: hormonal suppression and recovery. *Int J Pediatr Endocrinol*. 2010(1):398639.

<sup>19</sup> Leung, A., Sakkas, D., Pang, S., Thornton, K., & Resetkova, N. (2019). Assisted reproductive technology outcomes in female-to-male transgender patients compared with cisgender patients: a new frontier in reproductive medicine. *Fertility and Sterility*, 112(5), 858-865.

but health research in this area remains limited and, at times, contradictory.”<sup>20</sup> They additionally highlight a range of other factors that may cause higher rates of cardiovascular adverse events among transgender people, including depression, anxiety, and higher rates of smoking. The state’s experts report that gender-affirming medical care increases breast cancer risk. Studies have shown that transgender men (assigned female at birth) actually have lower incidences of breast cancer than cisgender women (also assigned female at birth).<sup>21</sup> This same study examined data from 2,260 transgender women (assigned male at birth) and identified 15 (0.7%) had developed breast cancer, suggesting a higher incidence ratio than would be expected for cisgender men (also assigned male at birth); however, a second larger study did not detect an increased risk of breast cancer among transgender women compared to cisgender men.<sup>22</sup> Of note, these studies did not examine whether study participants were taking gender-affirming hormones. In summary, there is no evidence that gender-affirming medical interventions increase breast cancer risk. The state’s experts assert that pubertal suppression adversely impacts brain development; however, research has shown that pubertal suppression does not negatively impact executive functioning.<sup>23</sup> Additionally, a 2020 systematic review and meta-analysis concluded

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<sup>20</sup> Streed Jr, C. G., Beach, L. B., Caceres, B. A., Dowshen, N. L., Moreau, K. L., Mukherjee, M., ... & Singh, V. (2021). Assessing and Addressing Cardiovascular Health in People Who Are Transgender and Gender Diverse: A Scientific Statement from the American Heart Association. *Circulation*. [ePublication ahead of Print]

<sup>21</sup> de Blok, C. J., Wiepjes, C. M., Nota, N. M., van Engelen, K., Adank, M. A., Dreijerink, K. M., ... & den Heijer, M. (2019). Breast cancer risk in transgender people receiving hormone treatment: nationwide cohort study in the Netherlands. *BMJ*, 365.

<sup>22</sup> Brown, G. R., & Jones, K. T. (2015). Incidence of breast cancer in a cohort of 5,135 transgender veterans. *Breast Cancer Research and Treatment*, 149(1), 191-198.

<sup>23</sup> Staphorsius, A. S., Kreukels, B. P., Cohen-Kettenis, P. T., Veltman, D. J., Burke, S. M., Schagen, S. E., ... & Bakker, J. (2015). Puberty suppression and executive functioning: an fMRI-study in adolescents with gender dysphoria. *Psychoneuroendocrinology*, 56, 190-199.

that “current evidence does not support an adverse impact of gender-affirming hormone therapy on cognitive performance in birth-assigned either male or female transgender individuals”.<sup>24</sup>

20. Every decision in medicine involves weighing risks and benefits of treatment. Physicians and families must be allowed to discuss the risks and benefits of potential treatment options and choose the intervention that is most likely to improve the health and well-being of an adolescent. To take away gender-affirming medical interventions as options for these families is dangerous and unethical. For many transgender adolescents, gender-affirming medical interventions are life-saving.

**THE STATE’S EXPERTS HAVE INAPPROPRIATELY APPLIED RESEARCH ABOUT PREPUBERTAL CHILDREN TO TRANSGENDER ADOLESCENTS WHO HAVE REACHED PUBERTY WHEN EXPLAINING WHAT THEY CLAIM IS A HIGH LIKELIHOOD OF “DESISTENCE”**

21. Though the terms “children” and “adolescents” are sometimes used synonymously in common parlance, it is vital that the court understand that these terms have specific and distinct meanings in the context of child and adolescent psychiatric research. In this field, “child” and “children” refers to a child who has not yet reached the earliest stages of puberty. The term “adolescent” refers to a minor who has begun puberty. The state’s experts inappropriately applied studies of prepubertal children (who are not candidates for gender-affirming medical interventions under any existing clinical guidelines) with studies of adolescents (who, depending on age and other factors, may be candidates for various forms of gender-affirming medical interventions).

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<sup>24</sup> Karalexi, M. A., Georgakis, M. K., Dimitriou, N. G., Vichos, T., Katsimpris, A., Petridou, E. T., & Papadopoulos, F. C. (2020). Gender-affirming hormone treatment and cognitive function in transgender young adults: a systematic review and meta-analysis. *Psychoneuroendocrinology*, *119*, 104721.

22. This distinction is most important in the realm of “desistence” studies (i.e., studies that look at how many transgender youths will later identify as cisgender). The state’s experts point to studies of gender non-conforming *prepubertal* children and highlight that the majority of these children will not grow up to be transgender. These studies have been criticized for a range of methodological limitations, but most importantly here, they do not apply to transgender minors who have reached the earliest stages of puberty (i.e., “adolescents”). Once a transgender youth reaches the earliest stages of puberty, it is extremely rare for them to later identify as cisgender. Dr. Adkins correctly cited the book chapter by Dr. deVries, Dr. Zucker, and me in this regard. Dr. Hruz, in contrast, pulled the following sentence from this same chapter, “The natural history of gender identity for *children* [emphasis added] who express gender nonconforming or transgender identities is an area of active research.” Once again, this is a reference to prepubertal children, not adolescents. Similarly, the quote the state’s experts use from The American Psychological Association referencing “working with [transgender and gender nonconforming] children” refers to children, not adolescents.

23. Dr. Levine cites a paper by Dr. James Cantor in *The Journal of Sex & Marital Therapy* that criticized The American Academy of Pediatrics policy statement regarding the treatment of transgender youth.<sup>25</sup> However, the paper *does not* criticize the use of pubertal suppression, gender-affirming hormones, or gender-affirming surgery for transgender adolescents. The paper is focused only on the treatment of prepubertal children, who are not candidates for gender-affirming medical interventions under any existing guidelines. The paper primarily defends the “watchful waiting” approach to prepubertal children that I describe later, in

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<sup>25</sup> Cantor, J. M. (2020). Transgender and gender diverse children and adolescents: fact-checking of AAP policy. *Journal of Sex & Marital Therapy*, 46(4), 307-313.

which a social transition is delayed until puberty begins. The paper is irrelevant to discussions regarding the interventions targeted by Arkansas's SAFE Act, namely, pubertal suppression, gender-affirming hormones, and gender-affirming surgery for transgender adolescents.

**THERE IS NO EVIDENCE THAT GENDER-AFFIRMATION MAKES  
“PERSISTENCE” OF A TRANSGENDER IDENTITY MORE LIKELY**

24. The state's experts spend a considerable portion of their statements discussing social transition. This refers to when a transgender child or adolescent takes on a gender expression (i.e., a name, pronouns, clothes, etc.) that matches their gender identity. This is a non-medical intervention that is irrelevant to Arkansas's SAFE Act. However, it is worth noting that the assertions made by the state's experts are false, including this statement from Dr. Levine: “In contrast, there is now data that suggests that encouraging social transition dramatically changes outcomes and often ‘locks in’ a patient’s journey into a life course of dependence on experimental hormone ‘treatments.’” This assertion is premised on the presumption that a social transition will make a child identify more strongly as transgender. However, recent research has shown that this is false – gender identification is not significantly different before and after a social transition.<sup>26</sup> This research highlights that the state's experts have misinterpreted the results of Steensma et al., which showed that “persistence” of a transgender identity is associated with a prepubertal social transition. The study by Rae et al. makes clear that this association is because those who undergo a social transition had stronger discordance between their sex assigned at birth and their gender identity to begin with, and the social transition itself does not increase their gender discordance. The state's experts proceed to point to studies showing that over 98% of transgender adolescents who start pubertal suppression go onto gender-affirming hormones,

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<sup>26</sup> Rae, J. R., Gülgöz, S., Durwood, L., DeMeules, M., Lowe, R., Lindquist, G., & Olson, K. R. (2019). Predicting early-childhood gender transitions. *Psychological Science*, 30(5), 669-681.



again suggesting that pubertal suppression increased these adolescent's gender incongruence. However, they make the same mistake again – the high percentage of adolescents going onto gender-affirming hormones indicates that these adolescents had a strong transgender identity to begin with. It is a logical fallacy to state that 98% of adolescents on puberty blockers proceeding onto gender-affirming hormones is evidence that puberty blockers increase the likelihood of persistence; rather all existing evidence suggests that the adolescents who started pubertal suppression to begin with were the those who were, through medical and mental health screening, determined, prior to starting pubertal suppression, to have a low likelihood of future desistence. If a higher number of these adolescents *did not* go onto gender-affirming hormones, these same experts would surely express concern that the evaluation protocols prior to starting pubertal suppression were insufficiently thorough. All existing evidence suggests that gender-affirmation does not impact “persistence” rates. That being said, I do wish to highlight that a small percentage of adolescents (around 2%) will not go onto gender-affirming hormones, which I will explain in further detail.

**THE STATE’S EXPERTS HAVE OMITTED KEY LITERATURE REGARDING  
“DE-TRANSITION” AND TRANSITION REGRET, WHILE  
MISREPRESENTING OTHER STUDIES**

25. The state's experts assert that a large number of adolescents who undergo gender-affirming medical or surgical interventions go on to regret treatment; however, this assertion is not backed up by extant evidence. In 2018, Amsterdam's VUMC Center of Expertise on Gender Dysphoria published the rates of regret among their cohort of 6,793 transgender patients who had undergone gender-affirming medical and/or surgical interventions.<sup>27</sup> Among transgender women

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<sup>27</sup> Wiepjes, C. M., Nota, N. M., de Blok, C. J., Klaver, M., de Vries, A. L., Wensing-Kruger, S. A., ... & den Heijer, M. (2018). The Amsterdam cohort of gender dysphoria study (1972–2015): trends in prevalence, treatment, and regrets. *The Journal of Sexual Medicine*, 15(4), 582-590.

who underwent gender-affirming surgery, 0.6% experienced regret. Among transgender men who underwent gender-affirming surgery, 0.3% experienced regret. Several of those who experienced regret were classified as having “social regret” rather than “true regret,” defined in the study as still identifying as transgender but deciding to reverse their gender-affirming surgery due to factors like “the loss of relatives [being] a large sacrifice.” The study also reported that only 1.9% of adolescents who started pubertal suppression did not choose to go onto gender-affirming hormones. In a second study of 143 transgender adolescents who started pubertal suppression, 5 (3.5%) decided not to proceed with further gender-affirming medical treatments.<sup>28</sup> One of these adolescents noted that pubertal suppression helped them to better understand their gender identity, and they ultimately identified with their sex assigned at birth. One birth-assigned female had ongoing chest dysphoria but chose to live with a female gender expression regardless, though was dreading breast development and menstruation. One stopped due to unspecified “psychosocial reasons” but continued to identify as transgender. One identified as gender non-binary and felt they no longer needed treatment. One came to identify with his sex assigned at birth. There was no indication that any of these adolescents regretted pubertal suppression. Cases of initiating then discontinuing gender-affirming hormones like estrogen or testosterone continue to be at the case report level, suggesting that this is a rare occurrence. In one of these case reports, a patient similarly noted that a trial of estrogen helped them to better understand their gender identity, which had evolved to non-binary, and they did not regret the trial of estrogen therapy.<sup>29</sup>

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<sup>28</sup> Brik, T., Vrouenraets, L. J., de Vries, M. C., & Hannema, S. E. (2020). Trajectories of adolescents treated with gonadotropin-releasing hormone analogues for gender dysphoria. *Archives of Sexual Behavior*, 49(7), 2611-2618.

<sup>29</sup> Turban, J. L., Carswell, J., & Keuroghlian, A. S. (2018). Understanding pediatric patients who discontinue gender-affirming hormonal interventions. *JAMA Pediatrics*, 172(10), 903-904.

26. In a peer-reviewed manuscript that was named Best Clinical Perspectives Manuscript of the year by *The Journal of The American Academy of Child & Adolescent Psychiatry*, Dr. Alex Keuroghlian and I created a framework for understanding transgender adolescent patients who discontinue gender-affirming medical interventions.<sup>30</sup> We explained that this may be due to external factors (e.g., pressure from family, societal rejection, harassment by peers) or internal factors (e.g., a change in the understanding of one's gender identity or confusion regarding gender identity). We highlighted that discontinuation of gender-affirming medical interventions does not always coincide with a change in understanding of one's gender identity or with transition-related regret. Our team later published a study highlighting that a substantial number of currently identified transgender people (13.1%) have "de-transitioned" at some point in their life, with the majority (82.5%) citing external factors like family rejection, societal stigma, or harassment.<sup>31</sup> Given that these people *currently* identify as transgender, it highlights that many people who "de-transition" choose to transition again in the future. This harkens to the history of the "ex-gay" movement in which many homosexual individuals reported that they were "cured" of their homosexuality, only to later reveal that they were still homosexual but felt pressured by their communities to say for many years that they were not.

27. Dr. Levine does not cite the landmark study by Wiepjes showing that regret following gender-affirming interventions is rare. Instead, he cites a study that he falsely claims, "identified 16,000 case reports world wide on the Internet." If one reads the cited manuscript

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<sup>30</sup> Turban, J. L., & Keuroghlian, A. S. (2018). Dynamic gender presentations: understanding transition and "de-transition" among transgender youth. *Journal of the American Academy of Child and Adolescent Psychiatry*, 57(7), 451-453.

<sup>31</sup> Turban, J. L., Loo, S. S., Almazan, A. N., & Keuroghlian, A. S. (2021). Factors Leading to "Detransition" Among Transgender and Gender Diverse People in the United States: A Mixed-Methods Analysis. *LGBT Health*, 8(4), 273-280.

closely, they will see that this is not the case.<sup>32</sup> Rather, the manuscript notes that there is a group on the social media platform Reddit called r/detrans and that this group contains 16,000 members. Dr. Hruz, presumably misreferencing this 16,000 figure, erroneously states that, “the authors claim to have identified 60,000 case reports of detransitioners world-wide on the Internet.” The authors of the paper note that one can find “several” studies of detransition in that group, but there is no indication that all 16,000 members of the group have detransitioned. In fact, in reading r/detrans, one will find posts expressing concern that the group has been dominated by members who have not actually detransitioned but rather by “people who are wanting to prey on their vulnerability and use them as political pawns.”<sup>33</sup> The state’s experts cite a second paper that recruited participants from r/detrans.<sup>34</sup> Though the state’s experts imply that this study of 237 individuals was of minors who medically transitioned, only 65% of those in the study had transitioned medically, and only 25% had medically transitioned as minors. It’s important to additionally note that this was an anonymous survey recruited on this r/detrans social media group in which there has been expressed concern that members of the group are not people who have detransitioned but rather people who wish to use detransition narratives for political motivations, such as removing access to gender-affirming medical care for transgender adolescents.

28. There is undoubtedly a small number of people who start gender-affirming medical interventions and later stop them. A minority of these appear to regret the treatment.

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<sup>32</sup> Expósito-Campos, P. (2021). A typology of gender detransition and its implications for healthcare providers. *Journal of Sex & Marital Therapy*, 47(3), 270-280.

<sup>33</sup> Post by a member of the Reddit group r/detrans, available at: [https://www.reddit.com/r/honesttransgender/comments/k6fidf/rdetrans\\_is\\_just\\_an\\_antitrans\\_sub\\_now/?utm\\_source=share&utm\\_medium=web2x&context=3](https://www.reddit.com/r/honesttransgender/comments/k6fidf/rdetrans_is_just_an_antitrans_sub_now/?utm_source=share&utm_medium=web2x&context=3). Accessed: July 12, 2021.

<sup>34</sup> Vandebussche, E. (2021). Detransition-related needs and support: A cross-sectional online survey. *Journal of Homosexuality*, 1-19.

However, it is of course not reasonable to outlaw an intervention that helps the vast majority of people because a small minority will regret treatment.

29. On the topic of de-transition, it is important to note that internal and external factors are not always clearly delineated. There have been reports of transgender people who have joined so-called “trans-exclusionary radical feminist groups,” where they are told that being transgender is not a valid identity and are encouraged to stop gender-affirming medical care. There have been reports of such factors leading to internal confusion about one’s gender identity and subsequent “de-transition.” Two people recently shared their stories of this in *Slate*, comparing the experience to the “ex-gay” movement of the past in which people were forced by external pressures to report they were no longer gay, but later came out as still identifying as gay.<sup>35</sup> As one person in the *Slate* article says, “No one really changes. They learn to keep their desires under control.”

30. In summary, all existing research suggests that regret following gender-affirming medical interventions is rare. As with all medical interventions, gender-affirming medical interventions cannot claim a 100% success rate. However, for the vast majority of adolescents, these interventions improve mental health. It is unreasonable and dangerous to take this option away from families and physicians as they work together to examine existing evidence and their individual case to determine what pathway is most likely to result in favorable mental health outcomes for an adolescent.

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<sup>35</sup> Urquhart, Evan. An “Ex-Detransitioner” Disavows the Anti-Trans Movement She Helped Spark. *Slate*. February 1, 2021. Available at: <https://slate.com/human-interest/2021/02/detransition-movement-star-ex-gay-explained.html>.

**THE STATE’S EXPERTS HAVE MISREPRESENTED THE “WATCHFUL WAITING” MODEL, WHICH REFERS TO PREPUBERTAL CHILDREN WHO ARE NOT CANDIDATES FOR GENDER-AFFIRMING MEDICAL INTERVENTIONS UNDER ANY EXISTING GUIDELINES**

31. The state’s experts repeatedly claim that the “watchful waiting” model of treating gender dysphoria involves not offering gender-affirming medical interventions to transgender adolescents. This is false. The “watchful waiting” model refers to the treatment of pre-pubertal youth, who are not offered gender-affirming medical interventions under any existing medical guidelines.<sup>36</sup> In fact, the “watchful waiting” model was first described by clinicians at The Center for Expertise for Gender Dysphoria at VUMC in Amsterdam, the very clinic that first developed the use of pubertal suppression for transgender adolescents. It refers to an approach in which one does not implement any interventions to try to push a prepubertal child to identify as cisgender but also does not advise a social transition until puberty. The approach notes that it is not relevant to transgender youth who have reached puberty (i.e., adolescents), who they note should be considered for pubertal suppression and potentially gender-affirming hormones and surgery later in life.<sup>37</sup> Furthermore, the “watchful waiting” approach is not generally practiced in the U.S. Nor do clinicians in the U.S. “push” children into a social transition. Rather, the approach in the U.S., which has increasingly become the most common approach for treating prepubertal transgender children, is to allow a child to direct their own gender exploration without any push from clinicians or parents toward any one gender identity (cisgender, transgender, or otherwise).

32. The state’s experts repeatedly misrepresent the watchful waiting approach in an attempt to create the sense that controversy exists regarding the provision of gender-affirming

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<sup>36</sup> De Vries, A. L., & Cohen-Kettenis, P. T. (2012). Clinical management of gender dysphoria in children and adolescents: the Dutch approach. *Journal of Homosexuality*, 59(3), 301-320.

<sup>37</sup> *Id.*

medical interventions when it does not. As noted above, there is broad consensus within the clinical and research community that gender-affirming medical interventions may be appropriate for transgender adolescents (not children).

**THE STATE’S EXPERTS HAVE MISREPRESENTED AND OMITTED KEY  
RESEARCH SHOWING GENDER IDENTITY HAS A STRONG INNATE  
BIOLOGICAL BASIS**

33. There is now a substantial body of literature showing that transgender identity has a strong innate biological basis. However, the state’s experts omit much of this research and misrepresent other elements of the existing literature. For example, Dr. Hruz proposes that, “Identical twin studies where siblings share genetic compliments and prenatal environmental exposure but have differing gender identities” have argued against the strong biological basis for transgender identity. On the contrary, twin studies have been some of the strongest pieces of evidence showing that gender identity has a strong biological basis. Researchers have examined identical twins (with the same DNA) and fraternal twins (with different DNA) and found that identical twins of transgender people are far more likely to be transgender than fraternal twins of transgender people, pointing to a strong genetic link.<sup>38</sup> Functional neuroimaging studies have shown that transgender adolescents have patterns of brain activation more similar to those of their gender identity than those of their sex assigned at birth.<sup>39</sup> Sophisticated gene sequencing studies have suggested that genes involved in estrogen processing play a role in the development

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<sup>38</sup> See, for example, Coolidge, F. L., Thede, L. L., & Young, S. E. (2002). The heritability of gender identity disorder in a child and adolescent twin sample. *Behavior Genetics*, 32(4), 251-257.

<sup>39</sup> Burke, S. M., Cohen-Kettenis, P. T., Veltman, D. J., Klink, D. T., & Bakker, J. (2014). Hypothalamic response to the chemo-signal androstadienone in gender dysphoric children and adolescents. *Frontiers in Endocrinology*, 5, 60.

of gender identity among transgender people.<sup>40</sup> Though the precise etiology of gender identity has yet to be identified, these studies together all establish that there is a strong innate biological basis for gender identity among transgender people. The psychosocial theories the state's experts present (that transgender identity is a result of trauma, parental factors, or social contagion) are not supported by scientific evidence. The one piece of evidence the state's experts present is a survey study by Dr. Littman, which I will discuss in subsequent sections.

**THE STATE'S EXPERTS' DISCUSSION OF GENDER-AFFIRMING SURGERY IS INCORRECT AND IRRELEVANT TO GENDER-AFFIRMING MEDICAL CARE FOR TRANSGENDER YOUTH**

34. The state's experts claim that the "error rate" for gender-affirming surgery is unknown. However, as described above, a large cohort study from The Netherlands showed that rates of regret following gender affirming surgery are low (0.3-0.6%), and many of these cases do not represent "true regret" as explained above. The state's experts also spend a considerable amount of time discussing a paper in *The American Journal of Psychiatry* by Bränström and Pachankis. This paper is not particularly relevant, as the majority of the surgeries described in the paper are not surgeries offered to minors under any existing medical guidelines (*i.e.*, genital surgery, hysterectomy, laryngeal surgery, etc.). The results are thus not of particular value to discussion of the Arkansas SAFE Act, which applies only to minors.

35. In addition, the state's experts all failed to mention a recent study in *JAMA Surgery* that addressed a major limitation of the analysis Bränström and Pachankis published in their response to letters to the editor critiquing their original study.<sup>41</sup> Namely, the *JAMA Surgery*

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<sup>40</sup> Theisen, J. G., Sundaram, V., Filchak, M. S., Chorich, L. P., Sullivan, M. E., Knight, J., ... & Layman, L. C. (2019). The use of whole exome sequencing in a cohort of transgender individuals to identify rare genetic variants. *Scientific Reports*, 9(1), 1-11.

<sup>41</sup> The Bränström and Pachankis paper itself found a decrease in mental healthcare utilization following gender-affirming surgery. Following publication, several physicians submitted letters



paper by Almazan & Keuroghlian used a proper control group. Their control group included only those who *desired* gender-affirming surgery as a control group, as comparing those who accessed surgery to those who did not desire surgery in the first place is not a clinically relevant comparison. The *JAMA Surgery* paper found that transgender people who accessed gender-affirming surgery had lower odds of past-month severe psychological distress and past-year suicidal ideation than those who desired but never accessed gender-affirming surgery.<sup>42</sup> Furthermore, they examined “lifetime but no past-year” measures of suicidality to address any potential concerns of reverse causality, with results indicating that gender-affirming surgery *improves* mental health, rather than those with better mental health being more likely to access gender-affirming surgery.

36. The state’s experts repeatedly cite a study by Dhejne et al. to imply that gender-affirming surgical interventions worsen mental health.<sup>43</sup> Their extrapolations from this data set are flawed. For example, Dr. Levine states, in reference to Dhejne et al., “The Swedish follow-up study found a suicide rate in the post-sex reassignment surgery population 19.1 times greater than that of the controls after affirmation treatment.” However, the control group he references

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to the editor critiquing the study for not including a control group. In response to these letters to the editor, Bränström and Pachankis published a response in which they provided a new analysis, comparing transgender people who received surgery to those who did not receive surgery. This new analysis did not detect lower rates of healthcare utilization among people who underwent surgery. As Bränström and Pachankis explain in their published response to the letters, however, this new analysis is not of particular value, as many transgender people do not desire surgery. Inclusion of transgender people who do not desire surgery in the control group makes this analysis relatively meaningless. A later study with a proper control group (Almazan & Keuroghlian 2021 *JAMA Surgery*) found a link between surgery and improved mental health.

<sup>42</sup> Almazan, A. N., & Keuroghlian, A. S. (2021). Association Between Gender-Affirming Surgeries and Mental Health Outcomes. *JAMA Surgery*.

<sup>43</sup> Dhejne, C., Lichtenstein, P., Boman, M., Johansson, A. L., Långström, N., & Landén, M. (2011). Long-term follow-up of transsexual persons undergoing sex reassignment surgery: cohort study in Sweden. *PLoS One*, 6(2), e16885.

consists of cisgender people. This is not an appropriate control group. Transgender people face a range of stressors that affect their mental health, most prominently societal rejection based on being transgender. Though gender-affirming surgery improves mental health (as shown, for example, by Almazan & Keuroghlian discussed above), it cannot eliminate societal discrimination, and thus even after surgery, many transgender people still suffer elevated rates of mental health problems compared to cisgender people. This reality of mental health challenges even with gender-affirming care is not a valid argument against the provision of gender-affirming care. Dr. Lappert states, “As a physician and surgeon, I have a duty to carefully assess the available scientific research literature and determine what surgical procedures have been scientifically proven safe and effective for use on patients — and which procedures are still experimental, potentially dangerous, and may well do more harm than good for patients.” However, it appears that Dr. Lappert did not read the discussion of the Dhenje paper he cites, which states that, “the results should not be interpreted such as sex reassignment *per se* increases morbidity and mortality. Things might have been even worse without sex reassignment. As an analogy, similar studies have found increased somatic morbidity, suicide rate, and overall mortality for patients treated for bipolar disorder and schizophrenia. This is important information, but it does not follow that mood stabilizing treatment or antipsychotic treatment is the culprit.” Furthermore, the study was published in 2011, and it followed individuals who had surgery when the surgical techniques were not as advanced and discrimination in society was far worse.

37. Gender-affirming chest surgery for transgender adolescents is not considered lightly. Parents and adolescents work extensively with their physicians to carefully weigh the potential risks and benefits of surgery. Existing medical guidelines note that this is only

considered for transmasculine patients and only after ample time living as their identified gender. There have been two studies examining the impact of gender-affirming chest surgery on the mental health of transgender adolescents specifically. The first was a case series of 68 transmasculine adolescents and young adults that found a reduction in scores on a novel unvalidated chest dysphoria scale.<sup>44</sup> The second was a series of qualitative interviews with 30 adolescents and young adults that identified themes of improved chest dysphoria and quality of life.<sup>45</sup> Though this intervention is not appropriate for all transgender adolescents, for some with severe chest dysphoria that persists despite other interventions, it can dramatically improve mental health. It would be dangerous to take this option away from families and their physicians.

**THE STATE’S EXPERTS MISREPRESENT THE ASSESSMENT AND INFORMED  
CONSENT PROCESS FOR GENDER-AFFIRMING MEDICAL CARE FOR  
TRANSGENDER ADOLESCENTS**

38. The state’s experts repeatedly misrepresent the way physicians approach the matter of informed consent for pediatric patients in the U.S. Aside from a few specific areas of medicine, all medications prescribed to minors require consent from a parent or legal guardian. This is particularly true for gender-affirming medical interventions. It is presumed that adolescents generally are unable to provide consent, and physicians rely on their parents or guardians to provide said informed consent after the physician discusses the relevant risks and benefits of an intervention with the parents. Adolescents, by contrast, provide “assent” when they agree to interventions, which alone is not sufficient for a physician to legally prescribe a

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<sup>44</sup> Olson-Kennedy J, Warus J, Okonta V, Belzer M, Clark LF. Chest reconstruction and chest dysphoria in transmasculine minors and young adults: comparisons of nonsurgical and postsurgical cohorts. *JAMA Pediatrics*. 2018;172(5):431-436.

<sup>45</sup> Mehringer JE, Harrison JB, Quain KM, Shea JA, Hawkins LA, Dowshen NL. Experience of chest dysphoria and masculinizing chest surgery in transmasculine youth. *Pediatrics*. 2021;147(3)

medication. Arkansas's SAFE Act does not simply say that gender-affirming medical and surgical interventions cannot be offered to adolescents without parental consent; it states that gender-affirming medical and surgical interventions cannot be offered *even with parental consent*. This is an unprecedented infringement upon the rights of physicians and families to work together and provide the treatment that is most likely to improve the health and wellbeing of an adolescent.

39. The state's experts also misrepresent the way in which gender-affirming medical and surgical care are provided to transgender adolescents. Dr. Hruz, for example, states "By demanding the immediate and uninvestigated 'affirmation' of a sex discordant gender identity patient's requests for so-called 'transitioning' – without conducting a detailed, proper, medical assessment of alternative hypothesis – the gender transition industry is attempting to enforce and institutionalize the methodological failure of 'confirmation bias.'" Though it is somewhat unclear to what he is referring with the phrase "gender transition industry," it appears he is referring to physicians and other medical providers who provide gender-affirming medical care. Such medical providers do not "[demand] immediate and uninvestigated" provision of gender-affirming medical or surgical interventions. The WPATH Standards of Care, for instance, highlight that, "before any physical interventions are considered for adolescents, extensive exploration of psychological, family, and social issues should be undertaken." The Standards of Care explain that mental health providers conducting an assessment should, among other guidelines: (1) offer a thorough assessment for gender dysphoria and any coexisting mental health concerns, (2) explore the nature and characteristics of an adolescent's gender identity. A psychodiagnostic and psychiatric assessment — covering the areas of emotional functioning, peer and other social relationships, and intellectual functioning/school achievement — should be

performed. Assessment should include an evaluation of the strengths and weaknesses of family functioning. Emotional and behavioral problems are relatively common, and unresolved issues in a youth's environment may be present, and (3) for adolescents, the assessment phase should also be used to inform youth and their families about the possibilities and limitations of different treatments. This is necessary for informed consent, but also important for assessment. The way that adolescents respond to information about the reality of sex reassignment can be diagnostically informative. Correct information may alter a youth's desire for certain treatment, if the desire was based on unrealistic expectations of its possibilities. The WPATH guidelines also note that for adolescents to be candidates for pubertal suppression, the following criteria must be met: (1) the adolescent has demonstrated a long-lasting and intense pattern of gender nonconformity or gender dysphoria, (2) gender dysphoria must have emerged or worsened after the onset of puberty, (3) any co-existing psychological, medical, or social problems that could interfere with treatment have been addressed, such that the adolescent's situation and functioning are stable enough to start treatment, and (4) the adolescent has given informed consent and, particularly when the adolescent has not reached the age of medical consent [18 in Arkansas], the parents or other caretakers or guardians have consented to the treatment and are involved in supporting the adolescent throughout the treatment process. They further note that mental health professionals working with minors with gender dysphoria must: (1) be trained in childhood and adolescent developmental psychopathology, (2) be competent in diagnosing and treating the ordinary problems of children and adolescents, and (3) meet the competency requirements for mental health providers that the Standards of Care lay out for adults. These competency requirements include: (1) a master's degree or its equivalent in a clinical behavioral science field. This degree, or a more advanced one, should be granted by an institution accredited by the

appropriate national or regional accrediting board. The mental health professional should have documented credentials from a relevant licensing board or equivalent for that country, (2) competence in using the *Diagnostic Statistical Manual of Mental Disorders* and/or the *International Classification of Diseases* for diagnostic purposes, (3) ability to recognize and diagnose coexisting mental health concerns and to distinguish these from gender dysphoria, (4) documented supervised training and competence in psychotherapy or counseling, (5) being knowledgeable about gender-nonconforming identities and expressions, and the assessment and treatment of gender dysphoria, and (6) continuing education in the assessment and treatment of gender dysphoria. This may include attending relevant professional meetings, workshops, or seminars; obtaining supervision from a mental health professional with relevant experience; or participating in research related to gender nonconformity and gender dysphoria. Dr. Hruz states that “parents are often manipulated and coerced by misinformed political activists or providers who threaten them with dire warnings that the only two options are ‘treatment or suicide.’” He provides no evidence to support this extreme assertion. If medical providers were, in fact, threatening or coercing a patient and their family into treatments, this would be grounds for legal liability and loss of one’s medical license under typical state medical regulations. Arkansas’s SAFE Act would add nothing in this regard, but rather it would take away a treatment option that is vital for many adolescent patients.

**THE STATE’S EXPERTS’ ASSERTION THAT GENDER-AFFIRMING  
TREATMENTS FOR TRANSGENDER ADOLESCENTS ARE  
“EXPERIMENTAL” IS INCORRECT**

40. The state’s experts repeatedly label gender-affirming medical interventions for adolescents “experimental.” In ascribing this term to gender-affirming medical interventions, they primarily rely on the fact that pubertal suppression and gender-affirming hormones do not

have FDA indications for gender dysphoria specifically, but rather for other indications. Prescribing FDA approved medications without specific FDA indications for the condition being treated is common in pediatrics. It is referred to as “off-label” prescribing.<sup>46</sup> The American Academy of Pediatrics has explained that “it is important to note that the term ‘off-label’ does not imply an improper, illegal, contraindicated, or investigational use.”<sup>47</sup> They go on to explain that “off-label use of medications is neither experimentation nor research.”

**THE STATE’S EXPERTS INCORRECTLY IMPLY THAT “RAPID-ONSET GENDER DYSPHORIA” IS AN ACCEPTED DIAGNOSTIC ENTITY AND THAT “SOCIAL CONTAGION” IS AN ESTABLISHED DRIVER OF GENDER DYSPHORIA**

41. The state’s experts repeatedly imply that “rapid-onset gender dysphoria” is an accepted phenomenon and that “social contagion” is a driver of gender dysphoria. For instance, Dr. Levine states, “the post-pubertal onset of what is now commonly referred to as rapid onset gender dysphoria or post-pubertal gender dysphoria seems to be heavily influenced by social and internal developmental forces.” This is a fringe view not supported by evidence. The term “rapid-onset gender dysphoria” entered the literature through a publication by Dr. Lisa Littman.<sup>48</sup> As the state’s experts note, a correction was later published on this article. However, the state’s experts did not highlight the content of the correction, which noted, “Rapid-onset gender dysphoria (ROGD) is not a formal mental health diagnosis at this time. This report did not collect data from the adolescents and young adults (AYAs) or clinicians and therefore does not validate the phenomenon.”<sup>49</sup> The correction goes on to say “the term should not be used in any

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<sup>46</sup> American Academy of Pediatrics Committee on Drugs. (2014). Policy Statement: Off-label use of drugs in children. *Pediatrics*, 133(3), 563-567.

<sup>47</sup> *Id.*

<sup>48</sup> Littman, L. (2018). Rapid-onset gender dysphoria in adolescents and young adults: A study of parental reports. *PloS one*, 13(8).

<sup>49</sup> Littman, L. (2019). Correction: Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria. *PloS one*, 14(3), e0214157.

way to imply that it explains the experiences of all gender dysphoric youth...” The Littman study was an anonymous online survey of the parents of transgender youth, recruited from websites where this notion of “social contagion” leading to transgender identity is popular. The anonymous survey participants were asked what they thought was the etiology of their children’s transgender identity. Some of these parents believed that their children became transgender as a result of watching transgender-related content on websites like *YouTube* and having LGBTQ friends. The obvious alternative interpretation is that these youth sought out transgender-related media and LGBTQ friends because they wanted to find other people who understood their experiences and could offer support. If the study had surveyed the children in addition to their parents, it likely would have found that this was the case. Unfortunately, the Littman study is based on an anonymous survey of *parents only*. The survey respondents also noted that, from their perspective, their children became transgender “all of a sudden,” hence the term “rapid-onset.” Once again, the problem here is that the study did not interview the adolescents themselves, nor their healthcare providers. Transgender people will tell you that it is common for transgender (as with gay, lesbian and bisexual) children and adolescents to conceal their identity from their parents for long periods of time, out of fear of negative repercussions were their parents to find out (rejection, being kicked out of the house, or even physical assault). Children often learn this early, when their parents have strong negative reactions to them exhibiting gender non-confirming behavior. No conclusions can be drawn from the Littman study other than the fact that some anonymous people recruited from the Internet theorize that transgender identity is due to social contagion and that their children’s gender dysphoria came on suddenly. This theorizing from people online does not establish a true phenomenon. Furthermore, no study to date has established a psychosocial or “environmental” determinant of gender identity. In



contrast, as described above, transgender identity has been shown to be primarily influenced by innate biological factors.

**THE CURRENT SCIENTIFIC CONSENSUS REGARDING THE INCREASE IN REFERRALS TO PEDIATRIC GENDER CLINICS AND THE SHIFT IN SEX RATIO DOES NOT FOCUS ON “SOCIAL CONTAGION”**

42. As detailed above, there is no evidence that gender dysphoria or transgender identity are results of “social contagion”. It is true that there has been an increase in referrals to gender clinics over the past few decades. This has coincided with increased visibility of transgender youth in the media. Whereas parents in the past may have had limited literacy regarding gender diversity in adolescents, today most Americans, as well as people abroad, have greater understanding of the experiences of transgender youth. This has undoubtedly dramatically increased the number of parents bringing their adolescents to gender clinics for evaluation. Additionally, insurance coverage of gender-affirming medical and surgical interventions has improved drastically, meaning that more families are able to afford care, which results in an increase in referrals for evaluation. Of note, not all adolescents who present for treatment ultimately go on to receive gender-affirming medical or surgical interventions.<sup>50</sup> In fact, in a large study from The Netherlands, the percentage of transgender people who presented for evaluation who actually started any kind of gender-affirming treatment decreased over time.<sup>51</sup> The authors of that study note, “this finding may be explained by the fact that in the past it was harder to find information about [gender dysphoria] and its treatment, and only people with extreme types of [gender dysphoria] managed to visit our gender identity clinic for treatment.

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<sup>50</sup> Wiepjes, C. M., Nota, N. M., de Blok, C. J., Klaver, M., de Vries, A. L., Wensing-Kruger, S. A., ... & den Heijer, M. (2018). The Amsterdam cohort of gender dysphoria study (1972–2015): trends in prevalence, treatment, and regrets. *The Journal of Sexual Medicine*, 15(4), 582-590.

<sup>51</sup> *Id.*

Currently, owing to media attention and the internet, it is easier to access information about our gender identity clinic, making the threshold lower to search for help.”

43. Dr. Regnerus additionally states that if decreased stigma were driving the higher rates of adolescents openly identifying as transgender, “we should be witnessing a parallel in documentable rise in gender dysphoria among, say, middle-aged adults.” However, transgender middle-aged adults have endured decades of stigma for their transgender identities that, despite improvements in contemporary social attitudes, make them fare less likely to come out as transgender. The “gender minority stress” model explains that these decades of exposure to unaccepting environments leads to expectations of future rejection and internalized transphobia (i.e., internalization of society’s negative messages about transgender people leading to self-hate of oneself for being transgender).<sup>52</sup> These factors make it less likely for middle-aged transgender adults to come out, despite an increase in societal acceptance. Transgender young people are for the first time growing up in environments where transgender identity is not as stigmatized, making it much easier for them to come out when compared to transgender adults plagued by anxiety due to decades of living in societies where being transgender was not recognized or accepted.

44. Some clinics have noted that they are seeing more birth-assigned females than males in recent years, often referred to as a change in the “sex ratio.” There have been a number of explanations for this, including the fact that in the past, transgender men could push the barriers of gender presentation further than transgender women could, due to gender non-conformity being more accepted among birth-assigned females than among birth-assigned males.

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<sup>52</sup> Hendricks, M. L., & Testa, R. J. (2012). A conceptual framework for clinical work with transgender and gender nonconforming clients: An adaptation of the Minority Stress Model. *Professional Psychology: Research and Practice*, 43(5), 460.

For example, tomboys are often accepted in society, whereas feminine boys are ridiculed. This is a phenomenon that has been noted internationally.<sup>53</sup> This likely led to more transgender males being satisfied with pushing gender expression toward more male without seeking support from a gender clinic; whereas transgender women had no similar option and thus presented to gender clinics at higher rates. Greater acceptance of gender diversity and transgender identity for both sexes would be expected to thus shift the ratio toward birth-assigned females, as some clinics have noted. This impact of societal acceptance impacting sex ratio has been noted in the past. A 2013 study compared the child sex ratio in two countries: Canada and The Netherlands. The sex ratio in Canada, where gender diversity is less socially accepted was 4.5:1 in favor of birth-assigned males. In The Netherlands, where gender diversity is more socially accepted, the ratio skewed much further toward birth-assigned females, 2:1.<sup>54</sup> While the state's experts would lead the court to believe that a sex ratio in favor of birth-assigned females is unprecedented, this is not the case. It is not new to see sex ratios that favor birth-assigned females. This has been seen many times in the past, including in the 1970s and 1980s in then-Czechoslovakia<sup>55</sup> and Poland,<sup>56</sup> where sex ratios were as high as 5.5:1 in favor of birth-assigned females. This was prior to the existence of the Internet or social media.

45. In summary, the current scientific consensus is that the increase in referrals to gender clinics is due to decreased stigma toward transgender people in recent years, along with

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<sup>53</sup> Yu, C., Zuo, X., Blum, R. W., Tolman, D. L., Kågesten, A., Mmari, K., ... & Lou, C. (2017). Marching to a different drummer: A cross-cultural comparison of young adolescents who challenge gender norms. *Journal of Adolescent Health, 61*(4), S48-S54.

<sup>54</sup> Wood, H., Sasaki, S., Bradley, S. J., Singh, D., Fantus, S., Owen-Anderson, A., ... & Zucker, K. J. (2013). Patterns of referral to a gender identity service for children and adolescents (1976–2011): age, sex ratio, and sexual orientation. *Journal of Sex & Marital Therapy, 39*(1), 1-6.

<sup>55</sup> Brzek, A., & Sipova, L. (1983) Transsexuelle in Prag. *Sexualmedizin, 3*, 110-112

<sup>56</sup> Godlewski, J. (1988). Transsexualism and anatomic sex ratio reversal in Poland. *Archives of Sexual Behavior, 17*(6), 547-548.

an increase in awareness among the general population that gender-affirming medical interventions for transgender adolescents exist, and an increase in insurance coverage for these interventions.

**GENDER IDENTITY CONVERSION THERAPY HAS A CLEAR DEFINITION AND IS DANGEROUS AND UNETHICAL**

46. Dr. Regnerus asserts that “there is no defined psychotherapeutic method for treating gender dysphoria that can be widely characterized and consistently identified as ‘conversion therapy’ in order to be banned.” This is false. The American Academy of Child & Adolescent Psychiatry offers a clear definition of conversion therapy, “‘Conversion therapies’ (or ‘reparative therapies’) are interventions purported to alter same-sex attractions or an individual’s gender expression with the specific aim to promote heterosexuality as a preferable outcome. Similarly, for youth whose gender identity is incongruent with their sex anatomy, efforts to change their core gender identity have also been described and more recently subsumed under the conversion therapy rubric.”<sup>57</sup> This same policy statement labels conversion therapy for both sexual orientation and gender identity unethical and dangerous. All relevant major medical organizations have issued clear statements that gender identity conversion therapy should not be practiced, including The American Medical Association,<sup>58</sup> The American Academy of

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<sup>57</sup> The American Academy of Child & Adolescent Psychiatry. Conversion Therapy. 2018. [https://www.aacap.org/AACAP/Policy\\_Statements/2018/Conversion\\_Therapy.aspx](https://www.aacap.org/AACAP/Policy_Statements/2018/Conversion_Therapy.aspx) Accessed July 12, 2022.

<sup>58</sup> American Medical Association. Health care needs of lesbian, gay, bisexual and transgender populations. H-160.991. 2017. <https://policysearch.ama-assn.org/policyfinder/detail/H-160.991%20?uri=%2FAMADoc%2FHOD.xml-0-805.xml>. Accessed July 12, 2021.

Pediatrics,<sup>59</sup> and The American Academy of Child & Adolescent Psychiatry.<sup>60</sup> In a recent paper from our team published in *JAMA Psychiatry*, we found that, after adjusting for a range of potentially confounding variables, exposure to gender identity conversion efforts was associated with greater odds of attempting suicide.<sup>61</sup> The increased odds of attempting suicide were even greater for transgender people who were exposed to gender identity conversion efforts during childhood. Some have pointed out that this study was not a randomized-controlled trial, but rather a cross-sectional study. In the realm of scientific evidence, this level of evidence is less conclusive than a randomized-controlled trial. However, given that gender identity conversion efforts have been labeled unethical by the major medical organizations cited above, it is not possible to conduct a randomized controlled trial of gender identity conversion efforts. No institutional review board would allow such a study to proceed. Because such a study design is not ethically permissible or feasible, we must rely on the evidence we currently have. All existing evidence suggests that trying to force a transgender person to be cisgender is harmful to those exposed to this intervention. There is no evidence of any benefit from such interventions. As Dr. Levine points out, there is also no evidence of efficacy or effectiveness, “To my knowledge, there is no credible scientific evidence beyond anecdotal reports that psychotherapy can enable a return to male identification for genetically male boys, adolescents, and men, or return to female identification for genetically female girls, adolescents and women.”

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<sup>59</sup> Rafferty, J., & Committee on Psychosocial Aspects of Child and Family Health. (2018). Ensuring comprehensive care and support for transgender and gender-diverse children and adolescents. *Pediatrics*, 142(4).

<sup>60</sup> The American Academy of Child & Adolescent Psychiatry. Conversion Therapy. 2018. [https://www.aacap.org/AACAP/Policy\\_Statements/2018/Conversion\\_Therapy.aspx](https://www.aacap.org/AACAP/Policy_Statements/2018/Conversion_Therapy.aspx) Accessed July 12, 2022.

<sup>61</sup> Turban, J. L., Beckwith, N., Reisner, S. L., & Keuroghlian, A. S. (2020). Association between recalled exposure to gender identity conversion efforts and psychological distress and suicide attempts among transgender adults. *JAMA Psychiatry*, 77(1), 68-76.

47. Dr. Regnerus asserts that our paper in *JAMA Psychiatry* “paint[s] an entire class of cautious therapeutic approaches as intrinsically harmful.” However, this is not true. It only classifies attempts to make transgender people cisgender as conversion therapy. This is, precisely, the definition of conversion therapy. If one were to treat anxiety, depression, or trauma-related symptoms, for instance, with the goal of treating these symptoms, rather than with the goal of forcing a person to be cisgender, this would not be conversion therapy. In fact, it would be following the guidelines set forth by The World Professional Association for Transgender Health, which note that other mental health conditions must be reasonably well controlled prior to initiating gender-affirming medical or surgical interventions. Dr. Hruz similarly asserts, “By disparaging as ‘conversion therapy’ all forms of psychotherapy, coping- and-resilience training, cognitive behavioral therapy for depression/anxiety, the gender transition industry is failing to treat individual patients according to the basic requirements and principles of competent medical assessment, diagnosis, and treatment.” This again is untrue, and in fact, many transgender patients are offered psychotherapeutic treatment like cognitive behavioral therapy for conditions such as anxiety and depression by the same mental health providers who ultimately refer them for gender-affirming medical interventions.

**DR. HRUZ MISREPRESENTS THE STUDY HE CITES TO CLAIM THAT RACIAL  
MINORITIZED ADOLESCENTS ARE OVER-REPRESENTED AMONG THOSE  
RECEIVING GENDER-AFFIRMING CARE**

48. Dr. Hruz cites a paper by Rider et al. as showing that racial minoritized adolescents are more likely to access gender-affirming medical care. However, this study did not examine access to gender-affirming medical care, but rather visits to the school nurse’s office,

preventative medical check-ups, and dental visits.<sup>62</sup> Studies that have examined access to gender-affirming medical care for transgender adolescents have found that racial minoritized patients are under-represented among those who access care.<sup>63</sup>

**SOME OF THE STATE’S EXPERTS’ OPINIONS DEMONSTRATE FUNDAMENTAL GAPS IN THEIR UNDERSTANDING REGARDING THE FIELD OF PSYCHIATRY**

49. Dr. Hruz states that “There are no reliable radiological, genetic, physical, hormonal, or biomarker tests that can establish gender identity or reliably predict treatment outcomes.” This is true of nearly all psychiatric conditions. If Arkansas were to use this standard to outlaw medications, it would outlaw selective-serotonin reuptake inhibitors like Prozac, Lexapro, and Zoloft for major depressive disorder and generalized anxiety disorder. It would also outlaw all anti-psychotic medications for schizophrenia. This is an unreasonable standard that would leave essentially all patients with mental health conditions without medical care.

50. Dr. Hruz states that, “NIMH [The National Institute of Mental Health] has launched the Research Domain Criteria (RDoC) project to transform diagnosis by incorporating genetics, imaging, cognitive science, and other levels of information to lay the foundation for a new classification system” to imply that the mental health field has moved away from using self-report measures in diagnosis and treatment measures. This is not true. RDoC includes over 100 self-report measures.<sup>64</sup>

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<sup>62</sup> Rider, G. N., McMorris, B. J., Gower, A. L., Coleman, E., & Eisenberg, M. E. (2018). Health and care utilization of transgender and gender nonconforming youth: A population-based study. *Pediatrics*, 141(3).

<sup>63</sup> Lopez, C. M., Solomon, D., Boulware, S. D., & Christison-Lagay, E. R. (2018). Trends in the use of puberty blockers among transgender children in the United States. *Journal of Pediatric Endocrinology and Metabolism*, 31(6), 665-670.

<sup>64</sup> The full list of RDoC self-report measures can be found on the National Institute of Mental Health’s RDoC website here: <https://www.nimh.nih.gov/research/research-funded-by-nimh/rdoc/units/self-reports/>. Accessed: July 12, 2021.

51. Dr. Hruz claims that “gender dysphoria or gender identity disorder is a logical subcategory of body dysmorphic disorder.” This is not true. Body dysmorphic disorder falls under the category of OCD and related disorders and involves an obsessive preoccupation with a perceived abnormally formed specific body part and frequent checking behaviors of that body part. Gender dysphoria, in contrast, does not focus on a specific body part but rather gender broadly. The Diagnostic and Statistical Manual of Mental Disorders, 5<sup>th</sup> Edition (DSM-5) clearly describes body dysmorphic disorder as a separate diagnosis that must be distinguished from gender dysphoria during the diagnostic process.<sup>65</sup> Gender dysphoria does not, as body dysmorphic disorder does, fall under the category of OCD and Related Disorders in the DSM-5.

52. Dr. Lappert asserts that “since the abandonment of frontal lobotomies in 1967, there has been no other psychological-psychiatric condition for which surgery is performed.” This is not true. Vagal nerve stimulators are FDA approved for surgical implantation in patients with treatment-refractory major depressive disorder.<sup>66</sup> An anterior capsulotomy is a neurosurgical procedure for refractory obsessive-compulsive disorder (OCD) that is considered safe, well-tolerated, and efficacious.<sup>67</sup> Deep brain stimulation is an additional surgical procedure that has been shown to be efficacious for treatment-refractory OCD,<sup>68</sup> with emerging evidence

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<sup>65</sup> American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Arlington, VA: American Psychiatric Association, 2013.

<sup>66</sup> O'Reardon, J. P., Cristancho, P., & Peshek, A. D. (2006). Vagus nerve stimulation (VNS) and treatment of depression: to the brainstem and beyond. *Psychiatry (Edgmont)*, 3(5), 54.

<sup>67</sup> Pepper, J., Zrinzo, L., & Hariz, M. (2019). Anterior capsulotomy for obsessive-compulsive disorder: a review of old and new literature. *Journal of Neurosurgery*, 133(5), 1595-1604.

<sup>68</sup> Menchón, J. M., Real, E., Alonso, P., Aparicio, M. A., Segalas, C., Plans, G., ... & Gabriëls, L. (2021). A prospective international multi-center study on safety and efficacy of deep brain stimulation for resistant obsessive-compulsive disorder. *Molecular Psychiatry*, 26(4), 1234-1247.



for treatment-resistant major depressive disorder.<sup>69</sup> All of these surgical procedures for psychiatric conditions are major interventions not to be taken lightly. In each instance, as with the decision to offer gender-affirming top surgery for an adolescent, a physician must carefully weigh the potential risks of the treatment with the potential benefits of the treatment. For some patients, the potential benefits will outweigh the potential risks. It is vital that physicians and families do not have these medical options taken away from them.

**RECENT NON-PEER-REVIEWED REPORTS FROM THE UNITED KINGDOM,  
SWEDEN, AND FINLAND DO NOT ACCURATELY SUMMARIZE THE SCIENTIFIC  
EVIDENCE ON GENDER-AFFIRMING MEDICAL CARE FOR ADOLESCENTS  
WITH GENDER DYSPHORIA**

53. Defendants' experts cite reports from the U.K., Sweden and Finland that they claim support their opinions about gender-affirming medical care for adolescents.

54. The state's experts cite two reports from the U.K.'s National Institute for Health and Care Excellence (NICE). These reports were not peer-reviewed but were meant to present a review of the evidence on the efficacy and safety of pubertal suppression and gender-affirming hormones to treat gender dysphoria in adolescents. The first report, which addressed pubertal suppression,<sup>70</sup> critiqued the research on this treatment as having substantial limitations, which is not unusual in medical research, but it's important to note that the analysis omitted important studies. For example, the NICE report cited a lack of comparative studies (i.e., studies with control groups), but omitted discussion of two such studies. It did not include Van der Miesen et

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<sup>69</sup> Raymaekers, S., Luyten, L., Bervoets, C., Gabriëls, L., & Nuttin, B. (2017). Deep brain stimulation for treatment-resistant major depressive disorder: a comparison of two targets and long-term follow-up. *Translational Psychiatry*, 7(10), e1251-e1251.

<sup>70</sup> United Kingdom's National Institute for Health Care Excellence. Evidence review: Gonadotrophin releasing hormone analogues for children and adolescents with gender dysphoria. Available at: <https://arms.nice.org.uk/resources/hub/1070905/attachment>. Accessed: July 14, 2021.

al. 2020 *Journal of Adolescent Health*, which was a large comparative study comparing 272 adolescents who presented to a gender clinic but had not yet received pubertal suppression with 178 adolescents who had received pubertal suppression, and found that those who received pubertal suppression had statistically significant lower rates of internalizing psychopathology (anxiety and depression) than those who did not receive pubertal suppression. The NICE report also erroneously excluded a second comparative study, Turban et al. 2020 *Pediatrics*, mistakenly stating that pubertal suppression was not reported separately from other interventions in this study. The study did report on pubertal suppression separately and found that those who accessed pubertal suppression during adolescence had statistically significant lower odds of lifetime suicidal ideation than those who desired but did not access pubertal suppression. The report also states that past studies have not addressed potential confounding variables, overlooking that Turban et al. 2020 *Pediatrics* examined a wide range of potential confounding variables including taking gender-affirming hormones, having been exposed to gender identity change efforts, family support for gender identity, race, sexual orientation, employment status, education level, and several others.

55. The second NICE report addressed the evidence regarding gender-affirming hormones. This report concluded, “results from 5 uncontrolled, observational studies suggest that, in children and adolescents with gender dysphoria, gender-affirming hormones are likely to improve symptoms of gender dysphoria, and may also improve depression, anxiety, quality of life, suicidality, and psychosocial functioning.” The studies they reference, which show statistically significant *improvement* in mental health following gender-affirming hormones, have already been described above. The report notes that the literature would benefit from larger studies with control groups but does not state that the existing evidence does not support

continued use of such treatment. Nowhere in either NICE report is there any statement that gender-affirming medical care should be prohibited. In addition to citing these non-peer-reviewed reports, the state's experts have repeatedly implied that the U.K... courts have prohibited the provision of gender-affirming medical care for transgender youth, citing *Bell v Tavistock*. However, this case did no such thing. The case simply ruled that adolescents cannot, on their own, consent to pubertal suppression. This was already the case in the U.S. prior to Arkansas's SAFE Act. Throughout the U.S, pubertal suppression cannot be provided without parents providing consent and adolescents providing assent. The state's experts also failed to mention that a second case in the U.K., *AC v CD and Others*, established that parents can provide consent for their transgender adolescents to receive pubertal suppression. Gender-affirming medical care for transgender adolescents has not been prohibited and continues to be legal in the U.K. with parental consent.

56. The state's experts also cite a report from Finland's Council for Choices in Health Care in Finland, which is "a subordinate of the country's Ministry of Social Affairs and Health that provides recommendations on which healthcare methods should be funded by the public sector."<sup>71</sup> This report is not peer-reviewed and reports on only three studies of gender-affirming medical care for adolescents, ignoring the additional studies I cited above. Specifically, it failed to review the following studies showing that gender-affirming medical interventions improve mental health: deVries et al. *Pediatrics* 2014, Turban et al. *Pediatrics* 2020, Van der Miesen et al. 2020 *Journal of Adolescent Health*, Achille et al. 2020 *International Journal of Pediatric*

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<sup>71</sup> See the description on the Ministry of Social Affairs and Health website, available at: <https://stm.fi/en/legislation-steering-and-supervision-cooperation#:~:text=The%20Council%20for%20Choices%20in,funded%20by%20the%20public%20sector>. Accessed: July 12, 2021.

*Endocrinology*, Kuper et al. 2020 *Pediatrics*, and Allen et al. 2019 *Clinical Practice in Pediatric Psychology*. It states that the effects of pubertal suppression on the central nervous system is “unknown,” despite these medications being used for precocious puberty for decades and a recent peer-reviewed systematic review and meta-analysis finding that “current evidence does not support an adverse impact of gender-affirming hormone therapy on cognitive performance in birth-assigned either male or female transgender individuals” and found “a higher performance in verbal working memory in treated assigned males.”<sup>72</sup> The Finnish report suggests that gender-affirmation increases the likelihood of persistence, failing to cite the literature I cite above that indicates that gender affirmation does not increase the degree of one’s transgender identity. In summary, this report was poorly researched and omits key studies. I do not recommend relying on its conclusions. But in any event, it does not recommend denying care as Arkansas’s SAFE Act does. Rather, it permits such treatments on a case-by-case basis when medically indicated.

57. The state’s experts also cite another non-peer-reviewed report from Sweden’s Statens Beredning for Medicinsk Och Social Utvardering (SBU), which translates to The Swedish Agency for Health Technology Assessment and Assessment of Social Services. The report only examined studies published prior to September 19, 2019. It thus did not review a number of key studies, described above, that found gender-affirming medical interventions for transgender adolescents improve mental health, including Turban et al. 2020 *Pediatrics*, Van der Miesen et al. 2020 *Journal of Adolescent Health*, Achille et al. 2020 *International Journal of Pediatric Endocrinology*, and Kuper et al. 2020 *Pediatrics*. It also failed to review a key paper

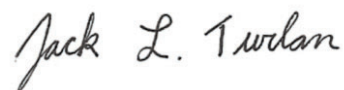
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<sup>72</sup> Karalexi, M. A., Georgakis, M. K., Dimitriou, N. G., Vichos, T., Katsimpris, A., Petridou, E. T., & Papadopoulos, F. C. (2020). Gender-affirming hormone treatment and cognitive function in transgender young adults: a systematic review and meta-analysis. *Psychoneuroendocrinology*, *119*, 104721.

that was published prior to 2019 that found improvement in internalizing psychopathology (anxiety and depression), externalizing psychopathology (e.g., disruptive behaviors), and global functioning that I note above, namely de Vries et al. 2011 *Journal of Sexual Medicine*. It appears The Karolinska Institute's Astrid Lindgren Children's Hospital has, based on this report, a misinterpretation of the *Bell v Tavistock* ruling, and a lack of knowledge of the *AC v CD and Others* decision, limited gender-affirming medical interventions at its institutions to patients over age sixteen and limited treatment to clinical trial settings. This decision, made on faulty and incomplete evidence, was clearly ill-advised. It is also worth noting that this is a decision by one hospital, not a government ban all gender-affirming medical care for minors. In summary, the SBU report is outdated and omits key studies. I do not recommend relying on its conclusions.

58. In summary, the state's experts' references these non-peer-reviewed reports from the U.K., Finland and Sweden do not support their assertions that gender-affirming medical interventions are ineffective or unsafe or should be taken away from transgender adolescents and their families in Arkansas. The state's experts have inflated the importance of these reports, and as noted above, all relevant major medical organizations in the United States disagree with their assessments.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.



Executed on: July 16, 2021.

JACK L. TURBAN, MD, MHS

# **EXHIBIT A**

**Jack Lewis Turban III MD MHS**

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**EDUCATION & TRAINING**

**Stanford University School of Medicine** Palo Alto, CA 2020-2022  
*Fellow in Child & Adolescent Psychiatry.* Fellow in child and adolescent psychiatry. Research focuses on pediatric gender identity and LGBTQ mental health. Serves as administrative chief fellow 2021-2022.

**Massachusetts General Hospital & McLean Hospital** Boston, MA 2017 - 2020  
*Integrated Adult, Child, & Adolescent Psychiatry Resident.* Resident physician in the integrated adult, child, and adolescent psychiatry program. Research focused on pediatric gender identity and LGBT mental health.

**Yale School of Medicine** New Haven, CT 2012-2017  
*Doctor of Medicine & Master of Health Science with honors.* Clinical rotations included inpatient pediatrics, inpatient child psychiatry, inpatient adolescent psychiatry, residential adolescent psychiatry, psychiatric consult liaison service, clinical neuromodulation, neurology clinics, and neurosurgery. Completed award-winning masters' thesis as a Howard Hughes Medical Institute (HHMI) medical research fellow on evolving treatment paradigms for transgender youth. Clerkship Grades: All Honors

**Harvard University** Cambridge, MA 2007-2011  
*B.A. Neurobiology magna cum laude with a secondary in the Dramatic Arts.* Coursework included clinical neuroscience, systems neurobiology, visual neuroscience, positive psychology, neurobiology of behavior, CNS regenerative techniques, neuroanatomy, vertebrate surgery, and extensive coursework in dramatic theory and practice. International study included Spanish language (Alicante, Spain), stem cell biology (Shanghai, China), and studying how visual art may be used as a window into the mechanisms of neural processing (Trento, Italy). Honors thesis completed at The Massachusetts Eye & Ear Infirmary studying inner-ear development and regeneration. GPA: 3.8/4.0

**RESEARCH EXPERIENCE**

**The Fenway Institute** Boston, MA 2017-Present  
*LGBT Mental Health Research.* Currently using data from the National Transgender Discrimination Survey to determine the adult mental health correlates of recalled childhood experiences including exposure to conversion therapy and access to gender-affirming hormonal interventions. PIs: Timothy Wilens, Alex Keuroghlian, & Sari Reisner

**McLean Institute for Technology in Psychiatry** Belmont, MA. 2017-Present  
*LGBT Mental Health Research.* Conducting cross-sectional studies that examine the associations between geosocial "hook-up apps," internalizing psychopathology, and compulsive sexual behavior. Utilizing the TestMyBrain platform. PI: Laura Germine

**Yale Program for Research on Impulsivity & Impulse Control Disorders** New Haven, CT 2016-Present  
*Clinical Research.* Conducted a study on US military veterans who had recently returned from deployment, studying rates and comorbidities of those veterans who exhibit compulsive sexual behavior facilitated by social media. Currently studying psychiatric morbidities among veterans who send sexually explicit self-images over social media. PI: Marc Potenza MD/PhD

**Yale Child Study Center** New Haven, CT 2015-2017  
*Medical Education Research.* Conducted a study to evaluate pediatric attending and medical student knowledge regarding transgender pediatric patient care. Additionally studied participants' personal ethical views regarding pubertal blockade and cross-sex hormone therapy for adolescent patients. PI: Timothy VanDeusen MD

**Yale Department of Dermatology** New Haven, CT 2015-2016  
*HHMI Medical Research Fellow.* Studied the potential molecular mediators of Langerhans Cell-mediated UVB-induced epidermal carcinogenesis. Techniques included transgenic mouse models of chronic UV exposure, epidermal sheet

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preparations, immunohistochemistry, confocal microscopy, flow cytometry, Bioplex analysis, quantitative PCR and tissue culture. PI: Michael Girardi MD

**Yale Department Laboratory Medicine** New Haven, CT 2012-2014  
*Basic Research.* Employed mass spectrometry to compare metabolite profiles of recurrent tumor versus radiation-induced necrosis following Gamma Knife Radiosurgery for brain metastases, working to identify novel biomarkers for non-invasive imaging techniques. PI: Tore Eid MD/PhD

**Yale Department of Neurosurgery** New Haven, CT 2012-2012  
*Clinical Research.* Developed a database of patients who received gamma knife radiosurgery or whole brain radiation for the treatment of brain metastases. This database is designed to evaluate the relative risks of radiation-induced necrosis following these two treatment modalities. PI: Veronica Chiang MD

**Eaton-Peabody Laboratory** Cambridge, MA 2009-2011  
*Basic Research.* Worked at the Massachusetts Eye and Ear Infirmary laboratory, studying stem cells of the inner ear and working toward cochlear hair cell regeneration. PI: Albert Edge PhD

**Novartis Pharmaceuticals** Shanghai, China 2009-2009  
*Intern.* Worked as a biological research intern, studying the role of Math-1 in inner-ear development and regeneration.

**WORK EXPERIENCE**

**Freelance Medical Journalism** New Haven, CT 2012-Present  
*Freelance Writer.* Writing pieces for the popular press to highlight the experiences of children suffering from societal stigma. Writing has been featured in the *New York Times*, *The Washington Post*, *The Los Angeles Times*, *Scientific American*, *Psychology Today*, and *Vox* among others.

**Clarion Healthcare Consulting, LLC** Boston, MA 2011-2012  
*Associate Consultant.* Worked as a strategy and management consultant for top ten pharmaceutical companies and emerging biotech. Areas of focus included neuroscience business development, life cycle management, and innovation in new product commercialization.

**Harvard Summer School in Mind/Brain Sciences** Trento, Italy 2011-2012  
*Resident Director.* Directed a study abroad program for Harvard undergraduate and Italian graduate students, introducing them to the basic principles of neuroscience and cognitive psychology.

**LEADERSHIP**

**The Upswing Fund** 2020-Present  
*Scientific Advisory Board.* Member of the scientific advisory board of a \$15M charitable fund to support adolescent minority mental health during the COVID19 pandemic. Funded by Melinda Gates's Panorama Global.

**MGH Psychiatry Gender Lab Meetings** Boston, MA 2019-Present  
*Founder.* Established monthly lab meetings for those in the MGH psychiatry department to discuss ongoing research regarding transgender mental health.

**Yale School of Medicine Cultural Competence Committee** New Haven, CT 2012-2017  
*Chair.* Worked with individual course directors to develop course material on cultural competence. Authored case studies on handling pediatric patient sexuality (Professional Responsibility Course), authored a pre-clinical lecture on LGBT healthcare (Ob/Gyn Module), and lectured on transgender pediatric patient care (Pediatrics Clinical Clerkship).



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**Dean's Advisory Committee on LGBTQ Affairs (Yale School of Medicine)** New Haven, CT 2016-2017  
*Member.* Served on the advisory committee to the Dean of Yale School of Medicine, advising on issues related to LGBTQ affairs.

**Yale HIV Dermatology Roundtable** New Haven, CT 2014-2017  
*Founder.* Eighty percent of patients suffering from HIV face a dermatologic manifestation of their disease. Struck by these patients' experience of stigma, I organized a bi-monthly interdisciplinary roundtable to improve research, education, and clinical care in HIV dermatology. Interventions have included primary care provider training on the treatment of genital warts and improved referral systems for cutaneous malignancies.

**Yale Gay & Lesbian Medical Association** New Haven, CT 2013-2017  
*President.* Led a group of medical students focused on supporting careers in medicine for LGBT individuals. Organized mixers with LGBT organizations from other graduate schools and with LGBT faculty. Coordinated trips to GLMA national conferences. Worked with the medical school administration to create an LGBT faculty advisor position.

**VOLUNTEER WORK & ADVOCACY**

**American Academy of Child & Adolescent Psychiatry "Break the Cycle"** 2017-2017  
*Event Coordinator.* Worked with Dr. Andres Martin to coordinate a fundraising indoor cycling event for the AACAP *Break The Cycle* fundraising campaign to fight children's mental illness.

**Yale Hunger & Homelessness Auction** New Haven, CT 2012-2014  
*Logistics Co-Chair.* Organized a group of ten students to coordinate entertainment, donations, and event logistics for the Yale annual charity auction. All proceeds for the auction go to support local charities.

**Yale School of Medicine Admissions Committee** New Haven, CT 2015-2017  
*Interviewer.* Served as a full voting member of the admissions committee. Responsibilities include student interviewing, recruitment, and organizing LGBT-focused activities for admitted students.

**Harvard College Admissions** New Haven, CT 2012-Present  
*Interviewer.* Interviewing students from the Boston area for admission to Harvard College.

**SELECTED PEER REVIEWED PUBLICATIONS**

**Turban J.L.,** King, D., Li, J.L., Keuroghian, A.S. (2021) Timing of Social Transition for Transgender and Gender Diverse Youth, K-12 Harassment, and Adult Mental Health Outcomes. *Journal of Adolescent Health.* [ePub ahead of print]

**Turban J.L.,** Kraschel K.L., Cohen, G.C. (2021) Legislation to Criminalize Gender-affirming Medical Care for Transgender Youth. *JAMA.* [ePub ahead of print]

Liu M., **Turban J.L.,** Mayer K.H. (2021) The US Supreme Court and Sexual and Gender Minority Health. *American Journal of Public Health.* [ePub ahead of print]

**Turban J.L.,** Loo, S. S., Almazan, A. N., Keuroghian, A.S. (2021) Factors Leading to "Detransition" Among Transgender and Gender Diverse People in the United States: A Mixed-Methods Analysis. *LGBT Health.* [ePub ahead of print]

Suto, D.J., Macapagal, K., **Turban, J.L.** (2021) Geosocial Networking Application Use Among Sexual Minority Adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry.* 60(4), 429-431.

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**Turban, J. L.**, Passell E, Scheer L, Germine L. (2020) Use of Geosocial Networking Applications Is Associated With Compulsive Sexual Behavior Disorder in an Online Sample. *The Journal of Sexual Medicine*. 17(8), 1574-1578.

**Turban, J. L.**, Keuroghlian, A. S., & Mayer, K. H. (2020) Sexual Health in the SARS-CoV-2 Era. *Annals of Internal Medicine*. 173(5), 387-389.

Suoizzi, K., **Turban, J.L.**, & Girardi, M. (2020). Focus: Skin: Cutaneous Photoprotection: A Review of the Current Status and Evolving Strategies. *The Yale Journal of Biology and Medicine*, 93(1), 55.

Malta, M., LeGrand, S., **Turban, J.L.**, Poteat, T., & Whetten, K. (2020). Gender-congruent government identification is crucial for gender affirmation. *The Lancet Public Health*. 5(4), e178-e179.

**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.

**Turban, J. L.**, Shirk, S. D., Potenza, M. N., Hoff, R. A., & Kraus, S. W. (2020). Posting Sexually Explicit Images or Videos of Oneself Online Is Associated With Impulsivity and Hypersexuality but Not Measures of Psychopathology in a Sample of US Veterans. *The Journal of Sexual Medicine*, 17(1), 163-167.

**Turban, J. L.**, Beckwith, N., Reisner, S. L., & Keuroghlian, A. S. (2020). Association between recalled exposure to gender identity conversion efforts and psychological distress and suicide attempts among transgender adults. *JAMA Psychiatry*, 77(1), 68-76.

Acosta, W., Qayyum, Z., **Turban, J. L.**, & van Schalkwyk, G. I. (2019). Identify, engage, understand: Supporting transgender youth in an inpatient psychiatric hospital. *Psychiatric Quarterly*, 90(3), 601-612.

**Turban J.L.** (2019). Medical Training in the Closet. *The New England Journal of Medicine*, 381(14), 1305.

**Turban, J. L.**, King, D., Reisner, S. L., & Keuroghlian, A. S. (2019). Psychological Attempts to Change a Person's Gender Identity from Transgender to Cisgender: Estimated Prevalence Across US States, 2015. *American Journal of Public Health*, 109(10), 1452-1454.

**Turban, J. L.**, & Keuroghlian, A. S. (2018). Dynamic gender presentations: understanding transition and "de-transition" among transgender youth. *Journal of the American Academy of Child and Adolescent Psychiatry*, 57(7), 451-453.

**Turban, J. L.**, Carswell, J., & Keuroghlian, A. S. (2018). Understanding pediatric patients who discontinue gender-affirming hormonal interventions. *JAMA Pediatrics*, 172(10), 903-904.

**Turban, J. L.** (2018). Potentially Reversible Social Deficits Among Transgender Youth. *Journal of Autism and Developmental Disorders*, 48(12), 4007-4009.

**Turban, J. L.**, & van Schalkwyk, G. I. (2018). "Gender dysphoria" and autism spectrum disorder: Is the link real?. *Journal of the American Academy of Child & Adolescent Psychiatry*, 57(1), 8-9.

**Turban, J. L.**, Winer, J., Boulware, S., VanDeusen, T., & Encandela, J. (2018). Knowledge and attitudes toward transgender health. *Clinical Teacher*, 15(3), 203-207.

**Turban, J. L.**, & Ehrensaft, D. (2018). Research review: gender identity in youth: treatment paradigms and controversies. *Journal of Child Psychology and Psychiatry*, 59(12), 1228-1243.

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**Turban J. L.**, Genel, M. (2017) Evolving Treatment Paradigms for Transgender Patients. *Connecticut Medicine*, 81(8), 483-486.

**Turban, J.**, Ferraiolo, T., Martin, A., & Olezeski, C. (2017). Ten things transgender and gender nonconforming youth want their doctors to know. *Journal of the American Academy of Child & Adolescent Psychiatry*, 56(4), 275-277.

**Turban, J. L.** (2017). Transgender Youth: The Building Evidence Base for Early Social Transition. *Journal of the American Academy of Child and Adolescent Psychiatry*, 56(2), 101.

**Turban, J. L.**, Potenza, M. N., Hoff, R. A., Martino, S., & Kraus, S. W. (2017). Psychiatric disorders, suicidal ideation, and sexually transmitted infections among post-deployment veterans who utilize digital social media for sexual partner seeking. *Addictive Behaviors*, 66, 96-100.

**Turban J. L.**, Martin A. (2017) Book Forum: Becoming Nicole. *Journal of the American Academy of Child & Adolescent Psychiatry*, 56(1): 91-92.

**Turban J. L.\***, Lu, A. Y\*, Damisah, E. C., Li, J., Alomari, A. K., Eid, T., ... & Chiang, V. L. (2017). Novel biomarker identification using metabolomic profiling to differentiate radiation necrosis and recurrent tumor following Gamma Knife radiosurgery. *Journal of neurosurgery*, 127(2), 388-396.

Kempfle, J. S., **Turban, J. L.**, & Edge, A. S. (2016). Sox2 in the differentiation of cochlear progenitor cells. *Scientific Reports*, 6, 23293.

## **TEXTBOOKS AND TEXTBOOK CHAPTERS**

---

Forcier, M., Van Schalkwyk, G., **Turban, J. L.** (Editors). *Pediatric Gender Identity: Gender-affirming Care for Transgender & Gender Diverse Youth*. Springer Nature, 2020.

Challa M., Scott C., **Turban J.L.** Epidemiology of Pediatric Gender Identity. In Forcier, M., Van Schalkwyk, G., **Turban, J. L.** (Editors). *Pediatric Gender Identity: Gender-affirming Care for Transgender & Gender Diverse Youth*. Springer Nature, 2020.

**Turban J.L.**, Shadianloo S. Transgender & Gender Non-conforming Youth. In Rey, J.M. (Editor): *IACAPAP e-Textbook of Child and Adolescent Mental Health*. Geneva. International Association of Child and Adolescent Psychiatry and Allied Professionals, 2018.

**Turban, J. L.**, DeVries, A.L.C., Zucker, K. Gender Incongruence & Gender Dysphoria. In Martin A., Bloch M.H., Volkmar F.R. (Editors): *Lewis's Child and Adolescent Psychiatry: A Comprehensive Textbook*, Fifth Edition. Philadelphia: Wolters Kluwer 2018.

## **PRESENTATIONS & ABSTRACTS**

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**Turban JL.** The Emergence of Gender-affirming Care for Transgender & Gender Diverse Youth, United Nations NGO Committee on Mental Health, Oral Presentation, Online, 2021.

**Turban JL.** Opinion Writing 101: An Introduction. American Psychiatric Association Professional Development Series, Online, 2021.

**Turban JL.** McLean Psychiatry Grand Rounds: Evolving Treatment Paradigms for Transgender Youth. Grand Rounds McLean Psychiatry, Online, 2021.

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**Turban JL.** Keynote – Transgender & Gender Diverse Youth: Research Updates. Stony Brook Transgender Health Conference, Online, 2021.

**Turban JL.** Einstein Psychiatry Grand Rounds: Evolving Treatment Paradigms for Transgender Youth. Grand Rounds, Einstein Psychiatry, Online, 2021.

**Turban JL.** Gender Identity Conversion Efforts: Quantitative Perspectives. Annual Meeting of The American Psychiatric Association, Oral Presentation, Online, 2021.

**Turban JL.** COVID19 and Pediatric Mental Health. Grand Rounds, Stanford University School of Medicine Pediatrics, Online, 2021.

**Turban JL.** Opinion Writing on Sensitive Topics. Harvard Media & Medicine Course, Live Lecture, Online, 2021.

**Turban JL.** Evolving Treatment Paradigms for Transgender Youth. Grand Rounds, Beth Israel Deaconess Medical Center Psychiatry (Harvard Medical School), Online, 2020.

**Turban JL.** For Worse: Negative Aspects of Social Media for LGBT Youth. Oral Presentation, Annual Meeting of The American Academy of Child & Adolescent Psychiatry, Oral Presentation, Online, 2020.

**Turban JL.** Hookup App Use among Gay and Bisexual Males: Sexual Risk and Associated Psychopathology. Oral Presentation, Annual Meeting of The American Academy of Child & Adolescent Psychiatry, Online, 2020.

**Turban JL.** Communicating with the Public: From The New York Times to The Big Screen. Oral Presentation, Annual Meeting of The American Academy of Child & Adolescent Psychiatry, Online, 2020.

**Turban JL,** King D, Reisner S, Keuroghlian A. Gender-Affirming Hormone Therapy for Transgender Adolescents Is Associated With Lower Odds of Suicidal Ideation in Adulthood. Poster, Annual Meeting of The American Academy of Child & Adolescent Psychiatry, Online, 2020.

**Turban JL.** Gender affirming care for transgender and gender diverse youth: what we know and what we don't. University of Texas Pride Health Institute, Oral Presentation, Online, 2020.

**Turban JL.** Q&A on Transgender Youth Mental Health. PEOPLE in Healthcare at University of Toledo, Oral Presentation, Online, 2020.

**Turban JL,** Pagato S, Gold J, Broglie J, Naidoo U, Alvarado A. Innovation of Student Mental Health during COVID19. Panel to the People, Oral Presentation, Online, 2020.

**Turban JL,** Belkin B, Vito J, Campos K, Scasta D, Ahuja A, Harris S. Discussion on Abomination: Homosexuality and the Ex-Gay Movement. Panelist, The Association of LGBTQ+ Psychiatrists Virtual Session, Oral Presentation, Online, 2020.

**Turban JL.** Is Grindr affecting gay men's mental health? Oral Presentation, UCLA & AETC Coping with Hope, Online, Oral Presentation, 2020.

**Turban JL,** Hall TM, Goldenberg D, Hellman R. Gay Sexuality and Dating. Moderator, The Association of LGBTQ+ Psychiatrists Virtual Session, Oral Presentation, Online, 2020.

**Turban JL,** McFarland C, Walters O, Rosenblatt S. An Overview of Best Outpatient Practice in the Care of Transgender

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Individual. Oral Presentation, Annual Meeting of the American Psychiatric Association, Philadelphia, 2020. [Accepted, but cancelled due to COVID19]

**Turban JL**, Lakshmin P, Gold J, Khandai C. #PsychiatryMatters: Combating Mental Health Misinformation Through Social Media and Popular Press. Oral Presentation, Annual Meeting of the American Psychiatric Association, Philadelphia, 2020. [Accepted, but cancelled due to COVID19]

**Turban JL**. The Pen and the Psychiatrist: Outreach and Education Through the Written Word. Oral Presentation, Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Chicago, 2019.

**Turban JL**. For Better and For Worse: Gender and Sexuality Online, Oral Presentation, Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Chicago, 2019.

**Turban JL**. Gender Diverse Young Adults: Narratives and Clinical Considerations, Oral Presentation, Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Chicago, 2019.

**Turban JL**. Transgender Youth: Controversies and Research Updates, Oral Presentation, Annual Meeting of the American Psychiatric Association, San Francisco, 2019.

**Turban JL**, Beckwith N, Reisner S, Keuroghlian A. Exposure to Conversion Therapy for Gender Identity Is Associated with Poor Adult Mental Health Outcomes among Transgender People in the U.S. Poster Presentation, Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Seattle, 2018.

Shirk SD, **Turban JL**, Potenza M, Hoff R, Kraus S. Sexting among military veterans: Prevalence and correlates with psychopathology, suicidal ideation, impulsivity, hypersexuality, and sexually transmitted infections. Oral Presentation, International Conference on Behavioral Addictions, Cologne, Germany, 2018.

**Turban JL**. Gender Identity and Autism Spectrum Disorder. Oral Presentation, Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Washington D.C., 2017.

**Turban JL**. Tackling Gender Dysphoria in Youth with Autism Spectrum Disorder from the Bible Belt to New York City. Oral Presentation, Annual Meeting of the American Academy of Child & Adolescent psychiatry, Washington D.C., 2017.

**Turban JL**. Affirmative Protocols for Transgender Youth. Oral Presentation, Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Washington D.C., 2017.

**Turban, JL**. Evolving Management of Transgender Youth. Oral Presentation, Klingenstein Third Generation Foundation Conference, St Louis, 2017.

**Turban, JL**, Potenza M, Hoff R, Martino S, Kraus S. Clinical characteristics associated with digital hookups, psychopathology, and clinical hypersexuality among US military veterans. Oral Presentation, International Conference on Behavioral Addictions, Haifa, Israel, 2017.

Lewis J, Monaco P, **Turban JL**, Girardi M. UV-induced mutant p53 keratinocyte clonal expansion dependence on IL-22 and ROR $\gamma$ T. Poster, Society of Investigative Dermatology, Portland, 2017.

**Turban JL**, Winer J, Encandela J, Boulware S, VanDeusen T. Medical Student Knowledge of and Attitudes toward Transgender Pediatric Patient Care. Abstract, Gay & Lesbian Medical Association, St Louis, 2016.

**Turban JL**, Lu A, Damisah E, Eid T, Chiang V. Metabolomics to Differentiate Radiation Necrosis from Recurrent

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Tumor following Gamma Knife Stereotactic Radiosurgery for Brain Metastases. Oral Presentation, 14<sup>th</sup> Annual Leksell Gamma Knife Conference, New York City, 2014

**Turban JL**, Lewis J, Girardi M. UVB-induced HMGB1 and extracellular ATP increase Langerhans cell production of IL-23 implicated in ILC3 activation. Poster, Society of Investigative Dermatology, Scottsdale, 2016

**Turban JL**, Lewis J, Girardi M. Characterization of cytokine pathways associated with Langerhans cell facilitation of UVB-induced epidermal carcinogenesis. Poster, American Society of Clinical Investigation, Chicago, 2016.

Lewis J, **Turban JL**, Girardi M, Michael Girardi. Langerhans cells and UV-radiation drive local IL22+ ILC3 in association with enhanced cutaneous carcinogenesis. Poster, Society of Investigative Dermatology, Scottsdale, 2016.

Sewanani L, Zheng D, Wang P, Guo X, Di Bartolo I, Marukian N, **Turban JL**, Rojas-Velazquez D, Reisman A. Reflective Writing Workshops Led By Near Peers During Third-Year Clerkships: A Safe Space for Solidarity, Conversation, and Finding Meaning in Medicine. Poster & Workshop, Society of General Internal Medicine, New Haven and Hollywood, 2016.

**EDUCATIONAL PRESENTATIONS**

---

Psychotherapeutic Considerations for Transgender Youth. Stanford PsyD Child Psychotherapy Course, 2021.

Transgender Youth: Treatment Paradigms and Research Updates. Children's Health Council DBT Program Lecture Series, 2021.

Gender-affirming Care for Patients with Primary Psychotic Disorders. McLean Psychotic Disorders Division Seminar Series, 2019.

Gender-affirming Care for Transgender Elders. McLean Geriatric Psychiatry Seminar Series, 2019.

Writing about Gender & Sexuality (Guest Lecture), Course: Sexual Outcasts & Uncommon Desires, Emerson College, 2019

Gender-affirming Care for Transgender and Gender Diverse Patients on Inpatient Psychiatric Units, MGH Inpatient Psychiatry Seminar Series, 2019.

Transgender & Gender Non-conforming Youth, MGH/McLean Adult Residency program, 2018.

Writing about Gender Identity for the Lay Audience (Guest Lecture), Course: Kids These Days, Emerson Journalism Program, 2017

International Approaches to the Treatment of Gender Incongruence, VU Medical Center, Amsterdam, 2017

Time to Talk About It: Physician Depression and Suicide, Yale Clerkship Didactics, 2017

Medical Management of Adolescent Gender Dysphoria. Yale Pediatrics Clerkship, 2015-2016

Medical Management of Children and Adolescents with Gender Dysphoria, Yale Pediatrics Residency Didactics, 2016

Reflective Writing Workshop Leader. Yale Surgery Clerkship, 2015-2016

Langerhans Cell Facilitation of Photocarcinogenesis. Yale Department of Dermatology Research Forum, 2016

Panel: Treating Transgender & Gender Non-conforming Patients in the Emergency Setting. Yale Emergency Medicine Clerkship, 2016

Panel: Challenges to the Learning Climate: Difficult Patients, Harassment, and Mistreatment. Yale Pre-Clinical Orientation, 2016

Panel: Personal Behavior and Professionalism, Introduction to the Profession, 2016

**AWARDS & HONORS**

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Sorensen Foundation Fellowship (2021-2023)

Stanford Child & Adolescent Psychiatry Chief Fellow (2021-2022)

Wasserman Award for Advocacy in Children's Mental Health (2021)

Top Manuscript of The Year - *Pediatrics* (2020)

American Academy of Child & Adolescent Psychiatry Pilot Research Award, \$15,000 (2019-2020)

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American Psychiatric Association Child & Adolescent Psychiatry Fellowship (2019-2021)  
Ted Stern Scholarship and Travel Award (2019)  
Editor's Pick for Best Clinical Perspectives Manuscript – *Journal of The American Academy of Child & Adolescent Psychiatry* (2018)  
SciShortform Project: Best Shortform Science Writing, Columns & Op-Eds (2018)  
Ted Stern Scholarship and Travel Award (2018)  
Medaris Grant (2018)  
Editor's Pick for Best Clinical Perspectives Manuscript – *Journal of The American Academy of Child & Adolescent Psychiatry* (2017)  
United States Preventative Health Services Award for Excellence in Public Health (2017)  
NBC Pride 30 Innovator (2017)  
Ferris Thesis Prize, Yale School of Medicine (2017)  
Parker Prize, Yale School of Medicine (2017)  
Howard Hughes Medical Institute Medical Research Fellowship (2015-2016)  
American Academy of Child and Adolescent Psychiatry Life Members Mentorship Grant (2016)  
Student Scholarship, Gender Conference East (2016)  
Farr Award for Excellence in Research (2016)  
Yale Office of International Medical Education Grant, Buenos Aires, Argentina (2016)  
Yale Office of International Medical Education Grant, VU Medical Center, The Netherlands (2016)  
Yale Summer Research Grant (2012)  
AIG International Scholar, Harvard College (2007-2011)  
Harvard International Study Grant, Alicante, Spain (2008)  
David Rockefeller International Study Grant, Shanghai, China (2009)

**PROFESSIONAL MEMBERSHIPS**

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American Medical Association, Member  
American Psychiatric Association, Member  
American Psychiatry Association, Council on Communications  
American Psychaitric Association, Child & Adolescent Psychiatry Fellow  
American Academy of Child & Adolescent Psychiatry, Member  
American Academy of Child & Adolescent Psychiatry, Media Committee  
American Academy of Child & Adolescent Psychiatry, Chair of Subcommittee on Interfacing with the Media  
Psychiatric Times, Editorial Board  
JAMA, Peer Reviewer  
JAMA Pediatrics, Peer Reviewer  
Pediatrics, Peer Reviewer  
Journal of the American Academy of Child & Adolescent Psychiatry, Peer Reviewer  
Journal of Child Psychology and Psychiatry, Peer Reviewer  
Journal of Adolescent Health, Peer Reviewer  
Academic Psychiatry, Peer Reviewer  
Journal of Autism and Developmental Disorders, Peer Reviewer  
American Journal of Public Health, Peer Reviewer  
Journal of Clinical Medicine, Peer Reviewer  
Brain Sciences, Peer Reviewer