Li Nowlin-Sohl* (admitted only in Washington) Leslie Cooper* Taylor Brown* AMERICAN CIVIL LIBERTIES UNION FOUNDATION 125 Broad St. New York, NY 10004 Tel: (212) 549-2584 lnowlin-sohl@aclu.org lcooper@aclu.org tbrown@aclu.org

Brad S. Karp* Alexia D. Korberg* Jackson Yates* Dana L. Kennedy* PAUL, WEISS, RIFKIND, WHARTON & GARRISON LLP 1285 Avenue of the Americas New York, NY 10019 Tel: (212) 373-3000 bkarp@paulweiss.com akorberg@paulweiss.com jyates@paulweiss.com dkennedy@paulweiss.com

*Admitted pro hac vice

Attorneys for Plaintiffs

Additional counsel for Plaintiffs identified on the following page

UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF IDAHO

PAM POE, by and through her parents and next friends, Penny and Peter Poe; PENNY POE; PETER POE; JANE DOE, by and through her parents and next friends, Joan and John Doe; JOAN DOE; JOHN DOE, Plaintiffs,

v. **RAÚL LABRADOR**, in his official capacity as Attorney General of the State of Idaho; JAN M. BENNETTS, in her official capacity as County Prosecuting Attorney for Ada, Idaho; and the INDIVIDUAL MEMBERS OF THE **IDAHO CODE COMMISSION**, in their official capacities, Defendants.

Case No. 1:23-cv-00269-CWD

EXPERT REBUTTAL DECLARATION OF JACK TURBAN, MD, MHS

Richard Eppink (ISB no. 7503) Casey Parsons (ISB no. 11323) David A. DeRoin (ISB no. 10404) WREST COLLECTIVE 812 W. Franklin St. Boise, ID 83702 Tel: (208) 742-6789 ritchie@wrest.coop casey@wrest.coop david@wrest.coop

Eric Alan Stone* Ariella C. Barel* Kyle Bersani* GROOMBRIDGE, WU, BAUGHMAN AND STONE LLP 565 5th Avenue, Suite 2900 New York, NY 10017 Tel: (332) 269-0030 eric.stone@groombridgewu.com ariella.barel@groombridgewu.com kyle.bersani@groombridgewu.com Jordan Orosz* PAUL, WEISS, RIFKIND, WHARTON & GARRISON LLP 2001 K Street, NW Washington, DC 20006-1047 Tel: (202) 223-7300 jorosz@paulweiss.com

Philip S. May* GROOMBRIDGE, WU, BAUGHMAN AND STONE LLP 801 17th St. NW, Suite 1050 Washington, DC 20006 Tel: (202) 505-5830 philip.may@groombridgewu.com Dina Flores-Brewer (ISB no. 6141) ACLU OF IDAHO FOUNDATION P.O. Box 1897 Boise, ID 83701 (208) 344-9750 dfloresbrewer@acluidaho.org

*Admitted pro hac vice

Attorneys for Plaintiffs

I, JACK TURBAN, MD, MHS hereby declare as follows:

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

2. I have actual knowledge of the matters stated herein.

3. In preparing this declaration, I reviewed the State's combined memorandum of law in opposition to motion for preliminary injunction and in support of motion to dismiss and the expert declarations by Drs. James Cantor and Daniel Weiss. 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 other developments in my area of expertise.

BACKGROUND AND QUALIFICATIONS

4. My curriculum vitae is attached as Exhibit A to this declaration. I am currently an Assistant Professor of Child & Adolescent Psychiatry at the University of California, San Francisco (UCSF) School of Medicine, where I am also Affiliate Faculty at the Philip R. Lee Institute for Health Policy Studies. As a member of the faculty at UCSF, I serve as director of the Gender Psychiatry Program in the Division of Child & Adolescent Psychiatry. I also serve as an attending psychiatrist in the adult LGBT psychiatry clinic and in the eating disorders program. In my career, I have cared for at least 100 adolescents with gender dysphoria. In addition to my clinical work, I conduct research focusing on the determinants of mental health among transgender youth and teach medical students, psychology trainees, psychiatry residents, and child and adolescent psychiatry fellows.

5. I received my undergraduate degree in neuroscience from Harvard College. I received both my MD and Master of Health Science (MHS) degrees from Yale University School

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 4 of 49

of Medicine. I completed residency training in general psychiatry in the combined Massachusetts General Hospital / McLean Hospital residency training program (Harvard Medical School) and fellowship training in child and adolescent psychiatry at Stanford University. I am board certified in psychiatry by The American Board of Psychiatry and Neurology.

6. My research focuses on the mental health of transgender youth and youth experiencing gender dysphoria. 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, UCSF, Stanford University, and The Massachusetts General Hospital (a teaching hospital of Harvard Medical School). I have given invited grand rounds presentations at academic institutions around the country and have presented nationally and internationally on topics related to the mental health of transgender people and people experiencing gender dysphoria.

7. I have served as a manuscript reviewer for numerous professional publications, including *The Journal of The American Medical Association (JAMA)*, *JAMA Pediatrics, JAMA Psychiatry, The Journal of The American Academy of Child & Adolescent Psychiatry, Pediatrics, The Journal of Adolescent Health*, and *The American Journal of Public Health*. I received commendation as a top peer reviewer from *Annals of Internal Medicine*, the academic journal of the American College of Physicians. I am an academic editor for the journal *PLoS One* and a contributing editor for *The Journal of The American Academy of Child & Adolescent Psychiatry*. 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

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 5 of 49

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 nine articles in peer-reviewed journals within the past two years.

9. In the last four years, I have been retained as an expert and provided testimony at trial or by deposition in the following cases: *Brandt et al. v. Rutledge, et al.*, No. 21-CV-450 (D. Ark.) (deposition and trial testimony); *K.C. v. Medical Licensing Board of Indiana*, No. 1:23-cv-00595-JPH-KMB (S.D. Ind.) (deposition).

10. I am being compensated at an hourly rate of \$400 per hour for preparation of expert declarations and reports and 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.

THERE IS NO BASIS FOR THE STATE'S EXPERTS' ASSERTIONS THAT THERE IS NO RELIABLE RESEARCH SHOWING THE EFFICACY AND EFFECTIVENESS OF GENDER-AFFIRMING MEDICAL CARE FOR ADOLESCENTS

11. There are over a dozen studies evaluating the efficacy and effectiveness¹ of puberty

blockers and gender-affirming hormones for the treatment of adolescents with gender dysphoria.²

¹ Efficacy refers to studies looking at an intervention under "ideal circumstances" (*e.g.*, in a research clinic), whereas effectiveness studies look at the impact of an intervention under "real world" conditions (*i.e.*, in the general community practice setting).

² Such studies include: 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 followup study. *The Journal of Sexual Medicine*, *8*(8), 2276-2283; 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; Costa, R., Dunsford, M., Skagerberg, E., Holt, V., Carmichael, P., & Colizzi, M. (2015). Psychological support, puberty suppression, and psychosocial functioning in adolescents with gender dysphoria. *The Journal of Sexual Medicine*, *12*(11), 2206-2214; Allen, L. R., Watson, L.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 6 of 49

These studies can be roughly delineated into two categories: uncontrolled longitudinal studies and controlled cross-sectional studies. Uncontrolled longitudinal studies (*e.g.*, Chen et al. *New England Journal of Medicine* 2023³ and deVries et al. *Journal of Sexual Medicine* 2011⁴) have examined mental health before and after gender-affirming medical interventions and found that mental health is improved after treatment. Controlled cross-sectional studies (*e.g.*, van der Miesen

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), 302-311; Kaltiala, R., Heino, E., Työläjärvi, 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; 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; 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; Kuper, L. E., Stewart, S., Preston, S., Lau, M., & Lopez, X. (2020). Body dissatisfaction and mental health outcomes of vouth on gender-affirming hormone therapy. Pediatrics, 145(4), e20193006; 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; Green, A. E., DeChants, J. P., Price, M. N., & Davis, C. K. (2021). Association of gender-affirming hormone therapy with depression, thoughts of suicide, and attempted suicide among transgender and nonbinary youth. Journal of Adolescent Health, 70(4), 643-649; Turban, J. L., King, D., Kobe, J., Reisner, S. L., & Keuroghlian, A. S. (2022). Access to gender-affirming hormones during adolescence and mental health outcomes among transgender adults. PLoS One, 17(1), e0261039; Tordoff, D. M., Wanta, J. W., Collin, A., Stephney, C., Inwards-Breland, D. J., Ahrens, K. (2022). Mental Health Outcomes in Transgender and Nonbinary Youths Receiving Gender-Affirming Care. JAMA Network Open, 5(2), e220978; Chen, D., Berona, J., Chan, Y. M., Ehrensaft, D., Garofalo, R., Hidalgo, M. A., Rosenthal, S. M., Tishelman, A. C., & Olson-Kennedy, J. (2023). Psychosocial functioning in transgender youth after 2 years of hormones. New England Journal of Medicine, 388(3), 240-250.

³ Chen, D., Berona, J., Chan, Y. M., Ehrensaft, D., Garofalo, R., Hidalgo, M. A., Rosenthal, S. M., Tishelman, A.C., & Olson-Kennedy, J. (2023). Psychosocial functioning in transgender youth after 2 years of hormones. *New England Journal of Medicine*, *388*(3), 240-250.

⁴ 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.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 7 of 49

et al. *Journal of Adolescent Health*⁵ and Turban et al. *PLoS One*⁶) have compared those who accessed gender-affirming medical care to those who desired but did not access this treatment and found that those who accessed treatment had better mental health outcomes. These two types of study designs offer complementary information that make experts in this field confident regarding the mental health benefits of these treatments. These studies are additionally supplemented by decades of clinical experience from experts around the world who care for adolescents with gender dysphoria.

12. The State's experts devote many pages to quarreling with individual studies' methodologies. All studies in medicine have strengths and weaknesses, and one must examine the body of literature as a whole to draw conclusions. Examining the body of literature regarding gender-affirming medical care for adolescent gender dysphoria as a whole provides a rich scientific perspective, linking these treatments to clear mental health benefits.

13. The State's experts often discuss the concept of "confounding" variables—the notion that certain *other variables* that are related to gender-affirming care and mental health outcomes may be the true reason for observed mental health benefits. The question of "confounding effect" has been examined in several ways. For instance, a 2022 paper from my research group that assessed the relationship between treatment with gender-affirming medical interventions and improved mental health statistically adjusted for a range of potentially confounding variables including age, gender identity, sex assigned at birth, sexual orientation,

⁵ 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.

⁶ Turban, J. L., King, D., Kobe, J., Reisner, S. L., & Keuroghlian, A. S. (2022). Access to genderaffirming hormones during adolescence and mental health outcomes among transgender adults. *PLoS One*, *17*(1), e0261039

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 8 of 49

race/ethnicity, level of family support for gender identity, relationship status, level of education, employment status, household income, having ever received pubertal suppression, having ever been exposed to gender identity conversion efforts, and having experienced any harassment based on gender identity in school.⁷ Even after adjusting for these potential confounding factors, the study found that treatment with gender-affirming medical care during adolescence was associated with lower odds of adverse mental health outcomes.

14. A potential confounder that the State's experts raise in particular is whether or not participants received supportive psychotherapy in addition to gender-affirming medical care. Of note, there is no evidence-based psychotherapy that treats gender dysphoria itself, so such therapy is generally aimed at supporting the patient in general with their mental health. Some studies assessing gender-affirming medical care in adolescents have taken psychotherapy into account and found that benefits seen were not explained by the psychotherapy. Costa et al.⁸ examined two cohorts of adolescents with gender dysphoria. Both cohorts received six months of supportive psychotherapy for the initial six months of the study. For the next twelve months, one group continued to receive supportive psychotherapy alone (the "delayed eligible" group), while the other received supportive psychotherapy *and* pubertal suppression (the "immediately eligible" group). The delayed eligible group had statistically significant improvement in global functioning after six months of psychotherapy alone. Of note, this supportive psychotherapy was aimed at improving mental health generally, not gender dysphoria specifically. The delayed eligible group

⁷ Turban, J. L., King, D., Kobe, J., Reisner, S. L., & Keuroghlian, A. S. (2022). Access to genderaffirming hormones during adolescence and mental health outcomes among transgender adults. *PLoS One*, *17*(1), e0261039.

⁸ Costa R, Dunsford M, Skagerberg E, Holt V, Carmichael P, Colizzi M (2015). Psychological support, puberty suppression, and psychosocial functioning in adolescents with gender dysphoria. *The Journal of Sexual Medicine*, *12*(11), 2206-2214.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 9 of 49

likely had worse mental health at baseline and thus was more likely to have their mental health improve with therapy. The "immediately eligible" group, which was deemed eligible for puberty blockers likely in part because their other mental health conditions besides gender dysphoria were reasonably well-controlled, did not see an improvement with therapy over these first six months. For the next twelve months of the study, the delayed eligible group that continued to receive psychotherapy alone saw no further improvement in their mental health. However, the immediately eligible group that received pubertal suppression in addition to psychotherapy saw statistically significant improvement in their global mental health functioning. This shows that pubertal suppression alleviated psychological distress that supportive psychotherapy alone could not-presumably gender dysphoria-related distress, given the mechanism of the medication. A study by Tordoff et al. similarly examined psychotherapy as a potentially confounding variable and their results showed that mental health improvements seen were not from psychotherapy alone.⁹ Another study by Achille et al.¹⁰ ran regression analyses in order to separate out the impacts of gender-affirming medical interventions from the impact of counseling and psychiatric medications. Though the sample size made it statistically difficult to detect differences, pubertal suppression was associated with better scores on the Center for Epidemiology Studies Depression Scale for participants assigned male at birth, which was a statistically significant finding.¹¹

⁹ Tordoff, D. M., Wanta, J. W., Collin, A., Stepney, C., Inwards-Breland, D. J., & Ahrens, K. (2022). Mental health outcomes in transgender and nonbinary youths receiving gender-affirming care. *JAMA Network Open*, *5*(2), e220978.

¹⁰ 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 wellbeing of transgender youths: preliminary results. *International Journal of Pediatric Endocrinology*, *2020*(8). doi: 10.1186/s13633-020-00078-2.

¹¹ It is important to note that in statistics, a statistically significant finding tells you that a finding is likely to represent a true effect and the finding was not due to random chance. In contrast, the lack of a statistically significant finding does not tell you one way or another if there is an effect. I would caution against over-interpreting non-statistically significant findings. Lack of a

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 10 of 49

15. As discussed above, Dr. Cantor is likely correct (Cantor, \P 196) that the pubertal suppression plus therapy group in Costa was different from the therapy alone group in that the latter group had other mental health concerns. However, this would mean that this group would be even more likely to respond well to psychotherapy than the therapy plus pubertal suppression group—as the study found in the first six months of psychotherapy alone; the pubertal suppression plus therapy had improvement over the latter course of the study when pubertal suppression was added, whereas the therapy alone group did not.¹² Again, this speaks to the mental health benefits of pubertal suppression for gender dysphoria, separate from the impact of supportive psychotherapy.

16. Of note, Dr. Cantor asserts that Carmichael et al. 2021¹³ supersedes the results of Costa et al. 2015 because "neither group actually had experienced any significant improvement at all." (Cantor, ¶196). He failed to recognize that the Carmichael study did find that global functioning scores improved; however, for reasons not clearly outlined in the Carmichael study,

statistically significant finding does not mean that no effect exists; it simply means the analysis in question does not tell the researchers one way or another if an effect exists.

¹² Dr. Cantor also references a letter to the editor about the Costa study that mentions the "dropout" rate being high (Cantor, ¶ 196). However, the dropout rate is nearly identical in the two groups, and there is no clear reason to think that the dropout rates would have thus impacted the results. If one had seen, for instance, that the dropout rate was much higher in the pubertal suppression group, one may think that people were leaving the study due to adverse effects of treatment; however, this was not seen in the study—the dropout rates were nearly identical in both groups. Biggs, M. (2019). A letter to the editor regarding the original article by Costa et al: Psychological support, puberty suppression, and psychosocial functioning in adolescents with gender dysphoria. *Journal of Sexual Medicine*, *16*(12), 2043.

¹³ Carmichael, P., Butler, G., Masic, U., Cole, T. J., De Stavola, B. L., Davidson, S., Skageberg, E. M., Khadr, 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.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 11 of 49

the authors did not run statistical analyses on this measure, as they did in the Costa 2015 publication.¹⁴

17. Dr. Cantor raises the possibility that the studies finding benefits of gender-affirming medical care for adolescents reflect reverse causation (*i.e.*, the notion that improved mental health causes one to access gender-affirming medical care rather than the reverse, that gender-affirming medical care leads to better mental health). (*See* Cantor, \P 61). This issue has been examined in the literature. For example, in a recent major publication in *The New England Journal of Medicine*, Chen et al. used a technique called parallel process modeling and found that improvements in mental health tracked along with improvements in appearance congruence over time (a measure of the degree to which study participants' bodies aligned with their gender identities), suggesting that gender-affirming medical care was the cause of the improvements in mental health, and arguing against the notion of reverse causation.¹⁵

18. The State's experts spend a great deal of time focusing on the lack of randomized controlled trial ("RCT") studies in this area. First, controlled cross-sectional studies and uncontrolled longitudinal cohort studies are well-accepted in medical research and often relied upon in medicine. It is true that randomized controlled trials provide valuable information and strong evidence of causation that other studies do not. But such studies are not always feasible or ethical in medicine, and many treatments are provided without the benefit of randomized

¹⁴ The discussion in the Carmichael study goes on to say, "Participant experience of treatment as reported in interviews was positive for the majority, particularly relating to feeling happier, feeling more comfortable, better relationships with family and peers and positive changes in gender role" and that their lack of statistically significant findings for other measures that were statistically analyzed "may relate simply to sample size."

¹⁵ Chen, D., Berona, J., Chan, Y. M., Ehrensaft, D., Garofalo, R., Hidalgo, M. A., Rosenthal, S. M., Tishelman, A.C., & Olson-Kennedy, J. (2023). Psychosocial functioning in transgender youth after 2 years of hormones. *New England Journal of Medicine*, *388*(3), 240-250.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 12 of 49

controlled trials. Randomized controlled trials are not feasible in the realm of gender-affirming medical care for adolescent gender dysphoria in particular. Because of the existing body of literature linking gender-affirming medical care to improved mental health outcomes for adolescents with gender dysphoria, it would be extraordinarily difficult to recruit people to participate in studies, knowing they could be randomized to receive no treatment. Particularly for vulnerable and pediatric populations, is not considered ethical to randomize patients to placebo treatments when there is substantial evidence that active treatment confers important benefits. Thus, a randomized controlled trial of gender-affirming medical care for adolescent gender dysphoria would be unlikely to be approved by an Institutional Review Board (IRB), the ethical boards at universities that decide if research is allowed to proceed). ¹⁶

19. The State's experts also claim that data based on self-report and surveys are not valid or reliable evidence. Their claims represent a broad misunderstanding of psychiatry. Clinical psychiatry and clinical psychiatric research almost always involve patient reports of their symptoms. Because psychiatric conditions (*e.g.*, generalized anxiety disorder, major depressive disorder, schizophrenia, obsessive compulsive disorder, and gender dysphoria, among many others) do not have laboratory tests, diagnosis is made largely based on patient reports of their symptoms. At times these may be supplemented by reports from parents and clinician observations, particularly for establishing a diagnosis; however, they are not considered standard

¹⁶ Of note, an RCT was recently conducted in Australia among adults with gender dysphoria to examine the impact of testosterone therapy. Nolan, B. J., Zwickl, S., Locke, P., Zajac, J. D., & Cheung, A. S. (2023). Early Access to Testosterone Therapy in Transgender and Gender-Diverse Adults Seeking Masculinization: A Randomized Clinical Trial. *JAMA Network Open*, *6*(9), e2331919. The RCT found that those randomized to immediate testosterone therapy had better mental health outcomes than those randomized to the clinic's regular waitlist. Given that they are a vulnerable group that generally warrants stricter protection under IRB review, it is unlikely that such an RCT would be approved for minors.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 13 of 49

or necessary in clinical trials that track symptoms over time or compare the mental health of those receiving treatment to those not receiving treatment. The studies cited in this declaration utilize commonly used and validated self-report psychometric measures including the Kessler-6 measure of past-month severe psychological distress,¹⁷ Beck Depression Inventory II,¹⁸ and self-report measures from the National Institutes of Health Toolbox Emotion Battery.¹⁹ These self-report instruments are standard in psychiatric research.

20. Survey methodologies are widely used in psychiatric research. Of note, the State's experts repeatedly cite survey research in their own reports (*e.g.*, Littman 2018,²⁰ Diaz 2023,²¹ Littman 2021²²). It is worth highlighting that there exist both high-quality and low-quality survey

¹⁷ Kessler, R. C., Green, J. G., Gruber, M. J., Sampson, N. A., Bromet, E., Cuitan, M., Furukawa, T.A., Gureje, O., Hinkov, H., Hu, C., Lara, C., Lee, S., Mneimneh, Z., Myer, L., Oakley-Browne, M., Posada-Villa, J., Sagar, R., Viana, M. C., & Zaslavsky, A. M. (2010). Screening for serious mental illness in the general population with the K6 screening scale: results from the WHO World Mental Health (WMH) survey initiative. *International Journal of Methods in Psychiatric Research*, *19*(S1), 4-22.

¹⁸ Beck, A. T., Steer, R. A., & Brown, G. (1996). Beck depression inventory-II. *Psychological Assessment*.

¹⁹ Slotkin, J., Nowinski, C., Hays, R., Beaumont, J., Griffith, J., Magasi, S., & Gershon, R. (2012). NIH Toolbox scoring and interpretation guide. *Washington (DC): National Institutes of Health*, 6-7.

²⁰ Littman, L. (2018). Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria. *PLoS One*, *13*(8), e0202330.

²¹ Diaz, S. & Bailey, J. M. (2023). Rapid Onset Gender Dysphoria: Parent Reports on 1655 Possible Cases. *Archives of Sexual Behavior*, 52(3), 1031-1043. This article was later retracted by the journal. Diaz, S. & Bailey, J. M. (2023). Retraction Note: Rapid Onset Gender Dysphoria: Parent Reports on 1655 Possible Cases. *Archives of Sexual Behavior*, doi: 10.1007/s10508-023-02635-1.

²² Littman, L. (2021). Individuals treated for gender dysphoria with medical and/or surgical transition who subsequently detransitioned: A survey of 100 detransitioners. *Archives of Sexual Behavior*, *50*(8), 3353-3369.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 14 of 49

methodologies. For example, Littman 2018 has been criticized for asking leading questions to a group that is ideologically focused, making it easy for participants to bias results and analyses.²³ In contrast, the 2015 US Transgender Survey had over 180 questions across 32 sections.²⁴ If participants were to attempt to bias the results in a certain direction, they would have needed to answer questions at distant parts of the survey in a particular fashion, based on what study design they believed researchers would use. Our group's analyses also utilized regression analyses that adjusted for a range of potentially confounding variables, further adding to the complexity of the analyses. Of note, the analysis plans for our group's studies were designed only after the 2015 USTS was already administered.

21. The State's experts' opinions concerning the evidence related to gender-affirming medical care and its impact on suicidality demonstrate a lack of understanding of suicidality research. Dr. Weiss and Dr. Cantor focus on a lack of data showing elevated rates of completed suicides among youth with gender dysphoria, at least as compared to youth with other mental health disorders. (Weiss, ¶ 89; Cantor, ¶¶ 147–53). It is true that there is a paucity of literature in this regard. Such research is often conducted by examination of death records, and because gender identity is rarely recorded on such records, this research has been difficult to conduct. However, there have been studies showing lower odds of suicidal ideation among those who receive treatment.²⁵ The suggestion that there is not really an elevated risk of suicide because the data we

²³ Littman, L. (2018). Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria. *PLoS One*, *13*(8), e0202330; 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.

²⁴ James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). The Report of the 2015 U.S. Transgender Survey. Washington, DC: National Center for Transgender Equality.

²⁵ See for example 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 in the realm of cross-sectional studies and Allen, L. R., Watson, L. B., Egan, A. M., & Moser, C. N.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 15 of 49

have is about suicidal ideation and not completed suicides demonstrates a profound lack of understanding of suicidality. Moreover, suicidal ideation is an indicator of severe psychological distress, rising to the level of the individual not wanting to live. Whether or not it ultimately results in a completed suicide, suicidal ideation is a serious negative outcome to be prevented. Reducing suicidal ideation is an important goal of mental health treatment, and it is vital for patients to have access to interventions that that reduce suicidal ideation.

22. The State's experts highlight that rates of suicidality are elevated among transgender people after gender-affirming care and Dr. Weiss even suggests that gender-affirming medical care "may increase the risk of suicide." (Weiss, ¶ 90). For example, he highlights a study by Dhejne et al. published in 2011^{26} that found that those who had gender-affirming surgery had a 19-fold increased odds of suicidality when compared to the general population. Such statistics are not evidence that gender-affirming care is ineffective or that it increases suicide risk. The discussion from that very study explains:

"It is therefore important to note that the current study is only informative with respect to transsexual persons health after sex reassignment; no inferences can be drawn as to the effectiveness of sex reassignment as a treatment for transsexualism. In other words, 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."

^{(2019).} Well-being and suicidality among transgender youth after gender-affirming hormones. *Clinical Practice in Pediatric Psychology*, 7(3), 302-311 in the realm of longitudinal studies.

²⁶ 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.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 16 of 49

In other words, though gender-affirming care improves mental health, it does not eliminate other factors like societal experiences of transphobia that adversely impact mental health. To evaluate if gender-affirming medical care is helpful to mental health using a control group, the control group would need to be transgender people who desired but did not access the treatment, not the general population. Almazan & Keuroghlian used that appropriate control group in a study published in *JAMA Surgery* in 2021²⁷ and found that access to gender-affirming surgery was associated with lower odds of past-year suicidal ideation. They further conducted post-hoc analyses that argued against the possibility of reverse causation (*i.e.*, they showed that people who received surgery had better mental health after the treatment, rather than having better mental health at baseline prior to having the surgery).

THE STATE'S EXPERTS' CLAIM THAT IDAHO'S BAN ON GENDER-AFFIRMING MEDICAL CARE FOR ADOLESCENT GENDER DYSPHORIA IS CONSISTENT WITH INTERNATIONAL CONSENSUS IS NOT ACCURATE

23. The State's experts rely on reports from some European countries and imply that Idaho's ban on gender-affirming medical care is in line with "international consensus." (*See* for example Cantor, ¶ 17-33).²⁸ This is not accurate. *None* of these countries have banned—let alone

²⁷ Almazan, A. N., & Keuroghlian, A. S. (2021). Association between gender-affirming surgeries and mental health outcomes. *JAMA Surgery*, *156*(7), 611-618.

²⁸ For example, Cass, H. (2022, February). The Cass Review: Independent review of gender identity services for children and young people Interim report. National Health Service (NHS), UK (England); COHERE Finland (Council for Choices in Health Care in Finland) (2020, June 16). Medical treatment methods for dysphoria associated with variations in gender identity in [Translated], minors—Summary recommendation. of а available at https://palveluvalikoima.fi/documents/1237350/22895008/Summary minors en+(1).pdf/fa2054c 5-8c35-8492-59d6-b3de1c00de49/Summary minors en+(1).pdf?t=1631773838474 (Finland): Swedish Socialstyrelsen. (2022, February 22). Uppdaterade rekommendationer för hormonbehandling vid könsdysfori hos unga. [Updated recommendations for hormone therapy for gender dysphoria in young people.], available at https://www.socialstyrelsen.se/omsocialstyrelsen/pressrum/press/uppdateraderekommendationer-for-hormonbehandling-vidkonsdysfori-hos-unga/ (Sweden); Swedish Socialstyrelsen. (2022, December). Care of children and adolescents with gender dysphoria. Summary of national guidelines, available at

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 17 of 49

criminalized—gender-affirming medical care for adolescents with gender dysphoria as Idaho does. Rather, the government health authorities in the select countries referenced have made changes to the way in which gender-affirming care is being delivered (*e.g.*, moving care to research settings where more data can be collected).²⁹ Rather than put it in line with "international consensus," Idaho's ban on gender-affirming medical care for adolescent gender dysphoria puts the law squarely outside of mainstream medical views and policies around the world.

24. The State's experts focus on the European reports' assessment of the body of research on gender-affirming care for minors. Of note, most of these reports were not peer-reviewed and were published by government entities.³⁰ These types of government reports are not the types of research that experts rely upon when forming conclusions about research. Moreover, they do not include all of the relevant literature. The State's experts attempt to bolster the importance of these reports by calling them "systematic reviews." But all a "systematic review" means is that the authors of the reports pre-defined the search terms they used when conducting literature reviews in various databases.³¹ Merely pre-defining search terms does not guarantee that

https://www.socialstyrelsen.se/globalassets/sharepoint-

dokument/artikelkatalog/kunskapsstod/2023-1-8330.pdf (Sweden); French Academy of Medicine. (2022) Medicine and gender transidentity in children and adolescents, *available at* https://www.academie-medecine.fr/la-medecine-face-a-la-transidentite-de-genre-chez-les-enfants-et-les-adolescents/?lang=en.

²⁹ Contrary to the suggestion of Dr. Weiss (¶ 168), that gender services for minors have been shut down in the U.K., the National Health Service replaced a centralized clinic with several regional clinics.

³⁰ The one exception is that the Swedish Agency for Health Technology Assessment and Assessment of Social Services (SBU) published its systematic review in the journal *Acta Paediatrica*, a Swedish medical journal that appears to be peer-reviewed. *See* Ludvigsson, J. F., Adolfsson, J., Höistad, M., Rydelius, P.-A., Kriström, B., & Landén, M. (2023). A systematic review of hormone treatment for children with gender dysphoria and recommendations for research. *Acta Paediatrica*. doi: 10.1111/apa.16791.

³¹ Harvard Countway Library. Systematic Reviews and Meta Analysis Q&A. Accessed: October 1, 2023, *available at* <u>https://guides.library.harvard.edu/meta-analysis/GettingStarted</u>.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 18 of 49

the systematic review will identify the full body of relevant literature,³² nor does it tell you anything about the reliability of the review authors' description and analysis of the literature. The primary advantage to a systematic review would be its potential (though no guarantee) to identify research publications that had not previously been identified in this discussion. The reports cited by the State's experts did not identify any such new research reports that affect my conclusions about the research.

THE STATE'S EXPERTS HAVE INAPPROPRIATELY APPLIED RESEARCH ON PREPUBERTAL CHILDREN TO TRANSGENDER ADOLESCENTS IN CLAIMING THAT THERE IS A HIGH LIKELIHOOD OF "DESISTANCE" AMONG ADOLESCENTS WITH GENDER DYSPHORIA

25. Dr. Cantor inappropriately uses studies of young prepubertal children to imply that adolescents who are candidates for gender-affirming medical care are likely to desist if not provided with gender-affirming care. (Cantor, ¶115). Though the terms "children" and "adolescents" are sometimes used synonymously in common parlance, these terms have specific and distinct meanings in the context of child and adolescent psychiatric research. In this field, "child" and "children" refer to minors who have not yet reached the earliest stages of puberty (*i.e.*, Tanner 2). The terms "adolescent" and "adolescents" refer to minors who have begun puberty. Studies of prepubertal children (who are not candidates for gender-affirming medical interventions under *any* existing clinical guidelines) cannot be conflated with studies of adolescents (who,

³² This is the case with a Cochrane review abstract from 2020 cited by Defendants' experts regarding gender-affirming hormone therapy among transgender women (Haupt, C., Henke, M., Kutschmar, A., Hauser, B., Baldinger, S., Saenz, S. R., & Schreiber, G. (2020). Antiandrogen or estradiol treatment or both during hormone therapy in transitioning transgender women. *Cochrane Database of Systematic Reviews*, 2020(11), CD013138). The Cochrane review did not identify several cohort studies examining gender-affirming medical care for adolescent gender dysphoria, likely due to its search methodology, and because it only examined studies published prior to 2019.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 19 of 49

depending on several factors, *may* be candidates for various forms of gender-affirming medical interventions).

26. This distinction is vital in the realm of "desistence" studies (*i.e.*, studies that aim to assess how many young people who identify as transgender will later identify as cisgender). The suggestion by Dr. Cantor that a majority of transgender minors affected by the Idaho law will come to identify with their assigned sex at birth inappropriately relies on studies of gender diverse *prepubertal* children, which have, in the past, shown that many of these children will not grow up to be transgender. These studies do not apply to transgender minors who have reached puberty (*i.e.*, "adolescents").³³ Once a transgender youth begins puberty, it is extremely rare for them to later identify as cisgender.³⁴ The notion that puberty will generally result in transgender people coming to identify as cisgender is also clearly not true given the fact that there are over 1 million transgender adults in the U.S.³⁵ and the vast majority of older cohorts were unable to access pubertal suppression.³⁶

 $^{^{33}}$ Dr. Cantor suggests that the desistance studies are not irrelevant to adolescents because they do not specify at what developmental stage the reported desistance occurred. (Cantor, ¶119). But those studies say nothing about whether desistance is common among adolescents with gender incongruence.

³⁴ See Turban, J.L., de Vries, A.L.C., & Zucker, K. (2018). 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. This textbook chapter provides comment from the directors of two of the oldest and most established gender clinics in the world.

³⁵ Flores, A. R., Herman, J., Gates, G. J., & Brown, T. N. (2016). *How many adults identify as transgender in the United States*? (Vol. 13). Los Angeles, CA: Williams Institute.

³⁶ See, for example, 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, which found that only 2.5% of those who desired pubertal suppression for gender dysphoria were able to access it.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 20 of 49

27. Any study regarding prepubertal children and their likelihood of ultimately identifying as transgender should not be used to assess the interventions targeted by the Idaho law, namely, pubertal suppression, gender-affirming hormones, and gender-affirming surgery, since none of these interventions are provided to prepubertal patients under current medical guidelines.³⁷

28. Further, the utility of "desistence" studies even for predicting the future gender identity of prepubertal children is not appropriate due to their reliance on an outdated diagnosis of "gender identity disorder in children," which did not require a child to identify as a sex different than their sex assigned at birth. This diagnosis likely captured many cisgender "tomboys" or cisgender boys with feminine interests like dresses or dolls who never identified as transgender to begin with and, thus, unsurprisingly did not identify as transgender when followed up with later in life. In fact, an analysis of the so-called "desistence" studies found that, when asked their gender identity, 90% of the children with "gender identity disorder" in these studies reported an answer that aligned with their sex assigned at birth.³⁸ In contrast, the diagnosis of "gender dysphoria in children" requires one to not merely have gender atypical interests and behaviors; one must identify as a gender different than one's sex assigned at birth. This is a vital distinction. While the diagnostic category of "gender identity disorder" would capture many cisgender children, the diagnostic category of "gender dysphoria" from the DSM-5, by definition, does not.³⁹

³⁷ Hembree, W.C., Cohen-Kettenis, P.T., Gooren, L., *et al.* (2017). Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline. *Journal of Clinical Endocrinology & Metabolism*, 102(11), 3869-3903.

³⁸ Olson, K. R. (2016). Prepubescent Transgender Children: What We Do and Do Not Know. *Journal of the American Academy of Child and Adolescent Psychiatry*, *55*(3), 155-156.

³⁹ For more information on the limits of "desistence studies" see Olson, K.R. (2016). Prepubescent Transgender Children: What We Do and Do Not Know. *Journal of the American Academy of Child & Adolescent Psychiatry*, 3(55), 155-156.

THE STATE'S EXPERTS' ASSERTION THAT GENDER AFFIRMING CARE CAUSES PERSISTENCE OF GENDER INCONGRUENCE IS NOT SUPPORTED BY EVIDENCE

29. The State's experts suggest that gender affirming care, including social transition, causes the persistence of gender incongruence among youth. Despite Dr. Cantor spending a considerable portion of his declaration on the importance of differentiating correlation from causation, he does not apply that to the findings that social transition is correlated with "persistence." He outlines data showing that youth who socially transition are more likely to continue to identify as transgender later in life (*i.e.*, correlation). But this correlation could be due to two possibilities: (1) social transition could influence a child's gender identity, making them identify more strongly as transgender and thus more likely to persist, or (2) children who go on to socially transition identified more strongly as transgender than those who did not *prior* to social transition, and thus their pre-transition gender incongruence lead to the social transition in the first place.

30. Research by Rae et al. has shown that the second possibility is far more likely to be what is occurring.⁴⁰ Rae et al.'s 2019 study showed that gender identification is not significantly different before and after a social transition, but that those who ultimately underwent a social transition had a greater degree of gender incongruence *prior to social transition*.⁴¹ The study made clear that this correlation—between pre-pubertal social transition and transgender identity— is because those who undergo a pre-pubertal social transition had stronger discordance between

⁴⁰ 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.

⁴¹ Note that in most studies, a lack of a statistically significant finding is not informative. This study used sophisticated Bayesian statistics to show that gender identification was not different before and after a social transition. Such a finding of something not being different is, under these methods, reliable.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 22 of 49

their sex assigned at birth and their gender identity to begin with, and that social transition itself does not appear to increase gender discordance.

31. The State's experts also point to studies showing that the overwhelming majority of transgender adolescents who start pubertal suppression go on to future additional gender-affirming medical interventions, suggesting that pubertal suppression causes continued gender incongruence. (*E.g.*, Weiss, ¶119, referring to a "conveyer belt of 'gender transition"). It is another logical fallacy to infer that a study showing that the majority of adolescents on puberty blockers proceeding on to future gender-affirming medical interventions is evidence that the treatment causes persistence; rather, it is just as possible, and in my opinion more likely, that, given the comprehensive biopsychosocial mental health assessment that is done prior to starting gender-affirming medical interventions under current guidelines, the adolescents who started pubertal suppression were those who were, through medical and mental health screening, determined, prior to starting pubertal suppression, to have a low likelihood of future desistence in their transgender identity.

THE STATE'S EXPERTS' SUGGESTION THAT PATIENTS SEEK GENDER-AFFIRMING MEDICAL CARE BECAUSE OF SOCIAL INFLUENCE IS WITHOUT BASIS

32. The State's experts claim that social influence is responsible for adolescents seeking gender-affirming medical care and is a cause of "rapid-onset gender dysphoria". (Cantor ¶ 136; Weiss ¶¶ 35, 106.)

33. As an initial matter, Defendants' experts fail to note that "rapid-onset gender dysphoria" is not a recognized mental health condition.⁴² The term "rapid-onset gender dysphoria"

⁴² 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.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 23 of 49

entered the literature in 2018 through a publication by Dr. Lisa Littman, discussed briefly above.⁴³ Soon after the initial publication of Dr. Littman's article, a correction was published.⁴⁴ The correction noted, "Rapid-onset gender dysphoria (ROGD) is not a formal mental health diagnosis at this time. This report did not collect any data from the adolescents and young adults (AYAs) or clinicians and therefore does not validate the phenomenon." ⁴⁵ The correction goes on to say "the term should not be used in any way to imply that it explains the experiences of all gender dysphoric youth" The American Psychological Association has highlighted that, due to the lack of empiric basis, "rapid-onset gender dysphoria" should not be used in assessment or clinical treatment contexts.⁴⁶ Despite this, the State's experts cite the 2018 Littman article to make unsubstantiated claims about adolescents with gender dysphoria.

34. 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

⁴³ Littman, L. (2018). Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria. *PLoS One*, *13*(8), e0202330.

⁴⁴ 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.

⁴⁵ A recent study by Bauer et al. in *The Journal of Pediatrics* examined some of the associations that would be consistent with the existence of "rapid-onset gender dysphoria" and concluded that their results "did not support the rapid onset gender dysphoria hypothesis." Bauer, G. R., Lawson, M. L., Metzger, D. L., & Trans Youth CAN! Research Team. (2022). Do Clinical Data from Transgender Adolescents Support the Phenomenon of "Rapid Onset Gender Dysphoria"?. *Journal of Pediatrics, 2022*(243), 224-227. Two recent publications from our group similarly did not support the notion: Turban, J. L., Dolotina, B., King, D., & Keuroghlian, A. S. (2022). Sex assigned at birth ratio among transgender and gender diverse adolescents in the United States. *Pediatrics, 150*(3), e2022056567 and Turban, J. L., Dolotina, B., Freitag, T. M., King, D., & Keuroghlian, A. S. (2023). Age of Realization and Disclosure of Gender Identity Among Transgender Adults. *Journal of Adolescent Health, 72*(6), 852-859.

⁴⁶ American Psychological Association et al. CAAPS Position Statement on Rapid Onset Gender Dysphoria (ROGD). Available at: https://www.caaps.co/rogd-statement. Accessed: October 1, 2023.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 24 of 49

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 alternative interpretation, and in my opinion more likely 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. The parent 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. 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. In a recent study from our research group, transgender people who first understood their gender identity in childhood waited a median 14 years before sharing this with another person.⁴⁷ In my experience working with transgender youth and adults, the reasons for this tend to be out of fear of negative repercussions (rejection, being kicked out of the house, or even physical assault) were their parents to find out that they are Children often learn to conceal their gender non-conforming behaviors and transgender. transgender identity early, particularly if their parents have strong negative reactions to them exhibiting gender non-confirming behavior.

35. The State's experts point to the increase in referrals to gender clinics, particular among birth-assigned females, over time as a point of concern. (*E.g.*, Cantor, ¶17, ¶25; Weiss ¶179). The increase in referrals has coincided with increased visibility of transgender people, including transgender men, in society and greater awareness of gender dysphoria and access to

⁴⁷ Turban, J. L., Dolotina, B., Freitag, T. M., King, D., & Keuroghlian, A. S. (2023). Age of Realization and Disclosure of Gender Identity Among Transgender Adults. *Journal of Adolescent Health*, 72(6), 852-859.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 25 of 49

medical care to treat it. In the past, people thought of gender dysphoria as something that primarily impacted birth-assigned males. This likely led to many cases of gender dysphoria among birthassigned females being overlooked by families or undiagnosed or "missed" by doctors. In recent years, literacy regarding gender dysphoria among birth-assigned females has increased among physicians. As fewer birth-assigned females go undiagnosed, the sex ratio in gender clinics has shifted away from predominantly birth-assigned males. This is similar to a pattern that has been seen in autism spectrum disorder. For example, a large study found that with increasing awareness that autism spectrum disorder can impact birth-assigned females as well as birth-assigned males, the sex ratio shifted more toward birth-assigned females, from 5.1:1 (birth-assigned males to females) to 3.1:1.48 The same study saw the sex ratio for the related diagnosis of Asperger's syndrome similarly shift from 8.4:1 to 3.0:1. Whereas parents and pediatricians in the past may have had limited literacy regarding gender diversity in adolescents, today more Americans, as well as people abroad, have greater understanding of the experiences of transgender youth. This fact has undoubtedly increased the number of parents bringing their adolescents to gender clinics for evaluation and pediatricians referring patients to gender clinics. Additionally, insurance coverage of gender-affirming medical interventions has improved drastically, meaning that more families are able to afford care, which results in an increase in referrals for evaluation.

36. Of note, not all adolescents who present at gender clinics ultimately go on to receive gender-affirming medical interventions.⁴⁹ In fact, in a large study from a Netherlands gender

⁴⁸ Jensen, C. M., Steinhausen, H. C., & Lauritsen, M. B. (2014). Time trends over 16 years in incidence-rates of autism spectrum disorders across the lifespan based on nationwide Danish register data. *Journal of Autism and Developmental Disorders*, *44*(8), 1808-1818.

⁴⁹ Wiepjes, C. M., Nota, N. M., de Blok, C. J., Klaver, M., de Vries, A. L., Wensing-Kruger, S. A., de Jongh, R. T., Bouman, M. B., Steensma, T. D., Cohen-Kettenis, P., Gooren, L. J. G., Kreukels, B. P. C., & den Heijer, M. (2018). The Amsterdam cohort of gender dysphoria study

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 26 of 49

clinic, the percentage of patients who presented for evaluation who actually started any kind of gender-affirming treatment has decreased over time.⁵⁰ The authors of that study note:

"[T]his 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. 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."

This shows that while more people may be coming in for evaluation, the criteria for diagnosis and treatment remain stringent and a smaller percentage of patients are actually being diagnosed with gender dysphoria and referred on for medical treatment.

THE STATE'S EXPERTS ASSERTIONS OF HIGH RATES OF TRANSITION REGRET ARE UNSUPPORTED BY THE EVIDENCE

37. The State's experts suggest that a large number of adolescents who undergo gender-

affirming medical care go on to regret treatment; however, this is not supported 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

underwent gender-affirming surgery, 0.6% experienced regret. Among transgender men with

medical and surgical interventions.⁵¹ Among transgender women with gender dysphoria who

^{(1972–2015):} trends in prevalence, treatment, and regrets. *Journal of Sexual Medicine*, 15(4), 582-590.

⁵⁰ Wiepjes, C. M., Nota, N. M., de Blok, C. J., Klaver, M., de Vries, A. L., Wensing-Kruger, S. A., de Jongh, R. T., Bouman, M. B., Steensma, T. D., Cohen-Kettenis, P., Gooren, L. J. G., Kreukels, B. P. C., & den Heijer, M. (2018). The Amsterdam cohort of gender dysphoria study (1972–2015): trends in prevalence, treatment, and regrets. *Journal of Sexual Medicine*, *15*(4), 582-590.

⁵¹ Wiepjes, C. M., Nota, N. M., de Blok, C. J., Klaver, M., de Vries, A. L., Wensing-Kruger, S. A., de Jongh, R. T., Bouman, M. B., Steensma, T. D., Cohen-Kettenis, P., Gooren, L. J. G., Kreukels, B. P. C., & den Heijer, M. (2018). The Amsterdam cohort of gender dysphoria study (1972–2015): trends in prevalence, treatment, and regrets. *Journal of Sexual Medicine*, *15*(4), 582-590.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 27 of 49

gender dysphoria 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 genderaffirming 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.⁵² 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 further 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; rather, this study shows that the treatment served its goal of allowing adolescents more time to better understand their gender identity before being assessed for additional treatment.

38. The State's experts cite some studies discussing rates of discontinuing genderaffirming medical interventions. For example, Dr. Weiss cites findings from a study by Roberts et al. published in 2022 that "[a]mong those who had started hormonal intervention before age eighteen, 26% discontinued treatment. Among all the natal females in this follow up study, 36%

⁵² 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.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 28 of 49

discontinued treatment."⁵³ (Weiss, ¶159). It is essential to note that discontinuation of a medication does not necessarily indicate regret. This study examined only rates of discontinuation, not *reasons* for discontinuation. Reasons for discontinuing can include satisfaction with degree of physical gender congruence already attained, social stress related to transphobia, or financial reasons like loss of insurance. As the paper notes, in citing our 2021 publication in the journal *LGBT Health*, "many individuals who report [stopping] gender-affirming hormones [report] subsequently restarting treatment or the intention to restart treatment."

39. Dr. Weiss also failed to mention that the Roberts study found that discontinuation rates were lower among those who started gender-affirming medical care as minors when compared to those who started as adults, likely due to the comprehensive psychosocial mental health evaluations conducted prior to initiating care. The publication's discussion section notes, "Regardless of the reason for the higher hormone continuation rate among TGD youth, this finding provides support for the idea that TGD individuals below the age of legal majority, with the assistance of their parents or legal guardians and health care providers, can provide meaningful informed assent for gender-affirming hormones and do not appear to be at a higher risk of future discontinuation of gender-affirming hormones because of their young age alone."

40. The State, on page nine of its combined memorandum of law in opposition to motion for preliminary injunction and in support of motion to dismiss, asserts that a paper by Hall et al. shows that "the medical detransition rate among youth who underwent gender transitions in recent years may be as high as 30% . . ." The cited paper shows no such thing. First, this was a study of adults, not youth. Second, the study did not find a detransition rate of 30%. The paper

⁵³ Roberts, C. M., Klein, D. A., Adirim, T. A., Schvey, N. A., Hisle-Gorman, E. (2022). Continuation of Gender-affirming Hormones among Transgender Adolescents and Adults. *Journal of Clinical Endocrinology & Metabolism*, *107*(9) e3937-e3943.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 29 of 49

notes, "twelve cases (12/175, 6.9%) were agreed by all authors to meet the case definition for detransitioning. Regret was specifically documented in two cases [1.1%]"⁵⁴ Also of note in this study is that the authors did not record reasons for detransition (defined in this study as going back to presenting as one's sex assigned at birth). The State also cites a press release from the French Academy of Medicine, which, though it states there is an "increasing number of transgender young adults wishing to "detransition," provides no detransition rate, nor any citation that shows this is true.⁵⁵ One of the few citations the press release does provide is to the 2018 Littman paper I discuss above.⁵⁶

41. 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.⁵⁷ 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). 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.

⁵⁴ Hall, R., Mitchell, L., & Sachdeva, J. (2021). Access to care and frequency of detransition among a cohort discharged by a UK national adult gender identity clinic: retrospective case-note review. *BJPsych Open*, *7*(6), e184.

⁵⁵ French Academy of Medicine. (2022) Medicine and gender transidentity in children and adolescents, *available at* https://www.academie-medecine.fr/la-medecine-face-a-la-transidentite-de-genre-chez-les-enfants-et-les-adolescents/?lang=en.

⁵⁶ The French Academy of Medicine press release itself recommends, "in the event of a persistent desire for transition, a careful decision about medical treatment with hormone blockers or hormones of the opposite sex within the framework of multi-disciplinary consultation meetings."

⁵⁷ 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.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 30 of 49

Our team later published a study highlighting that a substantial number of currently identified transgender people (13.1%) have "de-transitioned"⁵⁸ at some point in their life, with the majority (82.5%) citing external factors like family rejection, societal stigma, or harassment.⁵⁹ 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 gay and lesbian individuals reported that they were "cured" of their homosexuality, only to later reveal that they were still gay but felt pressured by their communities to say for many years that they were not.

42. The State's experts cite two papers discussing the experiences of some individuals who detransitioned, one by Littman and one by Vandenbussche.⁶⁰ (Weiss, ¶157). Neither of these papers provide information on the prevalence of detransition or, specifically. the rate of detransition among those who initiate gender-affirming medical care during adolescence. In fact, the introduction of the Littman article states that the paper is not "designed to assess the prevalence of detransition as an outcome of transition." In addition, in the Littman study, 34% of the participants reported that gender-affirming care was "a necessary part of [their] journey." And

⁵⁸ This study defined "de-transition" as an affirmative answer to the following: "Have you ever de-transitioned? In other words, have you ever gone back to living as your sex assigned at birth, at least for a while?"

⁵⁹ 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.

⁶⁰ Littman L. (2021). Individuals treated for gender dysphoria with medical and/or surgical transition who subsequently detransitioned: A survey of 100 detransitioners. *Archives of Sexual Behavior*, 50(8), 3353–3369; Vandenbussche, E. (2021). Detransition-related needs and support: A cross-sectional online survey. *Journal of Homosexuality*, 69(9), 1602-1620. Of note, of the 237 individuals in the Vandenbussche study, only 25% had medically transitioned as minors and many did not medically transition at all.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 31 of 49

among this group of people who de-transitioned, most reported that undergoing gender-affirming medical care was in some way helpful.

43. Dr. Weiss cites Reddit in his attempt to claim there is evidence that rates of detransition and regret among those initiating gender-affirming medical care are high. (Weiss, ¶156). He notes that one Reddit group called r/detrains has over 49,000 members. However, there is no indication that all or even many of the 49,000 members of that group have detransitioned, even if that term is broadly defined. 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."⁶¹

44. There are undoubtedly some people who start gender-affirming medical interventions and later stop them. A small minority of these appear to regret the treatment, though differentiating regret related to transphobia from regret related to the treatment itself can be difficult to disentangle. But as I reviewed above, 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. Accordingly, it is dangerous to take this option away from families and physicians.

THERE IS NO EVIDENCE-BASED PSYCHOTHERAPY TO TREAT GENDER DYSPHORIA

45. The State's experts suggest that psychotherapy can provide relief for gender dysphoria in lieu of gender-affirming medical care. While psychotherapy can be very helpful for

⁶¹ 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. Accessed: October 1, 2023.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 32 of 49

adolescents with gender dysphoria to help explore their gender identity and address comorbid conditions like depression and anxiety, there are no evidence-based psychotherapy protocols that effectively treat gender dysphoria itself.

46. In the past, some clinicians have described psychotherapeutic strategies to attempt to lead youth with gender dysphoria to identify with their sex assigned at birth.⁶² Such practices, often referred to as "gender identity conversion efforts", have subsequently been linked to adverse mental health outcomes, including suicide attempts, particularly when people are exposed to them as children.⁶³ In addition to being harmful, there is no peer-reviewed research to suggest that these gender identity conversion efforts are successful in changing a person from transgender to cisgender.⁶⁴

47. While the State's experts repeatedly criticize the extensive body of research linking gender-affirming medical care to improved mental health outcomes for adolescent gender dysphoria, they do not provide evidence to support their implication that gender dysphoria can be treated with psychotherapy alone.

48. Dr. Weiss asserts that "exploratory, non-judgmental psychotherapy can alleviative suffering in patients with 'gender dysphoria' and may help them accept their natal sex." (Weiss,

⁶² Meyer-Bahlburg, H.F. (2002). Gender Identity Disorder in Young Boys: A Parent-and Peer-Based Treatment Protocol. *Clinical Child Psychology and Psychiatry*, 7(3), 360-376.

⁶³ 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.

⁶⁴ Gender identity conversion efforts have therefore been labelled unethical by major medical organizations including The American Medical Association and The American Academy of Child & Adolescent Psychiatry. American Medical Association. (2017). Health Care Needs of Lesbian, Gay, Bisexual and Transgender Populations. H-160.991. *Available at* https://policysearch.ama-assn.org/policyfinder/detail/gender%20identity?uri=%2FAMADoc%2FHOD.xml-0-805.xml; The American Academy of Child & Adolescent Psychiatry. (2018). Conversion Therapy. *Available at* https://www.aacap.org/AACAP/Policy_Statements/2018/Conversion_Therapy.aspx.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 33 of 49

(40). Exploratory psychotherapy can be helpful for adolescent patients who are unsure of their gender identity to come to understand it. Dr. Weiss appears to be suggesting that such therapy can help transgender people become cisgender. The sources he cites to support this do no such thing. The first is a letter to the editor that provides no data or evidence to support the assertion.⁶⁵ The second is a description of twelve adolescent patients who underwent the psychosocial assessment that is required prior to initiating gender-affirming medical care for adolescent gender dysphoria and ultimately did not pursue gender-affirming medical care.⁶⁶ This case series is not evidence that psychotherapy is effective in promoting identification with one's sex assigned at birth, but rather, that the psychosocial evaluation is effective in identifying appropriate candidates for gender-affirming medical care.⁶⁷

CONCLUSION

49. In summary, the declarations from the State's experts do not provide justification for banning gender-affirming medical care for adolescents with gender dysphoria. The scientific evidence that I outlined above shows the benefits of the proscribed care. This research is consistent with the decades of clinical experience from around the world—including my own—of improved mental health outcomes from these interventions. None of the European countries the State's experts cite have banned care. The research the State's experts cite on "desistance" among prepubertal children has no bearing on adolescents with gender dysphoria, and there is no scientific

⁶⁵ D'Angelo, R., Syrulnik, E., Ayad, S., Marchiano, L., Kenny, D. T., & Clarke, P. (2021). One size does not fit all: In support of psychotherapy for gender dysphoria. *Archives of Sexual Behavior*, 50(1), 7-16.

⁶⁶ Churcher Clarke, A., & Spiliadis, A. (2019). 'Taking the lid off the box': The value of extended clinical assessment for adolescents presenting with gender identity difficulties. *Clinical Child Psychology and Psychiatry*, *24*(2), 338-352.

⁶⁷ Incidentally, it is surprising to see Dr. Weiss rely on this study at all as throughout the remainder of his declaration, he dismisses research that lacks high GRADE-level data.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 34 of 49

support for their assertions that providing gender-affirming medical care causes "persistence" of gender incongruence. Nor is there any evidence supporting the State's experts' claims that youth are seeking gender-affirming medical care due to peer and social media influence, or that those who receive care are likely to come to regret it. Finally, there are no evidence-based alternatives for treating gender dysphoria. While the State's experts critique the literature regarding the benefits of gender-affirming medical care, they offer no studies supporting an alternative treatment. The Idaho ban would leave physicians, adolescents, and their parents without any evidence-based treatments for adolescent gender dysphoria, a condition that can cause immense suffering.

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

Jack L. Twolan

Executed on: October 13, 2023

JACK L. TURBAN, MD, MHS

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 35 of 49

Exhibit A

Jack Lewis Turban III MD MHS 401 Parnassus Ave San Francisco, CA 94143 412.965.9388

jack.turban@ucsf.edu

ACADEMIC APPOINTMENTS

University of California, San Francsisco School of Medicine San Francisco, CA. September 2022-Present Assistant Professor of Child & Adolescent Psychiatry and Affiliate Faculty in the Philip R. Lee Institute for Health Policy Studies. Responsibilities include serving as director of the gender psychiatry program, and as an attending psychiatrist in the adult gender and sexual minority clinic, and in the eating disorders clinic, as well as research focusing on the determinants of mental health among transgender and gender diverse youth and the teaching of medical students. residents, and fellows.

EDUCATION & TRAINING

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

Massachusetts General Hospital & McLean Hospital Boston, MA

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.

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

USMLE: Step 1 (252), Step 2 (256)

Harvard University Cambridge, MA

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

Post-doctoral Research Fellow. 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

Stanford Division of Child & Adolescent Psychiatry Palo Alto, CA

Post-doctoral Resaerch Fellow. Established the Stanford Evaluation of Gender Affirmation (SEGA) study, which examines the impact of gender-affirming medical and surgical interventions on the mental health of transgender and gender diverse youth. Mentors: Dr. David Hong & Dr. Tandy Aye

McLean Institute for Technology in Psychiatry Belmont, MA.

Post-doctoral Research Fellow. Conducted 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

August 2012- May 2017

September 2007- May 2011

July 2017 – May 2020

2017-Present

2020-2022

2017-2020

Yale Program for Research on Impulsivity & Impulse Control Disorders New Haven, CT 2016-2019 Pre-doctoral Research Fellow. Conducted a studies of 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. PI: Marc Potenza MD/PhD

Yale Child Study Center New Haven, CT

Pre-doctoral Research Fellow. 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

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

Yale Department Laboratory Medicine New Haven, CT

Pre-doctoral Research Fellow. 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

Pre-doctoral Research Fellow. 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

Undergraduate Rearch Fellow. 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

Intern. Worked as a biological research intern, studying the role of Math-1 in inner-ear development and regeneration.

LEADERSHIP

UCSF Child & Adolescent Psychiatry Grand Rounds Committee San Francisco, CA. 2023-Present Member. Works with with committee to select and work with grand rounds speakers for the weekly child and adolescent psychiatry grand rounds series.

UCSF Child & Adolescent Psychaitry Fellowship Selection Committee San Francisco, CA 2022-Present *Member.* Conducts interviews for applications to the UCSF child and adolescent psychiatry fellowship training program, sits on selection committee, works on recruitment efforts.

The Upswing Fund

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.

Stanford Medicine Diversity Cabinet LGBTQ+ / Sexual and Gender Minority Subcommittee

Member. Working to improve Stanford School of Medicine in all aspects relevant to sexual and gender minorities including curriculum, clinical care, and employee support.

2015-2017

2015-2016

2012-2014

2012-2012

2009-2011

2009-2009

2020-Present

2021-2022

Jack Lewis Turban III MD MHS 401 Parnassus Ave

San Francisco, CA 94143 412.965.9388 jack.turban@ucsf.edu

Stanford Pediatric Gender Journal Club

Founder. Organizing a monthly journal club focusing on the latest research relevant to the care of transgender and gender diverse youth.

MGH Psychiatry Gender Lab Meetings Boston, MA

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).

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

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

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"

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

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

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

Interviewer. Interviewing students from the Boston area for admission to Harvard College.

SELECTED PEER REVIEWED PUBLICATIONS: ORIGINAL RESEARCH

Turban J.L., Dolotina B., Freitag T.M., King D., Keuroghlian A.S. Age of realization of transgender identity and mental health outcomes among transgender and gender diverse adults: examining the "rapid onset gender dysphoria" hypothesis. Journal of Adolescent Health. [In Press]

2013-2017

2012-2014

2015-2017

2012-2020

2019-2020

2021-2022

2014-2017

2017-2017

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 39 of 49

Jack Lewis Turban III MD MHS 401 Parnassus Ave San Francisco, CA 94143 412.965.9388 jack.turban@ucsf.edu

Turban J.L., Dolotina B., King D., Keuroghlian A.S. (2022) Sex assigned at birth ratio among transgender and gender diverse adolescents in the United States. *Pediatrics*. [Accepted]

Turban J.L., King D., Kobe J., Reisner S.L., Keuroghlian A.S. (2022) Access to gender-affirming hormones during adolescence and mental health outcomes among transgender adults. *PLoS ONE*, 17(1): e0261039.

Passell E., Rutter L.A., **Turban J.L.**, Scheuer L., Wright N., Germine L. (2021) Generalized Anxiety Disorder Symptoms are Higher Among Same- and Both-Sex Attracted Individuals in a Large, International Sample. *Sexuality Research and Social Policy*. [ePub ahead of print]

Lewis, J. M., Monico, P. F., Mirza, F. N., Xu, S., Yumeen, S., **Turban, J. L.**, Galan A., & Girardi, M. (2021). Chronic UV radiation–induced RORγt+ IL-22–producing lymphoid cells are associated with mutant KC clonal expansion. *Proceedings of the National Academy of Sciences*, 118(37).

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*. 69(6), 991-998.

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.

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

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.

Jack Lewis Turban III MD MHS 401 Parnassus Ave San Francisco, CA 94143 412.965.9388

jack.turban@ucsf.edu

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.

SELECTED PEER REVIEWED PUBLICATIONS: COMMENTARY, REVIEWS, & PERSPECTIVES

Lerario, M. P., Rosendale, N., Waugh, J. L., Turban, J., & Maschi, T. (2023). Functional Neurological Disorder Among Sexual and Gender Minority People. *Neurologic Clinics*. [In Press]

Chen A, Cohen I.G., Kraschel K., **Turban J.L.** Legal & Ethical Perspectives on Criminalization of Standard of Care Medical Practices. *Cell Reports Medicine*.

Turban J.L., Brady C., & Olson-Kennedy J. Understanding & Supporting Patients with Dynamic Desires for Genderaffirming Medical Interventions. *JAMA Network Open*.

Dolotina B. & Turban J.L. "Phantom Networks" Prevent Children & Adolescents from Obtaining the Mental Health Care They Need. *Health Affairs*. 41(7).

Turban J.L., Kamceva M, Keuroghlian A.S. Pharmacologic Considerations for Transgender and Gender Diverse People. *JAMA Psychiatry*. 79(6): 629-630.

Dolotina B. & **Turban J.L.** (2022) A multipronged, evidence-based approach to improving mental health among transgender and gender diverse youth. *JAMA Network Open*. 5(2): e220926.

Turban J.L., Almazan A.N., Reisner S.L., Keuroghlian A.S. (2022) The importance of non-probability samples in minority health research: lessons learned from studies of transgender and gender diverse mental health. *Transgender 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*. 325(22), 2251-2252.

Liu M., **Turban J.L.**, Mayer K.H. (2021) The US Supreme Court and Sexual and Gender Minority Health. *American Journal of Public Health*. 111(7), 1220-1222.

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.

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.

Suozzi, 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. (2019). Medical Training in the Closet. The New England Journal of Medicine, 381(14), 1305.

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

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

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.

INVITED GRAND ROUNDS PRESENTATIONS

Turban JL. Transgender Youth Mental Health. Maudsley Hospital / Kings College London Grand Rounds, 2023.

Turban JL. Resaerch Updates: Supporting the Mental Health of Transgneder and Gender Diverse Youth. Department of Behavioral Health, Wake Forest School of Medicine / Atrium Health, 2023.

Turban JL. Supporting the Mental Health of Transgender and Gender Diverse Youth. Child & Adolescent Psychiatry Grand Rounds, Long Island Jewish Medical Center / Zucker Hillside, 2023.

Turban JL. Suicidality in Sexual and Gender Minority Youth. Psychiatry Grand Rounds, Boston Children's Hospital, 2023.

Turban JL. Opinion Writing to Promote Public Health & Evidence-Based Public Policy. Medical Education Grand Rounds, The University of Vermont Larner College of Medicine, 2022.

Turban JL. Research Updates: Supporting the Mental Health of Transgender & Gener Diverse Youth. Division of Child & Adolescent Psychiatry Grand Rounds, Stanford University School of Medicine, 2022.

Turban JL. Supporting Transgender & Gender Diverse Youth: Research Updates & Treatment Paradigms. Department of Psychiatry Grand Rounds, University of Nebraska Medical Center, 2022.

Turban JL. Supporting the Mental Health of Transgener & Gender Diverse Youth. Department of Pediatrics, Division of Behavioral Health Grand Rounds, University of Utah, 2022.

Turban JL. Gender Diverse Youth: Treatment Paradigms & Research Updates. Psychiatry Grand Rounds, Thomas Jefferson University, 2021.

Turban JL. Supporting Gender Diverse Youth Throughout Development. Child Psychiatry Grand Rounds, Georgetown, 2021.

Turban JL. Understanding Pediatric Gender Identity through Childhood and Adolescence. Grand Rounds, Institute of Living, 2021.

Turban JL. Evolving treatment paradigms for transgender youth. Pediatric Grand Rounds, Albany Medical Center, 2021.

Turban JL. Evolving Treatment Paradigms for Transgender Youth. Psychiatry Grand Rounds, McLean Hospital (Harvard Medical School), 2021.

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

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

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

ADDITIONAL INVITED PRESENTATIONS

Turban JL. Suicide Prevention for LGBTQ+ Youth. National Institues of Health, Bethesda, 2023.

Turban JL. NAMI LGBTQ+ Mental Health Roundtable Discussion. *National Alliance on Mental Illness*, San Francisco, 2023.

Turban JL. Supporting the Mental Health of Transgender & Gender Diverse Youth. *United Nations NGO Committee on Mental Health*, United Nations, 2023.

Turban JL & Spetz J. How to Give Expert Testimony. UCSF Philip R. Lee Institute for Health Policy Studies Impacting Policy Series, San Francisco, 2023.

Turban JL. The Research on Gender-affirming Care for Transgender Youth. AusPATH Research Seminar. Sydney, 2023.

Turban JL. Building a Career in Sexual & Gender Minority Health Research. *National Institutes of Health*, Bethesda, 2022.

Turban JL. Research Updates: Gender-affirming Care for Transgender Youth. MUSC LGBTQ+ Health Equity Summit, Medical University of South Carolina, 2022.

Turban JL. Keynote: Supporting The Mental Health of Transgender & Gender Diverse Youth. Edythe Kurz Educational Institute Conference, Westchester, 2022.

Turban JL, Peters B, Olson-Kennedy J. Gender-Affirming Care: Through a Medical, Surgical, and Mental Health Lens. Critical Issues in Child & Adolescent Mental Health Conference, San Diego, 2022.

Turban JL. Improving Mental Health Outcomes for Transgender and Gender Diverse (TGD) Youth Through Genderaffirming Care. National LGBTQIA+ Health Education Center, The Fenway Institute, 2022.

Turban JL. Combatting anti-trans legislation through science, data, and writing. State of Queer Mental Health Conference by The Mental Health Association of San Francisco, Online, 2021.

Turban JL. Updates on LGBTQ Mental Health. Annual Psychiatric Times World CME Conference, Online, 2021.

Turban JL. Imbasciani LGBTQ Health Equity Lecture: Evolving Treatment Paradigms for Transgender and Gender Diverse Youth. University of Vermont Larner College of Medicine, Burlington, 2021.

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

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

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.

Jack Lewis Turban III MD MHS

401 Parnassus Ave San Francisco, CA 94143 412.965.9388 jack.turban@ucsf.edu

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.

CONFERENCE PRESENTATIONS & ABSTRACTS

Turban JL, Calhoun A, Gold, J. Mission-Based Media Collaborative Work Concerning "Controversial" Topics in Psychiatry. Annual Meeting of The American Psychiatric Association, Oral Presentation, San Francisco, 2023.

Turban JL, Ahuja A. Autogynephilia: Historical Context, Clarifications, and Controversy. Annual Meeting of The American Psychiatric Association, Oral Presentation, San Francisco, 2023. [Cancelled]

Turban JL. A Systematic Approach for Understanding Gender Identity Evolution. Annual Meeting of The American Academy of Child & Adolesent Psychiatry, Oral Presentation, Toronto, 2022.

Turban JL. Transgender Youth: Evolving Gender Identities and "Detransition." Annual Meeting of The American Academy of Child & Adolesent Psychiatry, Session Chair of Oral Symposium, Toronto, 2022.

Turban JL. From The New York Times to Hollywood: Communicating With the Public Through Opinion Writing, Publishing, Social Media, and Consulting for Film and TV, Annual Meeting of The American Academy of Child & Adolesent Psychiatry, Session Chair of Oral Symposium, Toronto, 2022.

Turban JL. Writing for the Lay Press to Combat Misinformation Regarding Pediatric Mental Health, Annual Meeting of The American Academy of Child & Adolesent Psychiatry, Oral Presentation, Toronto, 2022.

Turban JL. COVID-19 and Psychosexual Dynamics, Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Oral Presentation, Toronto, 2022.

Dolotina B, **Turban JL**, King D, Keuroghlian AS. Age of Realization of Gender Identity and Mental Health Outcomes among Transgender Adults: Evaluating the "Rapid Onset Gender Dysphoria" Hypothesis, Annual Meeting of The American Academy of Child & Adolescent Psychiatry, Poster, Toronto, 2022.

Turban JL. Sex ratio among transgender adolescents in the United States. World Professional Association for Transgender Health Scientific Symposium, Oral Presentation, Montreal, 2022.

Turban JL. Access To Gender-Affirming Hormones During Adolescence And Mental Health Outcomes Among Transgender Adults. World Professional Association for Transgender Health Scientific Symposium, Oral Presentation, Montreal, 2022.

Turban JL, Gold J, Hartselle S, Yen J. From The New York Times to the Big Screen: Communicating With the Public Through Opinion Writing, Publishing, Social Media, and Consulting for Film and TV. Annual Meeting of The American Academy of Child & Adolesent Psychiatry, Session Chair of Oral Symposium, Online, 2021.

Turban JL. Creating Change through Opinion Writing in Child & Adolescent Psychiatry. Annual Meeting of The American Academy of Child & Adolesent Psychiatry, Oral Presentation, Online, 2021.

Turban JL, Giedinghagen A, Janssen A, Myint M, Daniolos P. Transgender Youth: Understanding "De-transition," Nonlinear Gender Trajectories, and Dynamic Gender Identities. Annual Meeting of The American Academy of Child & Adolesent Psychiatry, Session Chair of Oral Symposium, Online, 2021.

Turban JL. A framework for understanding dynamic gender identities through internal and external factors. Annual Meeting of The American Academy of Child & Adolescent Psychiatry, Oral Presentation, Online, 2021.

Turban JL, Geosocial networking application use among birth-assigned male adolescents. Annual Meeting of The American Academy of Child & Adolescent Psychiatry, Oral Presentation, Online, 2021.

Turban JL. LGBTQ Families and the US Supreme Court. Annual Meeting of The American Academy of Child & Adolescent Psychiatry, Oral Presentations, Online, 2021.

Turban JL, King D, Kobe J, Reisner SL, Keuroghlian AS. Access to Gender-affirming Hormones during Adolescence and Mental Health Outcomes among Transgender Adults. Annual Meeting of The American Academy of Child & Adolescent Psychiatry, Poster, Online, 2021.

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

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

Jack Lewis Turban III MD MHS 401 Parnassus Ave San Francisco, CA 94142

San Francisco, CA 94143 412.965.9388 jack.turban@ucsf.edu

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 ketatinocyte clonal expansion dependence on IL-22 and RORγT. 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 Tumor following Gamma Knife Stereotactic Radiosurgery for Brain Metastases. Oral Presentation, 14th 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.

Sewanan L, Zheng D, Wang P, Guo X, Di Bartolo I, Marukian N, **Turban JL**, Rojas-Velazques 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.

TEACHING PRESENTATIONS

Advanced Topics in Pediatric Gender Care. Stanford Child & Adolescent Psychiatry Fellowship Didactics, 2023. Opinion Writing About The "Politically Sensitive" and Personal. Harvard Medical School Master of Science in Media, Medicine, and Health Degree Program, 2022.

Gender-affirming Care for Transgender & Gender Diverse Youth, Zuckerberg San Francisco General Hospital Adolescent Psychology Internship Didactics, 2022.

Case 1:23-cv-00269-BLW Document 70-4 Filed 10/13/23 Page 47 of 49

Jack Lewis Turban III MD MHS

401 Parnassus Ave San Francisco, CA 94143 412.965.9388 jack.turban@ucsf.edu

Supporting Transgender & Gender Diverse Youth. UCSF Trauma Recovery Center Didactics, 2022. Developmental Psychopathology, Psychotherapy & Psychopharmacology Course: Pediatric Gender. Stanford University School of Medicine Child & Adolescent Psychiatry Fellowship Didactics, 2021. Supporting Gender Diverse Youth Through Various Stages of Development. University of California San Francisco Child & Adolescent Psychiatry Fellowship Didactics, 2021. Treatment of Transgender and Gender Diverse Youth. Stanford University School of Medicine Psychiatry Residency Didactic, 2021. Caring for Transgender and Gender Diverse Youth. University of California San Diego General Psychiatry Residency Resident Rounds, 2021. Opinion Writing 101. Stanford Pediatrics Residency Program, 2021. Psychotherapeitic 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 **RESEARCH SUPPORT**

Current Funding:

Sorensen Foundation Fellowship, \$287,000 (2021-2023) The Impact of Gender-affirming Medical and Surgical Interventions on Psychopathology and Implicit Gender Incongruence among Transgender Adolescents Role: Principal Investigator

UCSF Population Health Equity Scholars Grant, \$20,000 (2023-2024) Systematic content analysis of federal appellate court rulings regarding the constitutionality of bans on gender identity and sexual orientation conversion efforts Role: Principal Investigator

Completed Funding: Stanford Department of Psychiatry and Behavioral Sciences Trainee Innovator Grant, \$5,000 (2020-2021) Jack Lewis Turban III MD MHS

401 Parnassus Ave San Francisco, CA 94143 412.965.9388 jack.turban@ucsf.edu

Examining the impact of gender identity conversion therapy bans on suicidality among transgender and gender diverse people in the U.S.: a difference-in-differences analysis Role: Principal Investigator

American Academy of Child & Adolescent Psychiatry Pilot Research Award, \$15,000 (2019-2020) Childhood and Adolescent Experiences with Gender-related Medical Care and Adult Mental Health Outcomes: Analysis of the 2015 U.S. Transgender Survey Role: Principal Investigator

AWARDS & HONORS

Top Peer Review Service, Annals of Internal Medicine (2022) 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 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 Psychatry (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 Psychatry (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 & COMMITTEES

American Psychiatric Association, Member American Academy of Child & Adolescent Psychiatry, Member American Psychiatry Association, Council on Communications American Academy of Child & Adolescent Psychiatry, Media Committee American Academy of Child & Adolescent Psychiatry, Chair of Subcomittee on Interfacing with the Media World Professional Association for Transgender Health, Member US Professional Association for Transgender Health, Member US Professional Association for Transgender Health, Research Committee Athlete Ally, Affiliate Scholar Psychiatric Times, Editorial Board Jack Lewis Turban III MD MHS

401 Parnassus Ave San Francisco, CA 94143 412.965.9388 jack.turban@ucsf.edu

ACADEMIC JOURNAL SERVICE & AD HOC PEER REVIEW

PLoS One, Academic Editor JAACAP, Contributing Editor JAMA, Peer Reviewer JAMA Pediatrics, Peer Reviewer JAMA Psychiatry, Peer Reviewer JAMA Network Open, Peer Reviewer Annals of Internal Medicine, Peer Reviewer Pediatrics, Peer Reviewer Journal of the American Academy of Child & Adolescent Psychiatry, Peer Reviewer JAACAP Open, 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 Perspectives on Psychological Science, Peer Reviewer Transgender Health, Peer Reviewer Journal of Clinical Medicine, Peer Reviewer Brain Sciences, Peer Reviewer Social Science & Medicine, Peer Reviewer Sexual Health, Peer Reviewer Women, Peer Reviewer