UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WISCONSIN

CODY FLACK and SARA ANN MAKENZIE, Plaintiffs, v. WISCONSIN DEPARTMENT OF HEALTH SERVICES and LINDA SEEMEYER, in her official capacity as Secretary of the Wisconsin Department of Health Services, Defendants.	Case No. 3:18-cv-00309-wmc Judge William Conley

EXPERT WITNESS DECLARATION OF DANIEL SHUMER, MD, MPH

I, Daniel Shumer, MD, MPH, declare as follows:

1. My name is Daniel Shumer, MD, MPH. I am a pediatric endocrinologist and Assistant Professor at the University of Michigan, where the major focus of my clinical and research work pertains to the transgender population.

2. I have been retained by counsel for Plaintiffs in the above-captioned matter to provide an expert witness declaration addressing the medical and scientific understanding of gender identity, gender dysphoria, and sex.

3. I have personal knowledge of the matters stated in this declaration.

Background and Qualifications

4. My Curriculum Vitae, attached to this declaration as Exhibit B, contains a full outline of my qualifications. I received my BA in Psychology from Northwestern University in 2003, my MD from Northwestern University in 2008, and my Masters of Public Health from Harvard University in 2015. I completed my residency in Pediatrics at the University of Vermont

in 2011, and my fellowship in Pediatric Endocrinology at Harvard University in 2015. During my fellowship at Harvard, I worked at the Gender Management Services Clinic (GeMS) at Boston Children's Hospital, the first pediatric gender management clinic established in the United States, where I became a clinical expert in the field of transgender medicine within my specialty of pediatric endocrinology, and also began conducting scientific research and publishing on transgender health care and gender identity.

5. I am currently an Assistant Professor in Pediatrics at the University of Michigan. I am the founder and Clinical Director of the Child and Adolescent Gender Services clinic at Mott Children's Hospital at the University of Michigan. As the director of this clinic, I have personally evaluated and treated over 100 patients for gender dysphoria. Treatment in the clinic is provided in accordance with The Endocrine Society clinical practice guidelines and the World Professional Association for Transgender Health (WPATH) Standards of Care.[1,2]

6. I am also the Medical Director of the Comprehensive Gender Services Program for the University of Michigan Health System, in which role I serve as the medical lead for transgender health for transgender adults in the University's Health System.

7. I am the Director of the Transgender Medicine elective for the University of Michigan Medical School.

8. I am active in scholarly research involving transgender medicine and have published peer-reviewed articles and other publications on the clinical needs of transgender individuals. A full list of my publications is listed on my CV, a true and correct copy of which is attached to this declaration as Exhibit B.

9. In the previous four years, I was retained as an expert witness by the plaintiff in *Whitaker v. Kenosha Unified School District*, Case No. 16-cv-943 (E.D. Wis.), a discrimination

case brought on behalf of a transgender student, and testified at a deposition in that case in September 2017. I have not testified as an expert witness at deposition or trial in any other cases.

10. The compensation to be paid for this declaration and testimony in the case is $200 per hour plus expenses. My compensation does not depend on the outcome of this litigation, the opinions I express, or the testimony I provide.

Basis for Opinions

11. My opinions contained in this declaration are based on the following sources: (1) my personal clinical experience treating transgender individuals and my own research on the clinical needs of transgender patients; (2) a review of peer-reviewed research, reflecting the enormous growth in the volume of research related to gender identity over the past 10 years and the etiology of gender dysphoria, as cited in the list of references attached as Exhibit A to this declaration; (3) the governing standards of care within the field of transgender medicine from the American Psychiatric Association (APA), The Endocrine Society, and WPATH, which govern the treatment of gender dysphoria;[1-3] and (4) a review of the Wisconsin Medicaid regulation excluding coverage for gender-affirming surgeries.

Definitions

12. I use the following terms in this declaration, as defined below.[4-6]

a. *Assigned sex* or *sex assigned at birth* refers to the determination of an infant's sex at birth, as male or female, most often based on the delivering practitioner's inspection of the genitalia.

b. *Gender identity* describes one's internal understanding of one's own sex, for example, boy or girl, man or woman; agender (identifying as having no gender); or a non-binary understanding of one's gender.

c. A *transgender* person feels a discrepancy between their sex assigned at birth and their gender identity.[5]

d. The term *cisgender* has subsequently been introduced to describe individuals whose gender identity is congruent with or the same as their sex assigned at birth.

e. *Differences of sex development (DSD)* is a term synonymous with *disorders of sex development* and with *intersex*, which describes any condition where the genitalia are atypical in relation to the chromosomes or gonads.

f. *Gender transition* refers to the process of living as the sex in which a person identifies when that sex is different from the sex assigned at birth. Transition can include social transition, such as dressing and grooming differently, changing one's name and pronouns, and living in social contexts as the sex with which one identifies. It can also involve medical transition, such as taking hormones to promote physical changes congruent with one's gender identity, and surgical transition if desired. The process of gender transition is individualized, such that not every transgender person may require the same treatments. For example, a transgender person may not desire a surgical intervention, but is no less transgender than a person who does. In adolescence and adulthood, gender transition is often recommended for patients with insistent, consistent, and persistent transgender identity, as it has been demonstrated to mitigate *gender dysphoria* (see below).

g. *Gender dysphoria in adolescence and adulthood* (gender dysphoria) is defined in the APA's Diagnostic and Statistical Manual of Mental Health Disorders,

> Fifth Edition (DSM-5) (DSM-5 replaced *gender identity disorder*, a diagnosis listed in previous editions, with *gender dysphoria*).[3] An individual meets the diagnostic criteria for gender dysphoria if the individual experiences a marked difference between the individual's experienced and assigned gender that persists for at least six months and causes significant distress or impaired functioning.

Discussion

Scientific and Medical Understanding of Gender Identity and Sex

13. The scientific evidence supports the idea that there are biologically-rooted, immutable, and unchangeable determinants of gender identity. This data also supports the notion that people who affirm a sex different from the sex they were assigned at birth are not making a choice based on their "preference" to be the "other" sex or to be transgender. Rather, they are disclosing to society that the sex they were assigned at birth is, in fact, incorrect.

14. Many people assume that the word "sex" describes a simple binary—male and female—and that classification of humans into this simple binary is quite straightforward. In fact, one's sexual identity is a complex characterization, which is based on multiple factors. The factors involved in determining one's sex include a person's chromosomes, the genes on these chromosomes, the hormonal milieu, the anatomy, and gender identity. Thus, a person has a chromosomal/genetic sex, a hormonal sex, an anatomic sex, and a gender identity. Many times, all of these factors are congruent making sex determination straightforward. However, in other cases, the factors determining one's sex are not congruent, making sex determination more complicated. In short, development of sex and gender identity is complex, and likely a multifactorial process involving genetic, hormonal, and environmental factors.[7]

15. There has been an evolving understanding of gender identity over the past several decades within both the scientific community and American culture. The idea that gender diversity is rooted in biological diversity, and should be recognized and respected, has gained cultural and scientific traction and has resulted in greater acceptance of transgender people in many communities. In my professional medical opinion, gender identity is properly understood to be a naturally occurring source of human biological diversity.

16. One obvious example of this evolution is the change in terminology within the APA's DSM-5, where "gender identity disorder" was reclassified as "gender dysphoria" in the most recent edition of the manual. This change was prompted by the understanding that having a gender identity which is incongruent with one's sex assigned at birth is not itself pathological, but rather the distress caused by this incongruence is what requires evaluation and treatment. Unlike many of the disorders listed in the DSM-5, gender dysphoria is not treated with psychotropic medications, but rather with social support and gender transition. The APA's decision to remove the stigmatizing word "disorder" from the DSM-5 reflects an evolving depathologization for those whose gender identity differs from their sex assigned at birth.[3]

17. In addition, The Endocrine Society's guidelines and the most current WPATH guidelines, published in 2009 and 2012, respectively, provide consensus statements to medical providers on the proper care for transgender patients.[1,2] Long-term outcomes data demonstrates that treatment of gender dysphoria with medical interventions—including hormonal therapies and surgical procedures—can result in improved psychosocial outcomes. This same outcomes data shows that transgender individuals who have received appropriate medical treatments for gender dysphoria have been shown to have equivalent mental health to the general population, in

stark contrast to the enormous difficulties faced by transgender individuals who have not obtained appropriate treatments.[8]

18. An individual's gender identity is likely the product of both biological factors (including brain structures and hormonal makeup) and environmental factors.

19. Emerging research suggests that there are neurobiological bases for being transgender. There have been numerous studies reporting brain differences in transgender individuals compared to controls.[a] Several brain structures seem to be sexually dimorphic, meaning differences are seen between the sexes.[9] This has led researchers to study whether transgender individuals have brain structures that more closely align with their gender identity. In one study, the volume of the bed nucleus of the stria terminalis (a collection of cells in the central brain) in male-to-female (MTF) transgender persons was equivalent to the volume found in cisgender women.[10] Studies of heritability of transgender identity have suggested that genetic factors may contribute to gender development. For example, in a recent review of twin studies, of 23 monozygotic male and female twin pairs where at least 1 twin met the criteria for gender identity disorder, 9 twin pairs (39.1%) were concordant for gender identity disorder—that is, the study suggests that where one twin is transgender, the other is significantly more likely to be transgender than the general population.[11] To summarize, there are "gender-dimorphic" brain structures that have different characteristics in people with male gender identities and female gender identities regardless of their chromosomal or hormonal sex.

20. Research on persons with differences of sex development suggests that the hormonal milieu of the developing fetal brain also likely affects gender identity development.

[a] A review of these studies is summarized by Rosenthal in *Approach to the Patient: Transgender Youth: Endocrine Considerations*.[9]

Sex hormones, primarily androgens and estrogens, affect sex-specific changes in the developing fetus. During fetal life and infancy, there are significant sex-specific differences in the normal concentrations of these hormones. Peer-reviewed research suggests that these differences may contribute to group differences in behaviors observed between males and females later in life.[12-15] In sum, the research suggests that prenatal hormonal milieu, especially fetal androgen exposure, may play a role in gender identity development.

21. In short, based on contemporary research, it is my professional opinion that transgender people's gender identity likely has a biological component that may be influenced by environmental factors.

22. A person's chromosomal sex, anatomic sex, genetic sex, and sex assigned at birth are not all synonymous with each other, and are not individually or collectively synonymous with "sex." In my professional opinion, a transgender person (i.e., someone whose gender identity is incongruent with the person's chromosomal sex or assigned sex), should be categorized according to the person's gender identity. Thus, a person with a female chromosomal sex or who was assigned female at birth based on external genitalia, but who has a male gender identity, should be categorized as male. Likewise, a person with a male chromosomal sex or who was assigned male at birth based on external genitalia, but who has a female gender identity, should be categorized as female.

23. I find it helpful to use examples from patients with Differences of Sex Development (DSD) in explaining why a transgender individual should be considered the sex that matches the individual's gender identity.

24. The first example of a DSD is a child born with complete androgen insensitivity syndrome (CAIS) and a 46,XY chromosomal karyotype. CAIS is a genetic mutation making the

androgen receptor non-functional. A typical fetus with 46,XY chromosomes develops testicles, which make testosterone; the testosterone then causes changes to the fetal tissues resulting in the development of a penis and scrotum. In CAIS, the tissues are unresponsive to testosterone. Therefore, the fetus with 46,XY chromosomes and CAIS has testicles which make testosterone, but the testosterone has no effect. The infant is born with a normal appearing vagina, but has no uterus and has testicles in the abdomen. CAIS most often goes undiscovered until puberty, when the young woman with the disorder does not have her first period. It is then discovered that she has no uterus, has abdominal testicles, and has a 46,XY karyotype. Despite having a 46,XY karyotype, most of these patients identify as females because their gender identities are female. When the diagnosis is made, girls with CAIS are often upset about the fact that they are infertile. Despite the presence of male reproductive organs, these girls continue to live as female in accordance with their affirmed female gender identities.[31,32] This particular example describes a situation where the chromosomal sex and hormonal sex is male, and the anatomic and gender identity is female.

25. A second example is a child who, as a result of a DSD, was born with ambiguous genitalia, such that making a sex determination is difficult. The endocrinologist may inform the infant's parents that children with this particular disorder have a gender identity of male 60% of the time and a gender identity of female 40% of the time.[b] In this hypothetical, the parents use this information in their decision to begin to raise the child as a boy. However, when the child is older and able to express her gender identity, the child may state, "I'm not a boy, I'm a girl." The parents may not be surprised by this statement in light of the child's medical history. As the female gender identity becomes insistent, persistent, and consistent over time, the parents

[b] These are hypothetical figures for purposes of this example.

recognize that the child was in the 40% (the group with a female gender identity), rather than the 60% (the group with a male gender identity), with this particular DSD. The parents then acknowledge that the medical team incorrectly predicted their child's gender identity at birth, and therefore incorrectly assigned sex, and the child makes a gender transition to female.

26. In both examples, medical teams considered the expected future gender identity when making recommendations about sex of rearing to parents of children with DSD in an effort to prevent gender dysphoria—the feeling of distress caused by discordance between assigned sex and gender identity. If an infant with ambiguous genitalia were assigned female, but later identified as male, the child would have to make a gender transition. Making such a transition is extremely challenging—youth making a gender transition are at much higher rates of depression, anxiety, and suicidality, likely due to the social impacts making such a transition.[35,36]

27. Using these examples as a jumping off point, it is possible to analogize to a transgender individual's gender identity development.[16] A child born with *unambiguous* genitalia will initially be assigned a sex based on the infant's genitals. When the child gets older, the child can either confirm that the sex assigned at birth is correct or affirm a different sex. Such a person, in the current societal context, would be considered "transgender" because the person does not have a DSD related to the person's genital anatomy. As described above, the scientific evidence supports the idea that there are biologically-rooted, immutable, and unchangeable determinants of gender identity. This data also supports the notion that people who affirm a sex different from the sex they were assigned at birth are not making a choice based on their preference to be transgender; they are disclosing to society that the sex they were assigned at birth is, in fact, incorrect. In this way, a transgender person is similar to a person born with DSD who was assigned a sex different from the person's later-affirmed gender identity.

28. Another question frequently raised is how one can know whether a transgender person's gender identity is legitimate. Some question, for example, whether a transgender person is simply going through a phase. In a situation where an individual experiences progressive gender dysphoria during or after puberty—and, in turn, consistently and persistently lives in accordance with the person's gender identity—the permanence of the individual's cross-gender identity is extremely likely.[1,2,8,17-19] In order to gain insight into a specific individual's gender identity, I recommend that the individual be assessed by a competent mental health professional trained in gender identity evaluation.[1,2]

Governing Standards of Care for Treating Gender Dysphoria

29. Medical treatment of transgender individuals is governed by the WPATH Standards of Care, The Endocrine Society's guidelines, and the APA's DSM-5.[1-3] These standards have been broadly endorsed by the medical community, including the American Academy of Pediatrics,[20] the American Congress of Obstetricians and Gynecologists,[21] the Pediatric Endocrine Society,[1] and the American Medical Association.[22]

30. WPATH is a non-profit, interdisciplinary professional and educational organization devoted to transgender health. The most recent Standards of Care developed by WPATH were published in 2012, and represent expert consensus for clinicians related to medical care for transgender people. The consensus guidelines describe a variety of therapeutic options which may be helpful for transgender individuals, including social transition, hormone therapy, surgeries, and psychotherapy. The WPATH Standards of Care are considered authoritative because they are written by the preeminent researchers and clinicians within the field of gender identity.[2]

31. The Endocrine Society is a 100-year-old global membership organization representing professionals in the field of adult and pediatric endocrinology. In 2017, The Endocrine Society published updated clinical practice guidelines.[1] The guidelines were co-sponsored by the American Association of Clinical Endocrinologists, the American Society of Andrology, the European Society for Pediatric Endocrinology, the European Society of Endocrinology, the Pediatric Endocrine Society, and the World Professional Association for Transgender Health. The guidelines are considered authoritative due to the respect given to these professional associations, the expertise of the authors, and the clarity with which the authors described what data was used in formulating recommendations. The guidelines state that eligible transgender persons with gender dysphoria require safe and effective hormone regimens, following a social transition, which may be followed by appropriate surgical interventions based on individual need.

32. The DSM, published by the APA, provides definitions and diagnostic criteria for psychiatric conditions. The DSM is the preeminent resource for diagnostic criteria for mental health clinicians in the US. The fifth edition, DSM-5, was published in 2013.[3] In DSM-5, gender identity disorder was reclassified as gender dysphoria. Clinicians use the DSM definition of gender dysphoria when making a diagnosis. This is important in determining which patients may benefit from an intervention, such as a social transition or a medical intervention. The diagnosis is made when a patient has incongruence between the expressed or experienced gender and the sex assigned at birth, lasting for at least six months, and causing distress or impairment across different social settings or contexts.

33. The American College of Obstetricians and Gynecologists and the American Medical Association have released consensus opinions outlining the importance of providing

high-quality and non-discriminatory care to transgender persons and endorsing the clinical standards outlined above.[21,22]

Role of Medical Treatment in a Gender Transition

34. Primary goals of transition-related medical interventions to treat gender dysphoria include (1) prevention or elimination of the development of unwanted secondary sex characteristics of the assigned sex, and (2) promotion or reconstruction of the development of desired secondary sex characteristics of the sex associated with the gender identity. Broader objectives include reduction in dysphoric feelings; reduction in comorbid depression, anxiety, and suicidality; and enhanced ability to "pass" as the sex associated with an individual's gender identity with subsequent improvement in quality of life and general functioning.

35. The use of the gender affirming hormonal interventions, including testosterone and estrogen, to promote the development of desired secondary sex characteristics in transgender persons can be considered in carefully screened and counseled adolescents with gender dysphoria. Specifically, the use of 17b-estradiol in male-to-female individuals, and testosterone in female-to-male individuals, are used to induce the development of the secondary sex characteristics of the sex associated with their gender identity. Broad goals of treatment are to improve psychological functioning and general well-being, and enhance the patient's ability to present as the person's affirmed gender in social life.

36. For a transgender boy or man, the discrepancies between the physical manifestations of his biology (his feminine appearance) and his male gender identity are causing dysphoria, or extreme distress, which is resulting in impairment in general functioning (e.g., depression, anxiety). Testosterone, used as a medication, can promote the development of male

secondary sex characteristics in this patient (e.g., deeper voice, facial and body hair, masculine appearance).

37. Likewise, for a transgender girl or woman, the discrepancies between the physical manifestations of her biology (her masculine appearance) and her female gender identity are causing dysphoria, or extreme distress, which is resulting in impairment in general functioning (e.g., depression, anxiety). Estrogen, used as a medication, can promote the development of breasts, a more feminine body habitus, and reduction in testosterone production and effect.

38. Testosterone or estrogen treatments lead to physical changes that can reduce dysphoria, and provide the opportunity for transgender individuals to live life with their body in congruence with their gender identity. This has been shown to reduce dysphoria and improve functioning, in addition to mental health care and family and social supports.[10]

39. Mental health and medical providers caring for transgender patients become familiar with common surgical interventions used in the transgender patient population, and are knowledgeable about what surgical resources are available. Surgical interventions used in transgender persons for the purposes of transition are often referred to as gender affirmation or gender confirmation surgeries. These surgeries typically follow a social transition and hormonal interventions.[1,2] Surgical procedures available to transgender adults may include genital surgeries, chest surgeries, and a variety of other gender affirming procedures. The most common surgical procedures performed in male-to-female individuals include breast augmentation surgery; genital surgery including penectomy, orchiectomy, and vaginoplasty; facial feminization surgeries; voice surgery; thyroid cartilage reduction; and hair reconstruction. Electrolysis or laser hair removal is also commonly performed. In female-to-male individuals, surgical procedures include mastectomy and genital surgeries including

hysterectomy/salpingoophorectomy, metoidioplasty with phalloplasty, vaginectomy, scrotoplasty, and implantation of erectile and testicular prostheses.[2]

40. Surgery is also not desired by or clinically appropriate for every transgender person. A person's history of having or not having a surgery is not part of any criteria for gender dysphoria. That said, when gender affirmation surgery is required to treat gender dysphoria, it should be considered a medically necessary intervention with the potential to provide tremendous benefit in reduction of the gender dysphoria.[1,2]

Opinions and Conclusions

41. In my professional opinion, variation in gender identity is a naturally occurring source of human diversity. When gender identity is discordant from anatomic sex, gender dysphoria can occur. Given the literature regarding the biological underpinnings of gender identity, adults with a diagnosis of gender dysphoria have not chosen to be transgender, but rather have an immutable difference in gender. Treatment with social, hormonal, and surgical interventions is known to be helpful for these persons and should be considered medically necessary.

42. In my professional opinion, based on my clinical experience as an endocrinologist, my research on transgender health care, and my review of the literature, failure to provide a transgender person with clinically appropriate medical treatments consistent with the prevailing standards of care, as outlined above, is medically harmful. In my professional opinion, with our current knowledge of gender identity and gender dysphoria, failure to provide these medically necessary interventions is not medically ethical.

43. In my professional opinion, a categorical exclusion on Medicaid/insurance coverage for transition-related surgeries and hormone treatments is at complete odds with the

prevailing standards of care. Such a policy puts the lives of individuals living with gender dysphoria at risk. The premise that such treatments are always medically unnecessary, as stated in Wisconsin's Medicaid policy, ignores the medical literature and the evidence-based guidelines outlined in this declaration.

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

Executed this 16th day of May, 2018.

Daniel E. Shumer, MD, MPH

EXHIBIT A

References

REFERENCES

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EXHIBIT B

C.V. of Daniel Shumer, MD, MPH

Daniel Evan Shumer, MD, MPH
Assistant Professor in Pediatrics
Michigan Medicine – Division of Pediatric Endocrinology
1500 E. Medical Center Drive, Ann Arbor, MI 48109-5718
735-646-8758
dshumer@med.umich.edu

Prepared: 05/15/2018

Education and Training

08/2000 – 08/2003	Undergraduate Education: Northwestern University, Weinberg College of Arts and Sciences Evanston, IL
08/2003 – 01/2004	National Outdoor Leadership School Semester in New Zealand
08/2004 – 05/2008	Medical School: Northwestern University, Feinberg School of Medicine Chicago, IL Doctor of Medicine
06/2008 – 06/2009	Pediatric Internship: Vermont Children's Hospital at Fletcher Allen Health Care University of Vermont Burlington, VT
07/2009 – 06/2011	Pediatric Residency: Vermont Children's Hospital at Fletcher Allen Health Care University of Vermont Burlington, VT
07/2011 – 06/2012	Pediatric Chief Resident Vermont Children's Hospital at Fletcher Allen Health Care University of Vermont Burlington, VT
07/2013 – 05/2015	Graduate Education: Harvard T. H. Chan School of Public Health Boston, MA Masters of Public Health
07/2012 – 06/2015	Clinical Fellow – Pediatric Endocrinology Boston Children's Hospital Harvard University Boston, MA

Daniel Evan Shumer, MD, MPH
Assistant Professor in Pediatrics
Michigan Medicine – Division of Pediatric Endocrinology
1500 E. Medical Center Drive, Ann Arbor, MI 48109-5718
735-646-8758
dshumer@med.umich.edu

07/2013 – 06/2015 Research Fellow – Pediatric Health Services Research Fellowship
Harvard University
Boston, MA

Certification and Licensure

American Board of Pediatrics – Certification Exam, passed 10/10/2011

Vermont Limited/Training Medical License, #060-0003620, 5/21/2008 to 6/30/2011
Montana Temporary Medical License, #12616, 5/1/2011 to 8/1/2011
(License required for one month rural elective in Butte, Montana)
Vermont Full Medical License, #042-0012179, 06/30/11 to 11/30/2012
Massachusetts Limited/Training Medical License, #250835, 4/4/2012 to 10/03/2013
Massachusetts Full Medical License, #253558, 10/03/2012 to 10/03/1015
Michigan Full Medical License, #4301108597, 8/7/2015 to present

Clinical Appointments

08/2013 – 09/2015 Pediatrician – Acute Care Moonlighter
Harvard Vanguard Medical Associates
Braintree, MA

10/2015 – present Assistant Professor
Division of Pediatric Endocrinology
Department of Pediatrics and Communicable Diseases
University of Michigan
Ann Arbor, MI

11/2016 – present Medical Director of the Comprehensive Gender Services Program at the University of Michigan

10/2015 – present Clinical Director of the Child and Adolescent Gender Services Team at Mott Children's Hospital

Daniel Evan Shumer, MD, MPH
Assistant Professor in Pediatrics
Michigan Medicine – Division of Pediatric Endocrinology
1500 E. Medical Center Drive, Ann Arbor, MI 48109-5718
735-646-8758
dshumer@med.umich.edu

07/2016 – present Pediatric Endocrinologist lead in the multidisciplinary Prader Willi Syndrome Clinic at Mott Children's Hospital

Research Interests

1. The evaluation and treatment of the transgender adolescent
2. Mental health and gender non-conformity
3. Developmental delay and autism spectrum disorder and gender non-conformity
4. Disorders of sex development

Grants

Current

2015 – present Internal funding for research study
Co-investigator on study to examine social media use among transgender adolescents

2017 – present Grant awarded by the Department of Diversity, Equity and Inclusion at Michigan Medicine
Award to fund community participation in the University-wide Transgender Research Group

Previous

2012 – 2015 Research Grant sponsored by the Eunice Kennedy Shriver National Institute of Child Health and Human Development; 1T32HD075727-01
Funded as a Research Fellow in the Harvard Pediatric Health Services Research Fellowship; sponsors tuition at Harvard School of Public Health and my fellowship research related to provision of health care for transgender adolescents

2009 – 2012 Project Grant from the Vermont Children's Miracle Network
Designed and created a mentoring program for adolescents with type 1 diabetes, the "Vermont Diabetes Mentoring Project"

Honors and Awards

12/2016 Child and Adolescent Gender Services Team awarded *The U-M Distinguished Diversity Leaders Award* under my leadership

Daniel Evan Shumer, MD, MPH
Assistant Professor in Pediatrics
Michigan Medicine – Division of Pediatric Endocrinology
1500 E. Medical Center Drive, Ann Arbor, MI 48109-5718
735-646-8758
dshumer@med.umich.edu

05/2014	Annual Pediatric Endocrine Society Essay Competition: Ethical Dilemmas in Pediatric Endocrinology **Competition Winner:** *The Role of Assent in the Treatment of Transgender Adolescents*

Memberships in Professional Societies

05/2015 – present	American Academy of Pediatrics
05/2015 – present	American Academy of Pediatrics – Section on LGBT Health and Wellness
05/2015 – present	World Professional Association for Transgender Health
07/2012 – present	Pediatric Endocrine Society

Peer-Review Service

2017, 2018	Reviewer – Pediatrics
2017	Reviewer – Canadian Medical Association Journal
2017	Reviewer – New England Journal of Medicine
2017, 2016	Reviewer – Transgender Health
2016	Reviewer – International Journal of School and Cognitive Psychology
2016	Reviewer – PLOS ONE
2016	Reviewer – Clinical Medical Journals
2015	Reviewer – Journal of Autism and Developmental Disorders
2014	Reviewer – Pharmacotherapy
2014	Reviewer – Psychological Science

Teaching and Mentorship

09/2017 – present	Branches Advisor *I am an advisor to M3/M4 medical students as part of the Branches Advisorship Program*
07/2017 – present	Mentor *Mentee: Adrian Araya, Fellow in Pediatric Endocrinology*
04/2016 – present	Course Director: Medical Student Elective in Transgender Medicine

Daniel Evan Shumer, MD, MPH
Assistant Professor in Pediatrics
Michigan Medicine – Division of Pediatric Endocrinology
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735-646-8758
dshumer@med.umich.edu

I coordinate and instruct a multidisciplinary Medical Student Elective available for registration during the M4 year; will be offered beginning July 2017

12/2017 Nursing Unit (12-West) Annual Educational Retreat
"Gender identity at the Children's Hospital"
Provided education to pediatric nurses around the topic of gender identity at their annual educational retreat
Michigan Medicine

10/2017 Transgender and Gender Non-Conforming Youth: Best Practices for Mental Health Clinicians, Educators, & School Staff
Planned, hosted, and spoke at a conference around topics related to gender identity and youth with 200+ attendees from the fields of mental health and education from across Michigan
Ypsilanti, MI

10/2017 Division Conference
"Hot Topics in Transgender Medicine"
Michigan Medicine – Division of Pediatric Endocrinology

10/2017 Family Medicine Annual Conference
"Transgender Medicine"
Michigan Medicine – Department of Family Medicine

05/2017 Division Conference
"Update in Transgender Medicine"
Michigan Medicine – Division of Pediatric Endocrinology
Ann Arbor, MI

04/2017 Fellow Didactic Lecture
"Androgen Physiology"
Michigan Medicine – Division of Pediatric Endocrinology
Ann Arbor, MI

03/2017 Pharmacy School Education
Presented lecture on LGBT Health for University of Michigan Pharmacy Students
University of Michigan, School of Pharmacy
Ann Arbor, MI

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02/2017	Swartz Rounds *Clinical Case Presentation* Michigan Medicine Ann Arbor, MI
02/2017	Presentation to Division of General Medicine "Transgender Health" Michigan Medicine Ann Arbor, MI
02/2017	Presentation at Collaborative Office Rounds "Transgender Health" Michigan Medicine Ann Arbor, MI
03/2016 – 02/2017	Mentor *Mentee: Colleen Moran, Fellow in Pediatric Endocrinology*
10/2016	Presentation to Clinical Staff "Primary Care for Transgender Patients" University Health Service University of Michigan Ann Arbor, MI
10/2016	Presentation to Department of Dermatology "The iPLEDGE program and transgender patients" Michigan Medicine Ann Arbor, MI
09/2016	Presentation to ACU Leadership *Presented on Gender Identity Cultural Competencies* Michigan Medicine Ann Arbor, MI
07/2016	Internal Medicine Resident Education *Presented on gender identity to internal medicine residency* Michigan Medicine Ann Arbor, MI
05/2016	Pediatric Rheumatology Divisional Conference *Presented on gender dysphoria to division*

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Michigan Medicine
Ann Arbor, MI

04/2016 Rheumatology Grand Rounds
"Gender Identity"
Michigan Medicine
Ann Arbor, MI

04/2016 Abstract Reviewer
Pediatric Resident Scholarly Activity Abstracts (2016)
University of Michigan Medical School
Ann Arbor, MI

03/2016 Pharmacy School Education
Presented lecture on LGBT Health for University of Michigan Pharmacy Students
University of Michigan, School of Pharmacy
Ann Arbor, MI

02/2016 Medical Student Education
Panelist for M1 Class Session on LGBT Health as part of the "Doctoring" Curriculum
Ann Arbor, MI

02/2016 Psychiatry Grand Rounds
"Transgender Medicine – A Field in Transition"
Michigan Medicine
Ann Arbor, MI

12/2015 Pediatric Grand Rounds
"Transgender Medicine – A Field in Transition"
Mott Children's Hospital – University of Michigan
Ann Arbor, MI

11/2015 Medical Student Education
Noon Lecture
Presentation to medical students and community members during Trans Awareness Week
"The Transgender Adolescent"
University of Michigan Medical School
Ann Arbor, MI

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02/2014 – 06/2015	Clinical Preceptor *Preceptor for students from Boston University School of Medicine attending the Gender Management Services Clinic during their elective in Transgender Medicine* Boston Children's Hospital Boston, MA
02/2015	Boston Children's Hospital – Division of Adolescent Medicine *Presentation to Adolescent Medicine Fellows* "Medical Management of the Transgender Adolescent"
01/2014	Objective Structured Clinical Examination – Instructor Patient-Doctor Course for Second Year Harvard Medical School Boston, MA
11/2012	Mini Grand Rounds "A Case of Ambiguous Genitalia; A Case of Hypothyroidism" *This is a case-based lecture given to the residents of the Boston Combined Pediatric Residency Program* Boston Children's Hospital Boston, MA
07/2011 – 06/2012	Pediatric Advanced Life Support – Instructor Vermont Children's Hospital at Fletcher Allen Health Care Burlington, VT
07/2011 – 06/2012	Neonatal Resuscitation Program – Instructor Vermont Children's Hospital at Fletcher Allen Health Care Burlington, VT
07/2011 – 06/2012	Morning Report *As Chief Resident, led bi-weekly case-based teaching sessions for the Pediatric Residency Program* Vermont Children's Hospital at Fletcher Allen Health Care Burlington, VT
8/2010	Pediatric Grand Rounds "An Interesting Case from the Wards"

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Presented a case of precocious puberty associated with an adrenocortical tumor and Li-Fraumeni Syndrome
Vermont Children's Hospital at Fletcher Allen Health Care
Burlington, VT

01/2004 – 08/2004 Kaplan Test Prep MCAT – Instructor
Highland Park, IL

Committee, Organizational, and Volunteer Service

Institutional

11/2017 – Present Divisional Diversity, Equity and Inclusion Champion
Michigan Medicine, Division of Pediatric Endocrinology
Ann Arbor, MI

08/2017 – Present University of Michigan Transgender Research Group – Director
I run a working group of researchers from across the University studying topics related to gender identity who meet 6 times yearly
University of Michigan
Ann Arbor, MI

07/2017 – Present Diversity, Equity and Inclusion Action Committee Member
Michigan Medicine, Department of Pediatrics
Ann Arbor, MI

07/2013 – 10/2014 Quality and Innovation Committee Member
Boston Children's Hospital, Division of Endocrinology
Boston, MA

07/2011 – 06/2012 Resident Selection Committee Member
Vermont Children's Hospital at Fletcher Allen Health Care
Burlington, VT

07/2011 – 06/2012 Residency Leadership Committee Member
Vermont Children's Hospital at Fletcher Allen Health Care
Burlington, VT

Regional

01/2013 – 09/2015 Investigational Review Board – Voting Member
The Fenway Institute
Boston, MA

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National

05/2014 – 10/2016 Pediatric Endocrine Society – Ethics Committee Member

Volunteer Service

04/2015 Community Service at Groton School, Groton, MA
Invited to address student body during assembly for National Day of Silence

03/2015 Community Service at Newton South High School, Newton, MA
Invited to set up an informational booth about transgender health at the school's production of Rocky Horror Picture Show

07/2014 Camp Joslin (Type 1 Diabetes Camp)
Under attending supervision, participated in summer camp as the camp physician

06/2014 Transgender Health for Schools and Teachers
Gave a lecture titled "Hormones 101" at a conference meant to educate area educators about their transgender students

03/2014 Transgender Health for Patients and Families
Gave a lecture titled "Hormones 101" at a conference meant to support and educate transgender children and their families

Extramural Invited Presentations

01/2018 Invited Speaker
"Working with transgender and gender non-conforming youth"
Michigan Association of Osteopathic Family Physicians
Bellaire, MI

01/2018 Speaker at "Community Conversations" in Lake Orion, MI
Invited to lead a community discussion on topics related to gender identity and transgender youth.
Lake Orion, MI

11/2017 National Transgender Health Summit
"Development of a Transgender Medicine Elective for 4th Year Medical Students"
Oakland, CA

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11/2017	Endocrinology Grand Rounds "Transgender Medicine" Wayne State University Detroit, MI
11/2017	Invited Speaker "Care of the Transgender Adolescent" St. John Hospital Conference: "Transgender Patients: Providing Compassionate, Affirmative and Evidence Based Care" Grosse Pointe Farms, MI
11/2017	Invited Speaker *Evening lecture to medical students* "Hormonal Care in Transgender Adolescents" Michigan State University – School of Osteopathic Medicine Detroit, MI
10/2017	Conference Organizer and Speaker *Transgender and Gender Non-Conforming Youth: Best Practices for Mental Health Clinicians, Educators, & School Staff* Washtenaw Community College I helped organize and run this conference for over 200 attendees, geared toward mental health professionals and school staff across the state of Michigan, and gave a lecture at the conference on medical issues related to gender transition.
06/2017	Partners in Pediatric Care – 2017 Conference "Care of the Transgender Adolescent" Traverse City, MI
05/2017	Grand Rounds Veterans Administration Ann Arbor Healthcare System "Transgender Medicine" Ann Arbor, MI
05/2017	Partners in Pediatric Care – 2017 Conference "Care of the Transgender Adolescent" Ann Arbor, MI
05/2017	Invited Speaker

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	Presentation to local non-profit healthcare organization "Gender Identity" Hegira Programs Detroit, MI
02/2017	Pediatric Grand Rounds St. John Hospital and Medical Center "Transgender Youth: A Field in Transition" Detroit, MI
11/2016	Pediatric Grand Rounds "Hormonal Management of Transgender Youth" Beaumont Children's Hospital Royal Oak, MI
11/2016	Invited Speaker "Transgender Youth: A Field in Transition" Temple Beth Emeth Ann Arbor, MI
11/2016	Invited Speaker "Transgender Youth: A Field in Transition" Washtenaw County Medical Society Ann Arbor, MI
11/2016	Invited Speaker *Evening lecture to medical students* "Hormonal Care in Transgender Adolescents" Michigan State University – School of Osteopathic Medicine Detroit, MI
10/2016	Invited Speaker "Gender Identity" Pine Rest Christian Mental Health Services Grand Rapids, MI
09/2016	Invited Oral Presentation "Gender Identity" Humanists of Southeast Michigan Farmington Hills, MI

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06/2016	Invited Oral Presentation "Overrepresentation of Adopted Children in a Hospital Based Gender Program" World Professional Association of Transgender Health – Biennial International Symposium Amsterdam, Netherlands
06/2016	Invited Oral Presentation "Mental Health Presentation of Transgender Youth Seeking Medical Intervention" World Professional Association of Transgender Health – Biennial International Symposium Amsterdam, Netherlands
05/2016	Invited Oral Presentation "It gets better: Promoting safe and supportive healthcare environments for Sexual Minority and Gender Non-Conforming Youth" Mini-Course at 2016 Pediatric Academic Societies' Annual Meeting Baltimore, MD
04/2016	Invited Speaker "Hormonal Care in Transgender Adolescents" Adolescent Health Initiative: Conference on Adolescent Health Ypsilanti, MI
04/2016	Television Appearance Channel 7 WXYZ Detroit *Appeared to discuss gender identity in adolsecents*
03/2016	Invited Speaker "Hormonal Care in Transgender Adolescents" Michigan State University – School of Osteopathic Medicine Department of Psychiatry East Lansing, MI
01/2016	Invited Speaker *Evening lecture to medical students* "Hormonal Care in Transgender Adolescents" Michigan State University – School of Osteopathic Medicine

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	Detroit, MI
01/2016	Pediatric Grand Rounds "Hormonal Care in Transgender Adolescents" St. Joseph Mercy Hospital, Department of Pediatrics Ypsilanti, MI
09/2015	Invited Lecturer *Lecture to first and second year medical students participating in an LGBT Health Elective* "Transgender Medicine – A Field in Transition" University of Massachusetts Medical School Worchester, MA
06/2015	Pediatric Grand Rounds "Medical Care of the Transgender Adolescent: A Field in Transition" University of Massachusetts Medical School Worchester, MA
05/2014	Invited Speaker "Health Care for Transgender Adolescents: A Field in Transition" Pediatric Endocrinology Nurses Society – Annual Conference Louisville, KY
04/2014	Invited Television Show Panelist "Trans Youth: Deciding Who You Are" *The Stream* Al Jazeera English
03/2014	Course: Contemporary Issues in Transgender Studies Lecture: *The Transgender Adolescent* Tufts University Medford, MA
02/2014	Presentation to Pediatric Residents and Pediatricians "Heath Care for Children and Adolescents with Gender Dysphoria/Transgenderism: Ethical, Political and Logistic Challenges" University of Vermont Medical School

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	Burlington, VT
11/2013	Presentation to Medical Students "Heath Care for Children and Adolescents with Gender Dysphoria/Transgenderism: Ethical, Political and Logistic Challenges" University of Massachusetts Medical School Worchester, MA
11/2013	Presentation to Medical Students "Heath Care for Children and Adolescents with Gender Dysphoria/Transgenderism: Ethical, Political and Logistic Challenges" Boston University Medical School Boston, MA
03/2012	Workshop Presentation "Longitudinal Advocacy Curriculum" Association of Pediatric Program Directors, Annual Conference Miami, FL
05/2011	Presentation to the Advocacy Special Interest Group "Vermont Diabetes Mentoring Project" Pediatric Academic Society, Annual Meeting Denver, CO
10/2010	Workshop Presentation "Vermont Diabetes Mentoring Project" 11th Annual Minnesota Mentoring Conference Minneapolis, MN

Bibliography

Peer-Reviewed Publications:

1. **Shumer DE**. *Doctor as Environmental Steward*. Wilderness and Environmental Medicine. 2009; 20(1):91.

2. **Shumer DE**, Spack NP. Current management of Gender Identity Disorder in Childhood and Adolescence: Guidelines, Barriers and Areas of Controversy. Curr Opin Endocrinol Diabetes Obes. 2013; 20(1):69-73. Review.

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3. **Shumer DE**, Mehringer JE, Braverman LE, Dauber A. Acquired Hypothyroidism in an Infant Related to Excessive Maternal Iodine Intake: Food for Thought. Endocr Pract. 2013; 19(4):729-31.

4. **Shumer DE**, Thaker V, Taylor GA, Wassner AJ. Severe hypercalcemia due to subcutaneous fat necrosis: presentation, management and complications. Arch Dis Child Fetal Neonatal Ed. 2014; 99(5):F419-21.

5. **Shumer DE**, Roberts AL, Reisner SL, Lyall K, Austin SB. Brief Report: Autistic Traits in Mothers and Children Associated with Child's Gender Nonconformity. J Autism Dev Disord. 2015 May; 45(5):1489-94.

6. Reisner SL, Vetters R, Leclerc M, Zaslow S, Wolfrum S, **Shumer D**, Mimiaga, MJ. Mental Health of Transgender Youth in Care at an Adolescent Urban Community Health Center: A Matched Retrospective Cohort Study. J Adolesc Health. 2015 Mar; 56(3):274-9.

7. **Shumer DE**, Spack NP. Paediatrics: Transgender medicine – long term-outcomes from 'the Dutch model'. Nat Rev Urol. 2015 Jan; 12(1):12-3. Editorial.

8. Tishelman A, Kaufman R, Edwards-Leeper L, Mandel, F, **Shumer DE**, Spack, N. Serving transgender youth: challenges, dilemmas, and clinical examples. Prof Psychol-Res Pr. 2015 Feb; 46(1):37-45.

9. Guss C, **Shumer D**, Katz-Wise SL. Transgender and Gender Nonconforming Adolescent Care: Psychosocial and Medical Considerations. Curr Opin Pediatr. 2015 Aug; 27(4):421-6. Review.

10. **Shumer DE**, Tishelman AC. The Role of Assent in the Treatment of Transgender Adolescents. Int J Transgend. 2015 Oct; 16(2):97-102.

11. **Shumer DE**, Reisner SL, Edwards-Leeper L, Tishelman A. Evaluation of Asperger Syndrome in Youth Presenting to a Gender Dysphoria Clinic. LGBT Health. 2016 Oct;3(5):387-90.

12. **Shumer DE**, Nokoff NJ, Spack, NP. Advances in the Care of Transgender Children and Adolescents. Adv in Pediatr. 2016 Aug; 63(1);79-102.

13. Strang JF, Meagher H, Kenworthy L, de Vries AL, Menvielle E, Leibowitz S, Janssen A, Cohen-Kettenis P, **Shumer DE**, Edwards-Leeper L, Pleak RR, Spack

Daniel Evan Shumer, MD, MPH
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N, Karasic DH, Schreier H, Balleur A, Tishelman A, Ehrensaft D, Rodnan L, Kuschner ES, Mandel F, Caretto A, Lewis HC, Anthony LG. Initial clinical guidelines for co-occurring autism spectrum disorder and gender dysphoria or incongruence in adolescents. J Clin Child Adolesc Psychol. 2016 Oct; 24: 1-11.

14. **Shumer DE**, Harris LH, Opipari VP. The Effect of Lesbian, Gay, Bisexual, and Transgender-Related Legislation on Children. J Pediatr. 2016 Nov; 178:5-6.e1

15. **Shumer DE,** Abrha A, Feldman HA, Carswell J. Overrepresentation of Adopted Adolescents at a Hospital-Based Gender Dysphoria Clinic. Transgen Health. 2017 May 1;2(1):76-79.

16. Tishelman A, Nahata L, **Shumer DE**. Disorders of Sex Development: Pediatric Psychology and the Genital Exam. J Pediatr Psychol. 2017 June 1;42(5):530-543.

17. Edwards-Leeper L, Feldman HA, Lash BR, **Shumer DE**, Tishelman AC. Psychological Profile of the First Sample of Transgender Youth Presenting for Medical Intervention in a U.S. Pediatric Gender Center. Psychology of Sexual Orientation and Gender Diversity. 2017 4(3), 374-382.

18. **Shumer D.** Health Disparities Facing Trasgender and Gender Nonconforming Youth Are Not Inevitable. Pediatrics. 2018 [epub ahead of print]

Non Peer-Reviewed Publications:

1. **Shumer D**. *The Effect of Race and Gender Labels in the Induction of Traits*. Northwestern Journal of Race and Gender Criticism. 2004.

2. **Shumer DE**. "A Tribute to Medical Stereotypes." The Pharos, Journal of the Alpha Omega Alpha Medical Society. Summer 2007.

Book Chapter

1. **Shumer D.** *Coma* in: The 5-Minute Pediatric Consult, 6th Edition. Schwartz, MW. Lippincott Williams & Wilkins. Philadelphia, PA. 2012.

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735-646-8758
dshumer@med.umich.edu

2. **Shumer DE**, Spack NP. Medical Treatment of the Adolescent Transgender Patient in: *Gender Affirmation: Medical and Surgical Perspectives*. CRC Press/Taylor & Francis. 2016.

3. **Shumer DE**, Kinnear HA. Duration of Pubertal Suppression and Initiation of Gender-Affirming Hormone Treatment in Youth in: *Pubertal Suppression in Transgender Youth*. Finlayson. Elsevier. In press.

4. **Shumer DE**, Araya A. Endocrinology of Transgender Care – Children and Adolescents in: *Transgender Medicine: A Multidisciplinary Approach*. Poretsky and Hembree. Springer. In process.