THE PREVALENCE AND PATTERNS OF FOOD AND BEVERAGE RESTRICTION FOR BATHROOM AVOIDANCE IN TRANSGENDER AND GENDER-DIVERSE YOUTH: A RETROSPECTIVE CHART REVIEW
Anderson Schlupp, MS, Nadia Dowshen, MD, MSHP, Linda Hawkins, PhD, MSEd, LPC, Virginia Stallings, PhD, MSEd, LPC
Children’s Hospital of Philadelphia

Purpose: According to the 2015 U.S. Transgender Survey, nearly one third of transgender adults reported restricting food and beverage intake to avoid using a public restroom. However, little is known about these types of behaviors for transgender and gender-diverse (TGD) youth and particularly how they impact the school environment. Therefore we aimed to quantify the prevalence of food and beverage restriction for the purpose of bathroom avoidance in TGD presenting to a large pediatric, hospital-based gender clinic.

Methods: A retrospective chart review was conducted of the youth between the ages of 10 and 18 seen in a large pediatric gender clinic from 2014 to 2019. For this analysis we used information from the clinical mental health gender assessment. The body assessment measure includes items relating to body likes and dislikes, interactions with mirrors, and sexuality. Specifically, youth are asked to describe comfort with utilizing the bathroom that aligns with the youth’s gender identity, comfort with anatomy when using the restroom, and descriptions of bathroom avoidance are captured. These data were abstracted, entered into a REDCap registry. Those who presented with a previous diagnosis of disordered eating, who presented in crisis, who did not complete the body assessment measure, were not included for this analysis. Data were analyzed using descriptive statistics.

Results: Of the 912 TGNC youth seen in this clinic between 2014 to 2019, 411 were between the ages of 10 and 18 and (n=272) had evaluable information in the body assessment measure. In total, 26% (n=72) of youth reported restricting food or fluid intake to avoid using the bathroom. Of those who reported restrictive behaviors 24% (n=38) endorsed not eating or drinking in public, 27% (n=43) endorsed not eating or drinking during school only, and 25% (n=40) endorsed not eating or drinking before or during school. Fluid restriction to avoid the bathroom was reported at higher incidences than food restriction. Nearly half (49%) of youth who report restrictive intake behaviors at school refuse the bathroom entirely during the school day.

Conclusions: In our clinical sample, TGD youth reported high rates of restricting food and beverage intake to avoid a public restroom, similar to the adult TGD population. These data have implications for schools, community organizations, and medical institutions serving this vulnerable population. Screening and referral procedures at such organizations should be reviewed to ensure that youth at risk for food or fluid restriction for bathroom avoidance are identified so that an appropriate action plan can be created. Future work is also needed to develop and evaluate policy solutions to ensure access to bathroom facilities that align with TGD youth identity and preferences.

Sources of Support:
EXPLORING THE ASSOCIATION BETWEEN GENDER- AND SEXUAL ORIENTATION-BASED BULLYING ON GUN CARRYING AMONG ADOLESCENT MALES

Kyle T. Ganson, MSW¹, Jason M. Nagata, MD, MSc²
¹Simmons University; ²University of California, San Francisco

Purpose: Bullying is known to influence gun and weapon carrying among adolescents; however, the content of the bullying remains relatively unknown. This secondary data analysis aimed to identify whether gender- and sexual orientation-based bullying was associated with gun carrying at school among adolescent males.

Methods: We used a representative sample of high school males (n=3,672) from the 2015 Maine Integrated Youth Health Survey (MIYHS) to analyze the influence of gender- and sexual orientation-based bullying on gun carrying at school. Odds ratios (ORs) and 95% confidence intervals (CIs) were obtained using hierarchical logistic regression analysis, controlling for grade level, race/ethnicity, sexual orientation, suicidal ideation, alcohol and marijuana use, gun access, and having been threatened/injured with a weapon. We also investigated the interaction between sexual orientation and gender- and sexual orientation-based bullying on gun carrying at school.

Results: Among complete cases, 3.8% (n=178) reported carrying a gun at school at least one time in the previous 12-months, 9.6% (n=439) reported experiencing gender-based bullying, and 7.4% (n=339) reported experiencing sexual orientation-based bullying. Regression analyses indicated that adolescent males who experienced gender-based bullying (OR=2.28, 95% CI 1.23, 4.25, p<.01) and sexual orientation-based bullying (OR=2.99, 95% CI 1.57, 5.69, p<.01) had greater odds of gun carrying at school. Analysis investigating the interaction between sexual orientation and gender- and sexual orientation-based bullying indicated that heterosexual males who experienced gender-based bullying (OR=2.70, 95% CI 1.34, 5.43, p<.01) and sexual orientation-based bullying (OR=3.42, 95% CI 1.55, 7.52, p<.01) had greater odds of gun carrying at school, which was higher than sexual minority males who experienced gender-based bullying (OR=2.23, 95% CI .78, 6.39, n.s.) and sexual orientation-based bullying (OR=2.66, 95% CI 1.01, 7.02, p<.05).

Conclusions: Both gender- and sexual orientation-based bullying is associated with gun carrying at school among adolescent males. These results expand previous gun carrying and bullying research by identifying the specific content of the bullying. Results also provide a unique understanding of the interacting influence between sexual orientation and gender- and sexual orientation-based bullying on gun carrying at school. Specifically, heterosexual adolescent males who experience gender- and sexual orientation-based bullying have greater odds of gun carrying at school, which may indicate that these forms of bullying have a greater impact on risk taking among heterosexual adolescent males. Intervention efforts should target programs that destigmatize and provide further education on gay and bisexual sexual orientations among adolescent males. The implementation and strengthening of diverse and inclusive curriculum and student groups, such as Gay-Straight Alliances, is also encouraged.

Sources of Support: No funding was used for the completion of this study.
MENTAL HEALTHCARE UTILIZATION AMONG TRANSGENDER AND GENDER-DIVERSE YOUTH AND THEIR CISGENDER SIBLINGS IN THE U.S. MILITARY HEALTHCARE SYSTEM

David A. Klein, MD, MPH\(^1\), Natasha A. Schvey, PhD\(^1\), Terry A. Adirim, MD, MPH, MBA\(^1\), Anna K. Rayne, MD\(^2\), Apryl Susi, MS, MLS\(^1\), Timothy Roberts, MD, MPH\(^6\), Elizabeth Hisle-Gorman, MSW, PhD\(^1\)

\(^1\)Uniformed Services University; \(^2\)Fort Belvoir Community Hospital; \(^6\)Children’s Mercy Hospital

**Purpose:** Large population-based studies using administrative data sets indicate that transgender and gender diverse (TGD) adults are more likely to have a mental health diagnosis and higher use of mental health services compared to cisgender peers. Moreover, research suggests TGD youth may experience higher than expected rates of adverse mental health outcomes. However, these studies are limited by small sample sizes, self-reports, limited geographic area, and lack of control groups. This study’s aim is to compare mental health service utilization of TGD youth to a control group of cisgender siblings in a large healthcare system.

**Methods:** TGD children and adolescents who received care in the military healthcare system 2010-2018 were identified by International Classification of Diseases (ICD) 9/10 codes; cisgender siblings were identified using the military parent’s unique identifier. All included youths were dependents of a military parent enrolled in the TRICARE health plan and were <18 years old at study initiation. Mental health visits were identified by ICD 9/10 codes and psychotropic medications were identified by name in the outpatient pharmacy record. Chi-squared and rank sum tests were conducted to compare groups on demographics, and single year mental health contacts; logistic regression clustered by family compared mental health diagnoses and applicable psychotropic medication use. Poisson regression clustered by family compared mental healthcare visit rates per year and psychotropic medication days. Adjusted models controlled for first sex recorded, total healthcare contacts per year, age at study initiation, and parental rank.

**Results:** 3,754 TGD and 6,603 cisgender sibling youth were identified. Both groups were tracked for a mean of 8.5 years. TGD youth were slightly older at study initiation (median age [IQR], 10 [8-13] vs 9 [4-14], p<0.001), had higher health care utilization (19 vs 10 visits per year; p<0.001), and were less likely to be assigned male at birth (32% vs 50%), and to have a junior enlisted parent. TGD youth were significantly more likely than cisgender siblings to have a mental health diagnosis other than gender dysphoria in 2010 (891 [23.7%] vs 920 [(13.9%); p=0.001], 2018 (1,601 [42.7%] vs 1,129 [17.1%]; p<0.001), and over the full course of the study period (3,352 [89.3%] vs. 3,308 [50.1%]). In adjusted analyses TGD youth had increased odds of a mental health diagnosis (OR 5.45; 95% CI [4.77-6.24]) and a psychotropic medication prescription (2,820 [75%] vs 2,425 [38%]; OR 3.71 95%CI [3.34-4.13] over the course of the full study period. As compared to cisgender siblings, TGD youth had over twice as many mental healthcare visits per year (IRR 2.22; 95% CI [2.00-2.46]), and psychotropic medication days (IRR 2.57, 95% CI [2.36-2.80]).

**Conclusions:** In a large population of TGD youth followed for an extended time period, mental healthcare and psychotropic medication utilization was significantly higher in TGD youth compared to their cisgender siblings. Results demonstrate the robust mental health care needs of gender minority youth, and the need for specialized and targeted care for these youths.

**Sources of Support:** None
COMMON HEALTH DISPARITIES IN THE TRANSGENDER POPULATION USING THE KID DATABASE
Stewart R. Malave Ramos, B.S.¹, Jacob Wilkes, BS², Adam W. Dell, MD³, Nicole L. Mihalopoulos, MD, MPH³
¹University of Puerto Rico School of Medicine; ²Intermountain Healthcare; ³University of Utah

Purpose: Transgender individuals have been stigmatized by society, which has produced minority stress in this population. Minority stress is described as additive stressors such as intrapersonal stigma, and concealment of sexual identity that may lead to maladaptive coping skills. Although there have been studies of health disparities in the transgender population, little is known of the prevalence of obesity/overweight, mental health problems and other health issues in transgender youth. We aim to describe these differences by using ICD-10 coding for pediatric transgender compared to cisgender inpatient admissions in the 2016 Kid's Inpatient Database (KID).

Methods: This study is a descriptive data analysis using the 2016 KID, which is part of a family of databases and software tools developed for the Healthcare Cost and Utilization Project (HCUP) from the Agency for Healthcare Research and Quality (AHRQ). We analyzed and compared coding for weight status, mental health conditions, substance use, and socioeconomic status between transgender and cisgender inpatients using Excel 2016 and SASTM 9.4.

Results: We identified 2,723 transgender and 1,345,766 cisgender inpatients, aged 10-20 years. The prevalence of overweight was 9% for transgender compared to 7% for cisgender (p<0.001). The most common health discharge diagnoses for transgender inpatients compared to cisgender inpatients, respectively, were mental health conditions (97% vs 39%): depression, 73% vs 16%; anxiety, 52% vs 12%; suicide or self-injury, 44% vs 8%. The next most common diagnoses were: substance-related disorders (21% vs 13%) and asthma (14% vs 12%). Problems related to upbringing were present in 17% of transgender compared to 3% of cisgender inpatients. All differences between transgender and cisgender inpatients were statistically significant (p<0.001).

Conclusions: Mental health conditions are the main cause of hospitalizations for transgender and cisgender patients, and are much more prevalent for transgender inpatients. Substance use, overweight/obesity and problems related to upbringing are more prevalent among transgender inpatients than cisgender inpatients. Minority stress experienced by transgender youth may contribute to the much greater prevalence of mental health conditions and substance-related disorders.

Sources of Support: Short-Term Training: Students in Health Professional Schools Funding Source: NIH/NHLBI Grant #: T35 HL007744 PI: Andrew Weyrich Department of Pediatrics
58.

**ADOLESCENT GENDER IDENTITY SCREENING IN PRIMARY CARE VISITS: FEASIBILITY AND ACCEPTABILITY**
Josephine S. Lau, MD, MPH¹, Stacy Sterling, DrPH, MSW¹, J. Carlo Hojilla, RN, PhD², Andrea Kline-Simon, MS³, Christina Grijalva, MA¹, Rahel Negusse, BA¹, Lauren Hartman, MD³  
¹Kaiser Permanente Northern California, The Permanente Medical Group; ²University of California, San Francisco; ³Kaiser Permanente Northern California, The Permanente Medical Group

**Purpose:** To examine the feasibility and acceptability of systematic gender identity screening among adolescents in pediatric primary care in a large integrated health care delivery system.

**Methods:** Systematic gender identity screening was implemented in 2 adolescent medicine clinics in the Kaiser Permanente Northern California (KPNC) health system between July 1, 2018 and June 30, 2019. Adolescents between the ages of 12.5-18 who presented for well visits at the two clinic pilot sites completed a gender identity screening question. The gender identity screening question asked: “What is your gender?” with possible responses that included transgender female/male, non-binary/genderqueer, and other. To assess the opinions of parents/guardians and adolescents toward gender identity screening, separate, anonymous questionnaires were administered to patients and parents/guardians, at the time of screening between January 7, 2019 and June 30, 2019. To assess pediatric providers’ perspectives on potential barriers to and facilitators of gender identity screening, an online survey was administered to all KPNC pediatric providers during a 3-week period in December 2018. Descriptive methods were used to summarize the data.

**Results:** Of the 344 adolescents who attended well visits and completed a well check questionnaire, 311 (90%) adolescents completed the anonymous questionnaires. Almost all (98.7%) adolescents felt that it was worthwhile to ask them about their gender. Two-thirds (66.6%) felt that doctors should ask all patients about their gender. A small percentage of adolescents reported that they found the question offensive (0.3%), or made them feel uncomfortable (0.6%). Two hundred and forty-nine (72%) parents/guardians completed the anonymous questionnaires. Of whom, the majority (75.5%) reported that it was worthwhile to ask adolescents, and 63.1% thought screening and discussions about gender would be beneficial for teens and families. A small percentage of parents/guardians reported that asking the question could interfere with the timing of their child’s doctor visit (3.6%), was offensive (2.8%) or made them feel uncomfortable (4.4%). Among the 800 KPNC pediatric providers, 228 (28.5%) completed the online survey. Most (92.5%) reported that it was somewhat important/important/critically important to screen for gender identity during well checks; and 85.6% felt that systematic gender identity screening would help direct more teens to receive gender-affirming care. Only 36.4% felt that asking teens to complete a gender identity screening question would affect visit workflow.

**Conclusions:** The majority of adolescents, parents/guardians and pediatric providers found systematic gender identity screening feasible and acceptable. Standardized gender identity screening during adolescent well checks could facilitate the identification of gender non-conforming youth and the delivery of gender-affirming care for adolescents and families in need.

**Sources of Support:** Kaiser Permanente Northern California Community Benefit Grant
59. TRANSGENDER YOUTH’S PERSPECTIVES ON TELEHEALTH FOR DELIVERY OF GENDER-RELATED CARE

Gina M. Sequeira, MD, MS1, Kacie Kidd, MD1, Robert WS Coulter, PhD, MPH1, Elizabeth Miller, MD, PhD1, Dennis Fortenberry, MD, MS2, Robert Garofalo, MD, MPH3, Kristin N. Ray, MD, MS4
1UPMC Children’s Hospital of Pittsburgh; 2Indiana University School of Medicine; 3Northwestern University Feinberg School of Medicine; 4University of Pittsburgh

Purpose: Transgender youth experience health disparities, compounded by multiple barriers to accessing gender-related care. Two significant barriers include the limited number and geographic location of multidisciplinary gender centers for youth and that few pediatric primary care providers (PCPs) have received training in transgender medicine. Telehealth may be one way to overcome these barriers, however transgender youths’ perspectives on receiving gender-related care via telehealth modalities have not been reported. The objectives of this study were to examine transgender youths’ interest in receiving gender-related care via: (1) telemedicine visits with transgender health specialists and (2) PCPs supported by varying levels of telehealth connection with a transgender health specialist.

Methods: Transgender youth (N=204) aged 12-26 presenting to a multidisciplinary children’s hospital gender clinic were recruited to complete the online survey during a regularly scheduled clinic visit. Survey items underwent cognitive interviewing with two transgender young adults and content validation with seven content experts prior to administration. Using descriptive statistics, we described the participants’ interest in receiving gender-related medical care via telemedicine encounters with transgender health specialists or through their PCP with different levels of technology-enabled support from transgender health specialists.

Results: Three-fifths (59%) of transgender youth surveyed identified as transmasculine and 56% were under 18. Almost one-third (31%) indicated they traveled more than 60 minutes to receive gender-related care, with 8% indicating they had traveled over 2 hours. Among transgender youth surveyed, 46% indicated interest in receiving some of their gender-related care from a transgender health specialist via telemedicine. When asked about interest in receiving specific services through telemedicine, 80% expressed interest in telemedicine visits for hormone refills and 71% for hormone related lab monitoring. Almost half of youth (48%) were interested in telemedicine visits for check-ups and 39% in telemedicine visits for counseling or therapy, while only 10% were interested in telemedicine visits for acute concerns. Regarding perspectives on receiving gender-related care from their PCP, only 4-13% of youth reported they would go to their PCP for specific gender-related care in the next 12 months (e.g., hormone refills: 13%; hormone shots: 11%; initiating hormone therapy: 4%). However, 45% expressed an interest in receiving some gender-related care from their PCP. This increased to 68% if a transgender health specialist attended the visit via telemedicine, 76% if their PCP had access via phone to transgender health specialists, and 85% if their PCP participated in regular trainings about transgender health.

Conclusions: Many transgender youth are open to receiving gender-related medical care outside of multidisciplinary gender clinics via telemedicine and from their PCPs. Youth report increased willingness to receive gender-related care from their PCPs in the context of engagement with technology-enabled support to PCPs from transgender health specialists, including via telemedicine, telephonic consultation, and tele-education. Use of these modalities to expand care delivery may help overcome existing geographic barriers and promote the provision of gender-related care in the general pediatric setting.

Sources of Support: T32 HD71834-5 (PI:Dermody) and T32 HD087162 (PI: Miller)