Comparing Psychotropic Medication Prescriptions for Inpatient Transgender and Cisgender Adolescents

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Transgender and gender nonconforming (TGNC) adolescents, defined as individuals whose gender identity does not align with sex assigned at birth, are at higher risk for mental and physical health complications and disparities compared to cisgender adolescents.[1] TGNC individuals report negative healthcare experiences which can lead to avoidance of further medical care. Examples include use of wrong pronouns (misgendering), not calling patients by their updated name (deadnaming), being treated as an investigation instead of as human (probing), provider-imposed barriers to care (gatekeeping), and stigmatizing stances such as feeling unwelcomed by the provider.[2] Additionally, studies reveal higher rates of suicide behaviors in TGNC compared to cisgender adolescents.[3]

Therefore, services aimed at assessment, monitoring, and treatment of mental health conditions for TGNC adolescents are of priority and need to be evaluated. Little has been published on treatment of mental health conditions in TGNC adolescents and how this compares to cisgender adolescents. We sought to evaluate psychotropic medication prescriptions for TGNC compared to cisgender adolescents admitted to an inpatient behavioral health unit (BHU).

This study of secondary data analysis was approved by the University of Kentucky Institutional Review Board. Electronic medical records (EMR) of patients ages 12 to 18 admitted to a 10 bed university-based inpatient behavioral health unit were searched for keywords: *trans female, trans male, nonbinary, gender dysphoria, transgender, transgender female, and transgender male*.

Patients with records containing any keywords were classified as TGNC. Records without gender identity were excluded. Identified TGNC patients were matched by age, gender identity on admission, ethnicity, and mental health diagnoses, collected using *International Classification of Diseases, Ninth and Tenth Revisions (ICD-9, ICD-10)* codes, to cisgender patients.

Prescription medications were extracted and classified as home or discharge medications. Home medications, prescribed by outpatient provider(s), were obtained from the patient's medication list (including names and dosages) documented on admission by a pharmacy technician or pharmacist. Discharge medications were obtained from discharge order reconciliation and summary documents.

Statistical analyses, using IBM SPSS Statistics v.5, included: descriptive statistics (demographic information); Pearson's Chi-square and Fisher's Exact Tests (to compare diagnoses and prescribed medications between TGNC and cisgender patients); Analysis of Variance (ANOVA) (to compare groups on continuous variables).

Between January 1, 2012, and October 14, 2018, 2,294 patients were admitted to our BHU. Twenty-six patients were identified as TGNC (Table 1). Over the study period, there were 3 TGNC-identified patients from 2012-2015 and 23 from 2016-2018 (see Figure 1 for further details). The most common diagnoses were major depressive disorder and unspecified anxiety disorder. Sixteen (61.5%) TGNC patients had attempted suicide at least once compared to 12 (46.1%) cisgender patients, averaging 1.19 and 0.73 attempts, respectively. There was no statistical difference between suicide attempts (p = 0.714) or documented self-harm. There was also no significant difference in prescribed medications on admission or discharge. One patient was actively taking gender-affirming hormone therapy.

Table 1. Demographic Data and Comparison of Mental Health Diagnoses and Prescribed Psychotropic Medications of Match-Paired Transgender and Gender Nonconforming (TGNC) and Cisgender Patients Admitted to an Inpatient Behavioral Health Unit

	TGNC (n = 26)	Cisgender (n = 26)	*p*
Age, mean (SD)	14.9 (1.75)	14.8 (1.74)	0.937
Race/ethnicity, n (%)			1.000
White	24 (92.3)	24 (92.3)	
Black/African American	2 (7.7)	2 (7.7)	
Gender identity			
Cisgender		26	
Transgender			
Male-to-female	4 (15.4)		
Female-to-male	18 (69.2)		
Nonbinary	4 (15.4)		
Patient diagnoses, n (%)			
Major depressive disorder	23 (88.5)	24 (92.3)	1.000
Adjustment disorder	2 (7.7)	0 (0.0)	–
Mood disorder	7 (26.9)	5 (19.2)	0.510
Unspecified anxiety disorder	18 (69.2)	16 (61.5)	0.56
Posttraumatic stress disorder	4 (15.4)	2 (7.7)	0.668
Bipolar disorder	0 (0.0)	1 (3.8)	–
Schizophrenia	0 (0.0)	1 (3.8)	–
Psychosis	1 (3.8)	0 (0.0)	–
Autism spectrum disorder	0 (0.0)	0 (0.0)	–
Eating disorder	4 (15.4)	4 (15.4)	1.000
Oppositional defiant disorder	3 (11.5)	3 (11.5)	1.000
ADHD	6 (23.1)	10 (38.5)	0.229
Substance use disorder	0 (0.0)	4 (15.4)	0.110
Suicide Attempts, mean (range)	1.19 (1-11)	0.73 (1-3)	0.714
Self-Harm, mean (range)	13 (50.0)	16 (61.5)	0.577
Home medications, n			
Antidepressants			
SSRI[b]	15	13	0.578
SNRI[c]	1	0	–
TCA[d]	0	0	–
Atypical[e]	2	3	1.000
Anxiolytics	4	4	1.000
Antipsychotics			
First generation	0	0	–
Second generation	3	3	1.000
Mood stabilizer	1	5	0.191
Stimulants	2	4	0.668
α-1 adrenergic antagonists	1	0	–
α-2 adrenergic agonists	0	3	–
Over-the-counter	1	2	1.000
Hormone therapy	1	0	–
Sleep aids	3	4	1.000
Polypharmacy	1.3	1.6	0.406

Table 1. Continued

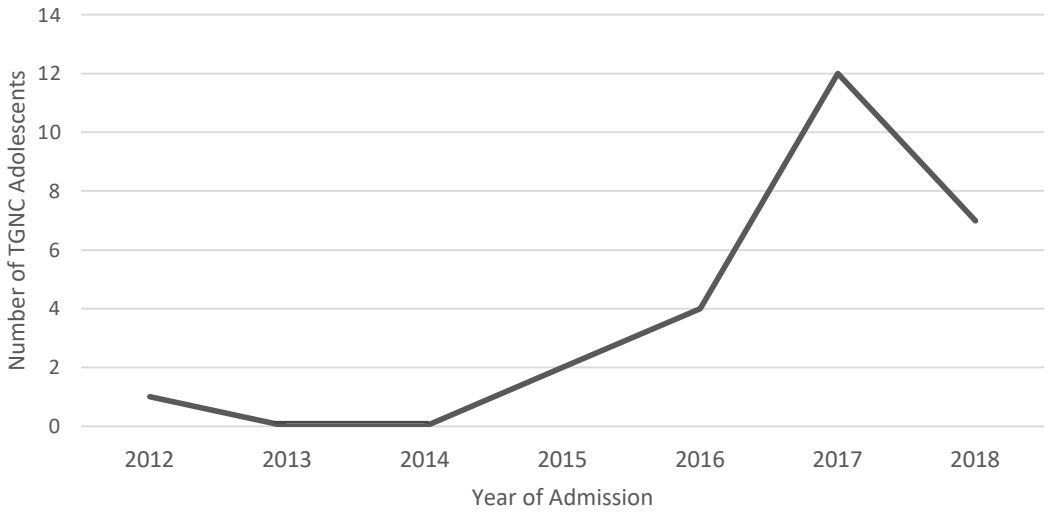
	TGNC (n = 26)	Cisgender (n = 26)	*p*
Discharge medications, n			
Antidepressants			
SSRI[b]	15	14	0.78
SNRI[c]	1	0	—
TCA[d]	0	0	—
Atypical[e]	4	6	0.726
Anxiolytics	5	3	0.703
Antipsychotics			
First generation	0	0	—
Second generation	4	6	0.726
Mood stabilizer	1	4	0.350
Stimulants	1	4	0.350
α-1 adrenergic antagonists	4	0	—
α-2 adrenergic agonists	0	3	—
Over-the-counter	2	1	1.000
Hormone therapy	1	0	—
Sleep aids	4	5	1.000
Polypharmacy	1.6	1.8	0.558

Note: ADHD = attention-deficit/hyperactivity disorder.
[a]Based on χ^2 and Fisher's Exact
[b]Selective serotonin reuptake inhibitors
[c]Serotonin-norepinephrine reuptake inhibitor
[d]Tricyclic antidepressants
[e]Atypical antidepressants (including bupropion and mirtazapine)

This study serves as a pilot to future studies about the inpatient mental health care of TGNC and cisgender adolescents. We did not see differences in prescribing patterns when TGNC and cisgender adolescents were matched by diagnosis; however, due to the high risk and mental health disparities, adequately powered studies are needed to further evaluate mental health identification, diagnosis, and prescribing patterns in TGNC adolescents.

While there was an increase in the number of TGNC adolescent admissions over the study period, this may represent evolving awareness and improvement in recognition of gender diversity. However, the number of TGNC adolescents may be under-reported. Importantly, the nature of chart review revealed many inconsistencies in EMR documentation that are worth noting. Many patients' gender identity was undocumented, which could have caused many TGNC patients to not be identified. This could be due to discomfort or bias of the clinician, lack of training or awareness, or systematic barriers to appropriate documentation and interviewing. The EMR does not have specific requirements or constancy in documenting gender identity, pronouns or updated name. This information is dispersed throughout the EMR and not easily available. Without a consistent way or requirement to assess or document these, healthcare providers are at risk of precipitating negative experiences, such as misgendering or deadnaming. Furthermore, patients were only identified as TGNC if they willingly provided that information. Adolescents with gender dysphoria may not disclose this information, especially if previous negative experiences have occurred or parents/caregivers are present. We likely missed additional TGNC patients

Figure 1. Number of Transgender or Gender Nonconforming (TGNC) Adolescent Admissions by Year[a]



Note: [a]Review from January 1, 2012 to October 14, 2018.

in our study for that reason. To ensure equitable and unbiased mental health care for all patients, it is essential to train healthcare providers, ensure competency in gender diversity, and ensure consistent interview and documentation processes for patients as they enter our healthcare systems.

Take Home Summary

We did not see differences in prescribing patterns between inpatient transgender and gender nonconforming (TGNC) and cisgender adolescents. However, TGNC adolescent admissions increased over the study period which highlights the need for training on equitable and unbiased mental health care.

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