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# Mental Health of Transgender Youth in Care at an Adolescent Urban Community Health Center: A Matched Retrospective Cohort Study

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## ABSTRACT

**Purpose:** Transgender youth represent a vulnerable population at risk for negative mental health outcomes including depression, anxiety, self-harm, and suicidality. Limited data exist to compare the mental health of transgender adolescents and emerging adults to cisgender youth accessing community-based clinical services; the present study aimed to fill this gap.
**Methods:** A retrospective cohort study of electronic health record data from 180 transgender patients aged 12–29 years seen between 2002 and 2011 at a Boston-based community health center was performed. The 106 female-to-male (FTM) and 74 male-to-female (MTF) patients were matched on gender identity, age, visit date, and race/ethnicity to cisgender controls. Mental health outcomes were extracted and analyzed using conditional logistic regression models. Logistic regression models compared FTM with MTF youth on mental health outcomes.
**Results:** The sample (N = 360) had a mean age of 19.6 years (standard deviation, 3.0); 43% white, 33% racial/ethnic minority, and 24% race/ethnicity unknown. Compared with cisgender matched controls, transgender youth had a twofold to threefold increased risk of depression, anxiety disorder, suicidal ideation, suicide attempt, self-harm without lethal intent, and both inpatient and outpatient mental health treatment (all $p < .05$). No statistically significant differences in mental health outcomes were observed comparing FTM and MTF patients, adjusting for age, race/ethnicity, and hormone use.
**Conclusions:** Transgender youth were found to have a disparity in negative mental health outcomes compared with cisgender youth, with equally high burden in FTM and MTF patients. Identifying gender identity differences in clinical settings and providing appropriate services and supports are important steps in addressing this disparity.

**IMPLICATIONS AND CONTRIBUTION**

Transgender youth were found to have a disparity in negative mental health outcomes compared with cisgender youth, with equally high burden in female-to-male and male-to-female youth. Identifying gender identity differences in clinical settings and providing appropriate services and supports are important steps in addressing this disparity.

"Transgender" youth have an assigned sex at birth that is different from their current gender identity [1]. Gender identity refers to a person's internal felt sense of self [2]. Transgender adolescents and emerging adults represent an underserved and under-researched population with specific medical and mental health needs [3,4]. The U.S. population-level surveys do not

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routinely include survey items to identify transgender youth respondents; therefore, there is a lack of national epidemiologic data to document and monitor health disparities by gender identity [1], including among youth [5]. Despite the dearth of quality comparative national-level data on the mental health of transgender versus cisgender (nontransgender) youth, local and regional studies suggest transgender adolescents and emerging adults are a subpopulation of youth burdened by adverse health indicators, particularly in the mental health domain including depression, anxiety, suicidality, and self-harm behaviors [6–11].

Clinical settings and electronic health records (EHRs) have been identified as important and underutilized sources of information about sexual minority (lesbian/gay/bisexual) and gender minority (transgender) health [12,13]. Clinical settings and EHR are particularly valuable for transgender health in light of the dearth of comparative data that exist to understand the health and well-being of transgender relative to cisgender patients. Only a small handful of studies using transgender youth patient data have been conducted in clinical settings in the United States, and most of these have occurred in multidisciplinary gender clinics [7,14,15]. Spack et al. conducted a chart review study to explore characteristics of 97 children and adolescents age <21 years (mean age, 14.8 years; standard deviation [SD], 3.4) with gender identity disorder (GID) seen consecutively between 1998 and 2009 at a multidisciplinary gender clinic at Boston Children's Hospital in Massachusetts. Overall, 44% (n = 43) of patients presented for medical care with significant psychiatric histories, including diagnoses of depression (58%), general anxiety disorder (16%), a history of self-mutilation (21%), and/or one or more suicide attempts (9%) [15]. Another study conducted at Children's Hospital, Los Angeles, in California examined associations between quality of life measures and psychosocial factors among 66 youth aged 12–24 years with GID who received care between 2011 and 2012. Perceived burden—the extent to which transgender identity interferes with life activities or causes distress—was positively correlated with greater depression and negatively associated with self-reported life satisfaction [7].

These clinical studies offer valuable information about transgender youth accessing services at multidisciplinary gender clinics at the U.S. pediatric medical centers. However, there are limitations. Youth in these studies received a psychiatric GID diagnosis per the DSM-4 Text Revision (DSM-4-TR) [16]. Given the 2013 changes to the DSM-5, which changed diagnoses to gender dysphoria, research is needed that (1) does not use GID as a sole inclusion criteria and (2) refrains from conceptualizing gender identity variation as psychopathology [17]. Patients presenting to specialized multidisciplinary gender clinics may not represent the larger population of transgender patients, including those who do not meet diagnostic criteria for gender dysphoria. The youth in these studies tend to be from higher socioeconomic status families that have health insurance, present for medical care with their parents/families—meaning their guardians are engaged in some way—and are largely white (non-Latino/Hispanic)/Caucasian [14,15]. In addition, the U.S. studies of transgender youth in clinical settings have not included a cisgender comparison group, which is essential to examine mental health disparities [18].

There are no published studies that utilize EHR data to examine the mental health of diverse transgender youth with varied socioeconomic and racial/ethnic backgrounds presenting to the U.S. community-based primary care youth clinic settings. Community-based health clinics are a unique point of entry to care for youth, especially for people of low socioeconomic and racial/ethnic minority backgrounds [19]. In 2008, children and youth made up 33% of all patients seen in over 1,100 Federally Qualified Community Health Centers, and they were more likely to be uninsured, poor, or from a racial/ethnic minority background than those seen in private practice settings [19,20]. Examining gender differences among transgender youth who access community-based primary care youth clinic settings is also important to understand whether and how health care utilization and service needs differ for female-to-male (FTM) and male-to-female (MTF) youth patients.

This study is designed to compare the mental health of transgender and cisgender youth in a community-based setting. To achieve this goal, this study (1) examines mental health indicators among diverse transgender youth engaged in care at an urban pediatric and young adult community-based health center; (2) tests whether transgender youth patients bear increased mental health burden compared with matched cisgender patients; and (3) explores differences in psychiatric diagnoses between FTM spectrum and MTF spectrum youth patient populations.

## Methods

### *Study design, participants, and procedures*

A retrospective observational cohort study of EHR data was conducted at the Sidney Borum, Jr. Health Center, an urban community-based health center serving youth in Boston, Massachusetts, that is part of Fenway Health. Transgender patients aged 12–29 years seen for one or more medical and/or behavioral health care visits between 2002 and 2011 were included in this study. Transgender patients (n = 180) were identified by an EHR code "transgender" based on self-reported transgender identity on patient registration forms, behavioral health assessment forms, or direct communication with medical or behavioral health professionals during clinical visits. Direct patient communication of transgender identity to a physician or behavioral health professional was documented in narrative notes on the clinical visit and/or listed as a diagnosis of GID [16] in the patient's diagnostic history. All study activities were reviewed and approved by the organization's Institutional Review Board.

### *Description of clinical context*

During the period covered by data collection from the Sidney Borum, Jr. Health Center, clinical site annual visits by unduplicated patients varied between 2,000 and 3,000 patients per year at the clinic. Clinicians providing care for transgender youth at the site included M.D.s, nurse practitioners, and clinical social workers working collaboratively as a team. This team met regularly once to twice a month to review cases and assess medical and behavioral health protocol applicability before supporting hormones for gender transition and writing prescriptions for hormones and other adjunct medications. Transgender care for youth under age 18 years required family participation, broadly defined, and the consent of the youth's guardians, including state-appointed guardians in some situations. Youth aged 18 years and older could consent to care supporting gender transition for themselves. Health insurance or the ability to pay for services was required for transition-focused transgender care at the clinic. However, with the implementation of Massachusetts state health insurance