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**Project Title:** Review of Healthcare in Manitoba for Transgender Youth

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**Summary (250 words max single spaced):**

The Gender Dysphoria Action and Assessment for Youth (GDAAY) program opened in 2011 and was the first comprehensive program offering endocrine and mental health assessments for transgender youth in Canada. A chart review was conducted to describe the GDAAY patient population and look at how wait times and demographic information affects patient mental health. This chart review found increased rates of depression and anxiety. A survey component allowed for qualitative feedback on GDAAY patient satisfaction with services, on the transition process for this population, and what community and healthcare experiences are for trans youth in Manitoba. Patient responses included negative experiences from their community and healthcare providers and frustration over long wait times in accessing care. Recommendations to improve care for transgender youth in Manitoba include: increase education for medical students, residents, and practicing doctors regarding trans healthcare; provide gender sensitivity training to clinic staff; increase trans friendly healthcare services; include preferred name and pronoun collection and recording into electronic patient records; enhance visibility of LGBT+ support in clinics; and create policies regarding trans people's rights. While advances in trans healthcare have been made since GDAAY's introduction, there are still areas of improvement needed in order to adequately service this population especially within the adolescent population.

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## **INTRODUCTION AND BACKGROUND**

Transgender is a term used to describe when an individual's gender identity does not match the characteristics associated with the sex they were assigned at birth. (1–5) In this study, we use the term trans to describe individuals whose gender identity differs from their sex assigned at birth. (3–5) Trans is an umbrella term that includes a wide spectrum of identities, including transsexuals who transition from one sex to the other and gender queer individuals who identify outside of the binary model of gender. (6) Trans male refers to a female-to-male (FTM) trans person and trans female refers to a male-to-female (MTF) trans person. (7) We use trans and transgender in this study as umbrella terms to be as affirmative as possible, understanding that it may not encompass everyone involved in the research.

Many, but not all trans individuals experience Gender Dysphoria (GD), which is distress caused by a difference between an individual's gender identity and their natal gender. (8) No formal estimates on the prevalence of GD have been made, but based on referrals to medical and surgical reassignment clinics, the prevalence for GD in natal males ranges from 0.005% to 0.014% and in natal females from 0.002% to 0.003%. (9,10) These numbers likely underestimate the true prevalence of GD in the general population, as not everyone will seek clinical treatment. There is an increasing incidence of GD in recent years, though it is unclear whether this is a true increase or due to improved social acceptance of the trans population with more people accessing services from medical and surgical reassignment clinics. (9)

Developing a gender identity is a normal part of childhood psychological development and the mental health of trans children often suffers when their social environment tells them that they cannot be the person they perceive themselves to be. (8,11,12) One Canadian study found that over 65% of trans youth had seriously considered suicide in the 12 months preceding the survey, with one third reporting at least one suicide attempt, and 10% of attempts requiring medical attention. (13) Another publication reported the prevalence of depression and anxiety in the MTF population as 51.4% and 40.4%, and 48.3% and 47.5% in the FTM population compared to 16.6% and 28.8% in the general population. (14,15) The negative impact on psychological health of transphobia and social isolation in society likely plays a role in the high attempted suicide rate of the trans population. (11) Studies show that increased social inclusion, reduced transphobia, and access to medical transition can reduce the risk of suicide ideation and suicide attempts. (14,16–18) Unfortunately many trans individuals avoid the healthcare system based on fear or previous negative experiences. (2,4,5,16) These factors all likely play a role in the trend of higher rates of anxiety, depression, and self-harm behaviours seen in the trans population. (5,19–21)

Members of the trans community have unique healthcare needs and researchers are becoming increasingly aware of the need for trans specific healthcare clinics. (22) Recent studies have shown how interdisciplinary teams providing care for transgender youth can lead to improved health outcomes, noting similar rates of clinical mental health problems of trans youth after cross sex hormone therapy and gender reassignment surgery, as reported in the baseline population. (23) Currently in Canada, there are 9 programs offering trans healthcare to youth; Children's Hospital of Eastern Ontario (CHEO) Diversity clinic in Ottawa, BC Children's Transgender Clinic in Vancouver, Quest in St. Catherines, Izaak Walton Killam (IWK) Transgender Clinic in Halifax, Sickkids in Toronto, Gender Variance Program of Montreal, The Metta Clinic in Calgary, Stollery Children's Transgender Clinic in Edmonton, and the Gender Dysphoria Assessment and Action for Youth (GDAAY) program in Winnipeg. Most gender clinic teams are composed of, but not limited to, a pediatric endocrinologist, an adolescent medicine physician, a psychologist and/or a psychiatrist, a pediatric endocrine nurse, and a social worker. Following current guidelines from the endocrine society and the World Professional Association

for Transgender Health (WPATH), these gender clinics offer patients access to medical transition services including gonadotropin releasing hormone (GnRH) analogs to block puberty, depo provera to control menses, and cross sex hormones to induce the desired gender's puberty. (24–26) These interdisciplinary teams also provide access to mental health assessments to address comorbid or concomitant mental health disorders, and to support transition. Mental health assessments are also used to diagnose GD to inform hormone therapy, as per current guidelines. (24–26) Currently, the GDAAY program's capacity is limited due to a high number of referrals and limited clinic time meaning the GDAAY team cannot provide crisis mental health services. The team can also make referrals to arrange surgical transition, which in many provinces require letters of support from care providers in order to be financially covered by the province. (27,28) Having all these services consolidated into one clinic helps transgender youth with their transition, making it easier to initiate treatments to relieve the dysphoria they are experiencing. (22)

The launching of the GDAAY clinic in 2011 has provided Manitoba's trans youth with access to trans-specific healthcare. The GDAAY program was one of the first comprehensive programs incorporating endocrinology, psychiatry, and psychology to provide care for trans youth in Canada. The GDAAY clinic is composed of a pediatric endocrinologist, a pediatric endocrine nurse, a child clinical health psychologist, a child and adolescent psychiatrist, and an adolescent gynecologist. The GDAAY team is able to provide trans youth with access to medical services such as menses cessation, puberty suppression, and cross-sex hormone therapies, provide mental health assessments related to gender, referrals to surgical services, and provide resources for patients and families throughout the transitioning process.

Prior to GDAAY opening, those under 18 years old in need of trans-specific healthcare had no formal program to help navigate the healthcare system to access the services they needed. Little research has been done to identify how the GDAAY clinic has affected the healthcare services available to the pediatric trans population in Manitoba and what their experiences have been accessing and receiving trans healthcare in Manitoba. The aim of this study was to describe the GDAAY program's patient population, wait times for GDAAY services, age at referral, and other demographic features which may be associated with mental health. Survey responses were incorporated to provide qualitative feedback on satisfaction with GDAAY services, and a description of transition experiences in the GDAAY population.

## **MATERIALS AND METHODS**

### **Survey**

A multi-modal survey and chart review was used to collect data. The survey data came from a 77-item internet-based survey over the period of August 2015 to July 2016 from trans individuals who had received transgender healthcare services in Manitoba. Qualitative questions were designed to obtain personal experiences on the healthcare services provided to transgender youth in Manitoba. Questions were adapted from trans health surveys completed in Canada and the United States to allow for comparison between our research and previous reports. (6,29,30) The survey could be completed anonymously and typically took between 20 to 40 minutes to complete. For younger patients who were unable to answer all the questions regarding social and demographic data, parent/guardian input was advised.

The following data were collected from the survey:

1. Social and demographic information: age, primary language, education, ethnicity/race, annual household income, assigned sex at birth, present gender identity
2. Trans health information: age of initial gender questioning, age when trans healthcare services were first sought, age of first trans healthcare services received, gender presented in everyday life, respect for preferred name/pronoun, medical treatments

3. Mental health information: stress level, general happiness, emotional wellbeing
4. School/Work information: correct gender identification at school/work, acceptance of transition by teachers/classmates/colleagues/employers, bullying/transphobic experiences at school or in the workplace
5. Healthcare Access: incidence of healthcare refusal due to trans status, avoidance of the healthcare system due to trans status/gender identity, identification of positive and negative experiences with the healthcare system

### **Survey Sample**

Participants were recruited from the GDAAY program. To be eligible for the survey, participants had to be either a current or past patient, or a patient on the GDAAY waitlist. Patients who were referred to GDAAY but never seen were included in the demographic chart description, but were not eligible for the survey. Individuals were not required to have undergone a full medical or social transition to be eligible for participation; medical and social transition being self-defined per patient as living in the gender consistent with their gender identity.

### **Survey Recruitment Strategy**

Patients of the GDAAY clinic were notified of the survey and asked to participate via email. Klinik, a healthcare clinic in Winnipeg that runs an adult Trans Health Program, and the GDAAY program also had recruitment posters displayed in their waiting rooms. This poster was also available online at the GDAAY website and on various Manitoba Trans Support Group facebook pages.

### **Ethics and Consent**

The University of Manitoba Bannatyne Campus Health Research Ethics Board and the Health Science Centre Pediatric Research Coordinating Committee provided ethics approval for this project. Proceeding past the disclosure of information page and submitting the completed survey was considered implied consent for this research.

### **Healthcare Experiences**

Healthcare experiences were coded from survey items asking, "For each of the following, has a healthcare provider ever...?", "What barriers do you identify in accessing health care?", "Have you ever had to educate a healthcare provider regarding your needs as a transgender/gender non-conforming individual?", "Based on being transgender/gender non-conforming, have you ever been denied equal treatment from a healthcare provider?", and "Have you ever avoided going to the emergency room because of your transgender/gender non-conforming identity?"

### **Chart Review**

GDAAY charts were reviewed for demographic information including age, natal sex, ethnicity, city/town of residence, and Child and Family Services (CFS) involvement. Other data extracted included date of referral, date of first endocrine appointment, date of first psychological or psychiatric appointment, medical intervention, i.e. Depo Lupron, Depo Provera, and cross-sex hormones, any mental health diagnosis, surgical intervention, and reasons for discharge or not accepting referrals. All charts were included, regardless of being active, inactive, or whether the referral was accepted. Some patients have been receiving care from GDAAY doctors before it's official opening, thus we have data from a few patients earlier than 2011. For patients that GDAAY had received a referral for but were never seen, chart information was used only in the analysis of clinic descriptors including number of referrals and patient demographics at referral. Values for n vary because of missing values for certain variables. This data was also used to assess for differences between responders and non-responders to the survey, since survey respondents all had been patients of GDAAY at some point in time.

### **Chart Data Coding**

Wait times were coded based on date of referral and the dates of appointments with the endocrinologist and the psychologist or psychiatrist. The number of active patients was identified from the number of referrals minus the number of patients discharged in the year. Medical intervention history was coded twice, once for reversible medical intervention (GnRH analogs, menses suppressors), and once for irreversible cross-sex hormone therapy. Mental health was coded into ten categories. Anxiety included Social Anxiety Disorder, Generalized Anxiety Disorder, Panic disorder, Post-Traumatic Stress Disorder (PTSD), Obsessive-Compulsive Disorder (OCD), and phobias. Depression and Bipolar mood disorders were coded separately due to separation in the DSM-V with bipolar disorder suggesting more severe psychopathology. (10) Conduct disorders included Oppositional Defiant Disorder (ODD) and hypersexuality. Neurodevelopmental disorders included Autism Spectrum Disorder (ASD), Fetal Alcohol Spectrum Disorders (FASD), Attention Deficit Hyperactivity disorder (ADHD), and Tourette's syndrome. Psychotic disorders, eating disorders, substance abuse disorders, child-parent relational problems, and adjustment disorder were all coded separately.

### **Coding Reason for Discharge and Referrals**

Lost to follow-up included patients who were unable to be contacted to schedule appointments. No longer wanting to transition/patient choice included patients who no longer identify as trans and patients who identify as trans but no longer wanted medical transition services at that time. Not seen in GDAAY included patients too old at referral (>17 years from 2011-2015; 16 and older for 2015/2016). Graduated to other healthcare professional included all patients who reached 18 years old and were referred to either an adult Trans Health program or back to their primary care provider. Not in service area included patients referred from outside the GDAAY catchment area and those that moved out of the catchment area while a GDAAY patient. The too young for services category included patients who were < 8 years. These patients' families and current primary healthcare providers are given resources on how to support these children until such time that GDAAY services become available. No family support included patients who were unable to disclose their trans status to their family/community due to personal safety concerns after such disclosure.

### **Data Analysis**

Chi-Square Testing was used to analyze tables where all cells had a value greater than 5. For tables that had any cell with a value less than 5 a Fisher's Exact Test was used. Wilcoxon scores were used when there were continuous variables, such as the different age variables used in this study. The average score was used for ties in the Wilcoxon scores. The rank score sums from the Wilcoxon tests were then analyzed using the Kruskal-Wallis one-way analysis of variance test. These tests were used because the different age variables in the chart and survey groups were non-parametric and the Wilcoxon scoring and Kruskal-Wallis tests do not assume normal distributions of the continuous variable. The alpha value for all tests for significant differences was 0.05.

### **RESULTS**

The chart review consisted of 174 charts, with 13 charts having limited information because these patients were referred directly onto another trans care provider. For survey recruitment, 96 GDAAY patients or families were emailed. Along with the posters and internet advertising, there were a total of 25 responses for the online survey. Means and frequencies of natal sex, age, age at referral, age of first trans healthcare appointment, ethnicity, home location, CFS involvement, reversible medical intervention, cross-sex hormone treatment, surgery, and mental health comorbidity are included in Table 1.

Since its inception, the rates of referrals to the GDAAY program has tripled (Fig. 1) with the rates of referrals far exceeding the rates of intake into the program (Fig. 2). Table 2 lists the raw numbers of active patients, referrals to the program, and referrals/discharges from the program. Based on limited program capacity and wait times, the number of individuals who were not seen due to being over age at referral was 33. Of the 25% (n=25) of discharged or referred from GDAAY patients who were graduated to other healthcare professionals, most were transferred to a Winnipeg adult trans health clinic, but some family doctors felt comfortable enough to take over the care of trans patients as well. Table 3 describes the reasons for discharge and why some referrals were not seen in the GDAAY program.

### Survey Response Validation

The respondent demographics were compared to the entire GDAAY population demographics to assess how well the survey sample reflected the total population. The mean age of clinic patients (16.05 years, n=161) did not differ significantly from the mean age of survey respondents (14.84 years, n=25) ( $p=0.1359$ ). There were no significant differences to an alpha value of 0.05 in natal sex, ethnicity, living location, rate of irreversible medical intervention, surgical intervention, or mental health diagnosis noted between responders and non-responders of the survey (Table 1). The only significant difference between the chart and survey groups was that the survey group had a higher proportion of patients who were on reversible medical therapy (Depo Lupron or Depo Provera) ( $p=0.0124$ ).

### Transition in our Population

The average age at which survey respondents reported becoming aware of their gender dysphoria was 8.79 years old (n=24) while the age at first transgender related healthcare visit was 13.32 years old (n=22). Thus there is an average time from initial gender questioning to first gender related healthcare visit of 4.53 years. Survey respondents first talked about their transgender identity to their family doctor (16.7%, n=4), a psychologist (25%, n=6), nurse (8.3%, n=2), social worker or counselor (25%, n=6), support group (4.2%, n=1), family or friends (16.7%, n=4), or a pediatric subspecialist. 87.5% (n=21) of survey respondents are currently living in the gender consistent with their gender identity with the average age at which respondents started living in this gender being 12.57 years old (n=21). 95.83% (n=23) of respondents had asked people to start calling them by a name and pronoun that reflected their gender identity. 37.5% (n=9) of respondents have legally changed their name.

The chart review revealed 33.6% (n=45) of patients were on either Depo Lupron for blocking puberty progression or Depo Provera for menses cessation and 22.4% (n=30) patients were on cross-sex hormone therapy. The average age that patients were started on Depo Lupron was 13.29 years old (n=21) or 4.5 years after initial gender questioning, and the average age that patients started on Depo Provera was 16.14 years old (n=22) or 7.35 years after initial gender questioning. The average age of patients started on cross-sex hormone therapy was 16.69 years old (n=29), 7.9 years after initial gender questioning. 10.2% (n=14) of FTM patients had surgery in regards to relieving their gender dysphoria.

Natal females were more likely to be on cross-sex hormone therapy than natal males ( $p=0.0467$ ). As expected, patients who had received any medical or surgical interventions were significantly older on average than patients who did not have these interventions ( $p_{\text{reversible medical intervention}}=0.0002$ ,  $p_{\text{cross-sex hormones}}<0.0001$ ,  $p_{\text{surgery}}<0.0001$ ). A shorter wait time for mental health assessment correlated with a higher likelihood of being on cross-sex hormone therapy or having had surgical intervention ( $p_{\text{cross-sex hormones}}=0.0006$ ,  $p_{\text{surgery}}<0.0001$ ).

### **Access to GDAAY Services**

The average wait time to see GDAAY services is 114 days (n=86). The average wait time to see the pediatric endocrinologist is 123 days (n=83) and the average time to see either the psychiatrist or psychologist is 257 days (n=59). Patients still waiting for GDAAY appointments, patients discharged after being assessed by only part of the GDAAY team, and referrals that were never triaged and accepted as GDAAY patients account for the lower n values than the 174. The survey reflected this with some discontent over wait times for mental health assessments as can be seen from the following comment left by a survey participant:

“It takes too long of a time to see a psychiatrist or psychologist, and way too long of a wait for the gender to be able to be changed on the birth certificate. My TransMale identity makes me uncomfortable enough, let alone seeing my female birth name on everything.”

Another participant expressed their feelings regarding long wait times to access GDAAY mental health services:

“Relating to GDAAY, I have been waiting over a year to see a psychologist to start hormone therapy. It's been stressful and frustrating.”

### **Healthcare Experiences**

Regarding questions about discrimination by healthcare providers, 15% (n=3) respondents reported that they had been denied equal treatment based on their trans or gender non-conforming identity. 15% (n=3) reported avoiding emergency medical care because of their transgender identity. 70% (n=14) of respondents reported having to provide some amount of education to a healthcare provider regarding their needs as a trans individual. Identifying specific experiences of discrimination by healthcare providers, 25% (n=5) reported experiencing hurtful/insulting language about their trans identity/experience, 15% (n=3) were discouraged from asking about trans related health concerns, 20% (n=4) were told they were not really trans, 10% (n=2) were discouraged from exploring their trans identity, 35% (n=7) were laughed at or belittled for their trans identity, 20% (n=4) experienced the healthcare provider thinking the preferred gender on the forms was a mistake, and 15% (n=3) reported the healthcare provider refusing to use their preferred name. 65% (n=13) of respondents were told by a healthcare provider that they didn't know enough about trans related care to provide it. These experiences may result in avoidance of medical care by the trans community as described in the following quote

“I feel some anxiety around the health care system but I believe that doctors should be aware of transgender people and I shouldn't be shamed of asking questions regarding me being transgender and how that affects my general health.”

Prior to seeing a doctor, many trans patients face barriers to accessing healthcare. 68.4% (n=13) survey respondents reported that medical information collecting prior to seeing a doctor is very gendered. More barriers identified include no evidence of LGBT+ support, identified by 68.4% (n=13), worry regarding embarrassing questions regarding transition, identified by 73.7% (n=14), lack of doctor/nurse/healthcare provider education regarding LGBT+ people, identified by 63.2% (n=12), improper pronoun usage by the healthcare team, identified by 84.2% (n=16), worry regarding sexual orientation questions, identified by 68.4% (n=13), and worry about being laughed at or belittled, identified by 31.6% (n=6).

### **Community Experiences**

Results of the survey regarding transphobic experiences identified that 58.3% (n=14) had rated being made fun of due to their trans status sometimes or many times. 58.3% (n=14) also reported feeling that their trans status hurt and embarrassed their family sometimes or many times, with 75%(n=18) feeling that they had to pass as cis-gendered (non-trans) in order to be accepted sometimes or many times. Three quarters (75%, n=18) of respondents also reported hearing that being trans was not “normal” sometimes or many times with all respondents (100%, n=24) reporting having heard this at least once. Of the 14 respondents who answered regarding work and school safety, 35.7% (n=5) reported never or rarely feeling safe at their work/school. Of the 17 who answered regarding bathroom availability at their school or workplace, 29.4% (n=5) reported being denied access to the bathroom of the gender consistent with their gender identity.

### **Mental Health of Patients**

Table 4 depicts the mental health diagnosis of patients in the GDAAY population extracted from chart review. Over one third of patients (37.9%, n=66) in the GDAAY program have a diagnosed mental health disorder with anxiety and depression being the most common. Self-harm behaviours are also common in the patient population (20.7%, n=36). Children in CFS care had a slight tendency to be more likely to have a mental health diagnosis, but this was not statistically significant. The analysis of mental health diagnosis and demographic information is in Table 5. Chart review found a diagnosis of anxiety or depression was more likely in natal females and in older patients. Analysis of anxiety and depression diagnosis and demographic information is in Table 6.

As for survey respondents, 63.6% (n=14) rated their own mental health as either poor or fair and 27.3% (n=6) said they were either unhappy or very unhappy with their life in general. 54.5% of survey respondents (n=12) reported feeling depressed more than 3-4 days in the past week and 63.6% (n=14) reported feeling happy less than 2 days in the last week. Another 63.6% (n=14) of survey respondents disagreed or strongly disagreed with the statement, “On the whole, I am satisfied with myself.”

## **DISCUSSION**

### **Transition in our Population**

The average of 4.53 years between when one began questioning their gender and when they first began receiving transgender healthcare can be partly explained by the time it takes for youth to disclose their trans identity to others. Coming out as trans can be very difficult, as family and friends are not always accepting. The period of time after youth begin questioning their gender identity but have not disclosed their feelings can account for some of the time between questioning and first receiving transgender healthcare. One factor that may decrease the wait time to receive transgender healthcare in the future by shortening the time youth hide their trans identity is increasing the social acceptance of trans people. Hopefully by reducing transphobia, trans youth are able to feel safer disclosing their trans status, thus reducing the time they must wait to receive treatment.

The finding that patients who were older were more likely to be receiving reversible medical therapy may be due to a few reasons. Depo Provera is a medication used to cease menses. This will be prescribed to patients who are already in or through puberty and having menstrual cycles, thus more likely to be older than patients who have not yet started puberty. A second reason why patients on reversible therapies would be older is that Depo Lupron is prescribed to prevent puberty progression, but is only given once patients have reached Tanner Stage 2. This means that pre-pubertal patients, who will likely be younger, will not be on this medication.



Current guidelines for prescribing cross-sex hormones recommend that these medications be only prescribed to patients over the age of 16. (26) This along with requiring a letter from a mental health provider suggesting that cross-sex hormones are in the patient's best interest, which involves multiple appointments with the mental health provider, can help explain the finding that older patients were more likely to be on cross-sex hormones than younger patients. (26) This reason is similar to why older patients were more likely to have surgery than younger patients, as two letters of recommendation for chest masculinization surgery are required in the pediatric population. Also, this surgery cannot be done on patients under the age of 16 in Manitoba. Another requirement for surgery in Manitoba includes being on cross-sex hormone therapy and living in the gender consistent with one's gender identity for at least 12 months. (26) A shorter wait time until mental health assessment correlates with more likely being on cross-sex hormone therapy or having surgery. A possible reason for this correlation is that both of these interventions require a letter of recommendation from a mental health provider. Thus patients with shorter waits to see mental health providers are able to be started on cross-sex hormones and have referrals sent to surgery more quickly than patients who had to wait longer to access mental health services.

### **Access to GDAAY Services**

A common theme that arose in the survey was that some patients are unhappy with the length of time it took to access mental health services from the GDAAY program. Wait times may also help explain that while 95.83% (n=23) of survey respondents had asked people to start calling them by a different name and pronoun, only 37.5% (n=9) of people actually legally changed their names. Currently in Manitoba to change your sex on your birth certificate, it requires a letter from a Canadian medical practitioner, nurse practitioner, psychologist, or psychological associate supporting this change. (31) In the GDAAY program, the pediatric endocrinologist, psychiatrist, and psychologist are approved to provide these letters. (28) With the chart review showing that it took on average 114 days to see someone from GDAAY and that it will take multiple visits for the doctor to be able to provide this letter, it is understandable that some patients end up feeling distress at being unable to change their legal documentation to reflect their true gender. From the chart review, we found that ethnicity and rural versus urban residence did not affect wait times and access to interventions.

Figure 2 helps depict the divergence of the number of referrals received by the GDAAY program per year and the number of new patients the GDAAY program has been able to accept each year. Since GDAAY's opening in 2011, the number of referrals per year has steadily increased and outpaced the number of patients the GDAAY program is able to provide care and services. As the difference between the number of referrals and the number of patients who were accepted into the GDAAY program increases, the wait times for endocrine and mental health services are also expected to increase.

### **Community Experiences**

School and work experiences by trans individuals are unique in that they often face discrimination by others for their gender identity. The survey identified that being denied access to bathrooms, not being able to change gender markers in school/work forms, not feeling safe in your environment, and being bullied regarding your gender identity are not uncommon experiences affecting trans people in Manitoba. Many survey respondents reported experiencing transphobia, whether through hearing trans people aren't "normal," being made fun of because their trans identity, feeling that they won't be accepted if they are perceived as trans, or that they have hurt or embarrassed their family for being trans.

### **Healthcare Experiences**

Identified through the survey, accessing healthcare as a trans patient has many barriers before even seeing a physician. Barriers identified include very gendered approaches to collecting health information, no evidence of lesbian, gay, bisexual, transgender, and other gender and sexual minority (abbreviated LGBT+) support in clinics, worry regarding being embarrassed, made fun of, or belittled due to questions about their sexual orientation or their trans identity, lack of health care provider education regarding trans people's needs, and improper pronoun and preferred name usage. Many of these barriers can be reduced to make healthcare settings more open to trans people. When collecting information prior to seeing a doctor, having options other than just male and female, such as leaving a blank space for the patient to fill out, can help affirm trans identities. Evidence of LGBT+ support can be introduced such as having rainbow stickers in clinic and providing pamphlets and information for all sexual and gender identities. With 65% (n=13) of survey respondents being told that they can't ask their healthcare provider questions about their trans identity, it makes it difficult for trans people to find a healthcare provider that is willing to answer these questions. With barriers to accessing healthcare and limited healthcare providers willing to provide care, it can be seen that there is a gap in health services available to trans patients. Making healthcare settings more affirming to trans identities can help to minimize barriers patients face when trying to access healthcare services and make them more likely to seek healthcare in the future, especially in the adolescent population. (32)

### **Mental Health of GDAAY Patients**

The lifetime prevalence of anxiety and depression in the general population are 16.6% and 12.2% respectively. (33,34) The rates identified from the chart review for diagnosed anxiety and depression in the GDAAY population were 19.9% and 16.1%. The rates found in the chart review are higher than what is found for the general lifetime prevalence in Canada, suggesting that trans youth experience disproportionate rates of these mental health disorders than the rest of Canadians. It is also well described in literature that females tend to have higher rates of depression and anxiety than males. (15,33–36) In the GDAAY chart review, we found that natal females tended to have higher depression and anxiety rates than natal males. Other studies have noted in adult trans populations that MtF individuals have more similar psychological profiles to cis-gender females and FtM individuals psychological profiles are more similar to cis-gender males. (1) In the future, looking more broadly than just anxiety and depression in the trans youth population, we may find that their psychological profiles do indeed fall more in line with that of their preferred gender.

Another finding from this study was that patients who were older at referral to the GDAAY program are more likely to have a diagnosis of anxiety or depression. While no causative relationship is determined, one possible reason why anxiety and depression correlate to being older at referral is that having a more accepting environment in which disclosing trans status is easier to do at a younger age reduces likelihood of developing these disorders. Another possible reason is for this relationship is that earlier treatment of gender dysphoria helps alleviate factors that promote anxiety and depression development.

### **Limitations**

In our original proposal, we had hoped to compare this population to adult patients within the Klinik program. Due to limited responses, we focused on GDAAY patients. For further research purposes, including adult trans patients may help provide a picture of the experiences of trans patients prior to specialized trans healthcare in the pediatric and adolescent setting.

## **RECOMMENDATIONS AND CONCLUSION**

We have found that there is a need for gender transition services in Manitoba. Wait times for GDAAY services have been lengthening due to a discrepancy in the number of referrals to the program and the clinic spots available. Currently these clinic spots are determined by availability of the mental health team.

Unfortunately there are barriers to receiving trans healthcare outside of a dedicated trans clinic. Survey respondents identified a perceived lack of general healthcare provider education regarding trans health needs, improper pronoun and name usage, and patient's worry regarding insensitive questions and belittling of their experiences from talking with a doctor. The survey described multiple transphobic experiences in school, work, and healthcare settings, increasing stress placed on these youth and affecting their ability to access healthcare services to meet their needs.

From this research, we were able to draw a series of recommendations for trans healthcare in Manitoba. These recommendations are supported by recurrent themes in this research and will be of value to medical professionals at all levels of education. We recommend:

1. That education regarding trans health needs be included in undergraduate and postgraduate medical education as well as continuing professional development of all current primary care providers regarding how to support a patient's gender identity and expression, how to use respectful and affirming language regarding trans identities, and how to ask questions about sexual orientation and trans identity in a respectful manner. This recommendation is also supported by position statements and practice guidelines from many professional medical associations, including but not limited to, the Canadian Psychiatric Association, the Canadian Federation of Medical Students, the Pediatric Endocrine Nursing Society, and the Endocrine Society. (26,37–39)
2. All medical personnel attend gender sensitivity training regarding how to be respectful of all patients who may not identify as cis-gender, especially physicians and frontline reception staff.
3. Increasing funding for the GDAAY program to allow for additional time for doctors to see patients regarding transition healthcare needs, especially the mental health assessments by the clinical health psychologist and child and adolescent psychiatrist.
4. Making changes to the current patient information collecting process to allow for preferred name and pronoun to be recorded and to have this information visible on electronic records to those who are going to be providing the patient's care.
5. Enhancing visibility of support for LGBT+ persons in clinics, such as rainbow stickers and health information packages for patients of all sexual and gender identities.
6. Creating policies surrounding the rights trans people have in schools, the workforce, and healthcare settings regarding access to appropriate washrooms, correcting markers of gender and name on forms, and anti-discrimination guidelines to protect the rights of this population.

While there have been recent improvements in the care of Manitoba's transgender youth with the introduction of the GDAAY program, there are still areas of improvement greatly needed. The recommendations we have made will help improve the care that GDAAY can offer trans youth in Manitoba wanting to explore transition. By improving healthcare experiences for trans youth, they may have a more positive outlook on healthcare providers and be more likely to seek healthcare when needed in the future.

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**FIGURES, FIGURE LEGENDS, AND TABLES**

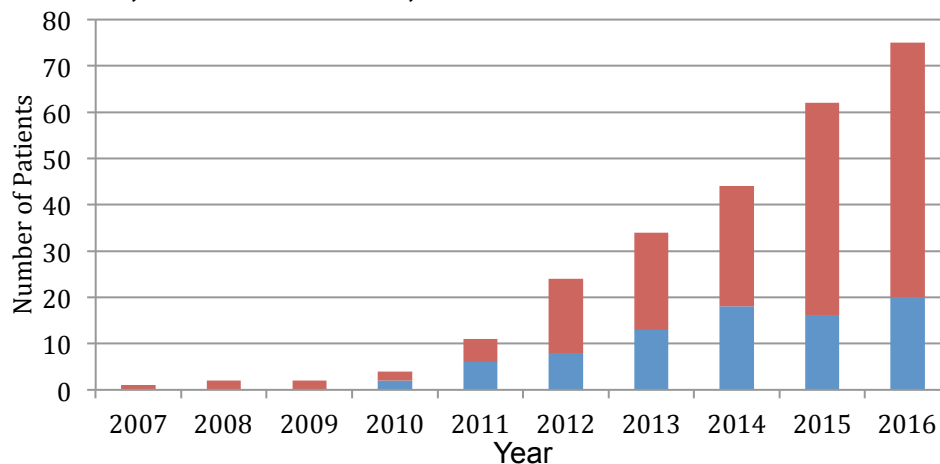


Figure 1: Number of active patients in the GDAAY program from 2007 up to July 1, 2016. Red bar represents natal female patients; blue bar represents natal male patients.

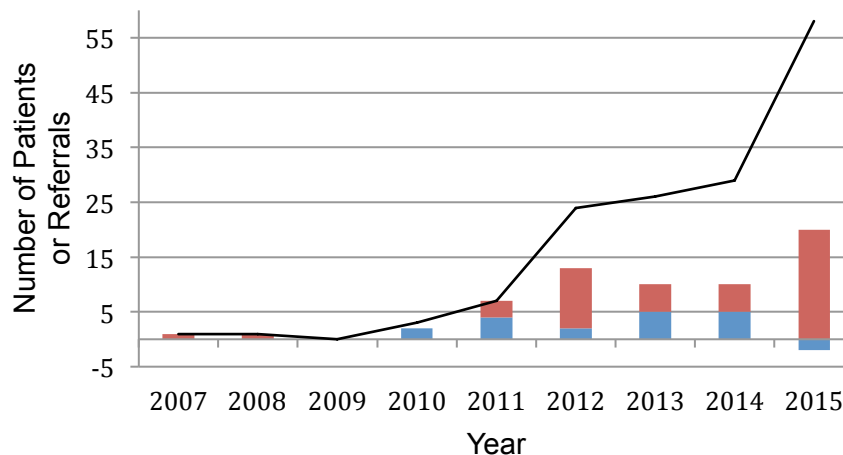


Figure 2: Number of new natal male and natal female patients and total number of referrals to GDAAY program from 2007 to 2015. Red bars represent the new natal female patients; Blue bars represent new natal male patients; Black line represents the number of referrals GDAAY received over that year. Two more natal male patients were discharged than were accepted into the GDAAY program in 2015, accounting for the negative value for this year.

Table 1: Demographic information extracted from chart and from survey results.

	Chart Review		Survey		Comparison p value
	n (%) or mean	total n	n (%) or mean	total n	
<b>Age (in years)</b>	16.05	161	14.84	25	0.1359
<b>Age at Referral (in years)</b>	13.9	174	-	-	-
<b>Age of First Trans Healthcare (in years)</b>	-	-	13.32	22	-
<b>Natal Sex</b>		174		25	
Natal Male	52 (29.9)		4 (16.0)		0.2329
Natal Female	122 (70.1)		21 (84.0)		
<b>Ethnicity</b>		161		25	
First Nation	38 (23.6)		8 (32.0)		0.3652
Non-First Nation	123 (76.4)		17 (68.0)		
<b>Home location</b>		161		24	
Winnipeg	116 (72.1)		15 (62.5)		0.5521
Rural MB	34 (21.1)		7 (29.1)		
First Nation Reserve	7 (4.3)		1 (4.2)		
Out of Province	4 (2.5)		1 (4.2)		
<b>In CFS care</b>	35 (22.2)	158	-	-	-
<b>Reversible Medical Treatment</b>	45 (33.6)	134	15 (60.0)	25	0.0124*
<b>Cross Sex Hormone Treatment</b>	30 (22.4)	134	7 (28.0)	25	0.5421
<b>Surgery</b>	14 (10.3)	136	4 (16.0)	25	0.4865
<b>Mental Health Comorbidity</b>	66 (37.9)	174	12 (57.14)	21	0.0896
<b>Anxiety or Depression</b>	49 (28.16)	174	10 (47.62)	21	0.0667

\*  $p < 0.05$  indicating statistically significant difference between groups

Table 2: Number of patients referred to and discharged from the GDAAY program and the number of active natal male and natal female patients in the GDAAY program per year.

Year	Active Natal Males	Active Natal Females	Referrals to GDAAY	Discharges or Referrals out of GDAAY
2007	0	1	1	0
2008	0	2	1	0
2009	0	2	0	0
2010	2	2	3	1
2011	6	5	7	0
2012	8	16	24	11
2013	13	21	26	16
2014	18	26	29	19
2015	16	46	58	40
2016 (Jan 1 - Jul 1)	20	55	25	12

Table 3: Reasons and frequencies for why patients were discharged from GDAAY or why referrals to the program were not accepted.

Total n = 100	n
Lost to Follow-up	13
No longer wanting to transition/patient choice	20
Not seen in GDAAY - Too old at referral	33
Graduated to other Healthcare Professional	25
Not in Service Area	5
Too young for services	2
No Family support/Not safe in family environment	2

Table 4: Mental health diagnosis from chart extraction. Note some patients had multiple mental health diagnosis so number of diagnosis is greater than the total number of participants with any diagnosis.

Total n = 161	n (%)
Anxiety (Panic, Social, Generalized, PTSD, OCD, phobias)	32 (19.9)
Mood disorders (depression)	26 (16.1)
Mood disorders (bipolar)	2 (1.2)
Conduct disorders: ODD, hypersexuality	3 (1.9)
Neurodevelopmental disorders (ASD, FASD, ADHD, Tourett's)	16 (9.9)
Psychotic disorders	1 (0.6)
Eating disorders	3 (1.9)
Substance abuse disorders	2 (1.2)
Child-Parent relational problem	3 (1.9)
Adjustment disorder	2 (1.2)



**Table 5: Analysis of demographic variables and having any mental health diagnosis.**

	Any Mental Health Diagnosis		No Mental Health Diagnosis		Analysis	
	n (%) or Mean	Total n	n (%) or Mean	Total n	p value	Test used
<b>Age (in years)</b>	16.47	66	15.75	95	0.2041	Kruskal-Wallis
<b>Age at Referral (in years)</b>	14.41	66	13.54	95	0.2270	Kruskal-Wallis
<b>Natal Sex</b>		66		108	0.2037	Chi-Square
Natal Male	16 (9.20)		36 (20.69)			
Natal Female	50 (28.74)		72 (41.38)			
<b>Ethnicity</b>		66		95	0.0951	Chi-Square
First Nation	20 (12.42)		18 (11.18)			
Non-First Nation	46 (28.57)		77 (47.83)			
<b>Home location</b>		66		95	0.6581	Fisher's Exact
Winnipeg	49 (30.43)		67 (42.61)			
Rural MB	12 (7.45)		22 (13.66)			
First Nation Reserve	4 (2.48)		3 (1.86)			
Out of Province	1 (0.62)		3 (1.86)			
<b>Child and Family Services (CFS)</b>		64		94	0.0598	Chi-Square
CFS involvement	19 (12.03)		16 (10.13)			
No CFS Involvement	45 (28.48)		78 (49.37)			

Note n values might not add up to 174 due to only using information available in chart.

**Table 6: Analysis of demographic variables and having an anxiety or depression diagnosis.**

	Anxiety/Depression Diagnosis		No Anxiety/Depression Diagnosis		Analysis	
	n (%) or Mean	Total n	n (%) or Mean	Total n	p value	Test used
<b>Age (in years)</b>	16.88	49	15.68	112	0.0592	Kruskal-Wallis
<b>Age at Referral (in years)</b>	14.86	49	13.48	112	0.0431*	Kruskal-Wallis
<b>Natal Sex</b>		49		125	0.0144*	Chi-Square
Natal Male	8 (4.60)		44 (25.29)			
Natal Female	41 (23.56)		81 (46.55)			
<b>Ethnicity</b>		49		112	0.8608	Chi-Square
First Nation	12 (7.45)		26 (16.15)			
Non-First Nation	37 (22.98)		86 (53.42)			
<b>Home location</b>		49		112	0.5860	Fisher's Exact
Winnipeg	36 (22.36)		80 (49.69)			
Rural MB	10 (6.21)		24 (14.91)			
First Nation Reserve	3 (1.86)		4 (2.48)			
Out of Province	0 (0.00)		4 (2.48)			
<b>Child and Family Services (CFS)</b>		47		111	0.8631	Chi-Square
CFS involvement	10 (6.33)		25 (15.82)			
No CFS Involvement	37 (23.42)		86 (54.43)			

\*  $p < 0.05$  indicating statistically significant difference between groups

Note n values might not add up to 174 due to only using information available in chart.