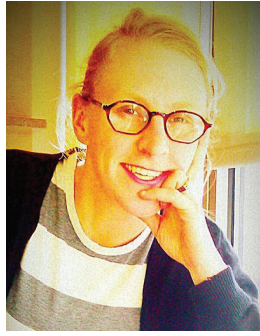




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A PRIMER ON ISSUES IN TRANSGENDER MEDICINE

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DISPARITIES IN HEALTH AND HEALTH CARE

Over the last several years, many efforts have been made to make the field of health care more inclusive and affirming of the lesbian, gay, bisexual and transgender (LGBT) community. However, sexual and gender minorities still face many disparities in physical health, mental health, and substance abuse. Lesbians are less likely than heterosexual women to undergo the recommended screening and preventive services for cancer.¹ LGBT youth are five times more likely to attempt suicide than non-LGBT peers.² Gay men still represent two-thirds of new HIV infections.³ Lesbians and bisexual women have higher rates of obesity. LGBT populations have the highest rates of drug use including tobacco and alcohol.¹

Within the LGBT community, transgender patients experience additional health disparities. Approximately 22% of transgender women test positive for HIV, and HIV diagnoses among the transgender population are three times higher than the national average.³ Forty percent of transgender people have attempted suicide. Transgender individuals are less likely to have health insurance than the general population or the LGB community. Fifty-nine percent of transgender individuals have avoided public bathrooms out of fear, and this bathroom avoidance led 8 percent of transgender people to develop urinary tract infections in 2015.⁴

Since the transgender population has significantly higher rates of many conditions that have an adverse impact on health, they need access to high quality health care. Yet, the current health care environment impedes many of them from receiving services. One-third of all transgender Americans have had a negative

experience with a health care provider within the last year due to being transgender, and 23% avoided visiting the doctor when they should have, because they feared the doctor would mistreat them. Twenty-four percent of transgender patients have had to “teach their health care provider about transgender people to get appropriate care.”⁴ To lessen these health disparities, all physicians need to educate themselves about the basics of transgender medicine, and how to create a more welcoming environment for LGBT patients. Physicians who do not provide gender confirmation medical care can still ensure their transgender patients are receiving quality care.

DEFINITION OF TERMS

In order to treat LGBT patients in a fair, understanding, and affirming way, it is crucial to understand key terms associated with the LGBT population. *Gender roles*, *sexual orientation*, and *gender identity*, are three terms physicians should familiarize themselves with:

- *Gender roles* are the typical roles played by each gender as perceived by society. The gender roles of one society may differ from those of another society, and gender roles may change over time within a single society. An example of a changing gender role is apparent in health care. Historically, most physicians were male. Today, nearly half of medical school graduates are women.⁵
- *Sexual orientation* encompasses to whom individuals are attracted. Heterosexual, gay, lesbian, and bisexual are examples of sexual orientations.
- *Gender identity* is a person’s perception of

themselves as male, female, both or neither regardless of biological sex. Gender identity and sexual orientation are separate concepts that do not dictate one another.⁶

Transgender means that an individual's gender identity does not match their biological sex; *cisgender* refers to an individual whose gender identity and biological sex are the same.

According to a 2012 study, "participants found a basic awareness by health care providers of LGBT issues and terminology to be helpful, and the quality of care was better when the provider was aware that each person is different, and asked questions about patient preferences."⁷ Another study showed that "greater perceived physician knowledge about trans health issues" is associated with transgender patients being more comfortable talking to their primary care providers.⁸ Overall, efforts to understand the LGBT culture and the terms associated with it can improve the health care of an individual by opening the lines of communication between the physician and patient.

UNDERSTANDING THE SPECTRUM OF GENDER DYSPHORIA

The *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)*, established *gender dysphoria* as a new diagnosis for transgender individuals.⁹ Prior to the DSM-5, transgender individuals were given the diagnosis *gender identity disorder*, instead of *gender dysphoria*. The new diagnosis draws attention to the stresses caused by the incongruity between one's gender identity and biological sex as the medical issue, rather than suggesting that the identification with another gender is in itself a disorder. A diagnosis of gender dysphoria should be given to someone who experiences "marked difference between the individual's expressed/experienced gender and the gender others would assign him or her, and it must continue for at least six months." This diagnosis allows gender dysphoria to be viewed as a fluid spectrum. The "marked difference" may refer to an individual's belief that they are a different gender than how they are viewed by the public, their preference to dress and adopt the gender roles of another gender, an individual's desire for surgery and/or hormones to change their gender physically, or a combination of any of the above. Hence, when treating gender dysphoric patients, it is important to remember that not all patients express their gender

identity in the same way, and treatments should be tailored to the patients' needs.

BIOLOGICAL BASIS OF GENDER DYSPHORIA

For many years, people claimed that early childhood experiences were determining factors in whether someone would become transgender. However, this view has largely fallen out of favor due to lack of scientific support, and a new hypothesis has taken its place. Among medical and other scientific professionals, it is relatively widely accepted that differences in neurological development contribute to establishing a person's gender identity regardless of the biological sex. A study of white matter in both male-to-female (MTF) and female-to-male (FTM) transgender populations has shown that the white matter of MTF individuals is more like that of biological females, while the white matter of FTM individuals is more like that of biological males.¹⁰ Another study tested the white matter of individuals who had not yet received cross sex hormone therapy, and found that the brains of transgender people were more structurally similar to cisgender people with whom they shared their gender identity, rather than to those with the same biological sex.¹¹

While white matter studies provide evidence for structural similarities between transgender people and cisgender people with whom they share their gender identity rather than biological sex, other researchers have begun to use chemical signaling to assess the functional response of transgender brains. One study demonstrated that MTF transgender patients who were smelling steroids, had hypothalamic activation more like biological females than biological males.¹²

IMPORTANCE OF TRANSGENDER MEDICAL TREATMENT

Depression, anxiety, and suicidal tendencies are higher among transgender individuals of all ages than in the U.S. population as a whole, and medical treatment combined with psychological treatment can help alleviate some of this psychological stress. In a recent study on cross-sex hormone treatment, both the depression and body uneasiness of transgender patients decreased over time as they received hormone treatments.¹³ This suggests that hormone treatments alone can be beneficial in improving the psychological well-being of transgender individuals. Depending on the needs of the patients, hormone treatments are often effective in changing the body and improving mental health, but other forms of medical treatment may be beneficial as well. Some patients need psychotherapy

to cope with both the social and physical adjustments that accompany transitioning. Gender confirmation surgery can benefit patients who wish to make a full physical transition to a gender that differs from their biological sex.

To ensure that transgender patients receive safe and effective treatment, the World Professional Association for Transgender Health (WPATH) has established standards of care that describe eligibility for both hormonal and surgical treatment, and – for providers of such services – lay out a framework of appropriate types of treatment. The standards also emphasize the importance of making mental health care available for transgender individuals, whether or not they are receiving medical treatment, due to the high prevalence of anxiety, depression, and other mental health diagnoses. Likewise, the standards are a helpful resource for all physicians looking to be more affirming and inclusive of all their patients, because it includes sections on appropriate primary and preventive care for transgender individuals. The standards emphasize that quality primary and preventive care is necessary to undergo a healthy transition.¹⁴

ADULT HORMONAL TRANSGENDER MEDICINE

Cross-sex hormone treatment is available for both MTF and FTM adults. According to the standards of care, a transgender individual must be informed about both the positive and negative effects of hormone treatment and undergo a psychological evaluation before hormone treatment can be administered.¹⁵ Cross-sex hormone treatment can decrease depression and body uneasiness among transgender individuals, and it is easier to access than gender confirmation surgery. These factors make cross-sex hormone treatment a common and beneficial treatment among many members of the transgender community. Undergoing hormone treatment is akin to undergoing puberty another time. Like puberty, hormone treatment affects the body over time rather than all at once, so it can take two to three years before the full effects of hormone treatment can be seen.¹⁴

For MTF transgender individuals, the current practice is to administer an antiandrogen as well as estrogen. The antiandrogen, often spironolactone, is used to prevent the production and effects of testosterone.¹⁶ If an antiandrogen is not used, higher doses of estrogen are needed to induce feminization, and this can lead to more side effects from the estrogen. Estrogen can be administered orally, intramuscularly,

or topically. Oral estrogen such as the pill estradiol is common, though topical treatments are often prescribed to older patients. Such treatment leads to the development of breasts, fat redistribution to the chest and hips, increased scalp hair growth, and decreased body and facial hair growth among other feminine features.¹⁴

When treating FTM transgender individuals, the current practice is to administer androgens like testosterone intramuscularly or transdermally. Treatment typically results in the cessation of menses, increased BMI, increased muscle mass, and the growth of facial hair, among other masculine features.¹⁴

The standards of care also provide guidelines for pediatric patients: no medical intervention should be provided to pediatric patients with gender dysphoria, but counseling is recommended. Once children reach puberty, hormone blockers can be provided to prevent their bodies from undergoing changes they may find stressful. Between the ages 14 and 16, physicians can start treating their patients with cross sex hormone treatment. The guidelines recommend that patients do not undergo gender confirmation surgery until at least age 18.¹⁴

GENDER CONFIRMATION SURGERY

Though not all transgender patients want gender confirmation surgery,¹⁴ several types are currently available, including breast mastectomy, breast enhancement, facial feminization, and genital surgery. If a patient expresses a desire for gender confirmation surgery, they should be referred to an appropriate mental health professional, because the current standards of care dictate that a mental health professional must officially document a diagnosis of gender dysphoria and recommend surgery. Some patients who do want surgery may opt for only selected procedures such as breast modification, but not genital surgery. To ensure that surgery is the appropriate decision, patients should live as the other gender for at least 12 months prior to surgery. Both pre- and post-surgery, strong networks of primary care and mental health services can help provide support to patients. Longitudinal studies have shown that gender confirmation surgery is associated with increased sexual satisfaction and overall quality of life in those who choose it.

THE ROLE OF PRIMARY CARE

As it does for all patients, quality primary care benefits the health of transgender patients. One role of

primary care is to help connect transgender patients with resources that can assist them in transitioning. Another is to ensure that transgender patients receive appropriate preventive care, such as cancer screenings. The standards of care recommend viewing the “Guidelines for the Primary and Gender-Affirming Care of Transgender and Gender Nonbinary People” published by the UCSF Center of Excellence for Transgender Health.¹⁷ The guide educates physicians on LGBT terminology, how to create a welcoming environment, cancer screenings, managing the health of an individual undergoing hormone therapy, post-operative primary care procedures, and more.

To make an office environment more friendly to transgender individuals, physicians can offer gender neutral bathrooms and use forms that are not restrictive to male and female when asking about gender. In order to ensure a comprehensive patient history, data collection forms should ask a question about biological sex and a separate question about gender identity. All staff members should undergo training on LGBT health issues, so they can ensure they treat LGBT patients in an appropriate and welcoming way. These tactics can help establish a more welcoming environment and make patients feel safe.¹⁷

Primary care physicians who seek to be affirming and to provide quality health care to transgender individuals should make use of the available educational materials on transgender health, so they are aware of the appropriate procedures and recommendations. Both transgender men and women should undergo regular breast cancer screenings according to the same standards that apply to women, unless a transgender man has undergone a complete mastectomy. Physicians should also advise transgender men to undergo cervical cancer screenings under the same guidelines that apply to cisgender women. Likewise, prostate cancer screening should be performed on transgender women in accordance with the same guidelines applied to cisgender men. Transgender women are also at risk for osteoporosis, and this risk increases the longer a patient has undergone hormone treatment.¹⁷

While many aspects of primary care for transgender individuals are the same as those for the general population, some procedures differ because the treatments transgender individuals undergo may put them at risk for certain health conditions even though such side effects are rare. FTM patients undergoing hormone therapy may be at an increased risk for polycythemia, hyperlipidemia, cardiovascular disease, type

II diabetes, and hypertension. MTF individuals undergoing hormone therapy may be at increased risk for venous thromboembolic disease, hypertriglyceridemia, cardiovascular disease, type II diabetes, and hypertension.¹⁴ Hematomas, seromas and infections are possible in both MTF and FTM patients following breast surgery. Genital gender confirmation surgery increases the risk of urinary tract infections in MTF individuals. Physicians treating transgender patients who are undergoing or have undergone such treatments and/or procedures should monitor them for these conditions.¹⁴

Physicians should also present options for preserving fertility to patients who plan to undergo cross sex hormone therapy, since infertility is a known side effect. There are several options available: MTF individuals can have their sperm frozen and banked, while FTM individuals can have their oocytes or ovarian tissue banked. Though all transgender patients should be made aware of their options, some do not wish to preserve their fertility because in some cases the transition is faster without such efforts.¹⁸

MENTAL HEALTH

The standards of care recommend, and in some cases require, that transgender patients undergo mental health care before engaging in various types of treatments, and they recommend mental health counseling throughout the treatment process with both hormone treatments and gender confirmation surgery.¹⁴ Transgender individuals tend to have higher rates of depression than the general population due to discrimination and minority stress. While hormone therapy has been shown to decrease their depression, so does psychotherapy. Many training modules are available for mental health professionals who wish to treat transgender individuals.¹⁷

Mental health care of transgender individuals intersects with hormone therapy, gender confirmation surgery, and primary care. Prior to hormone therapy, a referral from at least one mental health care professional is needed, and gender confirmation surgery requires referral by two mental health professionals. These professionals can help coordinate care and make sure that a patient fulfills the eligibility requirements for hormone and/or surgical treatment set forth by the standards of care.¹⁴ Furthermore, mental health professionals can help transgender individuals improve communications and ease social transitions throughout the course of using medical treatment to aid the transition to a different gender.

CONCLUSION

Many barriers, including discrimination, lack of knowledge, stigma, and insurance difficulties, prevent the LGBT population and specifically transgender individuals from receiving the health care they need. Physicians, nurses, and other medical staff can work

to combat the health disparities created by these barriers, by using education to become culturally competent, by creating a welcoming environment, by providing comprehensive primary care, and by connecting patients with helpful medical resources to fit their needs.

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