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Facial Feminization Surgery: The Ethics of Gatekeeping in Transgender Health

Alex Dubov, PhD and

Assistant Professor, Loma Linda University, School of Public Health, Sanitarium Dr., Loma Linda, CA 92350, Phone: 404-914-7231, adubov@llu.edu

Liana Fraenkel, MD, MPH

Professor of Medicine, Yale University School of Medicine, Section of Rheumatology PO Box 208031, 300 Cedar Street, TAC Bldg., New Haven, CT 06520-8031, Phone: (203) 932-5711 x5914, liana.fraenkel@yale.edu

Abstract

The lack of access to gender-affirming surgery represents a significant unmet healthcare need within transgender community frequently resulting in depression and self-destructive behavior. While some transgender people may have access to Gender Reassignment Surgery (GRS), an overwhelming majority cannot afford Facial Feminization Surgery (FFS). The former may be covered as a ‘medical necessity’, but FFS is considered ‘cosmetic’ and excluded from insurance coverage. This demarcation between ‘necessity’ and ‘cosmetic’ in transgender healthcare based on specific body parts is in direct opposition to the scientific community’s understanding of gender dysphoria and professional guidelines for transgender health. GRS affects one’s ability to function in intimate relationship while FFS has the same impact on social interactions and, therefore, may have a far greater implication for one’s quality of life. FFS is a cost-effective intervention that needs to be covered by insurance policies. The benefits of such coverage far exceed the insignificant costs.

“Medical necessity” is a legal doctrine in the U.S. used as a means to control healthcare costs (Dolgin 2015). Health care services that are deemed medically necessary to diagnose or treat an illness or injury are meant to be covered by insurers, while the remaining “non-essential” services (ranging for rhinoplasty to unproven but potentially lifesaving experimental treatments) are not.

There is no Federal definition of ‘medical necessity’ and only one-third of States have a regulatory definition of this concept (Abbott and Stevens 2013). As a result, the definition of ‘medical necessity’ is often found in individual insurance contracts, where it is framed in a broad, multidimensional way, and controlled by the insurer, not the medical professional (Skinner 2013). The process of medical necessity determination is rarely transparent and available for public review. Even when it is possible to demonstrate that a proposed treatment is consistent with professional clinical standards, the insurer may invoke ‘medical

necessity' to reject claims. Therefore, insurer's reliance on the notion of medical necessity in reviewing claims can be a form of rationing, driven by concerns for costs over the potential advantages of the intervention at stake (Hill 2012). For example, in the early 2000s insurance companies considered bariatric surgery as cosmetic and not medically necessary, despite the evidence demonstrating its efficacy (Hall 2003). Further, the approval or refusal of medical claims can reflect ideological or political agendas. For instance, anti-abortion groups may question decisions to cover abortions because the procedure is not medically necessary (Kaposy 2009).

Transgender people often have a critical need for medical treatment that mitigates their gender dysphoria. Facial feminization surgery (FFS) is an important component in the treatment of gender dysphoria and it can be more important than genital reassignment surgery in alleviating symptoms of gender dysphoria (Capitán et al. 2014). However, FFS is commonly denied by insurers as cosmetic and not medically necessary treatment for gender dysphoria. These denials reflect a long history of labeling medical care for transgender people as unnecessary, unproven, and unworthy of payment by insurance premiums. In this article, we argue that by labeling FFS as cosmetic and denying coverage insurers discriminate on the basis of diagnosis and fail to provide medically necessary treatment. As noted above, the definition of medical necessity can be ambiguous. Some documents define it as 'the services that a prudent physician would provide to a patient to prevent, diagnose, or treat a medical ailment, as determined by generally accepted standards of medical practice.' (American Medical Association 2011) The medical consensus and published standards of practice (Deutsch and Feldman 2013) explain that medical procedures related to sex reassignment (including FFS) are not 'cosmetic' or performed for the mere convenience of the patient. Transgender people do not seek these procedures due to their personal preference, but rather to change sex characteristics as treatment for their gender dysphoria (Rosh 2017). Therefore, FFS is not cosmetic or optional, but needs to be understood as medically necessary for the treatment of gender dysphoria.

In 2011, the Institute of Medicine (IOM) released a landmark report on the health of sexual and gender minority people who are lesbian, gay, bisexual, and transgender (LGBT). The report specifically emphasized the importance of transgender health research to better understand the needs of this underserved population. Transgender is an umbrella term that is used to identify people who experience incongruence between their sex assigned at birth and gender identity (Graham 2011). While there is nothing inherently pathological about the transgender experience, some people may experience significant distress associated with their gender incongruence or, in other words, gender dysphoria. Gender dysphoria refers to the discomfort and distress that arise from a discrepancy between a person's gender identity and sex assigned at birth (American Psychological Association 2015).

The diagnostic criteria for gender dysphoria are as follows: (1) desire to live and be accepted as a member of the opposite sex, usually accompanied by the wish to make his or her body as congruent as possible with the preferred gender through surgery and hormone treatment; (2) has lived as transgender for at least two years; (3) the condition is not a symptom of a mental disorder; and (4) it causes significant distress or social impairment (Cohen-Kettenis and Pfäfflin 2010). The underlying logic for the treatment of gender dysphoria rests on a

several presuppositions: (1) the person's body is wrongly gendered in relation to a self-identified gender identity; (2) the wrong gender is a series of bodily properties that can be identified and changed to what is considered normal for the chosen gender. (3) the conflict between 'self' and 'body' cannot be resolved through psychotherapy alone, but can be alleviated through medico-surgical interventions (Wylie et al. 2014).

The exact prevalence of gender dysphoria is difficult to estimate due to the stigma and limited access to healthcare among the transgender population (Collin et al. 2016). Furthermore, only in 2013 did the first medical center in the US begin adding gender identity as part of standardized demographic data in the electronic medical record (Zucker and Lawrence 2009). Recent estimates suggest that 0.5 to 0.9 percent of the U.S. population (or at least 1.4 million) have some degree of gender dysphoria (Herman et al. 2017). The rising prevalence and acceptance of transgenderism along with improved evidence-based surgical standards of care for gender-confirming surgery has resulted in a greater number of people seeking gender-affirming surgeries. However, despite the recent surge in media attention regarding the transgender community and decreasing stigma surrounding transgenderism, the access to necessary gender-affirming health care remains unacceptably poor. Transgender persons requiring effective treatment continue to face significant barriers to affordable medical care because of exclusions in health insurance policies and a scarcity of specialized providers.

The 2015 survey of 27,715 people by the National Center for Transgender Equality (NCTE) found that while the majority of respondents wanted to access gender-affirming treatment, only 49% had transitioned medically, while 25% were able to transition surgically (James et al. 2016). These numbers speak to significant unmet healthcare needs. While transgender people approach their transitions differently, the number of existing providers equipped to care for the US transgender patients remains profoundly low. For example, endocrinologists are often key healthcare providers for transgender people. However, a third of endocrinologists are unwilling to care for transgender patients, and fewer than half say they feel at least somewhat competent in providing that care (Irwig 2016). With respect to surgical reassignment surgery (GRS) and facial feminization surgery (FFS) more specifically, 22 states¹ do not have a single surgeon specializing in FFS and additional 7 states² have only one FFS trained surgeon according to a national registry (TransHealthCare). Furthermore, some studies point out that many surgeons who market themselves as being able to perform FFS are only trained to work with soft tissue modification. There are only a few surgeons in the US who are skilled in bone modification (Plemons 2012).

Lack of qualified providers is not the only barrier to gender-affirming care. Many transgender people are reluctant to seek needed care due to prevailing stigma and mistreatment. According to the NCTE survey, nearly one-quarter of respondents reported that they avoided seeking healthcare because they feared being mistreated. However, the most significant barrier to care is lack of insurance and ability to pay for treatment. One in

¹AL, AK, CT, DE, HI, ID, IA, KS, ME, MS, MT, NE, NH, ND, OK, SC, SD, UT, VT, WV, WY

²AK, KY, LS, MN, MO, NM, WV

four respondents experienced a problem in the past year with their insurance related to being transgender. More than half (55%) of those who sought coverage for gender-affirming surgery in the past year were denied, and 25% of those who sought coverage for hormones in the past year were denied (James et al. 2016). Thus, a significant proportion of persons in the US with gender dysphoria continue to suffer despite the availability of effective treatment.

Transgender people who are unable to access gender-affirming care are more likely to have depression, more prone to self-destructive behavior and are less likely to be employed (Wilson et al. 2015). Furthermore, according to the gender affirmation theory, anxiety and maladaptive coping strategies result from stigma-related stressors that threaten one's identity and exceed one's coping resources. When the need for gender affirmation is high (due to psychological distress) and access to gender affirmation is low (due to social oppression), identity threat may result (Sevelius 2013). Transgender people may attempt to reduce identity threat by either attempting to increase their access to gender affirmation or decrease their need for gender affirmation, and these coping strategies may often be maladaptive (i.e. engaging in sex work or pursuing dangerous silicone injections). In New York City (NYC), 22% of transgender women have had underground silicone injections, and widespread non-prescribed hormone use has been documented in various convenience samples ranging 58% of transgender respondents in DC (Xavier 2000), nearly 60% in Virginia (Xavier, Honnold and Bradford 2007), 71% in Chicago (Garofalo 2006), 29% in San Francisco (Clements-Nolle 2001), and 23% in NYC (Sanchez, Sanchez and Danoff 2009). In the worst-case scenario, identity threat may lead to suicide. The suicide rate in transgender persons is 40%, a rate demanding swift change and implementation at a minimum of effective therapies.

In this paper, we argue that the ability to 'pass' as the member of one's target gender is required for transgender persons' well-being and ability to successfully function in the current American society, and thus medical treatment and surgical procedures required to meet this goal should be considered as medically necessary and covered by insurance. Gender affirming hormone replacement therapy (HRT) is covered by many private insurance companies, Medicare, and Medicaid. Some government insurance plans cover GRS, but they usually exclude other procedures including masculinizing chest surgery (for female-to-male or FtM), facial feminization procedures, reduction thyrochondroplasty, voice surgery, and electrolysis. Insurance coverage for gender-affirming care is rare with 8% of employers with 500 or more workers covering GRS and none covering FFS (Human Rights Campaign 2015).

Facial feminization surgery refers to a set of surgical procedures that alter the characteristic male facial features to provide a more feminine appearance. FFS procedures include common facial plastic procedures like brow lift, rhinoplasty, cheek implantation, and lip augmentation, as well as more specific ones intended to modify bone structure like scalp advancement, frontal cranioplasty, and reduction mandibuloplasty (Ousterhout 2015). In most cases, the desired degree of feminization is impossible to achieve through soft tissue procedures alone since bone structure provides the architecture of facial sex differences. In this regard FFS is different from cosmetic surgery (Altman 2012). The objective of FFS is to decrease gender dysphoria by aligning the facial features of gender with the inward

identification of gender. Male-to-female (MtF) transgender persons have greater difficulty changing their outward appearance compared to FtM transgender persons (van de Grift 2016). Facial features, such as jaw line or facial hair growth, are difficult to modify and they are often the main area of concern for MtF patients. It is essential for these patients that their facial features be adjusted in such a way that the face will be recognized as belonging to the female gender.

Feeling congruent with one's outward appearance alleviates anxiety and depressive symptoms (Kozee, Tylka and Bauerband 2012). A number of relatively limited retrospective studies have assessed the quality of life after FFS and have demonstrated favorable outcomes in both appearance (Ainsworth and Spiegel 2010) and patient satisfaction (Raffaini, Magri and Agostini 2016). These studies concluded that FFS can significantly enhance the quality of life and reduce the psychosocial sequelae faced by transgender women, who are often marginalized and discriminated against in healthcare and society (Ousterhout 2015). One recent prospective study assessed psychological outcomes pre- and post-surgery. Six months after the surgery subjects reported improvement in overall appearance congruence and body image satisfaction, less avoidance, less day-to-day distress, and greater success in forming relationships (Isung et al. 2017). Furthermore, one recent study found that utilization of gender-affirming care, including FFS, can serve as a protective factor for health disparities in mental health, substance use, and HIV, which all impact transwomen (Wilson 2015). This study emphasizes that FFS is protective against violence and discrimination. Violence is often the result of being "visibly gender non-conforming," which has been found to elicit anti-transgender bias (Grant et al. 2010). When a transwoman has an appearance that does not transgress typical conceptions of gender, it serves as a protection from violence and discrimination, and by extension reduces their risk of depression and suicide.

FFS accomplishes a number of outcomes that GRS alone cannot deliver. While GRS is most commonly associated with transition, it has minor impact on how others recognize and respond to a person's gender. Genitals are hidden from the vast majority of daily encounters. If the ultimate goal of MtF transition is for the patient to be recognized by others as a woman, then the most profound change can be achieved by focusing not on what others see the most – the face. The overarching goal of FFS is to enable one to 'pass' in order to be accepted and consequently function in society.

While many insurance companies have recognized the importance of gender-affirming therapy, FFS remains unachievable for most MtF patients. On July 18, 2016, a set of rules entitled "Nondiscrimination in Health Programs and Activities" became effective. These new rules prohibit discrimination based on gender identity and are applicable to every health program that receives federal financial assistance, is administered by Human Health Services' health programs, or is established under Title 1 of the Affordable Care Act. Currently, ten jurisdictions prohibit health plans from using blanket exclusions for transgender healthcare services. In addition, eight states explicitly require coverage of transgender benefits for their state employee health plans and 12 cover gender transition services for their Medicaid populations (Budge, Katz-Wise and Garza 2016). However, these benefits are limited to hormone treatment and GRS. Furthermore, state laws that prohibit exclusions of services based on gender identity may still allow plans to deny services based

on medical necessity. FFS is generally considered ‘cosmetic’ and not a medical necessity and, therefore, excluded from insurance coverage. The average cost of FFS is \$60,000 while the average cost of GRS is \$20,000. Few MtF persons are able to afford FFS (The Philadelphia Center for Transgender Surgery).

This distinction between ‘medical necessity’ for GRS coverage and ‘cosmetic’ when it comes to FFS coverage based on specific body parts is in direct opposition to the scientific community’s understanding of gender identity. The recent change in DSM manual from gender identity disorder to gender dysphoria conceptualizes gender as the way one views oneself in relation to others in society, rather than a property of one’s anatomical structure. However, most insurance policies imply that ‘gender’ is defined by external genitalia, while all other body characteristics contribute to ‘appearance.’ For instance, New York has provisions for gender transition services, excluding, however, coverage for “cosmetic surgery, services, and procedures,” defined as “anything solely directed at improving an individual’s appearance.” (New York Commissioner of Health 2016) This demarcation between ‘necessity’ and ‘cosmetic’ goes against the World Professional Association for Transgender Health Standards of Care. The document describes FFS as both medically necessary and essential to the well-being of transgender individuals. It states “these surgical interventions are often of greater practical significance in the patient’s daily life than reconstruction of the genitals.” (WPATH 2016) For transgender women, GRS affects one’s ability to function in intimate relationships as fully female but it otherwise has little impact on non-intimate relationships with the exception of providing legal status (Ainsworth and Spiegel 2010). Most relationships are by their nature social rather than sexual, and so FFS has a far greater impact on one’s quality of life than GRS (Plemons 2012).

In the policies of the house of delegates of the American Medical Association, the definition of cosmetic surgery is that of “surgery performed to reshape normal structures of the body to improve the patient’s appearance and self-esteem.” (American Medical Association 198_) However, a medically-necessary surgery “is performed on an abnormal structure of the body caused by congenital defects, developmental abnormalities, trauma, infection, tumors, or disease and is generally performed to improve the function but may also be done to approximate normal appearance.” We argue that if one considers abovementioned treatment logic for gender dysphoria, FFS must be categorized as a medical necessity. While cosmetic surgery is intended to produce beauty, FFS is undertaken to produce femaleness. Like GRS, FFS is intended to transform the patient’s gender from male to female. FFS is not driven by a desire to achieve cosmetic improvement; it is driven by a desire to obtain a body that enables one to engage and function in society

A number of surgeons have now recognized FFS as a critical part of transition process. They point out that FFS should be judged according to the same standards and logic as GRS, as both procedures are about creation of gender and not about restoration or enhancement of physical appearance. Nouraei, et al. 2007, indicated that FFS is an important part of “aligning the patient’s physical appearance with his or her perceived sex.” They write, “the face is the most noticeable part of the human body, and facial feminization in male-to-female transsexualism is an important part of the gender reassignment process.” (Nouraei et al. 2007) Dempf et al. 2010 include FFS as a part of “gender reassignment” when the face of

the patient warrants it. “In male-to-female transsexuals with strong masculine facial features facial feminization surgery can be performed as part of gender reassignment.”

There are many examples of when evidence regarding the impact of a given procedure on quality of life has led to changes in insurance coverage and reclassification of a procedure from ‘cosmetic’ to ‘necessary.’ Breast augmentation is considered a cosmetic procedure and not covered by insurance but reconstructive breast surgery for cancer patients that have undergone mastectomies is considered medically necessary and therefore a covered service. Similarly, we no longer consider facial surgery for victims of extensive burns to be ‘cosmetic’. So too should FFS no longer be considered ‘cosmetic’ but medically necessary and universally covered by insurance plans. Considering this important procedure as purely ‘cosmetic’ is a failure to understand why FFS is felt to be an absolute necessity and to act on the significant improvements we have made in understanding the impact of gender dysphoria over the past few decades.

Sweden was the first country to recognize that FFS should be covered as part of gender-affirming care. In April 2015, the Swedish National Board of Health and Welfare published a new national guideline of care for patients suffering from gender dysphoria (Lundgren 2016). While GRS, hormone therapy, speech therapy, and electrolysis have been offered in Sweden for a number of years, medical professionals recognized the disparity in treatment and developed guidelines outlining the role of FFS. So too should the US healthcare system recognize this disparity and reclassify FFS as a medical necessity for successful MtF transition. Ideally, the goals of medical care should enable a transgender person to successfully function socially as a member of their desired gender. The ability to “pass” in daily social interactions as a member of the desired gender is critical to the well-being of transgender persons. When we consider the ability to “pass” as the ultimate treatment goal, FFS is a clear critical necessary service.

The current lack of uniform medical standards for, and access to, transition-related services leave many transgender persons without hope. The cost to cover transition-related care would be fewer than two pennies per month for every person with health insurance in the US and will not result in increased premiums (Padula, Heru and Campbell 2016). For instance, a recent research on cost efficiency of policies expanding access to transgender-inclusive coverage in Massachusetts showed that covering transition-related services is cost-effective, particularly given the high financial and human costs associated with untreated gender dysphoria (Padula, Heru and Campbell 2016). An economic-impact analysis of California’s regulation found that removing transgender exclusions had an “immaterial” effect on premium costs, leading the California Department of Insurance to conclude that “the benefits of eliminating discrimination far exceed the insignificant costs”; those benefits include improved health outcomes among transgender people, such as reduced suicide risk, lower rates of substance use, and increased adherence to HIV treatment (Baker 2017). A recent study published estimated that without the transition surgeries (one time cost) healthcare for a transgender person will cost \$10,712 a year (Padula and Baker 2017). Therefore, FFS is a cost-effective intervention that needs to be covered by insurance policies. There are ample reasons and precedents supporting classification of FFS as a

medical necessity. It is time for the delivery of health care to catch up with the needs of transgender persons.

In this article we made an argument to justify the public and private coverage of FFS that recognizes this intervention as medically necessary and crucial for psychological and social well-being of transgender people. This argument can be supported by a more fundamental need for justice in the administration of our social institutions. The thesis is that FFS should be publicly and privately covered because preventing access to FFS by denying insurance coverage is unjust. The argument can be summarized as follows:

1. Managed care is built on the notion that only services needed to treat a sickness or injury should be reimbursed. Delivery of unnecessary services increases the cost of health services.
2. Medical providers and insurance companies are entrusted with the role of distinguishing which treatments are cosmetic and which are medically necessary.
3. These policy decisions on funding can have significant impact on well-being of certain groups of people. Health is just one of many aspects of individual well-being.
4. Decisions about insurance coverage of certain conditions can be considered unjust if they create, compound, or perpetuate harm or disadvantage with respect to well-being of specific groups of people.
5. Denials of coverage for FFS have adverse and unjust effects on essential dimensions of the well-being of transgender people. Transgender individuals with untreated or only partially treated gender dysphoria face much greater risk of suicide (Haas 2010) or self-harm (Liu and Mustanski 2012) than the general population. Furthermore, the discrimination that transgender individuals face is inversely related to their ability to access transition related medical care. Transgender individuals whose appearance does not conform to their gender identity experience notably higher rates of discrimination by employers (Koch and Bales 2008) and even healthcare providers (Hughto, Reisner and Pachankis 2015) in receiving medical care.
6. The staggering rates of transgender self-harm and suicide, as well as discrimination faced by transgender people, together with structural barriers to employment and healthcare, should be considered in decisions about coverage of FFS. It is unjust to deny coverage of FFS as this policy decision will perpetuate harms and disadvantages faced by transgender people.

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Reference list

- Abbott Ryan, and Stevens Carl. "Redefining medical necessity: a consumer-driven solution to the US health care crisis." *Loy. LAL Rev.* 47 (2013): 943.
- Ainsworth Tiffany A., and Spiegel Jeffrey H.. "Quality of life of individuals with and without facial feminization surgery or gender reassignment surgery." *Quality of Life Research* 19.7 (2010): 1019–1024. [PubMed: 20461468]
- Altman K "Facial feminization surgery: current state of the art." *International journal of oral and maxillofacial surgery* 41.8 (2012): 885–894. [PubMed: 22682235]
- American Medical Association Policies of House of Delegates. Definitions of "Cosmetic" and "Reconstructive" Surgery, H-475.992. Council Medical Services Annual Meeting, 6 1989, Chicago, IL
- American Medical Association. "Statement of the American Medical Association to the Institute of Medicine's Committee on Determination of Essential Health Benefits." Retrieved June 26 (2011): 2016.
- American Psychological Association. "Guidelines for psychological practice with transgender and gender nonconforming people." *American Psychologist* 70.9 (2015): 832–864. [PubMed: 26653312]
- Baker Kellan E. "The Future of Transgender Coverage." *New England Journal of Medicine* 376.19 (2017): 1801–1804. [PubMed: 28402247]
- Budge Stephanie L., Katz-Wise Sabra L., and Garza Michael V.. "Health disparities in the transgender community: Exploring differences in insurance coverage." *Psychology of Sexual Orientation and Gender Diversity* 3, no. 3 (2016): 275.
- Capitán Luis, et al. "Facial feminization surgery: The forehead. Surgical techniques and analysis of results." *Plastic and reconstructive surgery* 134.4 (2014): 609–619. [PubMed: 24945951]
- Clements-Nolle K, Marx R, Guzman R, Katz M. HIV prevalence, risk behaviors, health care use, and mental health status of transgender persons: implications for public health intervention. *American journal of public health.* 2001 6;91(6):915. [PubMed: 11392934]
- Cohen-Kettenis Peggy T., and Friedemann Pfäfflin. "The DSM diagnostic criteria for gender identity disorder in adolescents and adults." *Archives of sexual behavior* 39.2 (2010): 499–513. [PubMed: 19838784]
- Collin Lindsay, et al. "Prevalence of transgender depends on the "case" definition: a systematic review." *The journal of sexual medicine* 13.4 (2016): 613–626. [PubMed: 27045261]
- Dempf Rupert, and Eckert Alexander W.. "Contouring the forehead and rhinoplasty in the feminization of the face in male-to-female transsexuals." *Journal of Cranio-Maxillofacial Surgery* 38.6 (2010): 416–422. [PubMed: 20036572]
- Deutsch Madeline B., and Feldman Jamie L.. "Updated recommendations from the world professional association for transgender health standards of care." *American family physician* 87.2 (2013): 89–93. [PubMed: 23317072]
- Dolgin Janet L. "Unhealthy Determinations Controlling Medical Necessity." *Va. J. Soc. Pol'y & L* 22 (2015): 435.
- Garofalo Robert, Deleon Joanne, Osmer Elizabeth, Doll Mary, and Harper Gary W.. "Overlooked, misunderstood and at-risk: Exploring the lives and HIV risk of ethnic minority male-to-female transgender youth." *Journal of adolescent health* 38, no. 3 (2006): 230–236. [PubMed: 16488820]
- Graham Robert, et al. "The health of lesbian, gay, bisexual, and transgender people: Building a foundation for better understanding." Washington, DC: Institute of Medicine (2011).
- Grant JM, Mottet LA, Tanis J, Herman JL, Harrison J, Keisling M. National Transgender Discrimination Survey Report on health and health care: National Center for Transgender Equality, 2010;
- Haas Ann P., et al. "Suicide and suicide risk in lesbian, gay, bisexual, and transgender populations: Review and recommendations." *Journal of homosexuality* 58.1 (2010): 10–51.
- Hall Mark A. "State regulation of medical necessity: The case of weight-reduction surgery." *Duke LJ* 53 (2003): 653.

- Herman Jody L., et al. "Age of individuals who identify as transgender in the United States." The Williams Institute (2017).
- Hill B. Jessie. "What Is the Meaning of Health? Constitutional Implications of Defining "Medical Necessity" and "Essential Health Benefits" Under the Affordable Care Act." *American journal of law & medicine* 38.2-3 (2012): 445–470. [PubMed: 22696976]
- Hughto Jaclyn M. White, Reisner Sari L., and Pachankis John E.. "Transgender stigma and health: a critical review of stigma determinants, mechanisms, and interventions." *Social Science & Medicine* 147 (2015): 222–231. [PubMed: 26599625]
- Human Rights Campaign. (2015). Finding insurance for transgender-related healthcare. Retrieved from <http://www.hrc.org/resources/finding-insurance-for-transgender-related-healthcare>
- Irwig MS. Transgender care by endocrinologists in the United States. *Endocrine Practice*. 2016 26;22(7):832–6. [PubMed: 26919656]
- Isung Josef, et al. "Craniofacial Reconstructive Surgery Improves Appearance Congruence in Male-to-Female Transsexual Patients." *Archives of Sexual Behavior* 46.6 (2017): 1573–1576. [PubMed: 28681189]
- James SE, Herman JL, Rankin S, Keisling M, Mottet L, Ana M. The Report of the 2015 U.S. Transgender Survey. Washington, DC: National Center for Transgender Equality, 2016.
- Kapossy Chris. "The public funding of abortion in Canada: going beyond the concept of medical necessity." *Medicine, Health Care and Philosophy* 12.3 (2009): 301–311.
- Koch Katie, and Bales Richard. "Transgender employment discrimination." *UCLA Women's LJ* 17 (2008): 243.
- Kozee HB, Tylka TL, & Bauerband LA (2012). Measuring transgender individuals' comfort with gender identity and appearance: Development and validation of the Transgender Congruence Scale. *Psychology of Women Quarterly*, 36, 179–196.
- Liu Richard T., and Mustanski Brian. "Suicidal ideation and self-harm in lesbian, gay, bisexual, and transgender youth." *American journal of preventive medicine* 42.3 (2012): 221–228. [PubMed: 22341158]
- Lundgren T. Kalle, et al. "Moving transgender care forward within public health organizations: Inclusion of facial feminizing surgery in the Swedish National Treatment Recommendations." *Archives of sexual behavior* 45.8 (2016): 1879–1880. [PubMed: 27502349]
- Maguen Shira, Shipherd Jillian C., and Harris Holly N.. "Providing culturally sensitive care for transgender patients." *Cognitive and Behavioral Practice* 12, no. 4 (2005): 479–490.
- New York Commissioner of Health (2016) Transgender related care and services. Retrieved from: https://regs.health.ny.gov/sites/default/files/pdf/recently_adopted_regulations/Transgender%20Related%20Care%20and%20Services.pdf
- Nouraei SA Reza, et al. "The role of nasal feminization rhinoplasty in male-to-female gender reassignment." *Archives of facial plastic surgery* 9.5 (2007): 318–320. [PubMed: 17875823]
- Ousterhout Douglas K. "Facial Feminization Surgery: The Forehead. Surgical Techniques and Analysis of Results." *Plastic and reconstructive surgery* 136.4 (2015): 560e–561e.
- Padula WV, Heru S, Campbell JD. Societal implications of health insurance coverage for medically necessary services in the US transgender population: A cost-effectiveness analysis. *Journal of general internal medicine*. 2016 4 1;31(4):394–401. [PubMed: 26481647]
- Padula William V., and Baker Kellan. "Coverage for Gender-Affirming Care: Making Health Insurance Work for Transgender Americans." *LGBT health* (2017).
- Plemons Eric Douglas. *Making the Gendered Face: The Art and Science of Facial Feminization Surgery*. University of California, Berkeley, 2012.
- Raffaini Mirco, Alice Sara Magri, and Tommaso Agostini. "Full facial feminization surgery: Patient satisfaction assessment based on 180 procedures involving 33 consecutive patients." *Plastic and reconstructive surgery* 137, no. 2 (2016): 438–448. [PubMed: 26818277]
- Rosh Samuel. "Beyond Categorical Exclusions: Access to Transgender Healthcare in State Medicaid Programs." *Colum. JL & Soc. Probs.* 51 (2017): 1.
- Sanchez NF, Sanchez JP, Danoff A. Health care utilization, barriers to care, and hormone usage among male-to-female transgender persons in New York City. *American Journal of Public Health*. 2009 4;99(4):713–9. [PubMed: 19150911]

- Sevelius Jae M. "Gender affirmation: a framework for conceptualizing risk behavior among transgender women of color." *Sex roles* 68.11-12 (2013): 675–689. [PubMed: 23729971]
- Skinner Daniel. "Defining medical necessity under the patient protection and affordable care act." *Public Administration Review* 73.s1 (2013).
- The Philadelphia Center for Transgender Surgery retrieved from: <http://www.thetransgendercenter.com/index.php/mtf-price-list.html>
- TransHealthCare SRS Surgeon Directory. Retrieved from: <http://www.transhealthcare.org>
- van de Grift, Tim C et al. "Body satisfaction and physical appearance in gender dysphoria." *Archives of sexual behavior* 45.3 (2016): 575–585. [PubMed: 26474976]
- Wilson Erin C., Chen Yea-Hung, Arayasirikul Sean, Wenzel Conrad, and Raymond H. Fisher. "Connecting the dots: examining transgender women's utilization of transition-related medical care and associations with mental health, substance use, and HIV." *Journal of Urban Health* 92, no. 1 (2015): 182–192. [PubMed: 25476958]
- WPATH (2016) Position Statement on Medical Necessity of Treatment, Sex Reassignment, and Insurance Coverage in the USA. Retrieved from: http://www.wpath.org/site_page.cfm?pk_association_webpage_menu=1352&pk_association_webpage=3947
- Wylie Kevan, et al. "Good practice guidelines for the assessment and treatment of adults with gender dysphoria." *Sexual and Relationship Therapy* 29.2 (2014): 154–214.
- Xavier Jessica, Honnold Julie A., and Bradford Judith B.. *The Health, Health-related Needs and Life Course Experiences of Transgender Virginians*. Virginia Department of Health, 2007.
- Xavier J Final Report of the Washington Transgender Needs Assessment Survey Washington, DC: Administration for HIV and AIDS, Government of the District of Columbia, 2000.
- Zucker Kenneth J., and Lawrence Anne A.. "Epidemiology of gender identity disorder: Recommendations for the standards of care of The World Professional Association for Transgender Health." *International Journal of Transgenderism* 11.1 (2009): 8–18.