EMORY UNIVERSITY

President's Commission on Sexuality,
Gender Diversity, & Queer Equality

RESOLUTION

for Healthcare Equity

by
THE PRESIDENT'S COMMISSION
ON SEXUALITY, GENDER DIVERSITY, & QUEER EQUALITY
at
EMORY UNIVERSITY

Whereas, the President's Commission on Sexuality, Gender Diversity, & Queer Equality (PCSGDQE) at Emory University fully supports equitable healthcare benefits for all members of our community;

Noting, through information provided to us by the Human Resources department in the Division of Finance & Administration as well as the Student Health & Counseling department in the Division of Campus Life at Emory University affirmed medically necessary claims made by members of our community diagnosed with Gender Identity Disorder or Transsexualism (ICD9 302.85) are not covered by Emory benefits and insurance;

Recognizing that the inequity in benefits negatively impacts employees and students at Emory University;

Realizing Emory's mission emphasizes its commitment to work collaboratively for positive transformation in the world through courageous leadership in teaching, research, scholarship, healthcare, and social action;

Bearing in Mind The President's Commission is charged with identifying issues of inequity for its constituents within Emory, and to make recommendations for change both to the President and to appropriate agents within the institution;

NOW THEREFORE BE IT RESOLVED
by The President's Commission on Sexuality, Gender Diversity, & Queer Equality at Emory University on this 20th day of October, 2009 that we support and request full and equitable medical insurance benefits for all Emory University Students and Employees (faculty and staff);

Be it further resolved that The PCSGDQE requests appropriate and immediate response to ensure that fully and equitable benefits are in place to cover all related and medically necessary costs (as deemed by the American Medical Association) by the appropriate 2010 reenrollment periods for employees and for students;

Requiring that such benefits include but not be limited to ensure the following:

1. Hormone Therapy:

a. **Understanding** that The PCSGDQE has been told by Emory University Human Resources Officials as well as Student Health Officials that a hormone therapy prescription determined to be as a result of gender reassignment surgery/transgender surgery or for the treatment of gender identity disorders through an authorized physician would be covered;
b. **Urging** appropriate officials to ensure this is accurate, clear to policy holders, and fully provided;

2. Sexual Reassignment Surgery
   a. **Understanding** that The PCSGDQE has been told by Emory University Human Resources Officials as well as Student Health Officials that all current plans exclude gender altering surgical procedures including but not limited to sex transformation operations;
3. Mental Health and Behavioral Health Services
   a. **Understanding** that is not currently clear whether the University provides full coverage for medically indicated necessary mental health care for people who identify as transgender;

Encouraging Human Resources and Student Health officials to work with Emory University's Office of LGBT Life to help communicate to members of the community affected by the affirmative change in these benefits to ensure clear, consistent communication and availability of information;

Emphasizing the following information to inform such action:

1. Transsexualism (ICD9 302.85) is a medical condition recognized by the healthcare community that requires medical and surgical therapy. Recently, the Endocrine Society, the largest and oldest professional organization of endocrinologists, published treatment guidelines in September 2009 entitled "Endocrine Treatment of Transsexual Persons" (**see enclosure**). In their guidelines, they recommend hormone and surgical treatment for all individuals who meet the criteria for transsexualism. Furthermore, the World Professional Association for Transgender Health (WPATH) has published Standards of Care (SOC) which delineates which individuals should have treatment with hormone and surgical therapy (**see enclosure**). Of note, these guidelines do not offer any alternative treatment options for those individuals with transsexualism; therefore, medical therapy with hormones and surgical therapy with reconstructive surgery are the only treatment options available. Recognizing that many people who identify as transgender face discrimination in regards to healthcare coverage, the American Medical Association passed a resolution in 2008 opposing discrimination in healthcare coverage for people who identify as transgender and resolved that public and private insurance companies provide health coverage for people who identify as transgender (**see enclosure**);
2. As Emory prides itself on being a leader across segments of society, it is critical to note that a number of leading organizations have taken the lead with respect to this issue and are already providing health benefits for transgender students and employees. The Human Rights Campaign 2010 Corporate Equality Index identified 66 businesses that provide transgender related health benefits out of the 590 surveyed. They include the following: Aetna Inc., The Coca-Cola Co., Deloitte LLP, AT&T Inc., Bank of

America Corp., Ernst & Young LLP, Chrysler LLC, Cisco Systems Inc., DuPont, Ford Motor Co., General Motors Corp., Google Inc., IBM, Johnson & Johnson, Kraft Foods Inc., PG&E Corp., State Farm Group, Sun Microsystems Inc., Sutherland Asbill & Brennan LLP, Walt Disney Co., Wells Fargo & Co., and Yahoo! Inc. The Consortium of Higher Education LGBT Resource Professionals found the University of California System and the University of Michigan provide both benefits to both students and employees in a 2009 survey. In addition, the Consortium found 23 universities that offer varying benefits (hormones, sex reassignment surgery, or both) to members of their community, including peer institutions such as Harvard University, Cornell University, and Washington University in St. Louis;

3. Emory University as a matter of both policy and practice is committed to developing and maintaining ethically engaged and diverse community. Consistent with these values Emory has taken a position of nationwide leadership in the area of equal rights and social justice in multiple areas including the inclusion of gender expression and gender identity into its non-discrimination/equal opportunity policies. However, the choice to not provide coverage for necessary healthcare for transgender employees and students places Emory's current healthcare coverage for both students and employees in contradiction to these core values of equality and non-discrimination. Emory already provides through its health insurance plans many of the same procedures and treatments to individuals with medical diagnoses other than transsexualism. For example, hormone replacement therapy is covered for multiple other healthcare conditions. Likewise, breast reduction, mastectomy, and breast reconstruction are also covered for other medical conditions. Given this, excluding coverage to these and similar treatment if they are related to the treatment of transsexualism (for whom the procedures are considered essential and non-cosmetic, and are required and deemed medically necessary by numerous international organizations) is at face value unequal and constitutes discrimination based on gender-identity;
4. The PCSGDQE understands that decisions concerning healthcare equity are by no means easy, and our society continues to wrestle with them. We also know that two of the primary challenges associated are increased costs and the difficulty of changing the current policy to offer these benefits. Fortunately, several recent studies demonstrate that the provision of healthcare coverage to the treatment of people who identify as transgender does not significant increase healthcare costs for the covering organization. (**see enclosure**). Additionally, Aetna, who offers these benefits to their own employees, also has a rider already established that Emory University simply needs to select (**see enclosure**);
5. The opportunity to affirm equal treatment of all members of our community is at stake. Recall Emory's Vision Statement which includes working "for positive transformation in the world." Emory is in a strong position as a leading international university to offer comprehensive healthcare for all members of its community regardless of gender identity or gender expression. Adoption of such a policy would without doubt influence other colleges and universities, including our peer institutions, to adopt similar policies. Moreover, healthcare equity for all on campus, including people who identify as transgender, will further encourage the recruitment

and retention of a diverse, world class faculty, staff, and student body. Indeed, this is one of the three global priorities of the University's Strategic Plan;

Calling for action, we congratulate Emory University for being the focus of the Trans-healthcare world in two years. Hosting the 2011 World Professional Association for Transgender Health Biennial Symposium (WPATH), Emory will bring healthcare professionals from around the world together to discuss and learn about current research and best practices in the field of transgender health. As we think about the future direction of healthcare, we know that there will come a day when there is full societal equity for people who identify as transgender; based on the vision of the institution and our strategic plan, Emory University seeks to be on the cutting edge of society, leading the charge toward a more equitable world. We do know that Emory will be under the gaze of healthcare professionals from across the world. These leaders in world health will be left with an impression of Emory;

Duly noting that Emory is faced with a choice: to show the world Emory's leadership in healthcare equity and equitable treatment of all members of its community, or to demonstrate an image of failure to address the clear inequity between our "vision" and our "reality." Emory is at the cusp of showing real courage and leadership, and The President's Commission on Sexuality, Gender Diversity, & Queer Equality **resolves** the institution should move forward to ensure our actions are as loud and clear as our aspirations.

HEREBY CERTIFIED

by The President's Commission on Sexuality, Gender Diversity, & Queer Equality at Emory University on this 20th day of October, 2009.

Thaddeus Pace
PCSGDQE Co-Chair
2009-2010

John Blevins
PCSGDQE Co-Chair
2009-2010

Enclosures with this Resolution:

- "Endocrine Treatment of Transsexual Persons" from September 2009
- Standards of Care from the WPATH
- American Medical Association Resolution opposing Discrimination in Healthcare Coverage for Transgender benefits
- Study on Costs Associated with providing Transgender Health Benefits
- Aetna Transgender Health Benefits

The Endocrine Society's
CLINICAL GUIDELINES

Endocrine Treatment of Transsexual Persons:

An Endocrine Society Clinical Practice Guideline

The Endocrine Society®

The Journal of Clinical Endocrinology & Metabolism

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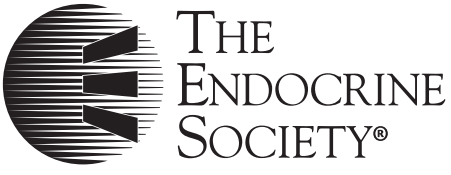

THE JOURNAL OF
CLINICAL
ENDOCRINOLOGY
& METABOLISM

The Endocrine Society's
CLINICAL GUIDELINES

Endocrine Treatment of Transsexual Persons:

An Endocrine Society Clinical Practice Guideline

THE ENDOCRINE SOCIETY®

THE JOURNAL OF CLINICAL ENDOCRINOLOGY & METABOLISM

Table of Contents

Abstract

Objective: The aim was to formulate practice guidelines for endocrine treatment of transsexual persons.

Participants: An Endocrine Society-appointed Task Force of experts, a methodologist, and a medical writer.

Evidence: This evidence-based guideline was developed using the Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) system to describe the strength of recommendations and the quality of evidence, which was low or very low.

Consensus Process: Committees and members of The Endocrine Society, European Society of Endocrinology, European Society for Paediatric Endocrinology, Lawson Wilkins Pediatric Endocrine Society, and World Professional Association for Transgender Health commented on preliminary drafts of these guidelines.

Conclusions: Transsexual persons seeking to develop the physical characteristics of the desired gender require a safe, effective hormone regimen that will 1) suppress endogenous hormone secretion determined by the person's genetic/biologic sex and 2) maintain sex hormone levels within the normal range for the person's desired gender. A mental health professional (MHP) must recommend endocrine treatment and participate in ongoing care throughout the endocrine transition and decision for surgical sex reassignment. The endocrinologist must confirm the diagnostic criteria the MHP used to make these recommendations. Because a diagnosis of transsexualism in a prepubertal child cannot be made with certainty, we do not recommend endocrine treatment of prepubertal children. We recommend treating transsexual adolescents (Tanner stage 2) by suppressing puberty with GnRH analogues until age 16 years old, after which cross-sex hormones may be given. We suggest suppressing endogenous sex hormones, maintaining physiologic levels of gender-appropriate sex hormones and monitoring for known risks in adult transsexual persons.

(J Clin Endocrinol Metab 94: 3132–3154, 2009)

Abbreviations: BMD, Bone mineral density; FTM, female-to-male; GID, gender identity disorder; MHP, mental health professional; MTF, male-to-female; RLE, real-life experience.

SUMMARY OF RECOMMENDATIONS

1.0. DIAGNOSTIC PROCEDURE

1.1. We recommend that the diagnosis of gender identity disorder (GID) be made by a mental health professional (MHP). For children and adolescents the MHP should also have training in child and adolescent developmental psychopathology. (1 | ⊕⊕◯◯)

1.2. Given the high rate of remission of GID after the onset of puberty, we recommend against a complete social role change and hormone treatment in prepubertal children with GID. (1 | ⊕⊕◯◯)

1.3. We recommend that physicians evaluate and ensure that applicants understand the reversible and irreversible effects of hormone suppression (*e.g.*, GnRH analogue treatment) and cross-sex hormone treatment before they start hormone treatment.

1.4. We recommend that all transsexual individuals be informed and counseled regarding options for fertility prior to initiation of puberty suppression in adolescents and prior to treatment with sex hormones of the desired sex in both adolescents and adults.

2.0. TREATMENT OF ADOLESCENTS

2.1. We recommend that adolescents who fulfill eligibility and readiness criteria for gender reassignment initially undergo treatment to suppress pubertal development. (1 | ⊕◯◯◯)

2.2. We recommend that suppression of pubertal hormones start when girls and boys first exhibit physical changes of puberty (confirmed by pubertal levels of estradiol and testosterone, respectively), but no earlier than Tanner stages 2–3. (1 | ⊕⊕◯◯)

2.3. We recommend that GnRH analogues be used to achieve suppression of pubertal hormones. (1 | ⊕⊕◯◯)

2.4. We suggest that pubertal development of the desired opposite sex be initiated at about the age of 16 years, using a gradually increasing dose schedule of cross-sex steroids. (2 | ⊕◯◯◯)

2.5. We recommend referring hormone-treated adolescents for surgery when 1) the real-life experience (RLE) has resulted in a satisfactory social role change; 2) the individual is satisfied about the hormonal effects; and 3) the individual desires definitive surgical changes. (1 | ⊕◯◯◯)

2.6. We suggest deferring surgery until the individual is at least 18 years old. (2 | ⊕◯◯◯)

3.0. HORMONAL THERAPY FOR TRANSSEXUAL ADULTS

3.1. We recommend that treating endocrinologists confirm the diagnostic criteria of GID or transsexualism and the eligibility and readiness criteria for the endocrine phase of gender transition. (1 | ⊕⊕⊕◯)

3.2. We recommend that medical conditions that can be exacerbated by hormone depletion and cross-sex hormone treatment be evaluated and addressed prior to initiation of treatment (See Table 11: Medical conditions that can be exacerbated by cross-sex hormone therapy). (1 | ⊕⊕⊕◯)

3.3. We suggest that cross-sex hormone levels be maintained in the normal physiologic range for the desired gender. (2 | ⊕⊕◯◯)

3.4. We suggest that endocrinologists review the onset and time course of physical changes induced by cross-sex hormone treatment. (2 | ⊕⊕◯◯)

4.0. ADVERSE OUTCOME PREVENTION AND LONG-TERM CARE

4.1. We suggest regular clinical and laboratory monitoring every 3 months during the first year and then once or twice yearly. (2 | ⊕⊕◯◯)

4.2. We suggest monitoring prolactin levels in male-to-female transsexual persons treated with estrogens. (2 | ⊕⊕◯◯)

4.3. We suggest that transsexual persons treated with hormones be evaluated for cardiovascular risk factors (2 | ⊕⊕◯◯)

4.4. We suggest that bone mineral density (BMD) measurements be obtained if risk factors for osteoporosis exist, specifically in those who stop hormone therapy after gonadectomy. (2 | ⊕⊕◯◯)

4.5. We suggest that male-to-female (MTF) transsexual persons, who have no known increased risk of breast cancer, follow breast screening guidelines recommended for biological women. (2 | ⊕⊕◯◯)

4.6. We suggest that MTF transsexual persons treated with estrogens follow screening guidelines for prostatic disease and prostate cancer recommended for biological men. (2 | ⊕◯◯◯)

4.7. We suggest that female-to-male (FTM) transsexual persons evaluate the risks and benefits of including total hysterectomy and oophorectomy as part of sex reassignment surgery. (2 | ⊕◯◯◯)

5.0. SURGERY FOR SEX REASSIGNMENT

5.1. We recommend that transsexual persons consider genital sex reassignment surgery only after both the physician responsible for endocrine transition therapy and the MHP find surgery advisable. (1 | ⊕◯◯◯)

5.2. We recommend that genital sex reassignment surgery be recommended only after completion of at least 1 year of consistent and compliant hormone treatment. (1 | ⊕◯◯◯)

5.3. We recommend that the physician responsible for endocrine treatment medically clear transsexual individuals for sex reassignment surgery and collaborate with the surgeon regarding hormone use during and after surgery. (1 | ⊕◯◯◯)

METHOD OF DEVELOPMENT OF EVIDENCE-BASED CLINICAL PRACTICE GUIDELINES

The Clinical Guidelines Subcommittee of The Endocrine Society deemed the diagnosis and treatment of transsexual individuals a priority area in need of practice guidelines and appointed a Task Force to formulate evidence-based recommendations. The Task Force followed the approach recommended by the Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) group, an international group with expertise in development and implementation of evidence-based guidelines (19). A detailed description of the grading scheme has been published elsewhere (20). The Task Force used the best available research evidence that Task Force members identified and two commissioned systematic reviews (21, 22) to develop some of the recommendations. The Task Force also used consistent language and graphical descriptions of both the strength of a recommendation and the quality of evidence. In terms of the strength of the recommendation, strong recommendations use the phrase "we recommend" and the number 1, and weak recommendations use the phrase "we suggest" and the number 2. Cross-filled circles indicate the quality of the evidence, such that ⊕◯◯◯ denotes very low quality evidence; ⊕⊕◯◯ low quality; ⊕⊕⊕◯ moderate quality; and ⊕⊕⊕⊕ high quality. The Task Force has confidence that persons who receive care according to the strong recommendations will derive, on average, more good than harm. Weak recommendations require more careful consideration of the person's circumstances, values, and preferences to determine the best course of action. Linked to each *recommendation* is a description of the *evidence* and the *values* that panelists considered in making the recommendation; in some instances, there are *remarks*, a section in which panelists offer technical suggestions for testing conditions, dosing and monitoring. These technical comments reflect the best available evidence applied to a typical person being treated. Often this evidence comes from the unsystematic observations of the panelists and their values and preferences; therefore, these remarks should be considered suggestions. Some statements in this guideline (1.3. and 1.4.) are not graded. These are statements the task force felt necessary to make, and it considers them matters about which no sensible healthcare professional could possibly consider advocating the contrary (*e.g.*, clinicians should conduct an adequate history taking and physical examination, clinicians should educate patients about

their condition). These statements have not been subject to structured review of the evidence and are thus not graded.

INTRODUCTION

Men and women have experienced the confusion and anguish resulting from rigid, forced conformity to sexual dimorphism throughout recorded history. Aspects of gender variance have been part of biological, psychological, and sociological debates among humans in modern history. The twentieth century marked the beginning of a social awakening for men and women "trapped" in the wrong body (1). Harry Benjamin and Magnus Hirschfeld, who met in 1907, pioneered the medical responses to those who sought relief from and resolution of their profound discomfort, enabling the "transsexual," a term coined by Hirschfeld in 1923, to live a gender-appropriate life, occasionally facilitated by surgery (2).

Endocrine treatment of transsexual persons (note: In the current psychiatric classification system, the Diagnostic and Statistical Manual of Mental Disorders-IV-TR, the term *gender identity disorder* is used instead of *transsexualism* (3)), previously limited to ineffective elixirs, creams, and implants, became reasonable with the availability of diethylstilbestrol in 1938 and following the isolation of testosterone in 1935. Personal stories of role models, treated with hormones and sex reassignment surgery, appeared in the press during the second half of the twentieth century. The Harry Benjamin International Gender Dysphoria Association (HBIGDA) was founded in September 1979; it is now known as the World Professional Association of Transgender Health (WPATH). The Association's "Standards of Care" was first published by HBIGDA in 1979, and its sixth edition is currently being revised. These carefully prepared documents have provided mental health and medical professionals with general guidelines for the evaluation and treatment of transsexual persons.

Prior to 1975, few peer-reviewed articles were published concerning endocrine treatment of transsexual persons. Since that time, more than 800 articles about various aspects of transsexual care have appeared. It is the purpose of this guideline to make detailed recommendations and suggestions, based on existing medical literature and clinical experience, that will enable endocrinologists to provide safe and effective endocrine treatment for individuals diagnosed with GID or transsexualism by MHPs. In the future, rigorous evaluation of the effectiveness and safety of endocrine protocols is needed. What will be required is the careful assessment of 1) the effects of prolonged delay of puberty on bone growth and development among adolescents, 2) in adults, the effects on outcome of both endogenous and cross-sex hormone levels during treatment, 3) the requirement for and the effects of anti-androgens and progestins during treatment, and 4) long-term medical and psychological risks of sex reassignment. These needs can be met only by a commitment of mental health and endocrine investigators to collaborate in long-term, large-scale studies across countries that employ the same diagnostic and inclusion criteria, medications, assay methods, and response assessment tools.

Terminology and its use vary and continue to evolve. Table 1 contains definitions of terms as they are used throughout the Guideline.

Etiology of Gender Identity Disorders

One's self-awareness as male or female evolves gradually during infant life and childhood. This process of cognitive and affective learning happens in interaction with parents, peers, and environment, and a fairly accurate timetable exists of the steps in this process (4). Normative psychological literature, however, does not address when gender identity becomes crystallized and what factors contribute to the development of an atypical gender identity. Factors that have been reported in clinical studies may well enhance or perpetuate rather than originate a GID (for an overview, see Ref. 5). Behavioral genetic studies suggest that, in children, atypical gender identity and role development has a heritable component (6, 7). Since, in most cases, GID does not persist into adolescence or adulthood, findings in children with GID cannot be extrapolated to adults.

TABLE 1. Definitions of terms used in this guideline

SEX refers to attributes that characterize biological maleness or femaleness; the best known attributes include the sex-determining genes, the sex chromosomes, the H-Y antigen, the gonads, sex hormones, internal and external genitalia and secondary sex characteristics.
GENDER IDENTITY is used to describe a person's fundamental sense of being men, women, or of indeterminate sex.
GENDER IDENTITY DISORDER (GID) is a DSM-IV-TR diagnosis. This psychiatric diagnosis is given when a strong and persistent cross-gender identification, combined with a persistent discomfort with one's sex or sense of inappropriateness in the gender role of that sex, causes clinically significant distress.
GENDER ROLE is used to refer to behaviors, attitudes, and personality traits that a society, in a given culture and historical period, designates as masculine or feminine, that is, more "appropriate" to, or typical of, the social role as men or as women.
GENDER DYSPHORIA is the distress and unease experienced if gender identity and sex are not completely congruent.
SEXUAL ORIENTATION can be defined by a person's relative responsiveness to sexual stimuli. The most salient dimension of sexual orientation is the sex of the person to whom one is attracted sexually; sexual orientation is not entirely similar to SEXUAL IDENTITY; a person may, for example, be predominantly aroused by homoerotic stimuli, yet not regard himself or herself to be gay or lesbian.
SEX REASSIGNMENT refers to the complete treatment procedure for those who want to adapt their bodies to the desired sex.
SEX REASSIGNMENT SURGERY refers only to the surgical part of this treatment.
TRANSSEXUAL people identify as, or desire to live and be accepted as, a member of the gender opposite to that assigned at birth; the term MALE-TO-FEMALE (MTF) TRANSSEXUAL PERSON refers to a biological male who identifies as, or desires to be, a member of the female gender; FEMALE-TO-MALE (FTM) TRANSSEXUAL PERSON refers to a biological female who identifies as, or desires to be, a member of the male gender.
TRANSITION refers to the period of time during which transsexual persons change their physical, social, and legal characteristics to the gender opposite that of their biologic sex. Transition may also be regarded as an ongoing process of physical change and psychological adaptation.

Note: In this Guideline, we have chosen to use the term "transsexual" throughout as defined by the ICD-10 Diagnostic Code (see Table 3). We recognize that "transsexual" and "transgender" are terms often used interchangeably. However, since "transgender" may also be used to identify individuals whose gender identity does not conform to the conventional gender roles of either male or female and who may not seek endocrine treatment as described herein, we prefer to use "transsexual" as an adjective (e.g., when referring to persons, individuals, men, or women and, when appropriate, referring to subjects in research studies).

In adults, psychological studies investigating etiology hardly exist. Studies that have investigated potential causal factors are retrospective and rely on self-report, making the results intrinsically unreliable.

Most attempts to identify biological underpinnings of gender identity in humans have investigated effects of sex steroids on the brain (functions) (for a review, see Ref. 8). Prenatal androgenization may predispose to development of a male gender identity. However, most 46,XY female-raised children with disorders of sex development and a history of prenatal androgen exposure do not develop a male gender identity (9, 10), whereas 46,XX subjects exposed to prenatal androgens show marked behavioral masculinization, but this does not necessarily lead to gender dysphoria (11–13). Male-to-female (MTF) transsexual individuals, with a male androgen exposure prenatally, develop a female gender identity through unknown mechanisms, apparently overriding the effects of prenatal androgens. There is no comprehensive understanding of hormonal imprinting on gender identity formation. It is of note that, in addition to hormonal factors, genetic mechanisms may bear on psychosexual differentiation (14).

Maternal immunization against the H-Y antigen has been proposed (15, 16). This hypothesis states that the repeatedly reported fraternal birth order effect reflects the progressive immunization of some mothers to Y-linked minor histocompatibility antigens (H-Y antigens) by each succeeding male fetus and the increasing effects of such immunization on the future sexual orientation of each succeeding male fetus. Sibling sex ratio studies have not been experimentally supported (17).

Studies have also failed to find differences in circulating levels of sex steroids between transsexual and non-transsexual individuals (18).

In summary, neither biological nor psychological studies provide a satisfactory explanation for the intriguing phenomenon of GIDs. In both disciplines, studies have been able to correlate certain findings to GIDs, but the findings are not robust and cannot be generalized to the whole population.

1.0. DIAGNOSTIC PROCEDURE

Sex reassignment is a multidisciplinary treatment. It requires five processes: diagnostic assessment, psychotherapy or counseling, real-life experience, hormone therapy, and surgical therapy. The focus of this Guideline is hormone therapy, although collaboration with appropriate professionals responsible for each process maximizes a successful outcome. It would be ideal if care could be given by a multidisciplinary team at one treatment center, but this is not always possible. It is essential that all caregivers be aware of and understand the contributions of each discipline and that they communicate throughout the process.

Diagnostic Assessment and Psychotherapy

Because GID may be accompanied with psychological or psychiatric problems (*see Refs. 23–27*), it is necessary that the clinician making the GID diagnosis be able 1) to make a distinction between GID and conditions that have similar features, 2) to diagnose accurately psychiatric conditions, and 3) to undertake appropriate treatment thereof. Therefore, the Standards of Care (SOC) guidelines of the WPATH recommend that the diagnosis be made by a MHP (28). For children and adolescents, the MHP should also have training in child and adolescent developmental psychopathology.

MHPs usually follow the WPATH's SOC. The main aspects of the diagnostic and psychosocial counseling are described below, and evidence supporting the SOC guidelines is given, whenever available.

During the diagnostic procedure, the MHP obtains information from the applicants for sex reassignment and, in the case of adolescents, the parents or guardians regarding various aspects of their general and psychosexual development and current functioning. On the basis of this information the MHP:

1. Decides whether the applicant fulfills DSM-IV-TR or ICD-10 criteria (see Tables 2 and 3) for GID;
2. Informs the applicant about the possibilities and limitations of sex reassignment and other kinds of treatment to prevent unrealistically high expectations; and
3. Assesses potential psychological and social risk factors for unfavorable outcomes of medical interventions.

In cases in which severe psychopathology or circumstances, or both, seriously interfere with the diagnostic work or make satisfactory treatment unlikely, management of the other issues should be addressed first. Literature on postoperative regret suggests that severe psychiatric comorbidity and lack of support may interfere with good outcome (30–33).

For adolescents, the diagnostic procedure usually includes a complete psychodiagnostic assessment (34) and, preferably, a child psychiatric evaluation (by a clinician other than the diagnostician). DiCeglie *et al.* (35) showed that 75% of the adolescents referred to their Gender Identity clinic in the United Kingdom reported relationship problems with parents. Therefore, a family evaluation to assess the family's ability to endure stress, give support, and deal with the complexities of the adolescent's situation should be part of the diagnostic procedure.

The Real-Life Experience

WPATH's SOC states that "the act of fully adopting a new or evolving gender role or gender presentation in everyday life is known as the RLE. The RLE is essential to the transition to the gender role that is congruent with the patient's gender identity. The RLE tests the person's resolve, the capacity to function in the preferred gender, and the adequacy of social, economic, and psychological supports. It assists both the patient and the MHP in their

TABLE 2. DSM-IV-TR diagnostic criteria for GID (3)

A. A strong and persistent cross-gender identification (not merely a desire for any perceived cultural advantages of being the other sex).
In children, the disturbance is manifested by four (or more) of the following:
1. Repeatedly stated desire to be, or insistence that he or she is, the other sex.
2. In boys, preference for cross-dressing or simulating female attire; in girls, insistence on wearing only stereotypical masculine clothing.
3. Strong and persistent preferences for cross-sex roles in make-believe play or persistent fantasies of being the other sex.
4. Intense desire to participate in the stereotypical games and pastimes of the other sex.
5. Strong preference for playmates of the other sex.
In adolescents and adults, the disturbance is manifested by symptoms such as a stated desire to be the other sex, frequent passing as the other sex, desire to live or be treated as the other sex, or the conviction that he or she has the typical feelings and reactions of the other sex.
B. Persistent discomfort with his or her sex or sense of inappropriateness in the gender role of that sex.
In children, the disturbance is manifested by any of the following:
1. In boys, assertion that his penis or testes are disgusting or will disappear or assertion that it would be better not to have a penis or aversion toward rough-and-tumble play and rejection of male stereotypical toys, games, and activities.
2. In girls, rejection of urinating in a sitting position, assertion that she has or will grow a penis, assertion that she does not want to grow breasts or menstruate, or marked aversion toward normative feminine clothing.
In adolescents and adults, the disturbance is manifested by symptoms such as preoccupation with getting rid of primary and secondary sex characteristics (e.g., request for hormones, surgery, or other procedures to physically alter sexual characteristics to simulate the other sex) or belief that he or she was born the wrong sex.
C. The disturbance is not concurrent with a physical intersex condition.
D. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
Code based on current age:
302.6 GID in Children
302.85 GID in Adolescents or Adults
Specify whether (for sexually mature individuals):
Sexually Attracted to Males
Sexually Attracted to Females
Sexually Attracted to Both
Sexually Attracted to Neither

judgments about how to proceed" (28). During the RLE, the person should fully experience life in the desired gender role before irreversible physical treatment is undertaken. Living 12 months full-time in the desired gender role is recommended (28). Testing an applicant's ability to function in the desired gender assists the applicant, the MHP and the endocrinologist in their judgments about how to proceed. During the RLE, the person's feelings about the social transformation, including coping with the responses of others, is a major focus of the counseling. Applicants increasingly start the RLE long before they are referred for hormone treatment.

Eligibility and Readiness Criteria

The WPATH SOC document requires that both adolescents and adults applying for hormone treatment and surgery satisfy two sets of criteria—eligibility and readiness—before proceeding (28). There are eligibility and readiness criteria for hormone therapy for adults (Table 4) and eligibility criteria for adolescents (Table 5). Eligibility and

TABLE 3. ICD-10 criteria for transsexualism and GID of childhood (29)

TRANSSEXUALISM (F64.0) criteria:
1. The 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 sex through surgery and hormone treatments.
2. The transsexual identity has been present persistently for at least 2 years.
3. The disorder is not a symptom of another mental disorder or a genetic, intersex, or chromosomal abnormality.
GID OF CHILDHOOD (F64.2) has separate criteria for girls and for boys.
FOR GIRLS:
1. The individual shows persistent and intense distress about being a girl and has a stated desire to be a boy (not merely a desire for any perceived cultural advantages of being a boy) or insists that she is a boy.
2. Either of the following must be present:
a. Persistent marked aversion to normative feminine clothing and insistence on wearing stereotypical masculine clothing.
b. Persistent repudiation of female anatomical structures, as evidenced by at least one of the following:
i. An assertion that she has, or will grow, a penis.
ii. Rejection of urination in a sitting position.
iii. Assertion that she does not want to grow breasts or menstruate.
3. The girl has not yet reached puberty.
4. The disorder must have been present for at least 6 months.
FOR BOYS:
1. The individual shows persistent and intense distress about being a boy and has a desire to be a girl or, more rarely, insists that he is a girl.
2. Either of the following must be present:
a. Preoccupation with stereotypic female activities, as shown by a preference for either cross-dressing or simulating female attire or by an intense desire to participate in the games and pastimes of girls and rejection of stereotypical male toys, games, and activities.
b. Persistent repudiation of male anatomical structures, as evidenced by at least one of the following repeated assertions:
i. That he will grow up to become a woman (not merely in the role).
ii. That his penis or testes are disgusting or will disappear.
iii. That it would be better not to have a penis or testes.
3. The boy has not reached puberty.
4. The disorder must have been present for at least 6 months.

readiness criteria for sex reassignment surgery in adults and adolescents are the same (see Section 5.0.). Although the eligibility criteria have not been evaluated in formal studies, a few follow-up studies on adolescents who fulfilled these criteria, and had started cross-sex hormone treatment from the age of 16, indicate good postoperative results (36–38).

One study on MTF transsexual subjects reports that outcome was not associated with minimum eligibility requirements of the WPATH's SOC. However, this study was performed among a group of individuals with a relatively high socioeconomic background (39). One study investigating the need for psychotherapy for sex-reassignment applicants, based on questionnaire scores, suggests that 'classical' forms of psychotherapy prior to medical interventions are not needed in about two thirds of the applicants (40).

Recommendations for those involved in the hormone treatment of applicants for sex reassignment

Recommendation

1.1. We recommend that the diagnosis of GID be made by a MHP. For children and adolescents the MHP must also have training in child and adolescent developmental psychopathology. (1 | ⊕⊕◯◯)

TABLE 4. Hormone therapy for adults

Adults are *eligible* for cross-sex hormone treatment if they (28):
1. Fulfill DSM IV-TR or ICD-10 criteria for GID or transsexualism (See Tables 2 and 3);
2. Do not suffer from psychiatric comorbidity that interferes with the diagnostic work-up or treatment;
3. Demonstrate knowledge and understanding of the expected outcomes of hormone treatment, as well as the medical and social risks and benefits; and
4. Have experienced a documented RLE of at least 3 months duration OR had a period of psychotherapy (duration specified by the MHP after the initial evaluation, usually a minimum of 3 months).
Adults should fulfill the following *readiness criteria* before the cross-sex hormone treatment. The applicant:
1. Has had further consolidation of gender identity during a RLE or psychotherapy;
2. Has made some progress in mastering other identified problems leading to improvement or continuing stable mental health; and
3. Is likely to take hormones in a responsible manner.

TABLE 5. Hormone therapy for adolescents

Adolescents are *eligible* and ready for GnRH treatment if they:
1. Fulfill DSM IV-TR or ICD-10 criteria for GID or transsexualism;
2. Have experienced puberty to at least Tanner stage 2;
3. Have (early) pubertal changes have resulted in an increase of their gender dysphoria;
4. Do not suffer from psychiatric comorbidity that interferes with the diagnostic work-up or treatment;
5. Have adequate psychological and social support during treatment; and
6. Demonstrate knowledge and understanding of the expected outcomes of GnRH analogue treatment, cross-sex hormone treatment, and sex reassignment surgery, as well as the medical and the social risks and benefits of sex reassignment.
Adolescents are *eligible* for cross-sex hormone treatment if they:
1. Fulfill the criteria for GnRH treatment AND
2. Are 16 years or older.
Readiness criteria for adolescents eligible for cross-sex hormone treatment are the same as those for adults.

1.1. Evidence

GID may be accompanied with psychological or psychiatric problems (*see Refs. 23–27*). It is therefore necessary that the clinician making the GID diagnosis be able to make a distinction between GID and conditions that have similar features, to accurately diagnose psychiatric conditions, and to ensure that any such conditions are treated appropriately. One condition with similar features is body dysmorphic disorder or Skoptic syndrome, a condition in which a person is preoccupied with or engages in genital self-mutilation, such as castration, penectomy, or clitoridectomy (41).

1.1. Values and Preferences

The Task Force placed a very high value on avoiding harm from hormone treatment to individuals who have conditions other than GID and who may not be ready for the physical changes associated with this treatment, and placed a low value on any potential benefit these persons believe they may derive from hormone treatment. This justifies the strong recommendation in the face of low quality evidence.

Recommendation

1.2. Given the high rate of remission of GID after the onset of puberty, we recommend against a complete social role change and hormone treatment in prepubertal children with GID. (1 | ⊕◯◯◯)

1.2. Evidence

In most children with GID, the GID does not persist into adolescence. The percentages differ between studies, probably dependent upon which version of the DSM was used in childhood, ages of children, and perhaps culture factors. However, the large majority (75-80%) of prepubertal children with a diagnosis of GID in childhood do not turn out to be transsexual in adolescence (42–44); for a review of seven older studies (see Ref. 45). Clinical experience suggests that GID can be reliably assessed only after the first signs of puberty.

This recommendation, however, does not imply that children should be entirely denied to show cross-gender behaviors or should be punished for exhibiting such behaviors.

1.2. Values and Preferences

This recommendation places a high value on avoiding harm with hormone therapy in prepubertal children who may have GID that will remit after the onset of puberty and places a relatively lower value on foregoing the potential benefits of early physical sex change induced by hormone therapy in prepubertal children with GID. This justifies the strong recommendation in the face of very low quality evidence.

Recommendation

1.3. We recommend that physicians evaluate and ensure that applicants understand the reversible and irreversible effects of hormone suppression (*e.g.*, GnRH analogue treatment) and of cross-sex hormone treatment before they start hormone treatment.

1.3. Remarks

In all treatment protocols, compliance and outcome are enhanced by clear expectations concerning the effects of the treatment. The lengthy diagnostic procedure (GnRH analogue treatment included, as this reversible treatment is considered to be a diagnostic aid) and long duration of the period between the start of the hormone treatment and sex reassignment surgery give the applicant ample opportunity to make balanced decisions about the various medical interventions. Clinical evidence shows that applicants react in a variety of ways to this treatment phase. The consequences of the social role change are sometimes difficult to handle, increasing understanding of treatment aspects may be frightening, and a change in gender dysphoric feelings may lead to confusion. Significant adverse effects on mental health can be prevented by a clear understanding of the changes that will occur and the time course of these changes.

Recommendation

1.4. We recommend that all transsexual individuals be informed and counseled regarding options for fertility prior to initiation of puberty suppression in adolescents and prior to treatment with sex hormones of the desired sex in both adolescents and adults.

1.4. Remarks

Persons considering hormone use for sex reassignment need adequate information about sex reassignment in general and about fertility effects of hormone treatment in particular to make an informed and balanced decision about this treatment. Because early adolescents may not feel qualified to make decisions about fertility and may not fully understand the potential effects of hormones, consent and protocol education should include parents, the referring MHP(s), and other members of the adolescent's support group. To our knowledge, there are no formally evaluated decision aids available to assist in the discussion and decision regarding future fertility of adolescents or adults beginning sex reassignment treatment.

Prolonged pubertal suppression using GnRH analogues is reversible and should not prevent resumption of pubertal development upon cessation of treatment. Although sperm production and development of the reproductive tract in early adolescent biological males with GID are insufficient for cryopreservation of sperm, they should be counseled that sperm production can be initiated following prolonged gonadotropin suppression, prior to estrogen treatment. This sperm production can be accomplished by spontaneous gonadotropin (both LH and FSH) recovery after cessation of GnRH analogs or by gonadotropin treatment and will probably be associated with physical manifestations of testosterone production. It should be noted that there are no data in this population concerning the time required for sufficient spermatogenesis to collect enough sperm for later fertility. In adult men with gonadotropin deficiency, sperm are noted in seminal fluid by 6–12 months of gonadotropin treatment, although sperm numbers at the time of pregnancy in these patients is far below the normal range (46, 47).

Girls can expect no adverse effects when treated with pubertal suppression. They should be informed that no data are available regarding timing of spontaneous ovulation or response to ovulation induction following prolonged gonadotropin suppression.

All referred subjects who satisfy eligibility and readiness criteria for endocrine treatment, at age 16 or as adults, should be counseled regarding the effects of hormone treatment on fertility and available options that may enhance the chances of future fertility, if desired (48, 49). The occurrence and timing of potentially irreversible effects should be emphasized. Cryopreservation of sperm is readily available and techniques for cryopreservation of oocytes, embryos, and ovarian tissue are being improved (50).

In biological males, when medical treatment is started in a later phase of puberty or in adulthood, spermatogenesis is sufficient for cryopreservation and storage of sperm. Prolonged exposure of the testes to estrogen has been associated with testicular damage (51–53). Restoration of spermatogenesis after prolonged estrogen treatment has not been studied.

In biological females, the effect of prolonged treatment with exogenous testosterone upon ovarian function is uncertain. Reports of an increased incidence of polycystic ovaries in FTM transsexual persons, both prior to and as a result of androgen treatment, should be acknowledged (54, 55). Pregnancy has been reported in FTM transsexual persons who have had prolonged androgen treatment, but no genital surgery (56). Counsel from a gynecologist before hormone treatment regarding potential fertility preservation after oophorectomy will clarify available and future options (57).

2.0. TREATMENT OF ADOLESCENTS

Over the past decade, clinicians have progressively acknowledged the suffering of young transsexual adolescents that is caused by their pubertal development. Indeed, an adolescent with GID often considers the pubertal physical changes to be unbearable. As early medical intervention may prevent this psychological harm, various clinics have decided to start treating young adolescents with GID with puberty-suppressing medication (a GnRH analogue). As compared with starting sex reassignment long after the first phases of puberty, a benefit of pubertal suppression is relief of gender dysphoria and a better psychological and physical outcome.

The physical changes of pubertal development are the result of maturation of the hypothalamo-pituitary-gonadal axis and development of the secondary sex characteristics. Gonadotropin secretion increases with a day-night rhythm with higher levels of LH during the night. The nighttime LH increase in boys is associated with a parallel testosterone increase. Girls do not show a day-night rhythm, although in early puberty, the highest estrogen levels are observed during the morning as a result of a delayed response by the ovaries (58).

In girls the first physical sign of the beginning of puberty is the start of budding of the breasts followed by an increase in breast and fat tissue. Breast development is also associated with the pubertal growth spurt, with menarche occurring approximately 2 years later. In boys the first physical change is testicular growth. A testicular volume equal to or above 4 ml is seen as the first pubertal increase. From a testicular volume of 10 ml, daytime testosterone levels increase, leading to virilization (59).

Recommendations

2.1. We recommend that adolescents who fulfill eligibility and readiness criteria for gender reassignment initially undergo treatment to suppress pubertal development. (1 | ⊕◯◯◯)

2.2. We recommend that suppression of pubertal hormones start when girls and boys first exhibit physical changes of puberty (confirmed by pubertal levels of estradiol and testosterone, respectively), but no earlier than Tanner stages 2–3. (1 | ⊕⊕◯◯)

2.1.–2.2. Evidence

Pubertal suppression aids in the diagnostic and therapeutic phase, in a manner similar to the RLE (60, 61). Management of gender dysphoria usually improves. In addition, the hormonal changes are fully reversible, enabling full pubertal development in the

biologic gender if appropriate. Therefore, we advise starting suppression of puberty before irreversible development of sex characteristics.

The experience of full biologic puberty, an undesirable condition, may seriously interfere with healthy psychological functioning and well-being. Suffering from gender dysphoria without being able to present socially in the desired social role or to stop the development of secondary sex characteristics may result in an arrest in emotional, social, or intellectual development.

Another reason to start sex reassignment early is that the physical outcome following intervention in adulthood is far less satisfactory than intervention at age 16 (36, 38). Looking like a man (woman) when living as a woman (man) creates difficult barriers with enormous life-long disadvantages.

Pubertal suppression maintains end-organ sensitivity to sex steroids observed during early puberty, enabling satisfactory cross-sex body changes with low doses and avoiding irreversible characteristics that occur by mid-puberty.

The protocol of suppression of pubertal development can also be applied to adolescents in later pubertal stages. In contrast to effects in early pubertal adolescents, physical sex characteristics, such as breast development in girls and lowering of the voice and outgrowth of the jaw and brow in boys, will not regress completely.

Unlike the developmental problems observed with delayed puberty, this protocol requires a MHP skilled in child and adolescent psychology to evaluate the response of the adolescent with GID after pubertal suppression. Adolescents with GID should experience the first changes of their biologic, spontaneous puberty because their emotional reaction to these first physical changes has diagnostic value. Treatment in early puberty risks limited growth of the penis and scrotum that may make the surgical creation of a vagina from scrotal tissue more difficult.

2.1.–2.2. Values and Preferences

These recommendations place a high value on avoiding the increasing likelihood of an unsatisfactory physical change when secondary sexual characteristics have become manifest and irreversible, as well as a high value on offering the adolescent the experience of the desired gender. These recommendations place a lower value on avoiding potential harm from early hormone therapy.

2.1.–2.2. Remarks

Tanner stages of breast and male genital development are given in Table 6. Blood levels of sex steroids during Tanner stages of pubertal development are given in Table 7. Careful documentation of hallmarks of pubertal development will ensure precise timing of initiation of pubertal suppression.

Irreversible and, for transsexual adolescents, undesirable sex characteristics in female puberty are large breasts and short stature and in male puberty are Adam's apple, low voice, male bone configuration such as large jaws, big feet and hands, tall stature, and male hair pattern on the face and extremities.

2.3. We recommend that GnRH analogues be used to achieve suppression of pubertal hormones. (1 | )

2.3. Evidence

Suppression of pubertal development and gonadal function is accomplished most effectively by gonadotropin suppression with GnRH analogues and antagonists. Analogues suppress gonadotropins after a short period of stimulation, whereas antagonists immediately suppress pituitary secretion (64, 65). Since no long-acting antagonists are available for use as pharmacotherapy, long-acting analogues are the currently preferred treatment option.

During treatment with the GnRH analogues, slight development of sex characteristics will regress and, in a later phase of pubertal development, will be halted. In girls, breast development will become atrophic and menses will stop; in boys, virilization will stop and testicular volume will decrease (61).

An advantage of using GnRH analogues is the reversibility of the intervention. If, after extensive exploring of his/her reassignment wish, the applicant no longer desires sex reassignment, pubertal

TABLE 6. Description of Tanner stages of breast development and male external genitalia

For breast development:
1. Preadolescent.
2. Breast and papilla elevated as small mound; areolar diameter increased.
3. Breast and areola enlarged, no contour separation.
4. Areola and papilla form secondary mound.
5. Mature; nipple projects, areola part of general breast contour.
For penis and testes:
1. Preadolescent.
2. Slight enlargement of penis; enlarged scrotum, pink texture altered.
3. Penis longer, testes larger.
4. Penis larger, glans and breadth increase in size; testes larger, scrotum dark.
5. Penis and testes adult size.

Adapted from Ref. 62

TABLE 7. Estradiol levels in female puberty and testosterone levels in male puberty during night and day

Tanner stage	Nocturnal estradiol	Diurnal estradiol
Estradiol (pmol/liter)[a]		
B1	<37	<37
B2	38.5	56.3
B3	81.7	107.3
B4	162.9	132.3
B5	201.6	196.7
Testosterone (nmol/liter)[b]		
G1	<0.25	<0.25
G2	1.16	0.54
G3	3.76	0.62
G4	9.83	1.99
G5	13.2	7.80
Adult	18.8	17.0

Data represent median of hourly measurements from 2400–0600 h (nocturnal) and 1200–1800 h (diurnal).
a Adapted from Ref. 63.
b Adapted from Ref. 59.

suppression can be discontinued. Spontaneous pubertal development will resume immediately (66).

Men with delayed puberty have decreased bone mineral density (BMD). Treatment of adults with GnRH analogues results in loss of BMD (67). In children with central precocious puberty, bone density is relatively high for age. Suppressing puberty in these children using GnRH analogues will result in a further increase in BMD and stabilization of BMD standard deviation scores (68). Initial data in transsexual subjects demonstrate no change of bone density during GnRH analogue therapy (61). With cross-hormone treatment, bone density increases. The long-term effects on bone density and peak bone mass are being evaluated.

GnRH analogues are expensive and not always reimbursed by insurance companies. Although there is no clinical experience in this population, financial considerations may require treatment with progestins as a less effective alternative. They suppress gonadotropin secretion and exert a mild peripheral anti-androgen effect in boys. Depo-medroxyprogesterone will suppress ovulation and progesterone production for long periods of time, although residual estrogen levels vary. In high doses, progestins are relatively effective in suppression of menstrual cycling in girls and women and androgen levels in boys and men. However, at these doses, side effects such as suppression of adrenal function and suppression of bone growth may occur (69). Anti-estrogens in girls and anti-androgens in boys can be used to delay the progression of puberty (70, 71). Their efficacy, however, is far less than that of the GnRH analogues.

2.3. Values and Preferences

For persons who can afford the therapy, our recommendation of GnRH analogues places a higher value on the superior efficacy, safety, and reversibility of the pubertal hormone suppression achieved, as compared with the alternatives, and a relatively lower value on limiting the cost of therapy. Of the available alternatives, a depot progestin preparation may be partially effective, but is not as safe (69, 72); its lower cost may make it an acceptable treatment for persons who cannot afford GnRH.

2.3. Remarks

Measurements of gonadotropin and sex steroid levels give precise information about suppression of the gonadal axis. If the gonadal axis is not completely suppressed, the interval of GnRH analogue injections should be shortened. During treatment, adolescents should be monitored for negative effects of delaying puberty, including a halted growth spurt and impaired bone accretion. The clinical protocol to be used is shown in Table 8.

Glucose and lipid metabolism, complete blood counts, and liver and renal function should be monitored during suppression and cross-sex hormone substitution. For the evaluation of growth, anthropometric measurements are informative. To assess bone density, dual energy X-ray absorptiometry (DXA) scans can be performed.

2.4. We suggest that pubertal development of the desired, opposite sex be initiated at the age of 16 years, using a gradually increasing dose schedule of cross-sex steroids. (2 | ⊕◯◯◯)

2.4. Evidence

In many countries, 16-year-olds are legal adults with regard to medical decision making. This is probably because, at this age, most adolescents are able to make complex cognitive decisions. Although parental consent may not be required, obtaining it is preferred since the support of parents should improve the outcome during this complex phase of the adolescent's life (61).

For the induction of puberty, we use a similar dose scheme of induction of puberty in these hypogonadal transsexual adolescents as in other hypogonadal individuals (Table 9). We do not advise the use of sex steroid creams or patches since there is little experience for induction of puberty. The transsexual adolescent is hypogonadal and may be sensitive to high doses of cross-sex steroids, causing adverse effects of striae and abnormal breast shape in girls and cystic acne in boys.

In FTM transsexual adolescents, suppression of puberty may halt the growth spurt. To achieve maximum height, slow introduction of androgens will mimic a "pubertal" growth spurt. If the patient is relatively short, one may treat with oxandrolone, a growth-stimulating anabolic steroid also successfully applied in women with Turner syndrome (73–75).

TABLE 8. Follow-up protocol during suppression of puberty

EVERY 3 MONTHS
Anthropometry: height, weight, sitting height, Tanner stages
Laboratory: LH, FSH, estrodiol/testosterone
EVERY YEAR
Laboratory: renal and liver function, lipids, glucose, insulin, glycosylated hemoglobin
Bone density using DXA
Bone age on X-ray of the left hand

In MTF transsexual adolescents, extreme tall stature is often a genetic probability. The estrogen dose may be increased by more rapid increments in the schedule. Estrogens may be started before the age of 16 (in exceptional cases), or estrogens can be prescribed in growth-inhibiting doses (61).

We suggest that treatment with GnRH analogues be continued during treatment with cross-sex steroids to maintain full suppression of pituitary gonadotropin levels and, thereby, gonadal steroids. When puberty is initiated with a gradually increasing schedule of sex steroid doses, the initial levels will not be high enough to suppress endogenous sex steroid secretion (Table 7). The estrogen doses used may result in reactivation of gonadotropin secretion and endogenous production of testosterone that can interfere with the effectiveness of the treatment. GnRH analogue treatment is advised until gonadectomy.

2.4. Values and Preferences

Identifying an age at which pubertal development is initiated will be by necessity arbitrary, but the goal is to start this process at a time when the individual will be able to make informed mature decisions and engage in the therapy, while at the same time developing along with his or her peers. Growth targets reflect personal preferences, often shaped by societal expectations. Individual preferences

TABLE 9. Protocol induction of puberty

Induction of female puberty with oral 17β, estradiol, increasing the dose every 6 months;
5 μg/kg/day
10 μg/kg/day
15 μg/kg/day
20 μg/kg/day
adult dose = 2 mg per day
Induction of male puberty with intramuscular testosterone esters, increasing the dose every 6 months:
25 mg/m^2/2 weeks im
50 mg/m^2/2 weeks im
75 mg/m^2/2 weeks im
100 mg/m^2/2 weeks im

TABLE 10. Follow-up protocol during induction of puberty

EVERY 3 MONTHS
Anthropometry: height, weight, sitting height, Tanner stages
Laboratory: endocrinology: LH, FSH, estrodiol/testosterone
EVERY YEAR
Laboratory: renal and liver function, lipids, glucose, insulin, glycosylated hemoglobin
Bone density using DXA
Bone age on X-ray of the left hand
These parameters should be measured also at long term. For bone development until the age of 25–30 years or until peak bone mass has been reached.

should be the key determinant, rather than the professional's deciding a priori that MTF transsexuals should be shorter than FTM transsexuals.

2.4. Remarks

Protocols for induction of puberty can be found in Table 9.

We recommend monitoring clinical pubertal development as well as laboratory parameters (Table 10). Sex steroids of the desired sex will initiate pubertal development, which can be (partially) monitored using Tanner stages. In addition, the sex steroids will affect growth and bone development, as well as insulin sensitivity and lipid metabolism, as in normal puberty (76, 77).

2.5. We recommend referring hormone-treated adolescents for surgery when 1) the RLE has resulted in a satisfactory social role change, 2) the individual is satisfied about the hormonal effects, and 3) the individual desires definitive surgical changes. (1 | ⊕◯◯◯)

2.6. We suggest deferring for surgery until the individual is at least 18 years old. (2 | ⊕◯◯◯).

2.5.–2.6. Evidence

Surgery is an irreversible intervention. The WPATH SOC (28) emphasizes that the "threshold of 18 should be seen as an eligibility criterion and not an indication in itself for active intervention." If the RLE supported by sex hormones of the desired sex has not resulted in a satisfactory social role change, if the person is not satisfied with or is ambivalent about the hormonal effects, or if the person is ambivalent about surgery, then the applicant should not be referred for surgery (78, 79).

3.0. HORMONAL THERAPY FOR TRANSSEXUAL ADULTS

The two major goals of hormonal therapy are: 1) to reduce endogenous hormone levels and, thereby, the secondary sex characteristics of the individual's biological (genetic) sex and assigned gender and 2) to replace endogenous sex hormone levels with those of the reassigned sex by using the principles of hormone replacement treatment of hypogonadal patients. The timing of these two goals and the age at which to begin treatment with cross-sex hormones is co-determined in collaboration with both the person pursuing sex change and the MHP who made the diagnosis, performed psychological evaluation, and recommended sex reassignment. The physical changes induced by this sex hormone transition are usually accompanied by an improvement in mental well-being.

Recommendations

3.1. We recommend that treating endocrinologists confirm the diagnostic criteria of GID or transsexualism and the eligibility and readiness criteria for the endocrine phase of gender transition. (1 | ⊕◯◯◯)

3.2. We recommend that medical conditions that can be exacerbated by hormone depletion and cross-sex hormone treatment be evaluated and addressed prior to initiation of treatment (Table 11. Medical conditions that can be exacerbated by cross-sex hormone therapy). (1 | ⊕⊕⊕◯)

3.3. We suggest that cross-sex hormone levels be maintained in the normal physiologic range for the desired gender. (2 | ⊕⊕◯◯)

3.1.–3.3. Evidence

Although the diagnosis of GID or transsexualism is made by an MHP, the referral for endocrine treatment implies fulfillment of the eligibility and readiness criteria (See Section 1) (28). It is the responsibility of the physician to whom the transsexual person has been referred to confirm that the person fulfills these criteria for treatment. This task can be accomplished by the physician's becoming familiar with the terms and criteria presented in Tables 1–5, taking a thorough history from the person recommended for treatment, and discussing these criteria with the MHP. Continued evaluation of the transsexual person by the MHP, in collaboration with the treating endocrinologist, will ensure that the desire for sex change is appropriate, that the consequences, risks, and benefits of treatment are well understood, and that the desire for sex change persists.

Female-to-male transsexual persons

Clinical studies have demonstrated the efficacy of several different androgen preparations to induce masculinization in FTM transsexual persons (80–84). Regimens to change secondary sex characteristics follow the general principle of hormone replacement treatment of male hypogonadism (85). Either parenteral or transdermal preparations can be used to achieve testosterone values in the normal male range (320–1000 ng/dl) (Table 12). Sustained supraphysiologic levels of testosterone increase the risk of adverse reactions (see Section 4.0.).

TABLE 11. Medical conditions that can be exacerbated by cross-sex hormone therapy

TRANSSEXUAL FEMALE (MTF) – ESTROGEN
Very high risk of serious adverse outcomes
• thromboembolic disease
Moderate to high risk of adverse outcomes
• macroprolactinoma
• severe liver dysfunction (transaminases > 3x upper limit of normal)
• breast cancer
• coronary artery disease
• cerebrovascular disease
• severe migraine headaches
TRANSSEXUAL MALE (FTM) – TESTOSTERONE
Very high risk of serious adverse outcomes
• breast or uterine cancer
• erythrocytosis (hematocrit >50%)
Moderate to high risk of adverse outcomes
• severe liver dysfunction (transaminases > 3x upper limit of normal)

Similar to androgen therapy in hypogonadal men, testosterone treatment in the FTM individual results in increased muscle mass and decreased fat mass, increased facial hair and acne, male pattern baldness, and increased libido (86). Specific to the FTM transsexual person, testosterone will result in clitoromegaly, temporary or permanent decreased fertility, deepening of the voice, and, usually, cessation of menses. Cessation of menses may occur within a few months with testosterone treatment alone, although high doses of testosterone may be required. If uterine bleeding continues, addition of a progestational agent or endometrial ablation may be considered (87, 88). Gonadotropin-releasing hormone analogues or depot medroxyprogesterone may also be used to stop menses prior to testosterone treatment and to reduce estrogens to levels found in biological males.

TABLE 12. Hormone regimens in the transsexual persons

	Dosage
MTF TRANSSEXUAL PERSONS[a]	
Estrogen	
Oral: estradiol	2.0–6.0 mg/d
Transdermal: estradiol patch	0.1– 0.4 mg twice weekly
Parenteral: estradiol	5–20 mg im every 2 wk
valerate or cypionate	2–10 mg im every week
Antiandrogens	
Spironolactone	100–200 mg/d
Cyproterone acetate[b]	50–100 mg/d
GnRH agonist	3.75 mg sc monthly
FTM TRANSSEXUAL PERSONS	
Testosterone	
Oral: testosterone	160–240 mg/d
undecanoate[b]	
Parenteral	
Testosterone enanthate	100–200 mg im every
or cypionate	2 wk or 50% weekly
Testosterone	1000 mg every 12 wk
undecanoate[b,c]	
Transdermal	
Testosterone gel 1%	2.5–10 g/d
Testosterone patch	2.5–7.5 mg/d

a Estrogens used with or without antiandrogens or GnRH agonist.
b Not available in the United States.
c 1000 mg initially, followed by an injection at 6 wk, then at 12-wk intervals

Male-to-female transsexual persons

The hormone regimen for MTF transsexual individuals is more complex than the FTM regimen. Most published clinical studies report the use of an anti-androgen in conjunction with an estrogen (80, 82–84, 89).

The anti-androgens shown to be effective reduce endogenous testosterone levels, ideally to levels found in adult biological women, to enable estrogen therapy to have its fullest effect. Two categories of these medications are progestins with anti-androgen activity and gonadotropin-releasing hormone agonists (90). Spironolactone has anti-androgen properties by directly inhibiting testosterone secretion and by inhibiting androgen binding to the androgen receptor (83, 84). It may also have estrogenic activity (91). Cyproterone acetate, a progestational compound with anti-androgenic properties (80, 82), is widely used in Europe. Flutamide blocks binding of androgens to the androgen receptor, but it does not lower serum testosterone levels; it has liver toxicity, and its efficacy has not been demonstrated.

Dittrich (90), reporting a series of 60 MTF transsexual persons who used monthly the GnRH agonist goserelin acetate in combination with estrogen, found this regimen to be effective in reducing testosterone levels with low incidence of adverse reactions.

Estrogen can be given orally as conjugated estrogens, or 17β-estradiol, as transdermal estrogen or parenteral estrogen esters (Table 12).

Measurement of serum estradiol levels can be used to monitor oral, transdermal, and intramuscular estradiol or its esters. Use of conjugated estrogens or synthetic estrogens cannot be monitored by blood

tests. Serum estradiol should be maintained at the mean daily level for pre-menopausal women (<200 pg/ml), and the serum testosterone level should be in the female range (<55 ng/dl). The transdermal preparations may confer an advantage in the older transsexual women who may be at higher risk for thromboembolic disease (92).

Venous thromboembolism may be a serious complication. A 20-fold increase in venous thromboembolic disease was reported in a large cohort of Dutch transsexual subjects (93). This increase may have been associated with the use of ethinyl estradiol (92). The incidence decreased upon cessation of the administration of ethinyl estradiol (93). Thus, the use of synthetic estrogens, especially ethinyl estradiol, is undesirable because of the inability to regulate dose by measurement of serum levels and the risk of thromboembolic disease. Deep vein thrombosis occurred in 1 of 60 MTF transsexual persons treated with a GnRH analog and oral estradiol (90). The patient was found to have a homozygous C677 T mutation. Administration of cross-sex hormones to 162 MTF and 89 FTM transsexual persons was not associated with venous thromboembolism despite an 8.0% and 5.6% incidence of thrombophilia (94). Thombophilia screening of transsexual persons initiating hormone treatment should be restricted to those with a personal or family history of venous thromboembolism (94). Monitoring D-dimer levels during treatment is not recommended (95).

3.1.–3.3. Values and Preferences

Our recommendation to maintain levels of cross-sex hormones in the normal adult range places a high value on the avoidance of the long-term complications of pharmacologic doses. Those receiving endocrine treatment who have relative contraindications to hormones (*e.g.*, persons who smoke, have diabetes, have liver disease, etc.) should have an in-depth discussion with their physician to balance the risks and benefits of therapy.

3.1.–3.3. Remarks

All endocrine-treated individuals should be informed of all risks and benefits of cross-sex hormones prior to initiation of therapy. Cessation of tobacco use should be strongly encouraged in MTF transsexual persons to avoid increased risk of thromboembolism and cardiovascular complications.

Recommendation

3.4. We suggest that endocrinologists review with persons treated the onset and time course of physical changes induced by cross-sex hormone treatment. (2 | ⊕⊕◯◯)

3.4. Evidence

Female-to-male transsexual persons

Physical changes that are expected to occur during the first 3 months of initiation of testosterone therapy include cessation of menses, increased libido, increased facial and body hair, increased oiliness of skin, increased muscle, and redistribution of fat mass. Changes that occur within the first year of testosterone therapy include deepening of the voice, clitoromegaly, and, in some individuals, male pattern hair loss (83, 96, 97) (Table 13).

Male-to-female transsexual persons

Physical changes that may occur in the first 3–6 months of estrogen and anti-androgen therapy include decreased libido, decreased facial and body hair, decreased oiliness of skin, breast tissue growth, and redistribution of fat mass (82–84, 96–97) (Table 14). Breast development is generally maximal at 2 years after initiation of hormones (82–84). Over a long period of time, the prostate gland and testicles will undergo atrophy.

Although the time course of breast development in MTF transsexual persons has been studied (97), precise information about other changes induced by sex hormones is lacking. There is a great deal of variability between individuals, as evidenced during pubertal development.

TABLE 13. Masculinizing effects in FTM transsexual persons

EFFECT	ONSET[a] (months)	MAXIMUM[a] (years)
Skin oiliness/acne	1 – 6	1 – 2
Facial/body hair growth	6 – 12	4 – 5
Scalp hair loss	6 – 12	b
Increased muscle mass/strength	6 – 12	2 – 5
Fat redistribution	1 – 6	2 – 5
Cessation of menses	2 – 6	c
Clitoral enlargement	3 – 6	1 – 2
Vaginal atrophy	3 – 6	1 – 2
Deepening of voice	6 – 12	1 – 2

a Estimates represent clinical observations. See Refs 81, 92, 93.
b Prevention and treatment as recommended for biological men.
c Menorrhagia requires diagnosis and treatment by a gynecologist.

TABLE 14. Feminizing effects in MTF transsexual persons

EFFECT	ONSET[a]	MAXIMUM[a]
Redistribution of body fat	3 – 6 months	2 – 3 years
Decrease in muscle mass and strength	3 – 6 months	1 – 2 years
Softening of skin/decreased oiliness	3 – 6 months	Unknown
Decreased libido	1 – 3 months	3 – 6 months
Decreased spontaneous erections	1 – 3 months	3 – 6 months
Male sexual dysfunction	Variable	Variable
Breast growth	3 – 6 months	2 – 3 years
Decreased testicular volume	3 – 6 months	2 – 3 years
Decreased sperm production	Unknown	> 3 years
Decreased terminal hair growth	6 – 12 months	> 3 years[b]
Scalp hair	No regrowth	c
Voice changes	None	d

a Estimates represent clinical observations. See Refs 81, 92, 93.
b Complete removal of male sexual hair requires electrolysis or laser treatment or both.
c Familial scalp hair loss may occur if estrogens are stopped.
d Treatment by speech pathologists for voice training is most effective.

3.4. Values and Preferences

Transsexual persons have very high expectations regarding the physical changes of hormone treatment and are aware that body changes can be enhanced by surgical procedures (*e.g.*, breast, face, and body habitus). Clear expectations for the extent and timing of sex-hormone-induced changes may prevent the potential harm and expense of unnecessary procedures.

4.0. ADVERSE OUTCOME PREVENTION AND LONG-TERM CARE

Cross-sex hormone therapy confers the same risks associated with sex hormone replacement therapy in biological males and females. The risk of cross-sex hormone therapy arises from and is worsened by inadvertent or intentional use of supraphysiologic doses of sex hormones or inadequate doses of sex hormones to maintain normal physiology (81, 89).

Recommendation

4.1. We suggest regular clinical and laboratory monitoring every 3 months during the first year and then once or twice yearly. (2 | ⊕⊕◯◯)

4.1. Evidence

Pretreatment screening and appropriate regular medical monitoring is recommended for both FTM and MTF transsexual persons during the endocrine transition and periodically thereafter (13, 97). Monitoring of weight and blood pressure, directed physical exams, routine health questions focused on risk factors and medications, complete blood counts, renal and liver function, lipid and glucose metabolism should be carried out.

Female-to-male transsexual persons

A standard monitoring plan for individuals on testosterone therapy is found in Table 15. Key issues include maintaining testosterone levels in the physiologic normal male range and avoidance of adverse events resulting from chronic testosterone therapy, particularly erythrocytosis, liver dysfunction, hypertension, excessive weight gain, salt retention, lipid changes, excessive or cystic acne, and adverse psychological changes (85).

Since oral 17-alkylated testosterone is not recommended, serious hepatic toxicity is not anticipated with the use parenteral or transdermal testosterone (98, 99). Still, periodic monitoring is recommended given that up to 15% of FTM persons treated with testosterone have transient elevations in liver enzymes (93).

Male-to-female transsexual persons

A standard monitoring plan for individuals on estrogens, gonadotropin suppression, or anti-androgens is found in Table 16. Key issues include avoiding supraphysiologic doses or blood levels of estrogen, which may lead to increased risk for thromboembolic disease, liver dysfunction, and development of hypertension.

TABLE 15. Monitoring of MTF transsexual persons on cross-hormone therapy

1. Evaluate patient every 2–3 months in the first year and then 1–2 times per year to monitor for appropriate signs of feminization and for development of adverse reactions.
2. Measure serum testosterone and estradiol every 3 months. a. Serum testosterone levels should be <55 ng/dl. b. Serum estradiol should not exceed the peak physiologic range for young healthy females, with ideal levels, 200 pg/ml. c. Doses of estrogen should be adjusted according to the serum levels of estradiol.
3. For individuals on spironolactone, serum electrolytes particularly potassium should be monitored every 2–3 months initially in the first year.
4. Routine cancer screening recommended in non-transsexual individuals (breasts, colon, prostate).
5. Consider BMD testing at baseline if risk factors for osteoporotic fracture are present (e.g., previous fracture, family history, glucocorticoid use, prolonged hypogonadism). In individuals at low risk, screening for osteoporosis should be conducted at age 60 or in those who are not compliant with hormone therapy.

Recommendation

4.2. We suggest monitoring prolactin levels in male-to-female transsexual persons treated with estrogens. (2 | ⊕⊕◯◯)

4.2. Evidence

Estrogen therapy can increase the growth of pituitary lactotroph cells. There have been several reports of prolactinomas occurring after long-term estrogen therapy (100–102). Up to 20% of transsexual women treated with estrogens may have elevations in prolactin levels associated with enlargement of the pituitary gland (103). In most cases, the serum prolactin levels will return to the normal range with a reduction or discontinuation of the estrogen therapy (104).

The onset and time course of hyperprolactinemia during estrogen treatment are not known. Prolactin levels should be obtained at baseline and then at least annually during the transition period and biannually thereafter. Given that prolactinomas have been reported only in a few case reports and were not reported in large cohorts of estrogen-treated transsexual persons, the risk of prolactinoma is likely to be very low. Since the major presenting findings of micro-prolactinomas (hypogonadism and sometimes gynecomastia) are not apparent in MTF transsexual persons, radiologic examination of the pituitary may be carried out in those whose prolactin levels persistently increase despite stable or reduced estrogen levels.

Because transsexual persons are diagnosed and followed throughout sex reassignment by an MHP, it is likely that some will receive psychotropic medications that can increase prolactin levels.

Recommendation

4.3. We suggest that transsexual persons treated with hormones be evaluated for cardiovascular risk factors. (2 | ⊕⊕◯◯)

TABLE 16. Monitoring of FTM transsexual persons on cross-hormone therapy

1. Evaluate patient every 2–3 months in the first year and then 1–2 times per year to monitor for appropriate signs of virilization and for development of adverse reactions.
2. Measure serum testosterone every 2–3 months until levels are in the normal physiologic male range:*
a. For testosterone enanthate/cypionate injections, the testosterone level should be measured mid-way between injections. If the level is >700 ng/dl or <350 ng/dl, adjust dose accordingly.
b. For parenteral testosterone undecanoate, testosterone should be measured just before the following injection.
c. For transdermal testosterone, the testosterone level can be measured at any time after 1 week.
d. For oral testosterone undecanoate, the testosterone level should be measured 3–5 hours after ingestion.
e. Note: During the first 3–9 months of testosterone treatment, total testosterone levels may be high although free testosterone levels are normal due to high sex hormone binding globulin levels in some biological women.
3. Measure estradiol levels during the first 6 months of testosterone treatment or until there has been no uterine bleeding for 6 months. Estradiol levels should be <50 pg/ml.
4. Measure CBC and liver function tests at baseline and every 3 months for the first year and then 1–2 times a year. Monitor weight, blood pressure, lipids, fasting blood sugar (if family history of diabetes) and hemoglobin A1c (if diabetic) at regular visits.
5. Consider BMD testing at baseline if risk factors for osteoporotic fracture are present (e.g., previous fracture, family history, glucocorticoid use, prolonged hypogonadism). In individuals at low risk, screening for osteoporosis should be conducted at age 60 or in those who are not compliant with hormone therapy.
6. If cervical tissue is present, an annual pap smear is recommended by the American College of Obstetricians and Gynecologists.
7. If mastectomy is not performed, then consider mammograms as recommended by the American Cancer Society.

* *Adapted from Refs. 83, 85*

4.3. Evidence

Female-to-male transsexual persons

Testosterone administration to FTM transsexual persons will result in a more atherogenic lipid profile with lowered HDL cholesterol and higher triglyceride values (21, 105–107). Studies of the effect of testosterone on insulin sensitivity have mixed results (106, 108). A recent randomized, open-label uncontrolled safety study of FTM transsexual persons treated with testosterone undecanoate demonstrated no insulin resistance after 1 year (109). Numerous studies have demonstrated effects of cross-sex hormone treatment on the cardiovascular system (107, 110–112). Long-term studies from The Netherlands found no increased risk for cardiovascular mortality (93). Likewise, a meta-analysis of 19 randomized trials in men examining testosterone replacement showed no increased incidence of cardiovascular events (113). A systematic review of the literature found that data were insufficient, due to very low quality evidence, to allow meaningful assessment of patient important outcomes such as death, stroke, MI, or venous thromboembolism in FTM transsexual persons (21). Future research is needed to ascertain harms of hormonal therapies (21). Cardiovascular risk factors should be managed as they emerge according to established guidelines (114).

Male-to-female transsexual persons

A prospective study of MTF subjects found favorable changes in lipid parameters with increased HDL and decreased LDL concentrations (106). However, these favorable lipid changes were attenuated by increased weight, blood pressure, and markers of insulin resistance. The largest cohort of MTF subjects (with a mean age of 41) followed for a mean of 10 years showed no increase in cardiovascular mortality despite a 32% rate of tobacco use (93). Thus, there is limited evidence to determine whether estrogen is protective or detrimental in MTF transsexual persons (21). With aging there is usually an increase of body weight and therefore, as with non-transsexual individuals, glucose and lipid metabolism and blood pressure should be monitored regularly and managed according to established guidelines (114).

Recommendation

4.4. We suggest that bone mineral density measurements be obtained if risk factors for osteoporosis exist, specifically in those who stop sex hormone therapy after gonadectomy. (2 | ⊕⊕◯◯)

4.4. Evidence

Female-to-male transsexual persons

Adequate dosing of testosterone is important to maintain bone mass in FTM transsexual persons (115, 116). In one study (116), serum LH levels were inversely related to bone mineral density, suggesting that low levels of sex hormones were associated with bone loss. Thus, LH levels may serve as an indicator of the adequacy of sex steroid administration to preserve bone mass. The protective effect of testosterone may be mediated by peripheral conversion to estradiol both systemically and locally in the bone.

Male-to-female transsexual persons

Studies in aging genetic males suggest that serum estradiol more positively correlates with BMD than does testosterone (117–119) and is more important for peak bone mass (120). Estrogen preserves BMD in MTF transsexuals who continue on estrogen and anti-androgen therapies (116, 121, 122).

Fracture data in transsexual men and women are not available. Transsexual persons who have undergone gonadectomy may not continue consistent cross-sex steroid treatment after hormonal and surgical sex reassignment, thereby becoming at risk for bone loss.

Recommendations

4.5. We suggest that male-to-female transsexual persons, who have no known increased risk of breast cancer, follow breast screening guidelines recommended for biological women. (2 | ⊕⊕◯◯)

4.6. We suggest that male-to-female transsexual persons treated with estrogens follow screening

guidelines for prostatic disease and prostate cancer recommended for biological men. (2 | ⊕◯◯◯)

4.5.–4.6. Evidence

Breast cancer is a concern in transsexual women. A few cases of breast cancer in MTF transsexual persons have been reported in the literature (123–125). In the Dutch cohort of 1800 transsexual women followed for a mean of 15 years (range 1 to 30 years), only one case of breast cancer was found. The Women's Health Initiative study reported that women taking conjugated equine estrogen without progesterone for 7 years did not have an increased risk of breast cancer as compared with women taking placebo (126). Women with primary hypogonadism (XO) treated with estrogen replacement exhibited a significantly decreased incidence of breast cancer as compared with national standardized incidence ratios (127, 128). These studies suggest that estrogen therapy does not increase the risk of breast cancer in the short term (<20–30 years). Long-term studies are required to determine the actual risk and the role of screening mammograms. Regular exams and gynecologic advice should determine monitoring for breast cancer.

Prostate cancer is very rare, especially with androgen deprivation therapy, before the age of 40 (129). Childhood or pubertal castration results in regression of the prostate and adult castration reverses benign prostate hypertrophy (BPH) (130). Although van Kesteren (131) reported that estrogen therapy does not induce hypertrophy or pre-malignant changes in the prostate of MTF transsexual persons, cases of BPH have been reported in MTF transsexual persons treated with estrogens for 20–25 years (132, 133). Three cases of prostate carcinoma have been reported in MTF transsexual persons (134–136). However, these individuals initiated cross-hormone therapy after age 50, and whether these cancers were present before the initiation of therapy is unknown.

MTF transsexual persons may feel uncomfortable scheduling regular prostate examinations. Gynecologists are not trained to screen for prostate cancer or to monitor prostate growth. Thus, it may be reasonable for MTF transsexual persons who transitioned after age 20 to have annual screening digital rectal exams after age 50 and PSA tests consistent with the United States Preventive Services Task Force Guidelines Guidelines (137).

Recommendation

4.7. We suggest that female-to-male transsexual persons evaluate the risks and benefits of including a total hysterectomy and oophorectomy as part of sex reassignment surgery. (2 | ⊕◯◯◯)

4.7. Evidence

Although aromatization of testosterone to estradiol in FTM transsexual persons has been suggested as a risk factor for endometrial cancer (138), no cases have been reported. When FTM transsexual persons undergo hysterectomy, the uterus is small and there is endometrial atrophy (139, 140). The androgen receptor has been reported to increase in the ovaries after long-term administration of testosterone, which may be an indication of increased risk of ovarian cancer (141). Cases of ovarian cancer have been reported (142, 143). The relative safety of laparoscopic total hysterectomy argues for preventing the risks of reproductive tract cancers and other diseases through surgery (144).

4.7. Values and Preferences

Given the discomfort that FTM transsexual persons experience accessing gynecologic care, our recommendation for total hysterectomy and oophorectomy places a high value on eliminating the risks of female reproductive tract disease and cancer and a lower value on avoiding the risks of these surgical procedures (related to the surgery and to the potential undesirable health consequences of oophorectomy) and their associated costs.

4.7. Remarks

The sexual orientation and type of sexual practices will determine the need and types of gynecologic care required following transition. In addition, approval of birth certificate change of sex for FTM transsexual persons may be dependent upon having a complete hysterectomy; each patient should be assisted in

researching and counseled concerning such non-medical administrative criteria.

5.0. SURGERY FOR SEX REASSIGNMENT

For many transsexual adults, genital sex reassignment surgery may be the necessary step towards achieving their ultimate goal of living successful in their desired gender role. Although surgery on several different body structures is considered during sex reassignment, the most important issue is the genital surgery and removal of the gonads. The surgical techniques have improved markedly during the past 10 years. Cosmetic genital surgery with preservation of neurological sensation is now the standard. The satisfaction rate with surgical reassignment of sex is now very high (22). In addition, the mental health of the individual seems to be improved by participating in a treatment program that defines a pathway of gender identity treatment that includes hormones and surgery (24). The person must be both eligible and ready for such a procedure (Table 17).

Sex reassignment surgeries available to the MTF transsexual persons consist of gonadectomy, penectomy, and creation of a vagina (145, 146). The skin of the penis is often inverted to form the wall of the vagina. The scrotum becomes the labia majora. Cosmetic surgery is used to fashion the clitoris and its hood, preserving the neurovascular bundle at the tip of the penis as the neurosensory supply to the clitoris. Most recently, plastic surgeons have developed techniques to fashion labia minora. Endocrinologists should encourage the transsexual person to use their tampon dilators to maintain the depth and width of the vagina throughout the postoperative period until the neovagina is being used frequently in intercourse. Genital sexual responsivity and other aspects of sexual function should be preserved following genital sex reassignment surgery (147).

Ancillary surgeries for more feminine or masculine appearance are not within the scope of this guideline. When possible, less surgery is desirable. For instance, voice therapy by a speech language pathologist is preferred to current surgical methods designed to change the pitch of the voice (148).

Breast size in genetic females exhibits a very broad spectrum. For the transsexual person to make the best-informed decision, breast augmentation surgery should be delayed until at least 2 years of estrogen therapy have been completed given that the breasts continue to grow during that time with estrogen stimulation (90, 97).

Another major effort is the removal of facial and masculine-appearing body hair using either electrolysis or laser treatments. Other feminizing surgery, such as that to feminize the face, is now becoming more popular (149–151).

TABLE 17. Sex reassignment surgery eligibility and readiness criteria

Individuals treated with cross-sex hormones are considered eligible for sex reassignment surgery if they:
1. Are of the legal age of majority in their nation.
2. Have used cross-sex hormones continuously and responsibly during 12 months (if they have no medical contraindication).
3. Had a successful continuous full-time RLE during 12 months.
4. Have (if required by the MHP) regularly participated in psychotherapy throughout the RLE at a frequency determined jointly by the patient and the MHP.
5. Have shown demonstrable knowledge of all practical aspects of surgery (e.g., cost, required lengths of hospitalizations, likely complications, postsurgical rehabilitation, etc.).
Individuals, treated with cross-sex hormones, should fulfill the following readiness criteria prior to sex reassignment surgery:
1. Demonstrable progress in consolidating one's gender identity.
2. Demonstrable progress in dealing with work, family, and interpersonal issues resulting in a significantly better state of mental health.

Sex reassignment surgeries available to the FTM transsexual persons have been less satisfactory. The cosmetic appearance of a neopenis is now very good, but the surgery is multistage and very expensive (152, 153). Neopenile erection can be achieved only if some mechanical device is imbedded in the penis, *e.g.*, a rod or some inflatable apparatus (154). Many choose a metadoioplasty that exteriorizes or brings forward the clitoris and allows for voiding while standing. The scrotum is created from the labia majora with a good cosmetic effect, and testicular prostheses can be implanted. These procedures, as well as oophorectomy, vaginectomy, and complete hysterectomy, are undertaken after a few years of androgen therapy and can be safely performed vaginally with laparoscopy.

The ancillary surgery for the female-to-male transition that is extremely important is the mastectomy. Breast size only partially regresses with androgen therapy. In adults, discussion about mastectomy usually takes place after androgen therapy is begun. Since some FTM transsexual adolescents present after significant breast development has occurred, mastectomy may be considered before age 18.

Recommendations

5.1. We recommend that transsexual persons consider genital sex reassignment surgery only after both the physician responsible for endocrine transition therapy and the MHP find surgery advisable. (1 | ⊕◯◯◯)

5.2. We recommend that genital sex reassignment surgery be recommended only after completion of at least 1 year of consistent and compliant hormone treatment. (1 | ⊕◯◯◯)

5.3. We recommend that the physician responsible for endocrine treatment medically clear transsexual individuals for sex reassignment surgery and collaborate with the surgeon regarding hormone use during and after surgery. (1 | ⊕◯◯◯)

5.1.–5.3. Evidence

When a transsexual individual decides to have sex reassignment surgery, both the endocrinologist and the MHP must certify that he or she satisfies the eligibility and readiness criteria of the SOC (28) (Table 17).

There is some concern that estrogen therapy may cause an increased risk for venous thrombosis during or following surgery (21). For this reason, the surgeon and the endocrinologist should collaborate in making a decision about the use of hormones during the month before surgery.

Although one study suggests that preoperative factors such as compliance are less important for patient satisfaction than are the physical postoperative results (39), other studies and clinical experience dictate that individuals who do not follow medical instructions and work with their physicians toward a common goal do not do achieve treatment goals (155) and experience higher rates of postoperative infections and other complications (156, 157). It is also important that the person requesting surgery feel comfortable with the anatomical changes that have occurred during hormone therapy. Dissatisfaction with social and physical outcomes during the hormone transition may be a contraindication to surgery (78).

Transsexual individuals should be monitored by an endocrinologist after surgery. Those who undergo gonadectomy will require hormone replacement therapy or surveillance or both to prevent adverse effects of chronic hormone deficiency.

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The Harry Benjamin International Gender Dysphoria Association's Standards Of Care For Gender Identity Disorders, Sixth Version

February, 2001

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This is the sixth version of the Standards of Care since the original 1979 document.
Previous revisions were in 1980, 1981, 1990, and 1998.

Table of Contents:

I. Introductory Concepts

The Purpose of the Standards of Care. The major purpose of the Standards of Care (SOC) is to articulate this international organization's professional consensus about the psychiatric, psychological, medical, and surgical management of gender identity disorders. Professionals may use this document to understand the parameters within which they may offer assistance to those with these conditions. Persons with gender identity disorders, their families, and social institutions may use the SOC to understand the current thinking of professionals. All readers should be aware of the limitations of knowledge in this area and of the hope that some of the clinical uncertainties will be resolved in the future through scientific investigation.

The Overarching Treatment Goal. The general goal of psychotherapeutic, endocrine, or surgical therapy for persons with gender identity disorders is lasting personal comfort with the gendered self in order to maximize overall psychological well-being and self-fulfillment.

The Standards of Care Are Clinical Guidelines. The SOC are intended to provide flexible directions for the treatment of persons with gender identity disorders. When eligibility

requirements are stated they are meant to be minimum requirements. Individual professionals and organized programs may modify them. Clinical departures from these guidelines may come about because of a patient's unique anatomic, social, or psychological situation, an experienced professional's evolving method of handling a common situation, or a research protocol. These departures should be recognized as such, explained to the patient, and documented both for legal protection and so that the short and long term results can be retrieved to help the field to evolve.

The Clinical Threshold. A clinical threshold is passed when concerns, uncertainties, and questions about gender identity persist during a person's development, become so intense as to seem to be the most important aspect of a person's life, or prevent the establishment of a relatively unconflicted gender identity. The person's struggles are then variously informally referred to as a gender identity problem, gender dysphoria, a gender problem, a gender concern, gender distress, gender conflict, or transsexualism. Such struggles are known to occur from the preschool years to old age and have many alternate forms. These reflect various degrees of personal dissatisfaction with sexual identity, sex and gender demarcating body characteristics, gender roles, gender identity, and the perceptions of others. When dissatisfied individuals meet specified criteria in one of two official nomenclatures--the International Classification of Diseases-10 (ICD-10) or the Diagnostic and Statistical Manual of Mental Disorders--Fourth Edition (DSM-IV)--they are formally designated as suffering from a gender identity disorder (GID). Some persons with GID exceed another threshold--they persistently possess a wish for surgical transformation of their bodies.

Two Primary Populations with GID Exist -- Biological Males and Biological Females. The sex of a patient always is a significant factor in the management of GID. Clinicians need to separately consider the biologic, social, psychological, and economic dilemmas of each sex. All patients, however, should follow the SOC.

II. Epidemiological Considerations

Prevalence. When the gender identity disorders first came to professional attention, clinical perspectives were largely focused on how to identify candidates for sex reassignment surgery. As the field matured, professionals recognized that some persons with bona fide gender identity disorders neither desired nor were candidates for sex reassignment surgery. The earliest estimates of prevalence for transsexualism in adults were 1 in 37,000 males and 1 in 107,000 females. The most recent prevalence information from the Netherlands for the transsexual end of the gender identity disorder spectrum is 1 in 11,900 males and 1 in 30,400 females. Four observations, not yet firmly supported by systematic study, increase the likelihood of an even higher prevalence: 1) unrecognized gender problems are occasionally diagnosed when patients are seen with anxiety, depression, bipolar disorder, conduct disorder, substance abuse, dissociative identity disorders, borderline personality disorder, other sexual disorders and intersexed conditions; 2) some nonpatient male transvestites, female impersonators, transgender people, and male and female homosexuals may have a form of gender identity disorder; 3) the intensity of some persons' gender identity disorders fluctuates below and above a clinical threshold; 4) gender variance among female-bodied individuals tends to be relatively invisible to the culture, particularly to mental health professionals and scientists.

Natural History of Gender Identity Disorders. Ideally, prospective data about the natural history of gender identity struggles would inform all treatment decisions. These are lacking, except for the demonstration that, without therapy, most boys and girls with gender identity disorders outgrow their wish to change sex and gender. After the diagnosis of GID is made the therapeutic approach usually includes three elements or phases (sometimes labeled triadic therapy): a real-life experience in the desired role, hormones of the desired gender, and surgery to change the genitalia and other sex characteristics. Five less firmly scientifically established observations prevent clinicians from prescribing the triadic therapy based on diagnosis alone: 1) some carefully diagnosed persons spontaneously change their aspirations; 2) others make more comfortable accommodations to their gender identities without medical interventions; 3) others give up their wish to follow the triadic sequence during psychotherapy; 4) some gender identity clinics have an unexplained high drop out rate; and 5) the percentage of persons who are not benefited from the triadic therapy varies significantly from study to study. Many persons with GID will desire all three elements of triadic therapy. Typically, triadic therapy takes place in the order of hormones = = > real-life experience = = > surgery, or sometimes: real-life experience = = > hormones = = > surgery. For some biologic females, the preferred sequence may be hormones = = > breast surgery = = > real-life experience. However, the diagnosis of GID invites the consideration of a variety of therapeutic options, only one of which is the complete therapeutic triad. Clinicians have increasingly become aware that not all persons with gender identity disorders need or want all three elements of triadic therapy.

Cultural Differences in Gender Identity Variance throughout the World. Even if epidemiological studies established that a similar base rate of gender identity disorders existed all over the world, it is likely that cultural differences from one country to another would alter the behavioral expressions of these conditions. Moreover, access to treatment, cost of treatment, the therapies offered and the social attitudes towards gender variant people and the professionals who deliver care differ broadly from place to place. While in most countries, crossing gender boundaries usually generates moral censure rather than compassion, there are striking examples in certain cultures of cross-gendered behaviors (e.g., in spiritual leaders) that are not stigmatized.

III. Diagnostic Nomenclature

The Five Elements of Clinical Work. Professional involvement with patients with gender identity disorders involves any of the following: diagnostic assessment, psychotherapy, real-life experience, hormone therapy, and surgical therapy. This section provides a background on diagnostic assessment.

The Development of a Nomenclature. The term *transexxual* emerged into professional and public usage in the 1950s as a means of designating a person who aspired to or actually lived in the anatomically contrary gender role, whether or not hormones had been administered or surgery had been performed. During the 1960s and 1970s, clinicians used the term *true transsexual*. The true transsexual was thought to be a person with a characteristic path of atypical gender identity development that predicted an improved life from a treatment sequence that culminated in genital surgery. True transsexuals were thought to have: 1) cross-gender identifications that were consistently expressed behaviorally in childhood, adolescence, and

adulthood; 2) minimal or no sexual arousal to cross-dressing; and 3) no heterosexual interest, relative to their anatomic sex. True transsexuals could be of either sex. True transsexual males were distinguished from males who arrived at the desire to change sex and gender via a reasonably masculine behavioral developmental pathway. Belief in the true transsexual concept for males dissipated when it was realized that such patients were rarely encountered, and thatsome of the original true transsexuals had falsified their histories to make their stories match the earliest theories about the disorder. The concept of true transsexual females never created diagnostic uncertainties, largely because patient histories were relatively consistent and gender variant behaviors such as female cross-dressing remained unseen by clinicians. The term "gender dysphoria syndrome" was later adopted to designate the presence of a gender problem in either sex until psychiatry developed an official nomenclature.

The diagnosis of Transsexualism was introduced in the DSM-III in 1980 for gender dysphoric individuals who demonstrated at least two years of continuous interest in transforming the sex of their bodies and their social gender status. Others with gender dysphoria could be diagnosed as Gender Identity Disorder of Adolescence or Adulthood, Nontranssexual Type; or Gender Identity Disorder Not Otherwise Specified (GIDNOS). These diagnostic terms were usually ignored by the media, which used the term transsexual for any person who wanted to change his/her sex and gender.

The DSM-IV. In 1994, the DSM-IV committee replaced the diagnosis of Transsexualism with Gender Identity Disorder. Depending on their age, those with a strong and persistent cross-gender identification and a persistent discomfort with their sex or a sense of inappropriateness in the gender role of that sex were to be diagnosed as Gender Identity Disorder of Childhood (302.6), Adolescence, or Adulthood (302.85). For persons who did not meet these criteria, Gender Identity Disorder Not Otherwise Specified (GIDNOS)(302.6) was to be used. This category included a variety of individuals, including those who desired only castration or penectomy without a desire to develop breasts, those who wished hormone therapy and mastectomy without genital reconstruction, those with a congenital intersex condition, those with transient stress-related cross-dressing, and those with considerable ambivalence about giving up their gender status. Patients diagnosed with GID and GIDNOS were to be subclassified according to the sexual orientation: attracted to males; attracted to females; attracted to both; or attracted to neither. This subclassification was intended to assist in determining, over time, whether individuals of one sexual orientation or another experienced better outcomes using particular therapeutic approaches; it was **not** intended to guide treatment decisions.

Between the publication of DSM-III and DSM-IV, the term "transgender" began to be used in various ways. Some employed it to refer to those with unusual gender identities in a value-free manner -- that is, without a connotation of psychopathology. Some people informally used the term to refer to any person with any type of gender identity issues. Transgender is not a formal diagnosis, but many professionals and members of the public found it easier to use informally than GIDNOS, which is a formal diagnosis.

The ICD-10. The ICD-10 now provides five diagnoses for the gender identity disorders (F64):

Transsexualism (F64.0) has three criteria:

1. The 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 sex through surgery and hormone treatment;
2. The transsexual identity has been present persistently for at least two years;
3. The disorder is not a symptom of another mental disorder or a chromosomal abnormality.

Dual-role Transvestism (F64.1) has three criteria:
1. The individual wears clothes of the opposite sex in order to experience temporary membership in the opposite sex;
2. There is no sexual motivation for the cross-dressing;
3. The individual has no desire for a permanent change to the opposite sex.

Gender Identity Disorder of Childhood (64.2) has separate criteria for girls and for boys.
For girls:

1. The individual shows persistent and intense distress about being a girl, and has a stated desire to be a boy (not merely a desire for any perceived cultural advantages to being a boy) or insists that she is a boy;
2. Either of the following must be present:
    a. Persistent marked aversion to normative feminine clothing and insistence on wearing stereotypical masculine clothing;
    b. Persistent repudiation of female anatomical structures, as evidenced by at least one of the following:
        1. An assertion that she has, or will grow, a penis;
        2. Rejection of urination in a sitting position;
        3. Assertion that she does not want to grow breasts or menstruate.
3. The girl has not yet reached puberty;
4. The disorder must have been present for at least 6 months.

For boys:

1. The individual shows persistent and intense distress about being a boy, and has a desire to be a girl, or, more rarely, insists that he is a girl.
2. Either of the following must be present:
    a. Preoccupation with stereotypic female activities, as shown by a preference for either cross-dressing or simulating female attire, or by an intense desire to participate in the games and pastimes of girls and rejection of stereotypical male toys, games, and activities;
    b. Persistent repudiation of male anatomical structures, as evidenced by at least one of the following repeated assertions:
        1. That he will grow up to become a woman (not merely in the role);
        2. That his penis or testes are disgusting or will disappear;
        3. That it would be better not to have a penis or testes.
3. The boy has not yet reached puberty;
4. The disorder must have been present for at least 6 months.

Other Gender Identity Disorders (F64.8) has no specific criteria.

Gender Identity Disorder, Unspecified has no specific criteria.

Either of the previous two diagnoses could be used for those with an intersexed condition.

The purpose of the DSM-IV and ICD-10 is to guide treatment and research. Different professional groups created these nomenclatures through consensus processes at different times. There is an expectation that the differences between the systems will be eliminated in the future. At this point, the specific diagnoses are based more on clinical reasoning than on scientific investigation.

Are Gender Identity Disorders Mental Disorders? To qualify as a mental disorder, a behavioral pattern must result in a significant adaptive disadvantage to the person or cause personal mental suffering. The DSM-IV and ICD-10 have defined hundreds of mental disorders which vary in onset, duration, pathogenesis, functional disability, and treatability. The designation of gender identity disorders as mental disorders is not a license for stigmatization, or for the deprivation of gender patients' civil rights. The use of a formal diagnosis is often important in offering relief, providing health insurance coverage, and guiding research to provide more effective future treatments.

IV. The Mental Health Professional

The Ten Tasks of the Mental Health Professional. Mental health professionals (MHPs) who work with individuals with gender identity disorders may be regularly called upon to carry out many of these responsibilities:

1. To accurately diagnose the individual's gender disorder;
2. To accurately diagnose any co-morbid psychiatric conditions and see to their appropriate treatment;
3. To counsel the individual about the range of treatment options and their implications;
4. To engage in psychotherapy;
5. To ascertain eligibility and readiness for hormone and surgical therapy;
6. To make formal recommendations to medical and surgical colleagues;
7. To document their patient's relevant history in a letter of recommendation;
8. To be a colleague on a team of professionals with an interest in the gender identity disorders;
9. To educate family members, employers, and institutions about gender identity disorders;
10. To be available for follow-up of previously seen gender patients.

The Adult-Specialist. The education of the mental health professional who specializes in adult gender identity disorders rests upon basic general clinical competence in diagnosis and treatment of mental or emotional disorders. Clinical training may occur within any formally credentialing discipline -- for example, psychology, psychiatry, social work, counseling, or nursing. The following are the recommended minimal credentials for special competence with the gender identity disorders:

1. A master's degree or its equivalent in a clinical behavioral science field. This or a more advanced degree should be granted by an institution accredited by a recognized national

or regional accrediting board. The mental health professional should have documented credentials from a proper training facility and a licensing board.
2. Specialized training and competence in the assessment of the DSM-IV/ICD-10 Sexual Disorders (not simply gender identity disorders).
3. Documented supervised training and competence in psychotherapy.
4. Continuing education in the treatment of gender identity disorders, which may include attendance at professional meetings, workshops, or seminars or participating in research related to gender identity issues.

The Child-Specialist. The professional who evaluates and offers therapy for a child or early adolescent with GID should have been trained in childhood and adolescent developmental psychopathology. The professional should be competent in diagnosing and treating the ordinary problems of children and adolescents. These requirements are in addition to the adult-specialist requirement.

The Differences between Eligibility and Readiness. The SOC provide recommendations for eligibility requirements for hormones and surgery. Without first meeting these recommended eligibility requirements, the patient and the therapist should not request hormones or surgery. An example of an eligibility requirement is: a person must live full time in the preferred gender for twelve months prior to genital surgery. To meet this criterion, the professional needs to document that the real-life experience has occurred for this duration. Meeting readiness criteria -- further consolidation of the evolving gender identity or improving mental health in the new or confirmed gender role -- is more complicated, because it rests upon the clinician's and the patient's judgment.

The Mental Health Professional's Relationship to the Prescribing Physician and Surgeon. Mental health professionals who recommend hormonal and surgical therapy share the legal and ethical responsibility for that decision with the physician who undertakes the treatment. Hormonal treatment can often alleviate anxiety and depression in people without the use of additional psychotropic medications. Some individuals, however, need psychotropic medication prior to, or concurrent with, taking hormones or having surgery. The mental health professional is expected to make this assessment, and see that the appropriate psychotropic medications are offered to the patient. The presence of psychiatric co-morbidities does not necessarily preclude hormonal or surgical treatment, but some diagnoses pose difficult treatment dilemmas and may delay or preclude the use of either treatment.

The Mental Health Professional's Documentation Letter for Hormone Therapy or Surgery Should Succinctly Specify:

1. The patient's general identifying characteristics;
2. The initial and evolving gender, sexual, and other psychiatric diagnoses;
3. The duration of their professional relationship including the type of psychotherapy or evaluation that the patient underwent;
4. The eligibility criteria that have been met and the mental health professional's rationale for hormone therapy or surgery;
5. The degree to which the patient has followed the Standards of Care to date and the likelihood of future compliance;
6. Whether the author of the report is part of a gender team;

7. That the sender welcomes a phone call to verify the fact that the mental health professional actually wrote the letter as described in this document.

The organization and completeness of these letters provide the hormone-prescribing physician and the surgeon an important degree of assurance that mental health professional is knowledgeable and competent concerning gender identity disorders.

One Letter is Required for Instituting Hormone Therapy, or for Breast Surgery. One letter from a mental health professional, including the above seven points, written to the physician who will be responsible for the patient's medical treatment, is sufficient for instituting hormone therapy or for a referral for breast surgery (e.g., mastectomy, chest reconstruction, or augmentation mammoplasty).

Two Letters are Generally Required for Genital Surgery. Genital surgery for biologic males may include orchiectomy, penectomy, clitoroplasty, labiaplasty or creation of a neovagina; for biologic females it may include hysterectomy, salpingo-oophorectomy, vaginectomy, metoidioplasty, scrotoplasty, urethroplasty, placement of testicular prostheses, or creation of a neophallus.

It is ideal if mental health professionals conduct their tasks and periodically report on these processes as part of a team of other mental health professionals and nonpsychiatric physicians. One letter to the physician performing genital surgery will generally suffice as long as two mental health professionals sign it.

More commonly, however, letters of recommendation are from mental health professionals who work alone without colleagues experienced with gender identity disorders. Because professionals working independently may not have the benefit of ongoing professional consultation on gender cases, two letters of recommendation are required prior to initiating genital surgery. If the first letter is from a person with a master's degree, the second letter should be from a psychiatrist or a Ph.D. clinical psychologist, who can be expected to adequately evaluate co-morbid psychiatric conditions. If the first letter is from the patient's psychotherapist, the second letter should be from a person who has only played an evaluative role for the patient. Each letter, however, is expected to cover the same topics. At least one of the letters should be an extensive report. The second letter writer, having read the first letter, may choose to offer a briefer summary and an agreement with the recommendation.

V. Assessment and Treatment of Children and Adolescents

Phenomenology. Gender identity disorders in children and adolescents are different from those seen in adults, in that a rapid and dramatic developmental process (physical, psychological and sexual) is involved. Gender identity disorders in children and adolescents are complex conditions. The young person may experience his or her phenotype sex as inconsistent with his or her own sense of gender identity. Intense distress is often experienced, particularly in adolescence, and there are frequently associated emotional and behavioral difficulties. There is greater fluidity and variability in outcomes, especially in pre-pubertal children. Only a few

gender variant youths become transsexual, although many eventually develop a homosexual orientation.

Commonly seen features of gender identity conflicts in children and adolescents include a stated desire to be the other sex; cross dressing; play with games and toys usually associated with the gender with which the child identifies; avoidance of the clothing, demeanor and play normally associated with the child's sex and gender of assignment; preference for playmates or friends of the sex and gender with which the child identifies; and dislike of bodily sex characteristics and functions. Gender identity disorders are more often diagnosed in boys.

Phenomenologically, there is a qualitative difference between the way children and adolescents present their sex and gender predicaments, and the presentation of delusions or other psychotic symptoms. Delusional beliefs about their body or gender can occur in psychotic conditions but they can be distinguished from the phenomenon of a gender identity disorder. Gender identity disorders in childhood are not equivalent to those in adulthood and the former do not inevitably lead to the latter. The younger the child the less certain and perhaps more malleable the outcome.

Psychological and Social Interventions. The task of the child-specialist mental health professional is to provide assessment and treatment that broadly conforms to the following guidelines:

1. The professional should recognize and accept the gender identity problem. Acceptance and removal of secrecy can bring considerable relief.
2. The assessment should explore the nature and characteristics of the child's or adolescent's gender identity. A complete psychodiagnostic and psychiatric assessment should be performed. A complete assessment should include a family evaluation, because other emotional and behavioral problems are very common, and unresolved issues in the child's environment are often present.
3. Therapy should focus on ameliorating any comorbid problems in the child's life, and on reducing distress the child experiences from his or her gender identity problem and other difficulties. The child and family should be supported in making difficult decisions regarding the extent to which to allow the child to assume a gender role consistent with his or her gender identity. This includes issues of whether to inform others of the child's situation, and how others in the child's life should respond; for example, whether the child should attend school using a name and clothing opposite to his or her sex of assignment. They should also be supported in tolerating uncertainty and anxiety in relation to the child's gender expression and how best to manage it. Professional network meetings can be very useful in finding appropriate solutions to these problems.

Physical Interventions. Before any physical intervention is considered, extensive exploration of psychological, family and social issues should be undertaken. Physical interventions should be addressed in the context of adolescent development. Adolescents' gender identity development can rapidly and unexpectedly evolve. An adolescent shift toward gender conformity can occur primarily to please the family, and may not persist or reflect a permanent change in gender identity. Identity beliefs in adolescents may become firmly held and strongly expressed, giving a false impression of irreversibility; more fluidity may return at a later stage. For these reasons, irreversible physical interventions should be delayed as long as is clinically appropriate. Pressure for physical interventions because of an adolescent's level of distress can be great and in such

circumstances a referral to a child and adolescent multi-disciplinary specialty service should be considered, in locations where these exist.

Physical interventions fall into three categories or stages:

1. Fully reversible interventions. These involve the use of LHRH agonists or medroxyprogesterone to suppress estrogen or testosterone production, and consequently to delay the physical changes of puberty.
2. Partially reversible interventions. These include hormonal interventions that masculinize or feminize the body, such as administration of testosterone to biologic females and estrogen to biologic males. Reversal may involve surgical intervention.
3. Irreversible interventions. These are surgical procedures.

A staged process is recommended to keep options open through the first two stages. Moving from one state to another should not occur until there has been adequate time for the young person and his/her family to assimilate fully the effects of earlier interventions.

Fully Reversible Interventions. Adolescents may be eligible for puberty-delaying hormones as soon as pubertal changes have begun. In order for the adolescent and his or her parents to make an informed decision about pubertal delay, it is recommended that the adolescent experience the onset of puberty in his or her biologic sex, at least to Tanner Stage Two. If for clinical reasons it is thought to be in the patient's interest to intervene earlier, this must be managed with pediatric endocrinological advice and more than one psychiatric opinion.

Two goals justify this intervention: a) to gain time to further explore the gender identity and other developmental issues in psychotherapy; and b) to make passing easier if the adolescent continues to pursue sex and gender change. In order to provide puberty delaying hormones to an adolescent, the following criteria must be met:

1. throughout childhood the adolescent has demonstrated an intense pattern of cross-sex and cross-gender identity and aversion to expected gender role behaviors;
2. sex and gender discomfort has significantly increased with the onset of puberty;
3. the family consents and participates in the therapy.

Biologic males should be treated with LHRH agonists (which stop LH secretion and therefore testosterone secretion), or with progestins or antiandrogens (which block testosterone secretion or neutralize testosterone action). Biologic females should be treated with LHRH agonists or with sufficient progestins (which stop the production of estrogens and progesterone) to stop menstruation.

Partially Reversible Interventions. Adolescents may be eligible to begin masculinizing or feminizing hormone therapy as early as age 16, preferably with parental consent. In many countries 16-year olds are legal adults for medical decision making, and do not require parental consent.

Mental health professional involvement is an eligibility requirement for triadic therapy during adolescence. For the implementation of the real-life experience or hormone therapy, the mental health professional should be involved with the patient and family for a minimum of six months. While the number of sessions during this six-month period rests upon the clinician's judgment,

the intent is that hormones and the real-life experience be thoughtfully and recurrently considered over time. In those patients who have already begun the real-life experience prior to being seen, the professional should work closely with them and their families with the thoughtful recurrent consideration of what is happening over time.

Irreversible Interventions. Any surgical intervention should not be carried out prior to adulthood, or prior to a real-life experience of at least two years in the gender role of the sex with which the adolescent identifies. The threshold of 18 should be seen as an eligibility criterion and not an indication in itself for active intervention.

VI. Psychotherapy with Adults

A Basic Observation. Many adults with gender identity disorder find comfortable, effective ways of living that do not involve all the components of the triadic treatment sequence. While some individuals manage to do this on their own, psychotherapy can be very helpful in bringing about the discovery and maturational processes that enable self-comfort.

Psychotherapy is Not an Absolute Requirement for Triadic Therapy. Not every adult gender patient requires psychotherapy in order to proceed with hormone therapy, the real-life experience, hormones, or surgery. Individual programs vary to the extent that they perceive a need for psychotherapy. When the mental health professional's initial assessment leads to a recommendation for psychotherapy, the clinician should specify the goals of treatment, and estimate its frequency and duration. There is no required minimum number of psychotherapy sessions prior to hormone therapy, the real-life experience, or surgery, for three reasons: 1) patients differ widely in their abilities to attain similar goals in a specified time; 2) a minimum number of sessions tends to be construed as a hurdle, which discourages the genuine opportunity for personal growth; 3) the mental health professional can be an important support to the patient throughout all phases of gender transition. Individual programs may set eligibility criteria to some minimum number of sessions or months of psychotherapy.

The mental health professional who conducts the initial evaluation need not be the psychotherapist. If members of a gender team do not do psychotherapy, the psychotherapist should be informed that a letter describing the patient's therapy might be requested so the patient can proceed with the next phase of treatment.

Goals of Psychotherapy. Psychotherapy often provides education about a range of options not previously seriously considered by the patient. It emphasizes the need to set realistic life goals for work and relationships, and it seeks to define and alleviate the patient's conflicts that may have undermined a stable lifestyle.

The Therapeutic Relationship. The establishment of a reliable trusting relationship with the patient is the first step toward successful work as a mental health professional. This is usually accomplished by competent nonjudgmental exploration of the gender issues with the patient during the initial diagnostic evaluation. Other issues may be better dealt with later, after the person feels that the clinician is interested in and understands their gender identity concerns.

Ideally, the clinician's work is with the whole of the person's complexity. The goals of therapy are to help the person to live more comfortably within a gender identity and to deal effectively with non-gender issues. The clinician often attempts to facilitate the capacity to work and to establish or maintain supportive relationships. Even when these initial goals are attained, mental health professionals should discuss the likelihood that no educational, psychotherapeutic, medical, or surgical therapy can permanently eradicate all vestiges of the person's original sex assignment and previous gendered experience.

Processes of Psychotherapy. Psychotherapy is a series of interactive communications between a therapist who is knowledgeable about how people suffer emotionally and how this may be alleviated, and a patient who is experiencing distress. Typically, psychotherapy consists of regularly held 50-minutes sessions. The psychotherapy sessions initiate a developmental process. They enable the patient's history to be appreciated**,** current dilemmas to be understood, and unrealistic ideas and maladaptive behaviors to be identified. Psychotherapy is not intended to cure the gender identity disorder. Its usual goal is a long-term stable life style with realistic chances for success in relationships, education, work, and gender identity expression. Gender distress often intensifies relationship, work, and educational dilemmas.

The therapist should make clear that it is the patient's right to choose among many options. The patient can experiment over time with alternative approaches. Ideally, psychotherapy is a collaborative effort. The therapist must be certain that the patient understands the concepts of eligibility and readiness, because the therapist and patient must cooperate in defining the patient's problems, and in assessing progress in dealing with them. Collaboration can prevent a stalemate between a therapist who seems needlessly withholding of a recommendation, and a patient who seems too profoundly distrusting to freely share thoughts, feelings, events, and relationships.

Patients may benefit from psychotherapy at every stage of gender evolution. This includes the post-surgical period, when the anatomic obstacles to gender comfort have been removed, but the person may continue to feel a lack of genuine comfort and skill in living in the new gender role.

Options for Gender Adaptation. The activities and processes that are listed below have, in various combinations, helped people to find more personal comfort. These adaptations may evolve spontaneously and during psychotherapy. Finding new gender adaptations does not mean that the person may not in the future elect to pursue hormone therapy, the real-life experience, or genital surgery.

Activities:

Biological Males:

1. Cross-dressing: unobtrusively with undergarments; unisexually; or in a feminine fashion;
2. Changing the body through: hair removal through electrolysis or body waxing; minor plastic cosmetic surgical procedures;
3. Increasing grooming, wardrobe, and vocal expression skills.

Biological Females:

1. Cross-dressing: unobtrusively with undergarments, unisexually, or in a masculine fashion;
2. Changing the body through breast binding, weight lifting, applying theatrical facial hair;

3. Padding underpants or wearing a penile prosthesis.

Both Genders:

1. Learning about transgender phenomena from: support groups and gender networks, communication with peers via the Internet, studying these Standards of Care, relevant lay and professional literatures about legal rights pertaining to work, relationships, and public cross-dressing;
2. Involvement in recreational activities of the desired gender;
3. Episodic cross-gender living.

Processes:

1. Acceptance of personal homosexual or bisexual fantasies and behaviors (orientation) as distinct from gender identity and gender role aspirations;
2. Acceptance of the need to maintain a job, provide for the emotional needs of children, honor a spousal commitment, or not to distress a family member as currently having a higher priority than the personal wish for constant cross-gender expression;
3. Integration of male and female gender awareness into daily living;
4. Identification of the triggers for increased cross-gender yearnings and effectively attending to them; for instance, developing better self-protective, self-assertive, and vocational skills to advance at work and resolve interpersonal struggles to strengthen key relationships.

VII. Requirements for Hormone Therapy for Adults

Reasons for Hormone Therapy. Cross-sex hormonal treatments play an important role in the anatomical and psychological gender transition process for properly selected adults with gender identity disorders. Hormones are often medically necessary for successful living in the new gender. They improve the quality of life and limit psychiatric co-morbidity, which often accompanies lack of treatment. When physicians administer androgens to biologic females and estrogens, progesterone, and testosterone-blocking agents to biologic males, patients feel and appear more like members of their preferred gender.

Eligibility Criteria. The administration of hormones is not to be lightly undertaken because of their medical and social risks. Three criteria exist.

1. Age 18 years;
2. Demonstrable knowledge of what hormones medically can and cannot do and their social benefits and risks;
3. Either:
   a. A documented real-life experience of at least three months prior to the administration of hormones; or
   b. A period of psychotherapy of a duration specified by the mental health professional after the initial evaluation (usually a minimum of three months).

In selected circumstances, it can be acceptable to provide hormones to patients who have not fulfilled criterion 3 – for example, to facilitate the provision of monitored therapy using hormones of known quality, as an alternative to black-market or unsupervised hormone use.

Readiness Criteria. Three criteria exist:

1. The patient has had further consolidation of gender identity during the real-life experience or psychotherapy;
2. The patient has made some progress in mastering other identified problems leading to improving or continuing stable mental health (this implies satisfactory control of problems such as sociopathy, substance abuse, psychosis and suicidality;
3. The patient is likely to take hormones in a responsible manner.

Can Hormones Be Given To Those Who Do Not Want Surgery or a Real-life Experience? Yes, but after diagnosis and psychotherapy with a qualified mental health professional following minimal standards listed above. Hormone therapy can provide significant comfort to gender patients who do not wish to cross live or undergo surgery, or who are unable to do so. In some patients, hormone therapy alone may provide sufficient symptomatic relief to obviate the need for cross living or surgery.

Hormone Therapy and Medical Care for Incarcerated Persons. Persons who are receiving treatment for gender identity disorders should continue to receive appropriate treatment following these Standards of Care after incarceration. For example, those who are receiving psychotherapy and/or cross-sex hormonal treatments should be allowed to continue this medically necessary treatment to prevent or limit emotional lability, undesired regression of hormonally-induced physical effects and the sense of desperation that may lead to depression, anxiety and suicidality. Prisoners who are subject to rapid withdrawal of cross-sex hormones are particularly at risk for psychiatric symptoms and self-injurious behaviors. Medical monitoring of hormonal treatment as described in these Standards should also be provided. Housing for transgendered prisoners should take into account their transition status and their personal safety.

VIII. Effects of Hormone Therapy in Adults

The maximum physical effects of hormones may not be evident until two years of continuous treatment. Heredity limits the tissue response to hormones and this cannot be overcome by increasing dosage. The degree of effects actually attained varies from patient to patient.

Desired Effects of Hormones. Biologic males treated with estrogens can realistically expect treatment to result in: breast growth, some redistribution of body fat to approximate a female body habitus, decreased upper body strength, softening of skin, decrease in body hair, slowing or stopping the loss of scalp hair, decreased fertility and testicular size, and less frequent, less firm erections. Most of these changes are reversible, although breast enlargement will not completely reverse after discontinuation of treatment.

Biologic females treated with testosterone can expect the following permanent changes: a deepening of the voice, clitoral enlargement, mild breast atrophy, increased facial and body hair and male pattern baldness. Reversible changes include increased upper body strength, weight gain, increased social and sexual interest and arousability, and decreased hip fat.

Potential Negative Medical Side Effects. Patients with medical problems or otherwise at risk for cardiovascular disease may be more likely to experience serious or fatal consequences of cross-sex hormonal treatments. For example, cigarette smoking, obesity, advanced age, heart disease, hypertension, clotting abnormalities, malignancy, and some endocrine abnormalities may increase side effects and risks for hormonal treatment. Therefore, some patients may not be able to tolerate cross-sex hormones. However, hormones can provide health benefits as well as risks. Risk-benefit ratios should be considered collaboratively by the patient and prescribing physician.

Side effects in biologic males treated with estrogens and progestins may include increased propensity to blood clotting (venous thrombosis with a risk of fatal pulmonary embolism), development of benign pituitary prolactinomas, infertility, weight gain, emotional lability, liver disease, gallstone formation, somnolence, hypertension, and diabetes mellitus.

Side effects in biologic females treated with testosterone may include infertility, acne, emotional lability, increases in sexual desire, shift of lipid profiles to male patterns which increase the risk of cardiovascular disease, and the potential to develop benign and malignant liver tumors and hepatic dysfunction.

The Prescribing Physician's Responsibilities. Hormones are to be prescribed by a physician, and should not be administered without adequate psychological and medical assessment before and during treatment. Patients who do not understand the eligibility and readiness requirements and who are unaware of the SOC should be informed of them. This may be a good indication for a referral to a mental health professional experienced with gender identity disorders.
The physician providing hormonal treatment and medical monitoring need not be a specialist in endocrinology, but should become well-versed in the relevant medical and psychological aspects of treating persons with gender identity disorders.

After a thorough medical history, physical examination, and laboratory examination, the physician should again review the likely effects and side effects of hormone treatment, including the potential for serious, life-threatening consequences. The patient must have the capacity to appreciate the risks and benefits of treatment, have his/her questions answered, and agree to medical monitoring of treatment. The medical record must contain a written informed consent document reflecting a discussion of the risks and benefits of hormone therapy.

Physicians have a wide latitude in what hormone preparations they may prescribe and what routes of administration they may select for individual patients. Viable options include oral, injectable, and transdermal delivery systems. The use of transdermal estrogen patches should be considered for males over 40 years of age or those with clotting abnormalities or a history of venous thrombosis. Transdermal testosterone is useful in females who do not want to take injections. In the absence of any other medical, surgical, or psychiatric conditions, basic medical monitoring should include: serial physical examinations relevant to treatment effects and side effects, vital sign measurements before and during treatment, weight measurements, and laboratory assessment. Gender patients, whether on hormones or not, should be screened for pelvic malignancies as are other persons.

For those receiving estrogens, the minimum laboratory assessment should consist of a pretreatment free testosterone level, fasting glucose, liver function tests, and complete blood count with reassessment at 6 and 12 months and annually thereafter. A pretreatment prolactin level should be obtained and repeated at 1, 2, and 3 years. If hyperprolactemia does not occur during this time, no further measurements are necessary. Biologic males undergoing estrogen treatment should be monitored for breast cancer and encouraged to engage in routine self-examination. As they age, they should be monitored for prostatic cancer.

For those receiving androgens, the minimum laboratory assessment should consist of pretreatment liver function tests and complete blood count with reassessment at 6 months, 12 months, and yearly thereafter. Yearly palpation of the liver should be considered. Females who have undergone mastectomies and who have a family history of breast cancer should be monitored for this disease.

Physicians may provide their patients with a brief written statement indicating that the person is under medical supervision, which includes cross-sex hormone therapy. During the early phases of hormone treatment, the patient may be encouraged to carry this statement at all times to help prevent difficulties with the police and other authorities.

Reductions in Hormone Doses After Gonadectomy. Estrogen doses in post-orchiectomy patients can often be reduced by 1/3 to ½ and still maintain feminization. Reductions in testosterone doses post-oophorectomy should be considered, taking into account the risks of osteoporosis. Lifelong maintenance treatment is usually required in all gender patients.

The Misuse of Hormones. Some individuals obtain hormones without prescription from friends, family members, and pharmacies in other countries. Medically unmonitored hormone use can expose the person to greater medical risk. Persons taking medically monitored hormones have been known to take additional doses of illicitly obtained hormones without their physician's knowledge. Mental health professionals and prescribing physicians should make an effort to encourage compliance with recommended dosages, in order to limit morbidity. It is ethical for physicians to discontinue treatment of patients who do not comply with prescribed treatment regimens.

Other Potential Benefits of Hormones. Hormonal treatment, when medically tolerated, should precede any genital surgical interventions. Satisfaction with the hormone's effects consolidates the person's identity as a member of the preferred sex and gender and further adds to the conviction to proceed. Dissatisfaction with hormonal effects may signal ambivalence about proceeding to surgical interventions. In biologic males, hormones alone often generate adequate breast development, precluding the need for augmentation mammaplasty. Some patients who receive hormonal treatment will not desire genital or other surgical interventions.

The Use of Antiandrogens and Sequential Therapy. Antiandrogens can be used as adjunctive treatments in biologic males receiving estrogens, though they are not always necessary to achieve feminization. In some patients, antiandrogens may more profoundly suppress the production of testosterone, enabling a lower dose of estrogen to be used when adverse estrogen side effects are anticipated.

Feminization does not require sequential therapy. Attempts to mimic the menstrual cycle by prescribing interrupted estrogen therapy or substituting progesterone for estrogen during part of the month are not necessary to achieve feminization.

Informed Consent. Hormonal treatment should be provided only to those who are legally able to provide informed consent. This includes persons who have been declared by a court to be emancipated minors and incarcerated persons who are considered competent to participate in their medical decisions. For adolescents, informed consent needs to include the minor patient's assent and the written informed consent of a parent or legal guardian.

Reproductive Options. Informed consent implies that the patient understands that hormone administration limits fertility and that the removal of sexual organs prevents the capacity to reproduce. Cases are known of persons who have received hormone therapy and sex reassignment surgery who later regretted their inability to parent genetically related children. The mental health professional recommending hormone therapy, and the physician prescribing such therapy, should discuss reproductive options with the patient prior to starting hormone therapy. Biologic males, especially those who have not already reproduced, should be informed about sperm preservation options, and encouraged to consider banking sperm prior to hormone therapy. Biologic females do not presently have readily available options for gamete preservation, other than cryopreservation of fertilized embryos. However, they should be informed about reproductive issues, including this option. As other options become available, these should be presented.

IX. The Real-Life Experience

The act of fully adopting a new or evolving gender role or gender presentation in everyday life is known as the real-life experience. The real-life experience is essential to the transition to the gender role that is congruent with the patient's gender identity. Since changing one's gender presentation has immediate profound personal and social consequences, the decision to do so should be preceded by an awareness of what the familial, vocational, interpersonal, educational, economic, and legal consequences are likely to be. Professionals have a responsibility to discuss these predictable consequences with their patients. Change of gender role and presentation can be an important factor in employment discrimination, divorce, marital problems, and the restriction or loss of visitation rights with children. These represent external reality issues that must be confronted for success in the new gender presentation. These consequences may be quite different from what the patient imagined prior to undertaking the real-life experiences. However, not all changes are negative.

Parameters of the Real-Life Experience. When clinicians assess the quality of a person's real-life experience in the desired gender, the following abilities are reviewed:

1. To maintain full or part-time employment;
2. To function as a student;
3. To function in community-based volunteer activity;
4. To undertake some combination of items 1-3;
5. To acquire a (legal) gender-identity-appropriate first name;

6. To provide documentation that persons other than the therapist know that the patient functions in the desired gender role.

Real-Life Experience versus Real-Life Test. Although professionals may recommend living in the desired gender, the decision as to when and how to begin the real-life experience remains the person's responsibility. Some begin the real-life experience and decide that this often imagined life direction is not in their best interest. Professionals sometimes construe the real-life experience as the real-life test of the ultimate diagnosis. If patients prosper in the preferred gender, they are confirmed as "transsexual," but if they decided against continuing, they "must not have been." This reasoning is a confusion of the forces that enable successful adaptation with the presence of a gender identity disorder. The real-life experience tests the person's resolve, the capacity to function in the preferred gender, and the adequacy of social, economic, and psychological supports. It assists both the patient and the mental health professional in their judgments about how to proceed. Diagnosis, although always open for reconsideration, precedes a recommendation for patients to embark on the real-life experience. When the patient is successful in the real-life experience, both the mental health professional and the patient gain confidence about undertaking further steps.

Removal of Beard and other Unwanted Hair for the Male to Female Patient. Beard density is not significantly slowed by cross-sex hormone administration. Facial hair removal via electrolysis is a generally safe, time-consuming process that often facilitates the real-life experience for biologic males. Side effects include discomfort during and immediately after the procedure and less frequently hypo-or hyper pigmentation, scarring, and folliculitis. Formal medical approval for hair removal is not necessary; electrolysis may be begun whenever the patient deems it prudent. It is usually recommended prior to commencing the real-life experience, because the beard must grow out to visible lengths to be removed. Many patients will require two years of regular treatments to effectively eradicate their facial hair. Hair removal by laser is a new alternative approach, but experience with it is limited.

X. Surgery

Sex Reassignment is Effective and Medically Indicated in Severe GID. In persons diagnosed with transsexualism or profound GID, sex reassignment surgery, along with hormone therapy and real-life experience, is a treatment that has proven to be effective. Such a therapeutic regimen, when prescribed or recommended by qualified practitioners, is medically indicated and medically necessary. Sex reassignment is not "experimental," "investigational," "elective," "cosmetic," or optional in any meaningful sense. It constitutes very effective and appropriate treatment for transsexualism or profound GID.

How to Deal with Ethical Questions Concerning Sex Reassignment Surgery. Many persons, including some medical professionals, object on ethical grounds to surgery for GID. In ordinary surgical practice, pathological tissues are removed in order to restore disturbed functions, or alterations are made to body features to improve the patient’s self image. Among those who object to sex reassignment surgery, these conditions are not thought to present when surgery is performed for persons with gender identity disorders. It is important that professionals dealing

with patients with gender identity disorders feel comfortable about altering anatomically normal structures. In order to understand how surgery can alleviate the psychological discomfort of patients diagnosed with gender identity disorders, professionals need to listen to these patients discuss their life histories and dilemmas. The resistance against performing surgery on the ethical basis of "above all do no harm" should be respected, discussed, and met with the opportunity to learn from patients themselves about the psychological distress of having profound gender identity disorder.

It is unethical to deny availability or eligibility for sex reassignment surgeries or hormone therapy solely on the basis of blood seropositivity for blood-borne infections such as HIV, or hepatitis B or C, etc.

The Surgeon's Relationship with the Physician Prescribing Hormones and the Mental Health Professional. The surgeon is not merely a technician hired to perform a procedure. The surgeon is part of the team of clinicians participating in a long-term treatment process. The patient often feels an immense positive regard for the surgeon, which ideally will enable long-term follow-up care. Because of his or her responsibility to the patient, the surgeon must understand the diagnosis that has led to the recommendation for genital surgery. Surgeons should have a chance to speak at length with their patients to satisfy themselves that the patient is likely to benefit from the procedures. Ideally, the surgeon should have a close working relationship with the other professionals who have been actively involved in the patient's psychological and medical care. This is best accomplished by belonging to an interdisciplinary team of professionals who specialize in gender identity disorders. Such gender teams do not exist everywhere, however. At the very least, the surgeon needs to be assured that the mental health professional and physician prescribing hormones are reputable professionals with specialized experience with gender identity disorders. This is often reflected in the quality of the documentation letters. Since fictitious and falsified letters have occasionally been presented, surgeons should personally communicate with at least one of the mental health professionals to verify the authenticity of their letters.

Prior to performing any surgical procedures, the surgeon should have all medical conditions appropriately monitored and the effects of the hormonal treatment upon the liver and other organ systems investigated. This can be done alone or in conjunction with medical colleagues. Since pre-existing conditions may complicate genital reconstructive surgeries, surgeons must also be competent in urological diagnosis. The medical record should contain written informed consent for the particular surgery to be performed.

XI. Breast Surgery

Breast augmentation and removal are common operations, easily obtainable by the general public for a variety of indications. Reasons for these operations range from cosmetic indications to cancer. Although breast appearance is definitely important as a secondary sex characteristic, breast size or presence are not involved in the legal definitions of sex and gender and are not important for reproduction. The performance of breast operations should be considered with the

same reservations as beginning hormonal therapy. Both produce relatively irreversible changes to the body.

The approach for male-to-female patients is different than for female-to-male patients. For female-to-male patients, a mastectomy procedure is usually the first surgery performed for success in gender presentation as a man; and for some patients it is the only surgery undertaken. When the amount of breast tissue removed requires skin removal, a scar will result and the patient should be so informed. Female-to-male patients may have surgery at the same time they begin hormones. For male-to-female patients, augmentation mammoplasty may be performed if the physician prescribing hormones and the surgeon have documented that breast enlargement after undergoing hormone treatment for 18 months is not sufficient for comfort in the social gender role.

XII. Genital Surgery

Eligibility Criteria. These minimum eligibility criteria for various genital surgeries equally apply to biologic males and females seeking genital surgery. They are:

1. Legal age of majority in the patient's nation;
2. Usually 12 months of continuous hormonal therapy for those without a medical contraindication (see below, "Can Surgery Be Performed Without Hormones and the Real-life Experience");
3. 12 months of successful continuous full time real-life experience. Periods of returning to the original gender may indicate ambivalence about proceeding and generally should not be used to fulfill this criterion;
4. If required by the mental health professional, regular responsible participation in psychotherapy throughout the real-life experience at a frequency determined jointly by the patient and the mental health professional. Psychotherapy per se is not an absolute eligibility criterion for surgery;
5. Demonstrable knowledge of the cost, required lengths of hospitalizations, likely complications, and post surgical rehabilitation requirements of various surgical approaches;
6. Awareness of different competent surgeons.

Readiness Criteria. The readiness criteria include:

1. Demonstrable progress in consolidating one’s gender identity;
2. Demonstrable progress in dealing with work, family, and interpersonal issues resulting in a significantly better state of mental health; this implies satisfactory control of problems such as sociopathy, substance abuse, psychosis, suicidality, for instance).

Can Surgery Be Provided Without Hormones and the Real-life Experience? Individuals cannot receive genital surgery without meeting the eligibility criteria. Genital surgery is a treatment for a diagnosed gender identity disorder, and should undertaken only after careful evaluation. Genital surgery is not a right that must be granted upon request. The SOC provide for an individual approach for every patient; but this does not mean that the general guidelines, which specify treatment consisting of diagnostic evaluation, possible psychotherapy, hormones,

and real-life experience, can be ignored. However, if a person has lived convincingly as a member of the preferred gender for a long period of time and is assessed to be a psychologically healthy after a requisite period of psychotherapy, there is no inherent reason that he or she must take hormones prior to genital surgery.

Conditions under which Surgery May Occur. Genital surgical treatments for persons with a diagnosis of gender identity disorder are not merely another set of elective procedures. Typical elective procedures only involve a private mutually consenting contract between a patient and a surgeon. Genital surgeries for individuals diagnosed as having GID are to be undertaken only after a comprehensive evaluation by a qualified mental health professional. Genital surgery may be performed once written documentation that a comprehensive evaluation has occurred and that the person has met the eligibility and readiness criteria. By following this procedure, the mental health professional, the surgeon and the patient share responsibility of the decision to make irreversible changes to the body.

Requirements for the Surgeon Performing Genital Reconstruction. The surgeon should be a urologist, gynecologist, plastic surgeon or general surgeon, and Board-Certified as such by a nationally known and reputable association. The surgeon should have specialized competence in genital reconstructive techniques as indicated by documented supervised training with a more experienced surgeon. Even experienced surgeons in this field must be willing to have their therapeutic skills reviewed by their peers. Surgeons should attend professional meetings where new techniques are presented.

Ideally, the surgeon should be knowledgeable about more than one of the surgical techniques for genital reconstruction so that he or she, in consultation with the patient, will be able to choose the ideal technique for the individual patient. When surgeons are skilled in a single technique, they should so inform their patients and refer those who do not want or are unsuitable for this procedure to another surgeon.

Genital Surgery for the Male-to-Female Patient. Genital surgical procedures may include orchiectomy, penectomy, vaginoplasty, clitoroplasty, and labiaplasty. These procedures require skilled surgery and postoperative care. Techniques include penile skin inversion, pedicled rectosigmoid transplant, or free skin graft to line the neovagina. Sexual sensation is an important objective in vaginoplasty, along with creation of a functional vagina and acceptable cosmesis.

Other Surgery for the Male-to-Female Patient. Other surgeries that may be performed to assist feminization include reduction thyroid chondroplasty, suction-assisted lipoplasty of the waist, rhinoplasty, facial bone reduction, face-lift, and blepharoplasty. These do not require letters of recommendation from mental health professionals.
There are concerns about the safety and effectiveness of voice modification surgery and more follow-up research should be done prior to widespread use of this procedure. In order to protect their vocal cords, patients who elect this procedure should do so after all other surgeries requiring general anesthesia with intubation are completed.

Genital Surgery for the Female-to-Male Patient. Genital surgical procedures may include hysterectomy, salpingo-oophorectomy, vaginectomy, metoidioplasty, scrotoplasty, urethroplasty, placement of testicular prostheses, and phalloplasty. Current operative techniques for

phalloplasty are varied. The choice of techniques may be restricted by anatomical or surgical considerations. If the objectives of phalloplasty are a neophallus of good appearance, standing micturition, sexual sensation, and/or coital ability, the patient should be clearly informed that there are several separate stages of surgery and frequent technical difficulties which may require additional operations. Even metoidioplasty, which in theory is a one-stage procedure for construction of a microphallus, often requires more than one surgery. The plethora of techniques for penis construction indicates that further technical development is necessary.

Other Surgery for the Female-to-Male Patient. Other surgeries that may be performed to assist masculinization include liposuction to reduce fat in hips, thighs and buttocks.

XIII. Post-Transition Follow-up

Long-term postoperative follow-up is encouraged in that it is one of the factors associated with a good psychosocial outcome. Follow-up is important to the patient's subsequent anatomic and medical health and to the surgeon's knowledge about the benefits and limitations of surgery. Long-term follow-up with the surgeon is recommended in all patients to ensure an optimal surgical outcome. Surgeons who operate on patients who are coming from long distances should include personal follow-up in their care plan and attempt to ensure affordable, local, long-term aftercare in the patient's geographic region. Postoperative patients may also sometimes exclude themselves from follow-up with the physician prescribing hormones, not recognizing that these physicians are best able to prevent, diagnose and treat possible long term medical conditions that are unique to hormonally and surgically treated patients. Postoperative patients should undergo regular medical screening according to recommended guidelines for their age. The need for follow-up extends to the mental health professional, who having spent a longer period of time with the patient than any other professional, is in an excellent position to assist in any post-operative adjustment difficulties.

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 122
(A-08)

Introduced by: Resident and Fellow Section
Massachusetts Delegation
California Delegation
New York Delegation

Subject: Removing Financial Barriers to Care for Transgender Patients

Referred to: Reference Committee A
(Linda B. Ford, MD, Chair)

Whereas, Our American Medical Association opposes discrimination on the basis of gender identity[1]; and

Whereas, Gender Identity Disorder (GID) is a serious medical condition recognized as such in both the Diagnostic and Statistical Manual of Mental Disorders (4th Ed., Text Revision) (DSM-IV-TR) and the International Classification of Diseases (10th Revision)[2], and is characterized in the DSM-IV-TR as a persistent discomfort with one's assigned sex and with one's primary and secondary sex characteristics, which causes intense emotional pain and suffering[3]; and

Whereas, GID, if left untreated, can result in clinically significant psychological distress, dysfunction, debilitating depression and, for some people without access to appropriate medical care and treatment, suicidality and death[4]; and

Whereas, The World Professional Association For Transgender Health, Inc. ("WPATH") is the leading international, interdisciplinary professional organization devoted to the understanding and treatment of gender identity disorders[5], and has established internationally accepted Standards of Care[6] for providing medical treatment for people with GID, including mental health care, hormone therapy and sex reassignment surgery, which are designed to promote the health and welfare of persons with GID and are recognized within the medical community to be the standard of care for treating people with GID; and

Whereas, An established body of medical research demonstrates the effectiveness and medical necessity of mental health care, hormone therapy and sex reassignment surgery as forms of therapeutic treatment for many people diagnosed with GID[7]; and

Whereas, Health experts in GID, including WPATH, have rejected the myth that such treatments are "cosmetic" or "experimental" and have recognized that these treatments can provide safe and effective treatment for a serious health condition[7]; and

Whereas, Physicians treating persons with GID must be able to provide the correct treatment necessary for a patient in order to achieve genuine and lasting comfort with his or her gender, based on the person's individual needs and medical history[8]; and

Whereas, Our AMA opposes limitations placed on patient care by third-party payers when such care is based upon sound scientific evidence and sound medical opinion[9,10]; and

Whereas, Many health insurance plans categorically exclude coverage of mental health, medical, and surgical treatments for GID, even though many of these same treatments, such as psychotherapy, hormone therapy, breast augmentation and removal, hysterectomy, oophorectomy, orchiectomy, and salpingectomy, are often covered for other medical conditions; and

Whereas, The denial of these otherwise covered benefits for patients suffering from GID represents discrimination based solely on a patient's gender identity; and

Whereas, Delaying treatment for GID can cause and/or aggravate additional serious and expensive health problems, such as stress-related physical illnesses, depression, and substance abuse problems, which further endanger patients' health and strain the health care system; therefore be it

RESOLVED, That our American Medical Association support public and private health insurance coverage for treatment of gender identity disorder (New HOD Policy); and be it further

RESOLVED, That our AMA oppose categorical exclusions of coverage for treatment of gender identity disorder when prescribed by a physician. (Directive to Take Action)

Fiscal Note: Staff cost estimated at less than $500 to implement.

Received: 04/18/08

RELEVANT AMA POLICY
H-65.983 Nondiscrimination Policy
H-65.992 Continued Support of Human Rights and Freedom
H-180.980 Sexual Orientation and/or Gender Identity as Health Insurance Criteria
H-120.988 Patient Access to Treatments Prescribed by Their Physicians

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[1] AMA Policy H-65.983, H-65.992, and H-180.980

[2] Diagnostic and Statistical Manual of Mental Disorders (4th ed.. Text revision) (2000) ("DSM-IV-TR"), 576-82, American Psychiatric Association; International Classification of Diseases (10th Revision) ("ICD-10"), F64, World Health Organization. The ICD further defines transsexualism as "[a] desire to live and be accepted as a member of the opposite sex, usually accompanied by a sense of discomfort with, or inappropriateness of, one's anatomic sex, and a wish to have surgery and hormonal treatment to make one's body as congruent as possible with one's preferred sex." ICD-10, F64.0.

[3] DSM-IV-TR, 575-79

[4] Id. at 578-79.

[5] World Professional Association for Transgender Health: http://www.wpath.org. Formerly known as The Harry Benjamin International Gender Dysphoria Association.

[6] The Harry Benjamin International Gender Dysphoria Association's Standards of Care for Gender Identity Disorders, Sixth Version (February, 2001). Available at http://wpath.org/Documents2/socv6.pdf.

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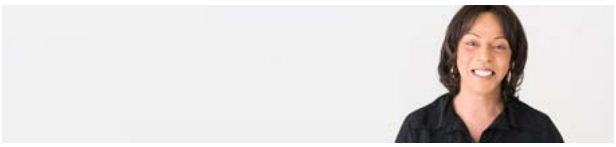
[8] The Harry Benjamin International Gender Dysphoria Association's Standards of Care for Gender Identity Disorders, at 18.

[9] Id.

[10] AMA Policy H-120.988

RESOURCES & PUBLICATIONS



San Francisco City and County Transgender Health Benefit - Letter from Human Rights Commission

4/1/2006

In July 2001, the City and County of San Francisco made history by becoming the first U.S. jurisdiction and major employer to remove transgender access exclusions in its employee and dependent health plans. The plan, as it was first made available in 2001, reflected concerns about cost and utilization — concerns since proven unfounded.

The health plan covers transition-related treatment including surgery performed by a qualified provider as part of a treatment plan conforming to the WPATH Standards of Care. Furthermore, plan participants who require psychotherapy for gender identity disorders or transsexualism, and/or hormones, may receive them under routine psychotherapy and pharmacy benefits.

2001

San Francisco originally administered its transgender benefits through the city's self-funded preferred provider organization, Beech Street Corp. The city's HMO plan providers were not able to offer such coverage until they received authorization from the Department of Managed Care that controls HMOs in California.

With more than 28,000 employees — 80,000 insured individuals including retirees and dependents — administrators originally anticipated as many as 35 people might use the benefits each year. Lifetime surgical benefits were capped at $50,000 and required a standard $250 deductible, after which the policy required a 15 percent co-pay in-network and 50 percent co-pay out-of-network. Eligibility to use the benefit was limited to employees, retirees or dependents who were members of the San Francisco Health Service System for more than one year.

To cover expected additional costs associated with gender transition-related claims, all employees were charged an additional $1.70 per month for health benefits.

2004

To comply with Department of Managed Care rules and ensure that equal benefits were provided to both female-to-male and male-to-female transsexuals, San Francisco raised the lifetime cap to $75,000 and removed the requirement of one year of membership in the Health Service System. HMO coverage through Health Net, Kaiser Permanente and Blue Shield began as of July 1, 2004.

At this point, San Francisco had collected $4.5 million in surcharges to offset projected claims. But in the three years, the system had just 7

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claims totaling $156,000. As a result, the per employee surcharge was lowered to $1.16 per month.

2006

By 2006, the system had collected $5.6 million in surcharges to offset 210 projected claims, and had paid out just $386,417 on 39 claims. In July 2006, the per employee surcharges were dropped entirely.

> *"Despite actuarial fears of over-utilization and a potentially expensive benefit, the Transgender Health Benefit Program has proven to be appropriately accessed and undeniably more affordable than other, often routinely covered, procedures."*
>
> — 2006 letter from San Francisco's Human Rights Commission

In other words, transgender people were not flocking to work for the city, and the cost of covering transgender employees' health needs was relatively inexpensive, compared to other health needs of San Francisco employees. Employees of the City and County of San Francisco and those employees' dependents may now access transgender specific treatments without the need for any plan members to pay any additional premiums, as they did the first few years the program was available.

Aug 2007 Letter from San Francisco Human Rights Commission (pdf)

Clinical Policy Bulletin: Sex Reassignment Surgery

Policy History

Last Review: 03/06/2009
Effective: 05/14/2002
Next Review: 08/12/2010
Review History
Definitions

Additional Information

Clinical Policy Bulletin Notes

Number: 0615

Policy

Note: Most Aetna plans exclude coverage of sex change surgery (gender reassignment surgery, transgender surgery) or any treatment of gender identity disorders. Please check benefit plan descriptions.

Aetna considers sex reassignment surgery medically necessary when all of the following criteria are met:

I. Member is at least 18 years old; *and*

II. Member has met criteria for the diagnosis of "true" transsexualism, including:

Life-long sense of belonging to the opposite sex and of having been born into the wrong sex, often since childhood; *and*
A sense of estrangement from one's own body, so that any evidence of one's own biological sex is regarded as repugnant; *and*
Wishes to make his or her body as congruent as possible with the preferred sex through surgery and hormone treatment; *and*
A stable transsexual orientation evidenced by a desire to be rid of one's genitals and to live in society as a member of the other sex for at least 2 years, that is, not limited to periods of stress; *and*
Does not gain sexual arousal from cross-dressing; *and*
Absence of physical inter-sex of genetic abnormality; *and*

Not due to another biological, chromosomal or associated psychiatric disorder, such as schizophrenia; *and*

III. Member has completed a recognized program of transgender identity treatment as evidenced by all of the following:

The member has successfully lived and worked within the desired gender role full-time for at least 12 months (so-called real-life experience), without periods of returning to the original gender; *and*

Unless medically contraindicated, member has received at least 12 months of continuous hormonal sex reassignment therapy recommended by a mental health professional and carried out by an endocrinologist (which can be simultaneous with the real-life experience); *and*
A qualified mental health professional* who has been acquainted with the member for at least 18 months recommends sex reassignment surgery documented in the form of a written comprehensive evaluation; *and*
A second concurring recommendation by another qualified mental health professional * must be documented in the form of a written expert opinion**; *and*
Psychotherapy is not an absolute requirement for surgery unless the mental health professional's initial assessment leads to a recommendation for psychotherapy that specifies the goals of treatment, estimates its frequency and duration throughout the real life experience (usually a minimum of 3 months); and
For genital surgical sex reassignment, member has undergone a urological examination for the purpose of identifying and perhaps treating abnormalities of the genitourinary tract, since genital surgical sex reassignment includes the invasion of, and the alteraton of, the genitourinary tract (urological examination is not required for persons not undergoing genital reassignment); and
Member has demonstrated an understanding of the proposed male-to-female or female-to-male sex reassignment surgery with its attendant costs, required lengths of hospitalization, likely complications, and post surgical rehabilitation requirements of the planned surgery.

* At least one of the two clinical behavioral scientists making the favorable recommendation for surgical (genital and breast) sex reassignment must possess a doctoral degree (e.g., Ph.D., Ed.D., D.Sc., D.S.W., Psy.D., or M.D.). Note: Evaluation of candidacy for sex reassignment surgery by a mental health professional is covered under the member's medical benefit, unless the services of a mental health professional are necessary to evaluate and treat a mental health problem, in which case the mental health professional's services are covered under the member's behavioral health benefit. Please check benefit plan descriptions.

** Either two separate letters or one letter with two signatures is acceptable.

Note: Rhinoplasty, face-lifting, lip enhancement, facial bone reduction, blepharoplasty, liposuction of the waist, reduction thyroid chondroplasty, laryngoplasty or shortening of the vocal cords, which have been used in feminization, are considered cosmetic. Similarly, chin implants, nose implants, and lip reduction, which have been used to assist masculinization, are considered cosmetic.

Note on gender specific services for transgender persons:

Gender-specific services may be medically necessary for transgender persons appropriate to their anatomy. Examples include:

1. Prostate cancer screening may be medically necessary for male to female transgender individuals who have retained their prostate;
2. Breast cancer screening may be medically necessary for female to male transgender persons who have not undergone a mastectomy.

Background

Transsexualism is "a gender identity disorder in which the person manifests, with constant and persistent conviction, the desire to live as a member of the opposite sex and progressively take steps to live in the opposite sex role full-time." People who wish to change their sex may be referred to as "Transsexuals" or as people suffering from "Gender Dysphoria" (meaning unhappiness with one's gender).

Transsexuals usually present to the medical profession with a diagnosis of transsexualism, a sophisticated understanding of their condition, and a desired course of treatment, that is, hormone therapy and sex-reassignment surgery. Due to the far-reaching and irreversible results of hormonal and/or surgical transformational measures, a careful diagnosis and differential diagnosis is absolutely vital to the patient's best interest. In and of themselves, a patient's self-diagnosis and the intensity of his desire for sex reassignment cannot be viewed as reliable indicators of transsexuality. A vital part of the long-term diagnostic therapy is the so-called real-life experience, in which the patient lives as a member of the desired sex continually and in all social spheres in order to accumulate necessary experience. Experience in specialist Gender Identity Units has shown that only about 15% of male transsexuals and 90% of female transsexuals are considered suitable for surgery or still desire it after specialist psychiatric care and a prolonged period of observation used to identify the relatively rare "true" transsexual from the more common "secondary" transsexual.

Hormone therapy and sex-reassignment surgery are superficial changes in comparison to the major psychological adjustments necessary in changing sex. Treatment should concentrate on the psychological adjustment, with hormone therapy and sex-reassignment surgery being viewed as confirmatory procedures dependent on adequate psychological adjustment. Psychiatric care may need to be continued for many years after sex-reassignment surgery. The technical success of sex-reassignment surgery is greater for male-to-female transsexuals than female-to-male transsexuals, and continues to improve as new techniques are developed. The overall success of treatment depends partly on the technical success of the surgery, but more crucially on the psychological adjustment of the transsexual, and the support from family, friends, employers and the medical profession.

Lawrence and colleagues (2005) stated that male-to-female transsexuals display male-typical category-specific sexual arousal following sex reassignment surgery, and that vaginal photoplethysmography is a promising methodology for studying patterns of sexual arousal in post-operative transsexuals.

CPT Codes / HCPCS Codes / ICD-9 Codes

CPT codes covered if selection criteria are met:

19301, 19303 - 19304

19316

19324 - 19325

19350

53430

54125

54520

54660

54690

55175

55180

55970

55980

56625

56800

56805

56810

57106 - 57107, 57110 - 57111

57291 - 57292

57335

58150, 58180, 58260 - 58262, 58275, 58291, 58541 - 58544,

58550 -
58554

CPT codes not covered for indications listed in the CPB [considered cosmetic]:

11950 -
11954

15820 -
15823

15824 -
15828

15830 -
15839

15876 -
15879

17380

21120 -
21123

21125 -
21127

30400 -
30420

30430 -
30450

Other CPT codes related to the CPB:

58570 -
58573

90804 -
90857

ICD-9 codes covered if selection criteria are met:

302.50 - 302.53	Trans-sexualism

ICD-9 codes not covered for indications listed in the CPB:

293.0 - 302.4, 302.6 - 319	Mental disorders [other than transexualism]
752.7	Indeterminate sex and pseudohermaphroditism

758.0 - 758.9 Chromosomal anomalies

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employees nor agents of Aetna or its affiliates. Treating providers are solely responsible for medical advice and treatment of members. This Clinical Policy Bulletin may be updated and therefore is subject to change.