

Transgender health 2



Serving transgender people: clinical care considerations and service delivery models in transgender health

Kevan Wylie, Gail Knudson, Sharful Islam Khan, Mireille Bonierbale, Suporn Watanyusakul, Stefan Baral

The World Professional Association for Transgender Health (WPATH) standards of care for transsexual, transgender, and gender non-conforming people (version 7) represent international normative standards for clinical care for these populations. Standards for optimal individual clinical care are consistent around the world, although the implementation of services for transgender populations will depend on health system infrastructure and sociocultural contexts. Some clinical services for transgender people, including gender-affirming surgery, are best delivered in the context of more specialised facilities; however, the majority of health-care needs can be delivered by a primary care practitioner. Across high-income and low-income settings alike, there often remains a dearth of educational programming for health-care professionals in transgender health, although the best evidence supports introducing modules on transgender health early during clinical education of clinicians and allied health professionals. While these challenges remain, we review the increasing evidence and examples of the defined roles of the mental health professional in transgender health-care decisions, effective models of health service provision, and available surgical interventions for transgender people.

Introduction

Transsexual, transgender, and gender non-conforming individuals have been a part of all cultures historically, yet the emergence of, and advocacy for, transgender individuals in the western world have only become prominent in recent decades, since the pioneering advocacy work of Harry Benjamin in New York starting in the late 1940s. Transgender, transsexual, and other gender non-conforming people have become more visible as a community and demonstrated considerable diversity in their gender identities, roles, and expressions. In 2012, the World Professional Association for Transgender Health (WPATH) published the seventh version of its standards of care¹ to promote the highest quality of service for this group of individuals. There are several barriers to access to care that vary between countries and cultures, including the fear of being seen as different (with associated stigma and violence), lack of access to caring and competent professionals, difficulty in identifying sources of information about gender dysphoria and hormone therapies, and inadequate access to safe prescribing and monitoring of hormone therapy. We are not aware of any follow-up studies reporting outcomes in individuals with gender dysphoria who have been refused transitional support.

Culture and gender

The majority of clinical experience related to transgender care is derived from higher-income settings. Therefore, local adaptation of clinical care protocols is required, in view of varying cultures and social norms across low-income and middle-income countries. Gender roles are culturally stereotyped in most societies where men and women are supposed to participate in masculine and feminine roles specific to their assigned sex at birth.²

Deviation from normative gender roles often results in devaluation of social status and experiences of stigma.^{3,4}

Although transgender people exist across cultures throughout the world, transgenderism and transsexualism are considered abnormal in most societies, because they transgress the normative sex-gender binary system.⁵⁻⁷ Perceptions of transgender people are affected by the profound differences in culture, religion, and history that exist between countries, and presentation and acceptance of gender diversity can vary widely even within regions of the world. For example, the variation in acceptance of gender diversity across Asia is independent of religion, economic level, and even subregion, with

Key messages

- The World Professional Association for Transgender Health has published international normative standards for the clinical care of transgender people, focused on improving the quality of health care of transgender, transsexual, and gender non-conforming people.
- Some clinical services for transgender people (such as gender-affirming surgery) are best delivered in the context of specialised facilities; however, the majority of their health-care needs can be delivered by a primary care physician.
- Standards for optimal individual clinical care for transgender people should be consistent around the world, although the implementation of services will depend on health-system infrastructure and sociocultural contexts.
- Although there remains a dearth of educational programming about transgender health for health-care professionals in most settings, the best evidence supports introducing modules on this topic early during the clinical education of clinicians and allied health professionals.

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This is the second in a *Series* of three papers about the health of transgender people

University of Sheffield, Sheffield, UK (Prof K Wylie MD); Porterbrook Clinic, Sheffield, UK (Prof K Wylie); Department of Psychiatry, University of British Columbia, BC, Canada (G Knudson MD); Program for HIV and AIDS, Infectious Diseases Division, icddr, Dhaka, Bangladesh (S I Khan PhD); Department of Epidemiology, Johns Hopkins School of Public Health, Baltimore, MD, USA (S Baral MD); Gender Dysphoria and Sexology Department, University Hospital La Conception, Marseille, France (M Bonierbale MD); and Suporn Clinic, Division of Plastic Surgery, Aikchol Hospital, Chonburi, Thailand (S Watanyusakul MD)

Correspondence to: Dr Kevan Wylie, Porterbrook Clinic, Sheffield S11 9BF, UK k.r.wylie@sheffield.ac.uk

some countries having broader acceptance (such as Thailand, Laos, and Indonesia) and other countries (including Malaysia) having less acceptance.^{8–13} Although many transgender people struggle to establish a separate gender category beyond the male-female binary system, only a few countries have acknowledged transgender as a “third” gender. In December, 2007, the Supreme Court of Nepal issued a groundbreaking verdict in favour of gender minorities and recognition of a third gender. In November, 2013, two remarkable developments took place in the gender debate and legal and human rights framework: Germany became the first European country to officially recognise a third gender for babies born with ambiguous genitalia through a new legislation by the country’s constitutional court;¹⁴ and the Government of Bangladesh officially approved a proposal by the social welfare ministry to identify transgender women (also known as hijra) within a separate gender category.¹⁵ In April, 2014, India’s Supreme Court recognised transgender people as members of a third gender in a landmark ruling.¹⁶ In 2015, the Nepal authorities decided to issue passports to gender minorities, adding a third gender category.¹⁷

Although transgender people across cultures are known by various indigenous terms, the increased visibility in many settings of transgender women, compared with transgender men, has resulted in increased social awareness of these women. Transgender women across many settings share some commonalities, such as preferences for feminine attire and body gestures, a sense of community, and, because of their gender incongruence, a status that has traditionally not been socioculturally, religiously, politically, and legally acknowledged. Because of such pervasive non-acceptance, many transgender women seek social or medical transition.^{2,18} Nevertheless, scientific information about transition-related issues is scarce. Access to transition-related health services is often limited, especially in many low-income and middle-income countries. Many transgender women seek clinical or surgical procedures, or both, by taking hormones, removal of genitals, or other gender reassignment surgery.^{19–21} For example, hijras in south Asian countries often seek social and psychological fulfilment by partial or complete removal of the male genital organs (castration) by modern or traditional caregivers, and some even seek modern gender-affirmation surgery that is unavailable in their home countries.^{22,23} The limited numbers of clinically skilled providers and high costs of medical interventions in most Asian countries have encouraged access to providers who are unskilled in performing medical interventions, causing untoward physical and psychological effects.²⁴

Castration for transgender women indicates removal of the penis and scrotum without the construction of female genitals. The underlying reasons for seeking castration and gender-affirming surgery can go further than relief from

physical dysphoria and perceived needs for compatible and socially acceptable sex-gender aligned lifestyles. Castration involves much diverse meaning—for example, for some hijra it represents sociocultural restructuring through which they ensure their economic survival by their engagement with the hijra community.²⁴ Members of this community can earn their living through traditional hijra occupations (known as *badhai*), such as collecting money from the market places (*bazar tola*) and blessing newborn babies (*bachcha nachano*).²⁵ Castration can also enhance their self-esteem, power, and status within and outside of the hijra community; through castration they become “real” hijras^{22,24} who can earn more than non-castrated hijras through *badhai* and by selling sex.

Not all transgender women go through castration or gender-affirming surgery. Instead, many adopt feminine gestures, clothing, voices, and roles. This type of socio-cultural adaptation enables the individual to have the experience of being transgender without any medical or surgical intervention. Those who have undergone castration often report substantial physical side-effects, such as urethral strictures, severe infections, and loss of libido.^{24,26–28} Moreover, social and legal dilemmas exist. For example, some non-castrated hijra believe that medical intervention may re-emphasise the dominant binary gender construction that ignores transgender as a separate gender. This is seen as a violation of their basic rights to life and survival. A hijra in Bangladesh stated (Khan SI, personal communication):

“My female mind is entrapped into my male body. By changing genital organs, I will not be able to become a woman to produce children, whereas my mind does not approve that I am a man. Our society only considers my male sex organs as marker of m=y male gender identity and overlooks my feminine mind and lifestyles, which have evolved over years. Who am I? I am not really a man or a woman. I am somewhere in the middle or I am outside male-female world. Maybe most societies cannot think beyond male-female. [When asked why they would not consider surgery, the informant explained:] I do not like to go for any surgery to change my sexual organ. I am neither a male nor a female. I am a hijra whether you acknowledge this or not is your problem. If I go for surgery then it means I agree that there is nothing beyond male or female, everybody must be within this boundary. I rather request not to deny our gender identity and human rights, please allow me to survive at least like a human being if not as a hijra. Because of this non-recognition, we are excluded from the society.”

This voice reflects other crucial dimensions of transgender experience—for example, the condemnation in heteronormative societies of the disparity between sex assigned at birth and socially constructed gender. People whose gender identity does not align with a rigid male-female dichotomy have been ostracised, leading to pervasive stigma and discrimination in all areas of life for transgender people. Normative notions often marginalise transgender people and place them in an

abusive sociolegal environment, in which they are sociopolitically, religiously, and economically excluded from the mainstream, which in turn may enhance their risk taking behaviours.⁴

Pathologisation of gender and sexual minorities in the western medical model,²⁹ has often resulted in transgender people being labelled as deviant individuals requiring medical and legal attention. It has also created silence from the individual to the state level,²⁴ which has limited the opportunities for accessible care and services. As cross-cultural diversity and fluidity of gender and sexuality have received attention, it is expected that standard care and services for transgender people will become available in most countries within the framework of human rights.

Clinical frameworks for delivery of care

Primary care

For the most part, the general health and wellbeing of transgender people should be attended to within the primary care setting, without differentiation from services offered to cisgender (non-transgender) people for physical, psychological, and sexual health issues. Specific care for gender transition is also possible in primary care. Successful services are provided outside of specialist care in diverse cities such as Toronto and Vancouver in Canada, Boston, USA, and Sydney, Australia. Comprehensive service provision to address multiple comorbidities among transgender people can often be implemented within these local health-care settings.³⁰

Establishing a diagnosis of gender dysphoria and adapting an informed consent model of care allows hormone therapy to be started in primary care by the physician. Primary health-care providers assessing for hormone and surgery eligibility should be competent in assessing basic mental health issues and should recognise that referral to a mental health professional may be necessary—for example, where there is evidence of depression or gender minority stress.

Endocrine therapy and gamete storage

Hormonal therapy is a fundamental necessity for most patients undergoing a medical transition. Recent reviews describe hormonal regimens that are considered standard practice for transgender women and men.^{31–34}

First, drugs are used to suppress the natal hormones—typically gonadotropin-releasing hormone (GnRH) analogues or agonists. If these drugs are not available for financial reasons, or occasionally when they cause side-effects in a patient, use of cyproterone acetate, spiro-lactone, or a progestin are alternatives.

Second, in transgender women, feminising hormones in the form of oestrogen tablets or transdermal patches are prescribed, usually lifelong. Natural oestrogen (17 β -oestradiol) is recommended, rather than synthetic ethinyl oestradiol or conjugated oestrogens, because 17 β -oestradiol can be measured and monitored in plasma

with commercial oestradiol assays, and it has a theoretically smaller associated risk of thromboembolism than synthetic oestrogens. There is evidence of increased mortality in transgender women on hormone therapy.³⁵ The primary health-care provider must discuss the risks with the patient, document this discussion in the case record, and obtain informed consent. Living with and being treated for HIV poses additional complexities in clinical decision making for hormone therapy, including documented interactions of certain antiretroviral drugs with hormones, learned from work with hormonal contraceptives.³⁶ Although the clinical implications of these drug interactions remain unclear, they should be reviewed to effectively inform clinical decision making for choice of antiretroviral and hormone therapies.

For transgender men, testosterone therapy is administered either as a transdermal gel or as a longer-acting depot injectable preparation. Again, blood testosterone concentrations can be monitored with the aim of avoiding excessive levels, which can bring about increased complications, such as erythrocytosis.

Hormone therapy can be started before the patient adopts their gender congruent role. It can even provide substantial comfort to those who do not wish to make a social transition in gender role or undergo surgery, or who are unable to do so.¹ However, it is essential that the patient understands and accepts the limitations of both hormone treatment and gender confirming surgery.^{37,38} Providing an accurate perspective and identifying the limitations of therapy will help the patient to develop realistic expectations.

Cessation of hormone therapy is usually traumatic; after hormone therapy is started, a clinic or primary care practice should continue to prescribe and monitor the treatment. Consent, including decisions about gamete storage, should be properly obtained and recorded. If the individual has any uncertainty about whether gamete storage should take place, then (where affordable) this process should occur before starting hormone therapy, because recovery of fertility may be poor after long periods of cross-gender hormone therapy.

In the majority of children with cross-gender behaviour, this behaviour does not persist into late puberty.^{39,40} An association has been reported between the intensity of gender dysphoria in childhood and the persistence of the dysphoria, as well as a higher probability of persistence among natal girls than boys.⁴¹

For adolescents with persistent gender dysphoria, the use of GnRH analogues is emerging as standard practice in many parts of the world. The treatment blocks the expected maturation of secondary sex characteristics, such as breast development, voice deepening, and facial hair growth. It allows time for the teenager to proceed with restricted pubertal growth while experiencing a change in gender role during the adolescent years.⁴² Follow-up studies of transgender adolescents indicate benefits from gender confirming surgery during adolescence, including a

decrease in gender dysphoria and steady improvement in psychological functioning.⁴³ The outcomes compare favourably with those of interventions in adulthood, which can no longer alter secondary sex characteristics that may create lifelong barriers to successful integration into the reassigned sex.^{44,45}

In all cases involving endocrine therapy, follow-up is important and can occur by telephone or email. The primary care provider inexperienced in this area should access mentorship and training using several resources.^{1,46,47} In time, they can become a trainer of other physicians.

WPATH standards of care

WPATH is an international, multidisciplinary professional association that promotes evidence-based care, education, research, advocacy, public policy, and respect in transsexual and transgender health care. The association first published its standards of care in 1979 with the goal of advancing this underserved population's access to evidence-based health care, social services, justice, and equality. The most recent version¹ (version 7, published in 2012) maintains the aim of promoting safe and effective pathways that allow transsexual, transgender, and gender non-conforming individuals to achieve lasting personal comfort with their gendered selves, maximise their overall health, and promote psychological wellbeing and self-fulfilment. The standards of care document is intentionally worded to allow flexibility, in order to meet diverse health-care needs, and the core principles can be applied to a wide range of settings.

The 7th version of the standards of care contains several improvements. First, it includes the concept that gender non-conformity is not, in and of itself, pathological. However, the guidelines acknowledge that those who experience distress related to gender dysphoria and want to make a physical transition are entitled to and should have access to medically necessary treatment.

Second, the guidelines now clarify that although psychotherapy is not an absolute requirement in order

for individuals to access medical interventions, an assessment and referral by a health-care professional with training in transgender health is essential. They describe the important part that mental health professionals can play in achieving the primary goal of improving overall health and fulfilment by attempting to mitigate the negative effects of stigma and prejudice, by helping clients to find their most comfortable and fulfilling gender expression, and, if applicable, by facilitating gender role changes and coming out.

Third, the standards of care state that any person wishing to start hormone therapy or breast or chest surgery must present with persistent, well-documented gender dysphoria, must demonstrate the capacity to make a fully informed decision and to consent for treatment; and must be the legal age of adulthood in the country of treatment (figure 1). If substantial medical or mental health concerns are present, documentation must show that these conditions are well managed. Although not an explicit criterion, the guidelines recommend that individuals undergoing feminising transition undergo feminising hormone therapy for a minimum of 12 months before breast construction surgery. This approach maximises breast growth, which allows better surgical (aesthetic) results to be obtained, and also confirms the steadiness of the desire to transition.

To be qualified to write a recommendation for hormone therapy or breast or chest surgery, a health-care professional should have appropriate training and professional licensure in behavioural health and demonstrated competency in the assessment of gender dysphoria. This experience is particularly important when the professional is part of a multidisciplinary specialist team that provides access to feminising or masculinising hormone therapy.

Fourth, in addition to the criteria set for hormone therapy, the standards of care recommend 12 months of

Hormones and upper body surgery			
Criteria for adults 1 letter	Hormone therapy	Chest surgery	Breast augmentation*
Persistent, well-documented gender dysphoria	*	*	*
Capacity to make a fully informed decision and to consent for treatment	*	*	*
Age of majority in a given country	*	*	*
If significant medical or mental concerns are present, they must be reasonably well controlled	*	*	*

Figure 1: Criteria for hormones and upper body surgery, WPATH standards of care (version 7)¹

Lower body surgery		
Criteria for adults 2 letters	Gonadectomy	Genital surgery*
Persistent, well-documented gender dysphoria	*	*
Capacity to make a fully informed decision and to consent for treatment	*	*
Age of majority in a given country	*	*
If significant medical or mental concerns are present, they must be well controlled	*	*
12 continuous months of hormone therapy as appropriate to the patient's gender goals (unless the patient has a medical contraindication or is otherwise unable or unwilling to take hormones)	*	*
12 continuous months of living in a gender role that is congruent with their gender identity		*

Figure 2: Criteria for lower body surgery, WPATH standards of care (version 7)¹

continuous living in a gender role that is congruent with the person's gender identity for metoidioplasty or phalloplasty in female-towards-male transition, and for vaginoplasty in male-towards-female transition (figure 2). 12 months of hormone therapy is recommended for hysterectomy or ovariectomy in female-towards-male transitions or orchiectomy in male-towards-female transitions. A letter of recommendation from a qualified mental health professional is required for hormone therapy referral or breast surgery, and two letters from two independent qualified mental health professionals are required for genital surgery.

Fifth, the guidelines state that any adolescent requesting puberty-suppressing hormones should demonstrate a long-lasting and intense pattern of gender non-conformity or gender dysphoria (whether suppressed or expressed), with gender dysphoria emerging or worsening with the onset of puberty (at least Tanner stage 2). As in adults, any coexisting psychological, medical, or social problems that could interfere with treatment (eg, factors that might compromise treatment adherence) should be successfully managed before hormone therapy is started. Additionally, the document states that adolescents may be eligible to begin feminising or masculinising hormone therapy, preferably with parental consent. Intervention usually starts with the use of GnRH agonists or antagonists, which block the development of secondary sexual characteristics of the natal sex. If treatment is stopped the characteristics will develop along the lines of the sex assigned at birth. Cross-gender hormones are added later in the treatment path; in many countries this occurs when the legal age of independent medical decision making has been reached.

The adolescent must provide written assent to treatment in addition to the informed consent obtained from parents or legal guardians. In many countries, 16 year olds are legal adults for the purpose of medical decision making and do not require parental consent. Ideally, treatment decisions should be made in collaboration between the adolescent, the family, and the treatment team. Although chest surgery can be performed earlier, genital surgery should not be undertaken until the patient has reached the legal age of adulthood in the country of treatment and has lived continuously for at least 12 months in the gender role that is congruent with their gender identity.

The WPATH standards of care not only provide clear guidelines for the health care but also represent an advocacy platform for the advancement of public policies and legal reforms that promote tolerance and equity for gender and sexual diversity and that eliminate prejudice, discrimination, and stigma. It is recognised that country specific guidelines exist (eg, in the UK⁴⁸), and these are informed by the WPATH standards of care.

Professional support throughout transition

Before the publication of the most recent WPATH standards of care, the path to transition was through so-called triadic therapy, beginning with "real life

experience", followed by hormone therapy and, finally gender confirming surgery. However, this model no longer represents the standard of care. The prevalence of non-binary gender presentations is increasing; therefore, provision of information to patients and health-care providers about options for gender identity and expression and possible medical interventions is crucial. The latest version of the standards of care recognises and validates various expressions of gender that may not necessitate hormonal or surgical treatments.

The role of the mental health professional

According to the WPATH standards of care, mental health professionals may support transition in the role of psychotherapist, counsellor, or family therapist, or as a diagnostician or assessor, advocate, or educator.¹ Here, we focus on the five tasks related to assessment and referral, namely: assessment of gender dysphoria; provision of information about options for gender identity and expression and possible medical interventions; assessment, diagnosis, and discussion of treatment options for coexisting mental health concerns; assessment of eligibility, preparation, and referral for hormone therapy; and assessment of eligibility, preparation, and referral for surgery.

As discussed in the previous section, to determine eligibility for hormone therapy and surgery, the standards of care recommend that the individual must present with persistent gender dysphoria, capacity to consent to treatment, and reasonably good control of any medical or mental health symptoms. A year on hormone therapy is recommended for individuals preparing for gonadectomy, and living for a year in a role congruent with their gender identity is recommended for patients seeking genital reconstruction. Such experience provides an opportunity for the person to experience day-to-day life in this gender congruent role.⁴⁹ However, in some settings, dressing in clothing often associated with the opposite sex is interpreted as proof of homosexuality, which is prohibited by some religions and countries (for example in Libya, Sudan, and Uganda) and could become a source of persecution.⁵⁰

The diagnosis of persistent gender dysphoria is fairly straightforward, except in cases of new onset in adolescence. Although very rare, situations that may present similarly to gender dysphoria include distress around gay or lesbian sexual orientation and related cultural restrictions. Cases of psychosis in people seeking transition have been reported^{51,52} but are very uncommon. In addition, dressing in clothing often associated with the opposite sex without gender dysphoria, where such behaviour is a source of wellbeing or sexual arousal, can be an initial presentation.

Mental health professionals should screen for conditions related to the oppression and stigmatisation that transgender people experience. These include an increased prevalence of high-risk sexual behaviour in youth,

depression (with or without suicidal ideation), anxiety-related conditions, substance abuse, and being victims of violence. Poor family and social support can negatively affect the quality of life during and after transition.

Hormone therapy and gender-affirming surgery is a medically necessary intervention for many transsexual, transgender, and gender non-conforming individuals with gender dysphoria.¹ It is well documented that hormone therapy and gender confirming surgery are correlated with an improved quality of life for transgender individuals.^{53–60} The risk of withholding treatment far outweighs that of providing hormones and surgery. The mental health of the individual undergoing medical transition deteriorates in only about 10% of cases, possibly because of diagnostic errors, poor coping abilities, employment difficulties, lack of support, and surgical complications.^{53–55,61–64} Postoperative regret is transient in 1–8% of people undergoing surgical transition, and permanent in 1–2%.^{53,54,61,64–69} Coexisting depression can become severe and chronic with medical transition; suicidal ideas and death by suicide (0.5–2%).^{62,63,70} Although De Cuypere and colleagues⁵⁵ reported a significant fall in suicidal behaviour after surgery (from 29.3% to 5.1% of 58 individuals), this rate remained 30 times higher than that in the general population (0.15%).

Dhejne and colleagues⁷¹ reviewed 38 studies describing prevalence of psychiatric disorders and psychiatric outcomes, before and after gender confirming medical interventions, for people with gender dysphoria. Although levels of psychopathology and psychiatric disorders in trans people initially presenting for services are higher than in the non-trans population, they do improve after gender confirming medical intervention. These rates reached normative values in many studies. Depression and anxiety disorders were most common. Prevalence of schizophrenia and bipolar disorder were the same in as the non-trans population. Both hormone therapy and gender-affirming surgery can alleviate the suffering caused by gender dysphoria, with many transsexual, transgender, and gender non-conforming individuals experiencing improvements in psychological comfort, social integration, quality of life, and ability to plan for and feel optimistic about the future.^{53–60,72}

Specific transition care management

In this section we discuss some of the specific interventions that can be helpful when supporting transgender individuals during transition. Access to these services may be limited by local health economies or the financial limitations of the individual, in which case family, friends, and support groups may be able to offer advice.

Counselling and psychotherapy

After the assessment phase, the mental health-care professional can inform, guide, and support the transgender individual throughout their journey. For

individuals whose gender identity is fluid, psychotherapy may help them to identify their own needs and desires before deciding on irreversible methods of gender reassignment.⁴⁹ If mental health conditions are present, the individual must receive customised management to optimise their quality of life.⁷²

For individuals without mental health issues whose desire for reassignment is clear and well considered, counselling could help them to adapt to their changing life. Psychotherapy is recognised as an appropriate supportive adjunctive treatment when provided within a clinic environment with the consent of the patient. Group psychotherapy facilitated by a psychotherapist⁷³ can be valuable in addition to individual therapy. Peer support in closed and open groups may be helpful. Parents of individuals undergoing transition may also need support from appropriate organisations or groups. Peer support and community empowerment are an important part of care, especially in developing countries. Peer support is now readily available on the internet through blogs, information sites, and chat groups, and warrants further research.

Speech and language therapy

Speech and language therapy, particularly with voice coaching as an adjunct to any voice surgery, has an important place in transition for transgender men and women.⁷⁴ An initial session is often offered before hormone therapies are started, to train the individual in the appropriate use of any voice change without undue damage to the vocal cords.

Hair removal

Removal of facial hair is crucial for individuals transitioning to a female role. Several hair removal techniques are recognised, with laser hair removal reserved particularly for individuals with dark coloured hair. Electrolysis and pulse wave light therapy are alternative treatments, but no treatments are acknowledged as being able to completely remove any future hair growth. Some transgender women may seek further removal of body hair, particularly of that on the chest, abdomen, and limbs. Increasingly, there is recognition that removal of genital hair, particularly in the scrotal area, is important if scrotal skin is intended for vaginoplasty, to reduce the likelihood of vaginal hair ball formation. Hair removal must be completed at least 6 weeks in advance of gender confirming surgery.

Deportment and image consultancy

The importance of clothing style, deportment, and presentation cannot be overestimated. In many countries, androgynous presentation is not yet acceptable and attention to detail may be necessary to avoid androgynous clothing choices. Input from an image consultant can be beneficial for individuals undergoing transition, alongside a change of voice pitch and tone and overall

facial appearance. Peers who have completed transition can offer advice and support such as how to deal with hostility in the public domain, and appearances. Clothing and hair pieces may be used and can be adapted during the period of transition.

The gender congruent role and occupational therapy

Although the so-called “real life experience” is no longer a requirement for progression in the WPATH standards of care, the guidelines still require individuals to successfully complete a period of time in their gender congruent role before approval for genital reconstruction. For many people, adaptation in social circumstances, as well as at work, remains a challenge. Although it is not a requirement of the WPATH standards of care that individuals demonstrate full-time employment in a gender congruent role, successful employment, attendance at higher educational facilities, or part-time voluntary work can all serve as a way of fulfilling the criteria. Where such activities present difficulties for an individual, particularly for those with comorbid mental health issues, input from an occupational therapist can be invaluable and the opportunity for consultation is recommended.⁷⁵

Concurrent medical and mental health conditions

Patients who have concomitant medical or psychiatric illnesses should be given the same degree of care, and access to care, as non-transgender individuals. Although this statement sounds obvious, discrimination and restriction to usual health-care services exist. These factors may be accompanied by an expression of uncertainty about how to treat a condition when patients are on hormone therapy, although in most circumstances such treatment does not preclude normal use of medical interventions. For example, non-urgent surgery may require cessation of oestrogen therapies to reduce the risk of thrombosis, whereas urgent surgery requires thrombosis prophylaxis with low molecular weight heparin. Wider areas that require active consideration and action include the use of unsuitable gender markers on case records, denial of preventive health interventions (such as cervical screening for transgender men and prostate awareness for transgender women), and an absence of health promotion from sexual health services. Much of this could be addressed by primary health-care providers as part of the coordination of gender care pathways.

The role of surgery

Some transgender people will undergo genital or non-genital surgical procedures as part of their medical transition. Surgical intervention can help to resolve a self-perceived mismatch between the body and self-identity. A transgender person may seek non-genital surgery to change their physical appearance and to better assimilate societally within their reassigned gender.

Health-care systems will always be limited in the amount of support and clinical services made available during transition. However, some people may seek further support, either by need or by choice, to successfully transition. Non-genital surgical procedures may include cricothyroid approximation, vocal cord surgery, breast or chest reconstruction, and facial feminising surgery.^{76,77}

Genital reconstruction surgery is typically the last stage in transition for those who cannot otherwise accept their gender dysphoria. Individuals must be well informed about surgical implications (especially since some procedures are irreversible), limitations, and cost, and must be given realistic expectations of surgical results. Careful appraisal is essential to assess needs and long-term benefits, and to ascertain which procedures and techniques are most appropriate for the patient.

The WPATH criteria for breast or chest surgery are the same as those for hormone therapy. Transgender individuals wanting gender confirming surgery must fulfil the aforementioned criteria and have 12 continuous months of hormone therapy (unless hormones are not clinically indicated for the individual). In addition, for those who want genital reconstruction, 12 continuous months of living in a gender role that is congruent with their gender identity is required.

Outline of surgical procedures

Female-to-male transgender men can be masculinised by administration of testosterone therapy alone. Common effects include facial and body hair growth, deepening of voice, cessation of menses, and increased musculature. Many will wish to further alter their body image by surgical means. Transgender men will usually prioritise mastectomy to promote a more masculine body image. Techniques used depend on previous breast size, skin elasticity, and personal preference.⁷⁸ Genital surgery comprises hysterectomy, oophorectomy, vaginectomy, phallic construction by phalloplasty or metoidioplasty, and scrotoplasty. Optimal objectives of phalloplasty are a naturally aesthetic neophallus, standing micturition, sexual sensation, coital ability, and one-stage surgery with minimal scars.⁷⁹ There is no clear gold standard technique to consistently achieve these objectives, so current operative techniques vary. The free vascularised forearm flap is currently the preferred technique for phallic construction. A tube within a tube is made with cutaneous skin, forming the new urethra, and the radial artery and vein and medial and lateral antebrachial cutaneous nerves are anastomosed to corresponding vessels and nerves in the pelvic area. Disadvantages of this technique include a high incidence of initial fistulas, residual forearm scarring, the need for an erection prosthesis, and potential long-term urological complications.^{78,80} Prefabrication of the flap with a tubed urethral graft is used to reduce the risk of fistula.⁸¹ The free sensate osteocutaneous fibula flap procedure yields good intrinsic rigidity and coital ability without an

erection prosthesis.⁸² Metoidioplasty involves construction of a microphallus from a clitoris that has been overdeveloped by hormonal treatment and offers a simpler one-stage option for patients who are not seeking coital ability.^{78,83} Scrotal reconstruction with testicular prostheses promotes male self-image and a constant awareness of being male. Facial surgery is rarely needed.

Male-to-female transgender women commonly desire breast reconstruction with mammary prostheses. Facial feminisation surgery is a group of procedures to alter the facial soft tissue and underlying bony structure towards feminine shape and proportions. Typically, forehead recontouring is done to reduce forehead and supraorbital bony prominence. Techniques used depend on the severity of frontal sinus deformity (exaggeration).⁸⁴ Feminising rhinoplasty can provide a smaller and more convex nasal profile with elevated tip projection.⁸⁵ Other facial procedures include hairline recontouring, eyebrow lift, upper lip lift, vermilion reconstruction, feminising genioplasty, jaw reduction, and thyroid cartilage reduction. Careful cooperative preassessment is essential to define optimal procedures, depending on the degree of masculinisation attained preoperatively and on personal preference.

Male-to-female genital surgery comprises orchiectomy, penectomy, urethral meatus reconstruction, vaginoplasty, labiaplasty, and clitoroplasty. The surgical aim is to create a perineogenital complex that is as feminine in appearance and function as possible. The gold standard technique for construction of a sensate clitoris is the dorsal neurovascular pedicle glans penis flap method.⁸⁶ Alternatively, in the glans penis-preputial/penile skin flap technique, the glans penis is used with varied amount of penile skin to construct the clitoral hood, clitoral frenulum, and labia minora for aesthetic appearance.⁸⁷ Penile–scrotal skin flap inversion is the usual technique for vaginoplasty.^{88,89} However, neo-vaginal dimensions are restricted by the available penile skin. Use of a full thickness scrotal skin graft for neo-vaginal lining enables an adequate neo-vaginal depth in the case of restricted penile skin.^{89,90} Additional advantages of scrotal skin graft are a hairless vaginal wall and no risk of vaginal wall prolapse. Some neovaginas have a microbiotic flora that produces unpleasant odours. Sigmoid colon vaginoplasty is most commonly used after a failed primary vaginoplasty, but advantageously provides spontaneous mucus secretion to facilitate sexual intercourse. Disadvantages of this technique include the need for additional abdominal surgery and sometimes disappointing long-term results.⁸⁸ With all techniques, postoperative vaginal dilation is necessary to prevent neo-vaginal stenosis.

Outcomes and measuring the costs and benefits

Outcome studies of gender-affirmed individuals provide evidence of elements that contribute to a positive prognosis for gender reassignment. These predictors include persistence in the individual's demand for the

treatment, absence of psychological or concurrent psychiatric conditions, and stable affective and environmental factors.^{53,55,91}

Statistical evidence shows properly administered gender confirming surgery to be a safe surgical treatment that provides satisfaction with neogenital appearance, sexual function, and improved quality of life. Postoperative morbidity can include urinary tract, bowel, and pelvic floor dysfunction and general wound healing disorder, as well as cosmetic imperfections of reconstructed genitalia. The mortality rate directly related to gender confirming surgery is practically zero in all studies.^{60,81,92–94}

Although surgery and hormonal therapy alleviate gender dysphoria, transgender individuals who have undergone sex reassignment need long-term follow-up to reduce the risks of cardiovascular disease and suicide, which are higher than those in the general population.³⁸

Delivery of care for transgender people

Delivery of care should reflect local needs and culture and recognise the potential influence of religion. All staff should receive essential training in how to adopt a practice of cultural humility combined with clinical skills, with recognition of the diversity of training needs for different members of the health-care team. For physicians, studies have consistently shown the importance of early introduction of modules on transgender health in medical education.⁹⁵ Evaluations of these curricula suggest that even short training modules introduced early can substantially increase comfort with transgender medicine.⁹⁶ Although these programmes appear to improve the cultural and clinical competence of future providers, most medical students—even those working in high-income settings—still complete their training with limited exposure to the needs of transgender people.⁹⁷

The need for training is clear in view of the importance of the recognition by health-care providers of expression outside of the gender binary and also the potential presence of specific gender-based violence affecting transgender people. Studies focused on the quality of nursing care have suggested that it is important to engage clinic nursing leaders in order to improve the quality of nursing services for sexual and gender minorities.⁹⁸ The Health Education about LGBT Elders (HEALE) curriculum is a specific training guide that aims to increase the competency of nurses in understanding and addressing the needs of older transgender populations.⁹⁹ HEALE was developed in a North American context, but the unmet health provision needs of older transgender people has similarly been recognised in Ireland.¹⁰⁰

Three consistent themes emerge in the literature focused on models of service provision for transgender people: the core leadership role of the transgender community; the need for transdisciplinary services to ensure comprehensive service availability; and the importance of partnerships that improve service delivery.

The TRANS Pulse Project in Ontario, Canada, is an example of a project with substantial transgender leadership that is ultimately focused on improving the access to quality health care for transgender people across the province.¹⁰¹ In Spain, Esteva de Antonio and colleagues describe the concept of “gender units” as models of coordinated and transdisciplinary approaches that comprehensively address the complex physical and psychosocial needs of transgender people and leverage the family of the clients and the broader transgender community.¹⁰²

A group in Boston, USA, documented the importance of partnerships across agencies that supported coordinated efforts between community, academia, public health entities, and service providers to improve the quality of comprehensive service provision for transgender people in the city.¹⁰³ These models show that for transgender care, partnerships are more than the sum of their parts and that maximising synergies in service provision might be a crucial component of improving health outcomes for transgender people. The Human Rights Campaign, a US civil rights organisation working for lesbian, gay, bisexual, and transgender (LGBT) equality, as published 30 best practices for service providers addressing the needs of transgender people and has developed a tool for service evaluation called the Healthcare Equality Index. The tool covers four main components: non-discrimination, equal visitation, employment non-discrimination, and training in LGBT-patient centred care. The Joint Commission has also developed implementation tools that can be used to support improved service provision for transgender people.¹⁰⁴ In 2014, The American Association of Medical Colleges published a resource for medical educators aimed at implementing curricula and cultural change within health-care facilities to improve the care of trans and gender non-conforming people.¹⁰⁵ As previously noted, the majority of guidance for transgender care has emerged from higher-income settings, although there has been an increasing recognition of the needs of transgender populations globally. In 2015, a comprehensive guide for optimising transgender health care in Asia was published.¹⁰⁶ Building on these approaches, WPATH will continue to support a Global Education Initiative to improve access to transgender health care through educational programming in live and online formats around the world.

The expectations of individuals and of society for the health care of transgender people are evolving; thus, the evolution of the standards of care allows for a flexible pathway of support from professionals who provide care during transition. Nevertheless, the fundamental challenge remains as to how the standards of care will be negotiated, approved, and implemented by the public and private health authorities of various countries, in the context of broader socioreligious and sociopolitical issues, within the normative climate of heterosexism.

Contributors

KW contributed to the concept, literature search, primary writing, consultation, review, and revisions of the manuscript, and collaboration with co-authors and editors. GK and SIK contributed to the literature search, compilation, and manuscript review, wrote sections of the manuscript, assisted in conceptualisation, and responded to reviewers' comments. SB contributed to the literature search, writing (primarily focused on service models), and revisions. MB and SW took part in the literature search and writing the manuscript.

Declaration of interests

We declare no competing interests. GK is the president-elect of WPATH and co-chair of WPATH's Global Education Initiative. KW was previously on the board of directors and is a current member of WPATH. MB is a member of WPATH.

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