



The Thai Handbook of

Transgender Healthcare Services

Center of Excellence in Transgender Health,
Chulalongkorn University

Editor-in-chief

Voranaddha Vacharathit, M.D.

Associate editors

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Chulalongkorn University

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Appreciation

Not long after the Tangerine Community Health Clinic, Thailand's and Asia's first transgender-lead community health clinic, has started its operation as part of the Anonymous Clinic at the Thai Red Cross AIDS Research Centre in November 2015, it has attracted a large number of transgender clients. It has also raised the awareness on transgender health and drawn a lot of attention from health service providers inside and outside the country. Most importantly, it brought multidisciplinary experts from the Faculty of Medicine, Chulalongkorn University together to provide their recommendations and referral network for the clinic. Eventually, they have reached a consensus to establish the Center of Excellence in Transgender Health (CETH), with the aim to scale up the transgender health service and develop an academic resource on transgender health, where there are still gaps in many areas. As a co-founder of the Tangerine Community Health Clinic, I would like to congratulate the Faculty of Medicine, Chulalongkorn University, and CETH team for this success.

From my observation, CETH has a very powerful and competent team. Within less than a year, they have introduced the "Thai Handbook of Transgender Healthcare Services" to public, as it is in your hand right now. The team used the word "Thai Handbook" because the authors applied years of experiences in serving transgender people in Thailand into writing, with backing references from numerous international guidelines. The health issues of transgender people in Thailand are certainly different from those in Europe or the United States. Therefore, Thai medical professionals will fully benefit from this handbook. You would also agree with me that this handbook covers all aspects of transgender health, including physical and mental health, as well as social perspective. The authors of each chapter are also an expert in their fields. Thammasat University's lecturers have also largely contributed in this handbook.

In my opinion, this handbook is rather be called a "textbook", because of its profound academic framework. However, I understand that the team has intentionally designed it to be a go-to book that health service providers should keep within the reach of their hands. I also believe that those who will benefit from this handbook will not be limited to just transgender health

specialists, but primary care providers, community health workers and everyone in the society will also benefit from it. I would also like to see this handbook translated into English and available as an e-book in the future. Medical professionals from the countries with similar public health and socio-economic background like Thailand should also benefit from this handbook.

Lastly, I would like to express my appreciation to the Center of Excellence in Transgender Health, Chulalongkorn University, and Tangerine Community Health Clinic for developing this handbook for Thailand. May all of you be blessed for your devotion and dedication for the public interest.

Best wishes,

Professor Emeritus Praphan Phanuphak, M.D., Ph.D.



Appreciation

Modern Sex Reassignment Surgery (SRS), also known as Gender Affirming Surgery (GAS) these days, has been performed in Thailand for almost half a century, started back in 1978 up until present. In those days, most physical transitions, except for the major gender affirming surgeries, often took place among the transgender community without psychiatrist's diagnosis and care, due to the limited access to transgender health service. Despite of the situation, transgender people have always been standing firm on the notion that having transgender identity does not mean having a mental disorder.

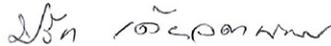
Access to the endocrinologist was also limited at that time. Hence, transgender people usually relied on their peers' advices or friends who have successfully transitioned. By the time they came to see a surgeon or psychiatrist, they often have completed their self-transition, which could usually take more than five years to achieve. This circumstance, somehow, aided the psychiatrists' decision when setting out a medical diagnosis.

Having consistently followed the WPATH (World Professional Association for Transgender Health) or HBIGDA (Harry Benjamin International Gender Dysphoria Association)'s guidelines, together with my experiences in serving more than 3,000 private clients, and over 2,000 collaboration cases since 1978, no single client has ever shown their intention to reverse the surgery or "regret having undergone the genital surgery". However, hormone treatment for both pre and post operative genital surgery could be a lifelong requirement. Therefore, proper medical supervision should be available for those who wish to undergo the procedure.

This handbook for transgender health service is the first in a century to combine resources on psychosocial support, hormone treatment, gender affirming surgery, as well as legal perspective in one easy-to-understand handbook. The highly experienced specialists who wrote this handbook have certainly laid out the fundamental transgender health service provision and inspired the new generation health service providers to quest for even better innovation to improve transgender people's quality of life. This handbook has also set a standard approach to addressing and solving transgender people's complex health issues.

I would like to thank and express my gratitude to all the authors who have made valuable contributions to improve the treatment and care for transgender people.

Congratulations to all involved in the publishing of this handbook.



Associate Professor Preecha Tiewtranon, M.D.
Former Chief of Plastic Surgery Department,
Faculty of Medicine, Chulalongkorn University



Appreciation

Technology in transgender medical care has been rapidly progressing in the recent years, with transgender health being recognized as an important agenda in an international level. I am delighted to learn that members of the Faculty of Medicine, Chulalongkorn University, and Tangerine Community Health Clinic under the Center of Excellence in Transgender Health, along with many highly experienced experts, have collaborated and published "The Thai Handbook of Transgender Healthcare Services". This handbook has pinned down all the essential knowledge on transgender health in one source. It will serve as an information pool for both public health professionals and transgender people.



Professor Suttipong Wacharasindhu, M.D.

Dean of the Faculty of Medicine, Chulalongkorn University
Director of King Chulalongkorn Memorial Hospital

Appreciation

Access to healthcare for transgender and gender variant people in Thailand has started to become more promising in the past few years. This could be seen through the establishment of many new community based organizations that provide health and HIV-related services designed specifically for gender variant people. One of the supportive roles of the Ministry of Public Health was to facilitate the accreditation for these facilities and their community workers. Tangerine Community Health Clinic, Asia's first holistic transgender health center operated by the Institute of HIV Research and Innovation, was also one of those facilities aforementioned. The clinic offers gender affirming counselling, HIV and sexually transmitted infections screening and treatment as well as sexual health and psychosocial support for transgender people in a stigma and discrimination free environment.

From time to time, I have learnt that Tangerine Community Health Clinic was in the center of attention from both domestic and international organizations. They see the clinic as a practical model that could be applied to scale up transgender health service in their local context. This leads to the collaboration between the clinic and the Faculty of Medicine, Chulalongkorn University, to establish the Center of Excellence in Transgender Health in 2020. Its first product was Thailand's first handbook for transgender health service provision. I am honored to have the opportunity to write the Appreciation for this handbook, and I would like to congratulate each member of this working group for their contributions to develop this valuable and essential academic resource.

As the Deputy Minister of Public Health, I strongly hope that the guidelines and recommendations in this handbook will be applied into real practice and help accelerate the medical advance in transgender health service for better health and well-being of the transgender community in Thailand and in the region.



Dr. Satit Pitutecha
Deputy Minister of Public Health



Executive Summary

In the past, all kind of medical and social supports for transgender people often took place and offered among the community members themselves with considerable limitations. Nowadays, public health sectors in Thailand and around the globe have become very proactive when it comes to improving the quality of health services for transgender people. The evidences could be witnessed through extensive academic conferences and seminars on transgender health, as well as a wide variety of related information being shared in public and on social media platform. The establish of the Tangerine Community Health Clinic, which offers a complete range of health services for transgender people, was also regarded as a new wave of proactive approach to enhance transgender health service quality.

Establishing “The Thai Handbook of Transgender Healthcare Services” is part of the Center of Excellence in Transgender Health, Chulalongkorn University’s mission to offer the best health service at the highest standard and safety for transgender people.

Developing this handbook is considered a milestone step between the multidisciplinary medical professions, transgender health experts, and the transgender community. This handbook can be used by transgender health service providers, transgender people, and the public. It covers all comprehensive guidance and is written in a simple language. It provides straightforward recommendations that fit with the background and situation in the Thai context. As part of the team, I am grateful for the opportunity to contribute to the transgender community. I also would like to express my gratitude to all the experts who were the authors of this handbook. Since, this handbook is the first valuable step, I hope it would ultimately serve and address the need and demand of the public. As a team, we promise to keep moving and never stop improving our works to promote health and well-being of the transgender people.

Assistant Professor Poonpissamai Suwajo, M.D.
Head of the Center of Excellence
in Transgender Health, Chulalongkorn University

Executive Summary

Implementing transgender health service is not an easy task, due to the predominant bias that the society holds against the concept of gender diversity and the way of life related to being a transgender person. Thereby, both transgender people and health service providers who offer transgender health services are often faced with stigma and discrimination, built on the lack of understanding or the myths that being a transgender person is a personal choice, and such choice should not be supported. Transgender health service providers are also often seen as the medical ethic challengers for promoting transgender health, of which the society believes to be a disorder or based purely on cosmetics purpose. In fact, the knowledge, skills and art of transgender health service implementation is a specific science that requires scientific references based on the research studies, practices, and accumulated extensive experiences. Stigma and discrimination against the work on transgender health, therefore, could be a drawback and discouragement for people who work in this field.

Sharing the same will to improve the quality of transgender health services in multidisciplinary fields, members of Chulalongkorn University's Faculty of Medicine, Tangerine Community Health Clinic of the Institute of HIV and Research Innovation (IHRI), The Foundation of Transgender Alliance for Human Rights, and The Asia Pacific Transgender Network, have worked together to develop "The Thai Handbook of Transgender Healthcare Services". This handbook was designed to be used by both transgender individuals and transgender health service providers. It consists of 16 chapters, starting from the background and rationale for transgender health service provision in chapter 1. Then, chapters 2 to 5 provide comprehensive details on gender affirming services, from gender dysphoria diagnosis to gender affirming hormone treatment, gender affirming surgery, and voice feminization in transgender woman. Chapters 6 to 14 provide details on other related health issues and services that often found and needed among transgender people, such as, HIV, hepatitis, sexually transmitted infections (STIs), mental health, transgender children and adolescent care, reproductive health, cancer screening, long-term effects of hormone treatment, and substance use. Then, Chapter 15 provides details on how to combine and turn all the knowledge into implementation. Lastly, Chapter 16 provides the perspective on social context, laws and culture that relate to transgender people's lives in Thailand and how they affect their health.

Clearly, this handbook is a comprehensive guide that could be translated into real practice. The arrival of this handbook could also be seen as a revolution to reimage the unclear perception about transgender health service implementation by making it visible and tangible. Furthermore, it will give transgender health service providers a sense of fulfillment, that their works are being recognized and appreciated by professionals in all fields. This handbook will also serve as a key tool to advocate the right to health, which is one of the fundamental human rights, for transgender and gender variant people both in Thailand and in the Asia-Pacific region.

Nittaya Phanupak, M.D., Ph.D.

**Executive Director of the Institute of HIV
and Research Innovation (IHRI)**

Editors' note

As clinicians, social workers, caregivers, and members of society, we have come a long way in the care and treatment of transgender individuals. Starting from the depathologization of the transgender label, notable progress has been made in Thailand and around the world to improve the welfare of this unique population. Programs geared at improving access to healthcare and social support structures can – and do – improve the physical and mental health of individuals. However, providers involved in the care of transgender individuals must be cognizant of the unique needs specific to this population. These needs can vary and change by age, by individual goals, and by concomitant social, psychological, and medical issues.

This Thai Handbook of Transgender Healthcare Services is the first multidisciplinary collaboration of its kind between the Chulalongkorn University Faculty of Medicine and the Center of Excellence in Transgender Health, Chulalongkorn University. It draws on expertise from veteran professionals, social workers, and clinicians experienced in the care of transgender individuals. Through these guidelines and expert recommendations, we hope to shed light on current best practices that can aid all providers – regardless of which facet of care they are responsible for. We hope that this work will pave way for many more multidisciplinary efforts to ultimately improve care for transgender individuals locally and worldwide.

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Glossary

Transgender people People whose gender identity differ from their sex assigned at birth.

Transgender woman A person who identifies oneself as female and was assigned male at birth.

Transgender man A person who identifies oneself as male and was assigned female at birth.

Cisgender people People whose gender identity are the same as their sex assigned at birth.

Cisgender woman A person who identifies oneself as female and was assigned female at birth.

Cisgender man A person who identifies oneself as male and was assigned male at birth.

Gender identity A person's internal sense of their gender, how they identify and see themselves. People may identify themselves as male, female, transgender man, transgender woman, queer, non-binary, or any identity that may or may not fit into the binary category of male and female. Gender identity does not have to be in line with a person's sex assigned at birth. Though most people have firm gender identity, gender identity is not fixed. It is fluid and can change over time.

Gender expression A person's outward presentation of gender, including style, clothing and body language. Gender expression does not have to be in line with a person's gender identity, sex assigned at birth or the social norms. Gender expression is also fluid and can change over time.

**Anatomical sex,
Biological sex
or Sex assigned
at birth**

Anatomical or biological sex, often used interchangeably with the term "Sex Assigned at Birth", is the sex given to a child at birth by a doctor and is typically determined by external anatomy. Anatomical sex does not indicate an individual's gender identity, expression or sexual orientation. Anatomical sex is usually classified into three characteristics- male, female, and intersex.

**Sexual orientation
or attraction**

Sexual orientation or attraction is a person's feelings of attraction towards other people. It could be emotionally, physically, and sexually. A person can be attracted to people of the same, different or more than one genders. Some common words to describe sexual orientation are: heterosexual, bisexual and homosexual. Sexual orientation or attraction does not have to be in line with gender identity, gender expression and sex assigned at birth. It can be fluid and it is completely normal and natural.

Gender dysphoria

A marked and persistent incongruence between someone's experienced gender and anatomical or sex assigned at birth which causes feelings of discomfort and distress.

Gender nonconformity

A range of gender expressions that do not conform with traditional gender roles or norms expected by the society or culture, such as the certain way of dressing or sexual orientation.

Levels of Recommendations

Several parts of this handbook will suggest recommendations and options for healthcare providers to follow. The editors have divided the recommendations into two levels based on;

1. Credibility of the source of reference.
2. Likelihood of positive outcome when the recommendations are followed.
3. Acceptability of the recommendation among the transgender community.
4. Level 2 Recommendations are suggestions of alternative solutions with less positive outcomes when the level 1 recommendation is unavailable

Recommendation level 1 means the recommendation must be strictly followed.

- The source of reference is highly credible.
- Following the recommendations will mostly lead to positive and reliable outcomes.
- Following the recommendations will mostly lead to low risk of negative outcomes or complications.
- The recommendations are widely recognized among the transgender community.

Recommendation level 2 means the recommendation may be followed, depending on the resources and the context of each healthcare facility.

- The source of reference is not highly credible.
 - Following the recommendations may not always lead to positive and reliable outcomes.
 - Following the recommendations may lead to medium to high risk of negative outcomes or complications.
 - The recommendations are not widely recognized or there are different views among the transgender community.
 - These are suggestions of alternative solutions when the level 1 recommendation is unavailable
-

Chapter

1

Introduction to Healthcare Services for Transgender People

Kritima Samitpol, B.Ed.

Rena Janamnuaysook, B.A., M.B.A.

Asia Pacific Transgender Network (APTN)

Nittaya Phanuphak, M.D., Ph.D.

1. Transgender people's health in Thai background

The Asia Pacific Transgender Health Blueprint by the Asia Pacific Transgender Network estimates that 9 - 9.5 million transgender people live in the Asia and Pacific region.¹ In Thailand, the Ministry of Public Health reveals that the approximate number of transgender women in Thailand are 313,747.² There is no clear and conclusive data on the number of transgender men in Thailand, and the research on transgender men is limited.

Because Thailand has not yet passed the gender recognition law, the transgender population are faced with gender-based stigma and discrimination in many dimensions. The research on "Trans Respect Versus Transphobia Worldwide" conducted by the Foundation of Transgender Alliance for Human Rights and Transgender Europe³ revealed that in Thailand 6% of transgender people were physically abused by their families, 29% were sexually abused at schools, and 22% were rejected from employment because of their gender identity. These factors have largely affected transgender people's mental health and quality of life. The same research also showed that almost half of the transgender people that participated in the research had never visited a doctor to discuss about their health in general, including the plan for safe gender transition.³ Moreover, when visiting healthcare facilities, almost half of the transgender people in the research had experienced stigma and discrimination by health service providers based on their gender identity³. For example, being treated with disrespect, called the wrong title or pronouns, or being asked invasive or insensitive questions. These issues have posed a huge impact on transgender people's access to healthcare. Furthermore, the Ministry of Public Health's report on transgender people's access to HIV and STIs services also found that about 15% of healthcare providers had negative attitudes towards transgender women who sought for HIV-related services.⁴ These negative experiences were circulated and communicated within the community, making many transgender people feel uncomfortable, worried, and reluctant to seek healthcare services.

In addition to the aforementioned reports in Thailand, many reports worldwide also indicated the similar issues. In global context, the Joint United Nations Programme on HIV/AIDS (UNAIDS) has reported that transgender women are found to be one of the key affected populations at high risk of HIV acquisition⁵, partly due to the same barriers mentioned above including the stigma and discrimination they experience in healthcare settings.

Apart from the lack of understanding on gender diversity and sensitivity of the health service providers that usually contribute to transgender people's barriers and challenges in accessing to healthcare, other major issues are the limited resource of medical knowledge and research on transgender health, as well as the limited number of service providers.

Transgender-specific health service initiation in Thailand and the development of the Thai Handbook of Transgender Healthcare Services

Recognizing the barriers to health services that transgender people in Thailand and worldwide have to face, Professor Emeritus Dr. Praphan Phanuphak, Director of The Thai Red Cross AIDS Research Centre (TRCARC), took the lead to respond to the issues by initiating the plan to provide health services that are tailored-made for transgender people in Thailand for the first time.

To truly understand the transgender community's health needs, TRCARC hosted a community consultation meeting with the community members in September 2015. Based on the community members' feedback, the meeting concluded that an easily accessible transgender-specific clinic should be established to provide holistic healthcare for transgender people. The clinic should also employ a good proportion of transgender staff and create a meaningful engagement with the community. The clinic should provide non-judgmental services and respect the dignity of all transgender clients. The clinic was, thereafter, established under the name of "Tangerine Community Health Clinic," and started its operation on November 27, 2015. With the funding from the United States Agency for International Development (USAID), it offers holistic transgender health services by both transgender and non-transgender staff. All staff members were required to attend the gender sensitivity training before taking up their duties. This clinic is also considered a model of a Key Population-led Health Service Delivery (KPLHS). It emphasizes the equal and meaningful engagement from the community, service providers, and partners, who may or may not necessarily be a member of the transgender community.

Nevertheless, without a national guideline on transgender health service provision, doctors, researchers and those who work with transgender people have to rely on the international guidelines. Despite some similarities, there are still many limitations in practice. The idea to develop the Thai Handbook of Transgender Healthcare Services then brought up with the establishment of the Center of Excellence in Transgender Health, Chulalongkorn University (CETH). The aim of this handbook is to support both transgender health specialists and primary healthcare providers, including community workers in providing health services for transgender people based on the Thai context. The Thai Handbook of Transgender Healthcare Services covers all aspects of health services for transgender people, for example, gender affirming hormone treatment and surgery, sexual health, mental health, reproductive health, substance use, and etc. This handbook is, therefore, an essential resource of holistic healthcare provision for transgender people in Thailand.

2. Key concepts to understand when providing health service for transgender people

Key recommended public health policies to improve access to healthcare for transgender people.

- Transgender health service package should be included in the national health coverage.
- Transgender clients should be treated with respect and dignity.
- Access to transgender health service and information should be available to all and across the country.
- Health Care Providers of all levels should be educated and trained in transgender-competent care and sensitivity.
- There should be more research and inclusion of transgender people's health needs.

As mentioned earlier that one of the barriers to access to healthcare faced by transgender people is the lack of understanding on gender diversity and sensitivity among health service providers. To eliminate that barrier and improve access to health service for transgender people, health service providers should study and understand the following key concepts in providing health service to transgender people.

1. Understand who transgender people are and how to communicate with them with gender sensitivity.

Who are transgender people?

Transgender people are group of gender diverse people, also represented as the letter 'T' in the term LGBTIQ+. A transgender person generally means a person whose gender identity is different from their sex assigned at birth. This handbook, however, will focus on two main groups of transgender people as follow:

1. A transgender woman, or a person who identifies oneself as female and was assigned male at birth.
2. A transgender man, or a person who identifies oneself as male and was assigned female at birth.

Some transgender people are fully aware of their gender identity and may have undergone different transition processes, such as using hormones or undergoing gender affirming surgery. Therefore, they would usually live and express themselves based on the gender they experience. However, many transgender people, even though they might be fully aware of their gender identity, they may not be able to or may not want to transition medically for a variety of reasons. In this case, they may live and express themselves in any way they choose for themselves.

Many individuals may also feel unsure of their gender identity. In this case, they may need to consult with healthcare providers to understand their own needs. Even so, the needs and goals of gender transition could vary among transgender individuals.

No matter the stage of a trans person's gender transition and goals, service providers should provide services based on the individual's needs without being judgmental.

It is also important to note that the need for gender affirming hormone treatment or surgery are not limited only to transgender women or men. Other LGBTQI+ groups may also need access to these services to fulfill their gender identity.

What should we call or how should we address transgender people?

Like many countries in the world, there are many different terms used to call or refer to transgender people in Thailand. However, most of them tend to have negative and mocking connotation or come with multiple meanings. In the Thai context, the recommended terms to be used to refer to transgender people are "ying kham phet" (An exact translation for transgender woman in English.) for male-to-female transgender person and "chai kham phet" (An exact translation for transgender man in English.) for female-to-male transgender person. These two terms have neutral, straightforward meaning and cannot be interpreted in other ways. However, health service providers in different countries will need to work with the community to identify and agree on the terms in their local context that are polite and stigma and discrimination free.

Title / pronouns / name of transgender people

In Thailand, it is recommended that the health service providers should use the word “Khun” as a title for transgender clients, instead of “Mr.,” “Mrs.,” or “Miss” to avoid using the title that may not match with the clients' gender identity. The word “Khun” in Thai is gender-neutral, polite, and can be used with all clients. However, again, this may vary in different countries and regions.

Proper use of title, pronouns, and name is also crucial. The chosen name, title, and pronouns of the client may not be the same as the one on identity documents or medical records. If unsure, the service providers should ask the clients for the pronouns or name that they would like to use. The service providers should then follow the client's instruction without being judgmental.⁶ (See more details in Dos and don'ts in providing healthcare services for transgender people.)

2. Understand that being a transgender person is not the same as having mental disease.

The service providers should understand that being a transgender person is not the same as having mental disease. The main objective of providing healthcare services for transgender people is to support them to live their lives in their rightful ways. The service providers should never make any attempt to convert or change their gender identity, expression, sexual orientation and lifestyle. This effort not only is ineffective, it could also be harmful to the transgender individuals.⁷⁻⁹ Providing affirmative support on the basis that being a transgender person does not mean a person has a mental disease is a fundamental approach. This approach also aligns with the new World Health Organization (WHO)'s ICD-11 (International Classification of Diseases) that no longer classifies being transgender as having mental disorder. The ICD-11 is expected to be in effect worldwide by 2022.¹⁰ (Figure 1).

Gender Incongruence

CODE HA4Z

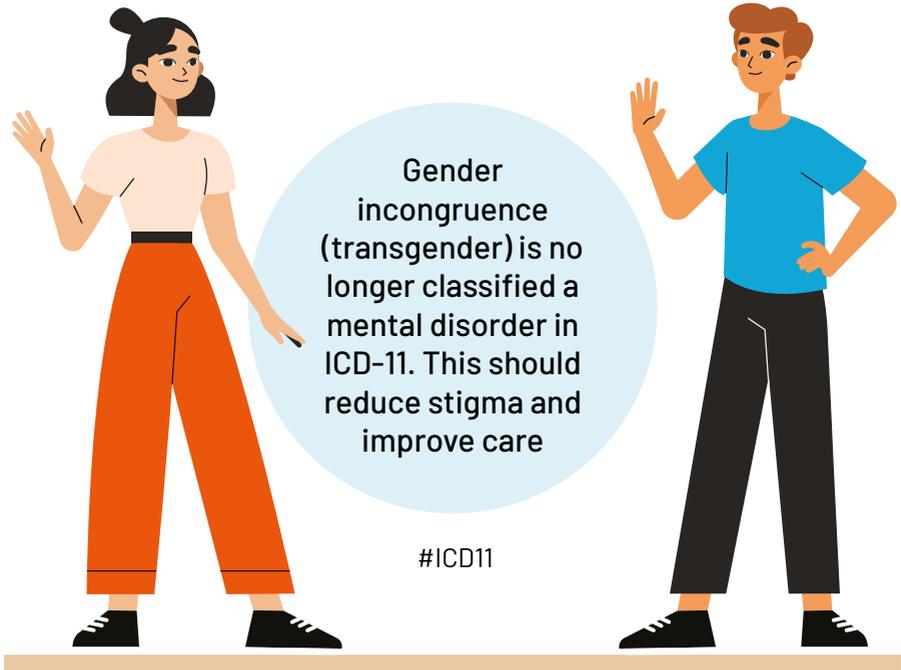


Figure 1: WHO no longer classifies being transgender as having mental disorders. (Reference: who.int)

3. Understand the concept of gender diversity to better understand transgender people.

Health service providers should learn and understand the concept of gender diversity to have the clear view that gender diversity is normal and natural, it is not a mental disease or disorder. Doing so, will eliminate gender bias, which often leads to stigma and discrimination against transgender people.

The Genderbread Person

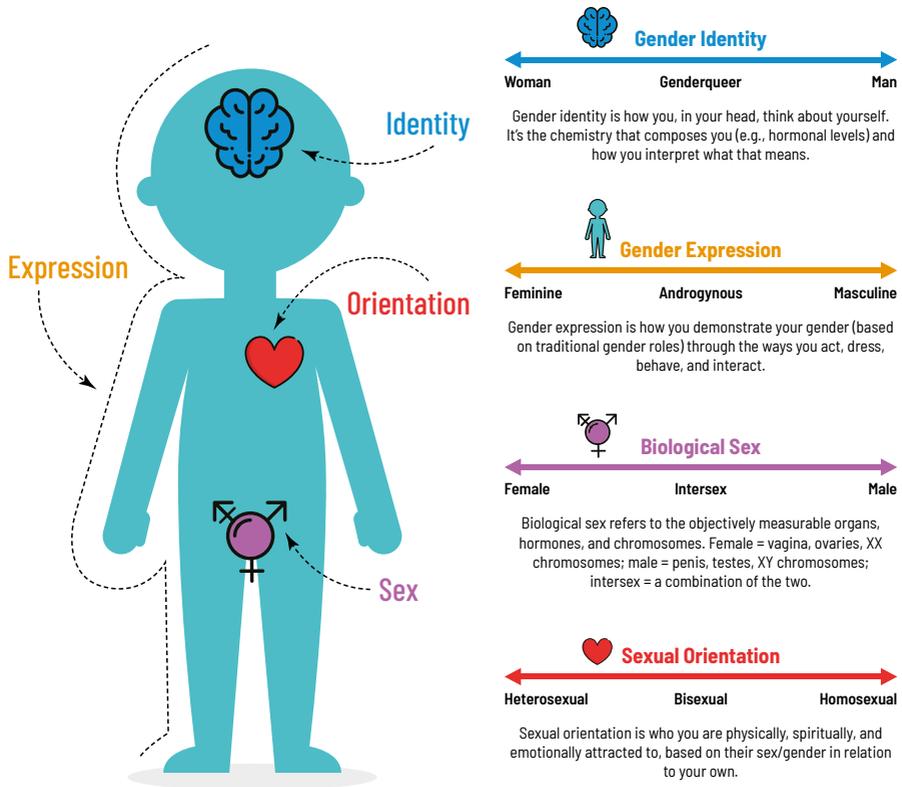


Figure 2: The Genderbread Person, adapted from www.itspronouncedmetrosexual.com

Gender identity

Gender identity is a person's internal sense of their gender, how they identify and see themselves. People may identify themselves as male, female, transgender man, transgender woman, queer, non-binary, or any identity that may or may not fit into the binary category of male and female. Gender identity does not have to be in line with a person's sex assigned at birth. Though most people have firm gender identity, gender identity is not fixed. It is fluid and can change over time.

Because gender identity is the individual's inner experience, health service providers should always respect and not question an individual's gender identity.

Gender expression

Gender expression is a person's outward presentation of gender, including style, clothing and body language. Gender expression does not have to be in line with a person's gender identity, sex assigned at birth or the social norms. Gender expression is also fluid and can change over time.

In most cases, normative gender roles, for example, men should represent strength and not cry, while women should be sweet, obedient, and well-behaved, are often formed and defined by the society based on the view that the world consists of only two genders. Therefore, any gender expression that differs from normative gender roles, or social expectations is often seen as an unacceptable or inappropriate manner. In fact, individuals should have the freedom to express themselves in their rightful way.

Anatomical sex / Biological sex / Sex assigned at birth

Anatomical and biological sex are terms often used interchangeably with the term "Sex Assigned at Birth", which is the sex given to a child at birth by a doctor and is typically determined by external anatomy. Anatomical sex does not reflect an individual's gender identity, expression or sexual orientation. Anatomical sex is usually classified into three categories- male, female, and intersex.

Sexual orientation or attraction

Sexual orientation or attraction is a person's feelings of attraction towards other people. It could be emotionally, physically, and/or sexually. A person can be attracted to people of the same, different or more than one genders. Some common words to describe sexual orientation are, heterosexual, bisexual and homosexual. Sexual orientation or attraction does not have to be in line with gender identity, gender expression or sex assigned at birth. It can be fluid and it is completely normal and natural. Health service providers should never assume a client's sexual orientation, as it may create discomfort for the client. It may also prevent the client from opening up about their sexual health and risk behavior.

The American Psychiatric Association removed the diagnosis of homosexuality from their mental disorder list in 1973¹¹. World Health Organization also voted to remove the diagnosis of homosexuality in 1990.¹² Homosexuality, therefore, not considered a mental disorder.

4. Understand myths around transgender people.

In addition to understanding the concept of gender diversity, health service providers should also be aware of the misunderstanding or myths around transgender people. Understanding the myths will prevent them from stereotyping the transgender people, such as assuming that all transgender people are funny, sexually obsessed, talented in beautification or performing arts, or more talented in certain areas than non-transgender people. In fact, like other people, transgender people do have different talents and interests. They are not more talented than others and are as diverse as everyone else in the society.

Dos and Don'ts in providing health services for transgender people

To give a shortcut to practice your communication skills needed when providing health service to transgender people, here are some example scenarios of what you should do and should not do when providing health service to transgender people, based on the experiences from Thailand.

Always be polite and friendly

Health service providers should always be polite and friendly. Never gossip, or make jokes about the clients.



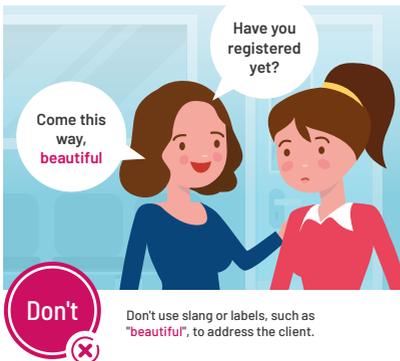
Use gender title / pronouns / name based on the transgender clients' instruction

The service providers should avoid using gender titles, pronouns and names that may not correspond with the clients' gender identity or preferences. In the Thai context, health service providers are recommended to use the word "Khun" as a title to all transgender clients instead of "Mr.," "Ms.," or "Mrs.". Because the word "Khun" is gender-neutral and polite. It is also important to use proper pronouns and name in some cases as well. If unsure, the service providers should ask the clients politely for the title, pronouns and name that they would like to use. Health service providers should, then, follow the client's instruction without being judgmental.



Do not use slangs or labels

Avoid using slang or labels, such as 'beautiful' or other similar words that may imply stigmatization or disrespect to the clients. Always use title, pronouns and name suggested by the clients.



Avoid irrelevant conversation

Avoid conversation or comments that are irrelevant to the service the clients come for on the day, such as "You are beautiful like a woman," "I couldn't tell that you were transgender," "When did you know that you are trans?" Because these comments or conversations may imply stigmatization, which may make the clients feel uncomfortable.



Avoid irrelevant questions

The health service providers should not ask questions about the clients' surgical history that are unrelated to the service they are seeking on the day. For example, "You look beautiful. Had the big snip yet?" or "Where did you have your breast implant done? How much did it cost?" Should you need to ask relevant personal information or medical history of the clients that are related to the service they come for on the day, the health service providers must politely ask for the clients' permission first.



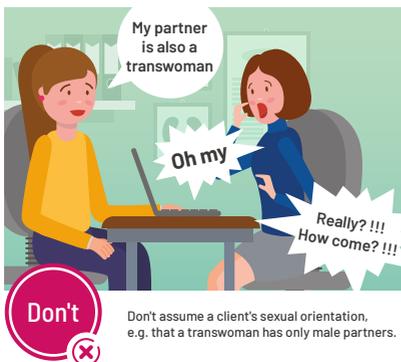
Do not judge

The service providers should not judge the clients based on their occupation, race, ethnicity, religion, economic status, gender identity, or sexual orientation. All clients should be treated equally.



Do not assume the clients' sexual orientation

Do not assume or judge the clients' sexual orientation. Expressing surprise or judging the clients' sexual orientation can make the clients feel uncomfortable and they may lose their trust in you.



5. Summary and next step

This chapter has given the rationale and introduction to transgender health service provision, as well as the key concepts that the health service providers should understand when providing health service and communicating with transgender people. However, there are more elements that can contribute to improve the quality of transgender health service implementation in every area of its operation. All the details can be found in chapter 15.

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Chapter

2

Diagnosis of Gender Dysphoria

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Introduction

The clinical diagnostic criteria for gender dysphoria, a condition defined by incongruence between biological sex and gender identity, is a continually evolving one with frequent updates to help standardize care of transgender individuals amongst healthcare personnel around the world.

The International Classification of Diseases (ICD) of the World Health Organization (WHO) describes gender dysphoria in several different ways. The 10th revision, ICD-10, called this clinical condition "transsexualism"¹ and describes it as an individual's desire to live and gain social acceptance as a member of the opposite sex, including a desire to undertake interventions such as hormonal therapy or surgery to gain anatomical congruence with the desired sex. To ensure the common understanding, The Royal College of Psychiatrists of Thailand defined "transsexualism" as the desire for gender reassignment.²

ICD-11 (the 11th revision), is projected to come into effect in 2022. It replaces the term "transsexualism" with "gender incongruence of adolescence or adulthood."³ This is defined as marked and persistent incongruence between an individual's experienced gender and assigned sex. The incongruence leads to a need to be treated and accepted as the other, desired gender, with usage of hormone treatment or gender reassignment surgery or other healthcare services to change one's primary and secondary sexual characteristics to match the desired gender. The condition cannot be diagnosed before puberty and diagnosis cannot be based solely on gender behavior or sexual orientation alone.

Another widely used guideline for the clinical diagnosis of gender dysphoria is the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, 5th Edition), by the American Psychiatric Association.⁴ It consists of the following diagnostic criteria:

- 1. A marked incongruence between the experienced or expressed gender and assigned gender, of at least six months' duration with at least two of the following:**
 - 1.1 A marked incongruence between one's experienced/expressed gender and primary and/or secondary sex characteristics
 - 1.2 A strong desire to be rid of one's primary and/or secondary sex characteristics
 - 1.3 A strong desire for the primary and/or secondary sex characteristics of the other gender
 - 1.4 A strong desire to be of the other gender
 - 1.5 A strong desire to be treated as the other gender
 - 1.6 A strong conviction that one has the typical feelings and reactions of the other gender
- 2. Such condition causes significant distress or impairs function, such as in a social, occupational, or other setting.**

The abovementioned criteria are used for transgender adults and adolescents only. The American Psychiatric Association provides a different specific diagnostic criterion for transgender children (See chapter 10).

1. Role of psychiatrists in gender dysphoria diagnosis

According to the Medical Council of Thailand Regulations on Gender Affirmation Treatment B.E. 2552 (A.D. 2009), psychiatrists are responsible for evaluating, diagnosing, and providing counseling and confirmation for gender affirmation treatment, which requires confirmation from at least two psychiatrists.

In diagnosing gender dysphoria, psychiatrists should follow the Royal College of Psychiatrists of Thailand's practice guidelines on supporting people with gender identity issues as below⁶:

Psychiatrists should assess and diagnose any psychiatric disorders and coexisting comorbid conditions. This should include an assessment of the individual's personality, medical conditions, family or social issues, and coping skills to plan for and provide the optimal clinical support. Collateral information from diversified sources is necessary, with history taking to include childhood to adolescent sexual expression. Family history, family function, parental roles in upbringing, gender roles, and sexual development must be used in conjunction with a thoroughly performed physical and mental status examination to diagnose any related medical conditions and evaluate other gender factors and psychopathology.

Another tool in the psychiatric evaluation is the psychological test and trial period living as the opposite sex. This trial period includes asking individuals to dress, socialize, and carry out activities as the desired sex over at least 12 consecutive months. Detailed records that can be reviewed must be taken, with specific attention to duration, continuity, and personal results from the trial period.

The psychiatrist's diagnosis of gender dysphoria should take into consideration any psychiatric disorders, personality problems, medical conditions, family issues and acceptance, and individual coping mechanisms at the present and in the preceding 12 months.

Case study

A 22-year-old male university student, was referred to a psychiatrist for evaluation prior to initiating feminizing hormone therapy. He told the psychiatrist that he has started cross-dressing about six months ago because he felt sexually satisfied and more comfortable when wearing female clothing. He still perceived himself as a man but wanted to take feminizing hormones to make his appearance look more like a woman. He is an only child, and his parents have anger management issues. He was treated for depression and ADHD as a child. He wears female shoes while wearing male clothing. He does not make eye contact and had pressured speech. After taking a thorough history, he reported difficulty getting along with friends. The psychiatrist diagnosed him with transvestism and autistic spectrum disorders with family problems. He then received psychiatric treatment including counseling and family therapy.

2. Differential diagnosis^{4,7} for gender dysphoria

Nonconformity to gender roles means gender expression that deviates from the traditional role of the gender assigned at birth, expressed in a certain way of dressing or same sexual orientations.

Transvestic disorder is classified as a paraphilic disorder. The clients dress as the opposite sex to feel sexually aroused. However, they do not have incongruence between the experienced gender and the gender assigned at birth.

Body dysmorphic disorder, one condition in the group of obsessive-compulsive and related disorders, is manifested as obsession with a specific body part. Surgical correction or reassignment might be one method to resolve this obsession and pathologic perception of bodily abnormalities. However, in these patients, incongruence between biological sex and self-perception of gender is not present.

Schizophrenia and other psychotic disorders are classified as thought disorders. These patients may have a delusion that they are of another gender, and this delusion can coexist with other psychosis. Treatment of the underlying schizophrenia resolves the delusion, which is different from individuals with gender dysphoria. It should be noted however, that individuals may have both gender dysphoria and concomitant schizophrenia.

3. Diagnosis of Comorbid Conditions^{4,7}

Mental health problems in transgender people vary from culture to culture as a result of stigmatization or discrimination. The most prevalent comorbid conditions are anxiety and depression, including suicidal and self-harming behaviors and substance abuse. Autistic spectrum disorder in transgender children and adolescents can be more commonly found than in the general population. Anxiety and depression in children occur as often as in adults. Mental health issues, both in children and adults, will be discussed in detail in Chapter 8.

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Chapter

3

Gender-Affirming Hormone Treatment in Transgender People

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Krasean Panyakhamlerd, M.Sc., M.D.

1. Objectives and indications of gender-affirming hormone treatment (GAHT)

GAHT induces physical and mental transition in transgender individuals, promoting behavioral changes and changes in social roles. For example, in male-to-female transgender individuals, hormonal therapy will result in physical feminization, such as softer skin and body hair, larger breasts, smaller muscles, and similar distribution of accumulated fat to natal females. In female-to-male transgender individuals, testosterone will result in virilization, such as larger muscles, deeper voice, thicker facial and body hair, oily skin, acne, and cessation of menstruation. Moreover, GAHT can profoundly affect the individual's feelings and emotions, especially when such physical changes commensurate with the desired gender. It heals the mind, reduces the risk of stress, and lowers dissatisfaction with individuals' assigned gender. It also improves individuals' satisfaction with their bodies.^{1,2}

There are two main goals of GAHT: 1) To suppress native sex hormone levels in the body, to reduce secondary sex characteristics of the individual's biologic sex, and 2) to shape physical characteristics into those that matches the desired gender.

The decision to start GAHT should be a joint verdict from both specialist provider and individual. Before initiating the process, the diagnosis of gender dysphoria should be confirmed by a specialist and the individual's current health status should be evaluated^{3,4} (**Recommendation level 1**). This process will help reduce risks of potential adverse effects on patients' body, mind, and behavior and avoid the prescription of hormonal therapy to those that do not truly have gender dysphoria. Even in patients with gender dysphoria, GAHT may not be a suitable option if they have certain comorbidities, such as severe liver dysfunction, certain types of hormone-responsive cancers, or severe cardiovascular disease.

Healthcare providers should carefully consider the benefits and potential short and long-term risks and side-effect profile on a case-by-case basis. Individuals with gender dysphoria may have different goals in receiving GAHT. Some may want to get the best results out of GAHT, while others may only want to reduce their biologic secondary sex characteristics or change their physical appearance without surgery.³

There should be no barrier to care preventing individuals with gender dysphoria from receiving health services. GAHT must be provided under the expert supervision to mitigate risks of unsafe use of hormones. Because resources and personnel in medical and public health services vary by country, criteria for the consideration of GAHT can be adjusted to reflect the local context.

2. Pre-GAHT considerations^{3,4}

Before GAHT, a psychosocial assessment must be conducted by a specialist. Individuals must always be asked for informed consent. The following criteria should be met (**Recommendation level 1**):

1. The diagnosis of gender dysphoria must be confirmed.
2. Individuals must be competent to make their own decisions and able to give consent for treatment.
3. Their age requirement is fulfilled in the country in which they are to receive treatment.
4. Any comorbidities or concomitant psychiatric diseases that may affect GAHT should first be treated and medically controlled.

However, in some specific circumstances, healthcare providers may administer hormonal therapy to individuals who do not fully meet criteria, such as those who have already received inappropriate hormone treatment but wish to switch to therapy under medical supervision. Another example is those who have lived a transgender lifestyle and have used hormones in the past (**Recommendation level 2**). On the other hand, if the individuals have risk factors for complications or harmful effects of GAHT, it is the healthcare providers' responsibility to give appropriate counseling or offer non-hormonal transition alternatives.³ Before initiating GAHT, healthcare providers must always consider the cautions and contraindications of therapy, as shown in Table 1, to ensure proper treatment.

Table 1: GAHT cautions or contraindications for transgender individuals (**Recommendation level 1**)

Estrogen for Male-to-Female Transgender Individuals	Testosterone for Female-to-Male Transgender Individuals
<ul style="list-style-type: none">• Cardiovascular and cerebrovascular disease• Deep vein thrombosis (DVT)/pulmonary embolism• Breast cancer• Severely high triglyceride levels (oral estrogen should be used with caution)• Abnormal liver or kidney function	<ul style="list-style-type: none">• Cardiovascular and cerebrovascular disease• Deep vein thrombosis (DVT)/pulmonary embolism• Breast cancer, endometrial cancer• Obstructive sleep apnea• Polycythemia (hematocrit >50%)• Uncontrolled dyslipidemia (LDL, total cholesterol, triglyceride levels)

Furthermore, healthcare providers should advise individuals on abstinence from smoking, regular exercise, weight control, adjustment of eating behaviors, and a lifestyle conducive to the reduction of cardiovascular disease risk (**Recommendation level 2**).

Healthcare providers should counsel individuals of reproductive age who wish to have children with their own gametes on gamete preservation (**Recommendation level 1**) because GAHT may harm gamete production and development and reduce fertility. (**Gamete collection for transgender couples will be discussed in Chapter 11**).

The individual's age range is one of the most critical factors in choosing the drug and drug administration periods. In cases with transgender children, healthcare providers must be extra cautious in diagnosing gender dysphoria. A shared decision with the parents must be made before starting treatment (**Recommendation level 1**). It may in fact not be necessary for children to receive GAHT. Instead, multidisciplinary specialists (such as pediatricians and child psychiatrists) should supervise individuals' transition process to plan the appropriate treatment during adolescence. In cases with GAHT in transgender adolescents entering puberty, healthcare providers must take both short and long-term hormonal therapy effects on health (such as adverse effects on gametes, brain function, and behavior) into careful consideration. Furthermore, individuals may change their minds later and prefer detransitioning. This can be found in very young individuals.

When transgender adolescents reach Tanner stage 2 of sexual development (breast development in biologic females or testis development in biologic males), healthcare providers may consider starting GnRH agonists to temporarily suppress puberty until individuals reach an appropriate age. GnRH agonists are recommended in many countries to suppress individuals' gonads until the age of 16. Afterwards, healthcare providers may initiate GAHT.⁵

This chapter focuses on GAHT in adolescent and adult individuals. **Details on management of transgender children will be discussed in chapter 9.**

3. GAHT in transgender adolescents

1. GAHT in male-to-female transgender adolescents

1.1 Induction of secondary sex characteristics with estradiol in male-to-female transgender adolescents

Oral estradiol treatment⁵

Usage of estradiol (17 β -estradiol), the most highly secreted hormone from native ovarian tissue in women of reproductive age, is recommended (Recommendation level 2). It is available in both oral and transdermal forms. The dosage of 17 β -estradiol should be gradually increased every six months to ensure that the physical transition is most similar to natural puberty. Such induction of secondary sex characteristics may take a few years from initiation of therapy. 17 β -estradiol products currently available on the market are primarily certified internationally and by the Thai Food and Drug Administration for hormone replacement therapy indications in post-menopausal women. However, 17 β -estradiol has been safely used for GAHT in transgender women as an extended indication (Box 1)*

Box 1 Examples of pubertal induction protocol with oral estradiol for male-to-female transgenders⁵ (Recommendation level 2)

Start with 5 μ g 17 β -estradiol/ kg body weight/day for six months, followed by

10 μ g /kg of body weight/day for six months, followed by

15 μ g /kg of body weight/day for six months, followed by

20 μ g /kg of body weight/day for six months.

Then, adjust the final dosage to 2-6 mg per day based on blood estradiol levels, targeted at 100-200 pg estradiol per ml.

* Examples and trade names of estrogen and testosterone formulations available for transgender individuals in Thailand are listed in the appendix.

Transdermal estradiol treatment

Because oral 17β -estradiol only comes in 1 mg tablet in Thailand, it is not easy to gradually increase the dose as suggested above. As a result, transdermal treatment may be the easier drug administration option because healthcare providers can easily adjust the dose. Moreover, it does not interfere with liver function (unlike oral hormones, which have first-pass hepatic effects). In addition, transdermal estradiol can maintain blood hormone levels better than oral estradiol. Currently, two forms of transdermal estradiol are available in Thailand: transdermal patch and gel.

17β -estradiol patch⁵

The patch can be placed on any exposed skin, such as the lower abdomen or buttocks. Do not place it on the breast or areas that rub against clothes, such as areas around the hips, hairy areas, or areas with creases. Replace the patch every 3.5 days (twice a week) to maintain targeted blood levels. Adjust the dosage every six months like with oral estradiol (**Box 2**).

Box 2 Examples of pubertal induction protocol with transdermal estradiol for male-to-female transgenders (Recommendation level 2)

(For 17β -estradiol transdermal patches (50 $\mu\text{g}/24$ hours))

Start 17β -estradiol at 6.25–12.5 $\mu\text{g}/24$ hours (cut the patch into 1/8 - 1/4) for six months. Then, increase the dosage to

25 $\mu\text{g}/24$ hours (cut into 1/2 patches) for six months, followed by

37.5 $\mu\text{g}/24$ hours (cut into 3/4 patches) for six months.

The final dose to 50–200 $\mu\text{g}/24$ hours (one - four patches) based on blood estradiol levels, targeted at 100–200 pg/ml.

In Thailand, only 50 $\mu\text{g}/24$ hours 17β -estradiol patches are available. In practice, the patch should be cut into smaller pieces for the desired dosage. For example, if 12.5 $\mu\text{g}/24$ hours are needed, the patch should be cut in quarters. If 25 $\mu\text{g}/24$ hours are needed, the patch should be cut in half.

The 17β -estradiol patch may have some disadvantages. It may irritate the skin because it needs to be applied throughout the day for 3.5 days/application. The patch may peel off, especially in case of sweating or hot weather.

0.06% 17 β -estradiol gel

This form of estradiol requires a different application from the patch. Users must apply the gel once a day and avoid breasts and mucosal surfaces, such as genitalia. The gel should be applied on the thighs, abdomen, or upper arms (**Box 3**).

In Thailand, 0.06% 17 β -estradiol gels are available as either 1) a tube or 2) a pump bottle. A dosing spatula that comes with the tube dispenses 2.5 grams of gel, corresponding to 1.5 mg estradiol, while one pump from the pump bottle dispenses 0.75 mg estradiol (half the amount of one dosing spatula). As a result, two pumps are equal to one dosing spatula from the tube. The induction of adolescents' female secondary sex characteristics often starts with a low dose. Therefore, using the tube formulation initially would be more convenient than using a pump bottle because the pump bottles cannot dispense lower doses.

Gel packets of 0.1% 17 β -estradiol are also available in Thailand, which must be applied once a day. The recommended areas of application are the thighs, which should be alternated between left and right. In Thailand, 1 g gel in such packets contain 1 mg of 17 β -estradiol.

Box 3 Examples of estradiol gel-based therapy in male-to-female transgender adolescents in the prepubertal or pubertal period (Recommendation level 2)

Start with 0.625 g 17 β -estradiol gel (equal to a quarter of a dosing spatula or half a pump) for six months, followed by

1.25 g estradiol gel (equal to half a dosing spatula or one pump) for six months, followed by

2.5 g estradiol gel (equal to a dosing spatula or two pumps) for six months

The final dose adjustment should be to 2.5-10 grams estradiol gel (equal to one to four dosing spatulas or two to eight pumps) based on blood estradiol levels, which should be targeted to 100-200 pg/ml

1.2 Induction of secondary sex characteristics with estradiol in male-to-female transgender in the postpubertal period⁵

Currently in Thailand, most transgender individuals seek consultation for GAHT quite late, often in the postpubertal period. In this scenario, induction of secondary sex characteristics does not need to mimic natural transition, unlike in instances of intervention in the prepubertal or pubertal phase. As a result, hormonal treatment can be started at a higher dose (**Box 4**).

Box 4 Examples of estradiol therapy in male-to-female transgender adolescents in the postpubertal period

- Oral 17 β -estradiol: Start at 1 mg/day for six months. Then increase the dose to 2 mg/day.
- 17 β -estradiol transdermal patch: Start at 50 μ g/24 hours (one patch).
- 0.06% 17 β -estradiol gel: Start at 2.5 g of estradiol gel (one unit per dosing spatula provided delivers 2.5 g estradiol gel, corresponding to 1.5 mg of estradiol)

2. GAHT in female-to-male transgender adolescents⁵

2.1 Induction of secondary sex characteristics with injectable testosterone in female-to-male transgender adolescents

GAHT in female-to-male transgender individuals may differ from male-to-female transgender individuals with regards to drug administration. Oral testosterone is not well absorbed via the gastrointestinal tract, while transdermal testosterone is costly and requires daily application. Therefore, the popular testosterone formulation for female-to-male transgender individuals is intramuscular injections. An example of injectable testosterone is testosterone enanthate. Gradually increase the dosage every six months to mimic the effects of natural puberty as closely as possible (**Box 5**).

Box 5 Examples of injectable testosterone therapy in female-to-male transgender adolescents in the prepubertal or pubertal period (Recommendation level 2)

Start with injections of testosterone enanthate at a dose of 25 mg per unit body surface area (m²) every two weeks for six months. Alternatively, inject half of the dose weekly or double the dose every four weeks.

Then, adjust the dosage using the following guidelines:

- 50 mg/body surface area (m²) every two weeks for six months, followed by
- 75 mg/body surface area (m²) every two weeks for six months, followed by
- 100 mg/body surface area (m²) every two weeks for six months.

The final dose adjustment would be to inject 100-200 mg/body surface area (m²) every two weeks with the goal of reaching total testosterone levels similar to normal levels for biologic males (400-700 ng/dl).

2.2 Induction of secondary sex characteristics with testosterone therapy in female-to-male transgender in the postpubertal period⁵

Because most transgender people seek consultation for GAHT quite late, healthcare providers must start with a higher dose as seen in (Box 6).

Box 6 Examples of injectable testosterone therapy in female-to-male transgender adolescents in the postpubertal period (Recommendation level 2)

Start with injections of testosterone enanthate at a dose of 75 mg per unit body surface area (m²) every two weeks for six months. Then increase dosage to 125 mg/body surface area (m²) injections once every two weeks. This dose is equivalent to the final dose used in female-to-male GAHT for adults. Adjust dosage requirements based on total testosterone levels. The goal is to have total testosterone levels in the 400-700 ng/dl range.

Post-GAHT monitoring in transgender adolescents (Recommendation level 2)

Assessment conducted every three to six months:

- Assess weight, height, blood pressure, and sexual development by Tanner staging.

Assessment conducted every six to twelve months:

- **Female-to-male transgender individuals:** Monitor blood levels of testosterone and vitamin D, lipid profile.
- **Male-to-female transgender individuals:** Monitor blood estradiol and vitamin D levels.

Assessment conducted every one to two years:

- Test bone mineral density (BMD) until the age of 25-30 or the period of peak bone mass.
- Bone age study (as indicated)

4. GAHT in transgender adults

1. GAHT in male-to-female transgender adults⁵

1.1 Estradiol

Available in three formulations, namely oral, transdermal, and injectable estradiol.

Oral estradiol

Either 17 β -estradiol hemihydrate or estradiol valerate can be used. After ingestion, estradiol valerate is rapidly metabolized to 17 β -estradiol in the intestine and liver. The recommended dosage of estradiol is 2-6 mg/day for both estradiol valerate and 17 β -estradiol hemihydrate.

The estrogen in contraceptive pills (Ethinyl estradiol) is not recommended for male-to-female transgender individuals. This is because of increased risks of complications, such as a significantly higher risk of deep vein thrombosis compared to 17 β -estradiol, especially in male-to-female transgender individuals aged over 40^{5,6} (**Recommendation level 1**).

Conjugated equine estrogens and conjugated estrogens should be used with caution because they may carry a greater risk of deep vein thrombosis than 17 β -estradiol, especially in male-to-female transgender individuals aged over 40⁵ (Thailand no longer distributes conjugated equine estrogen manufactured from the urine of pregnant mares, but plant-based conjugated estrogens are still available on the market. However, this latter is not widely used because few clinical studies support its use).

Transdermal estradiol (patch and gel)

Recommended dosages of 17 β -estradiol patches are 25 -200 μ g/24 hours (half to four patches). Patches should be replaced every 3.5 days (twice a week). For 0.06% 17 β -estradiol gels, 2.5-10 g/day should be used and applied to the skin once a day.

Injectable estradiol (estradiol valerate or cypionate)

The recommended dosage is 5-30 mg every two weeks or 2-10 mg every week.

The clinical practice of using injectable estradiol is somewhat different from usage of injectable testosterone. Injectable testosterone is widely used, available in most healthcare facilities to treat men with abnormally low hormone levels, and certified by the Food and Drug Administration. On the other hand, injectable estradiol is rarely used in postmenopausal women and is unavailable in public healthcare facilities. Moreover, injectable estradiol therapy may have some disadvantages, including pain at the injection site in some cases and supraphysiologic levels of estradiol immediately after injection, especially when incorrectly administered.⁸ Consequently, injectable estradiol is provisionally not widely used as GAHT for male-to-female transgender individuals and its prescription must be done with caution with careful monitoring of dose-response. (Recommendation level 2).

Regardless of estradiol formulation, dosage is adjusted based on blood estradiol levels, targeted at 100–200 pg/ml (Recommendation level 2).

Box 7 Monitoring male-to-female transgender adults on estradiol therapy⁵
(Recommendation level 2)

1. Implement quarterly assessment in the first year and every six to twelve months thereafter to monitor the feminization progress and potential side effects.
2. Measure blood estradiol and testosterone levels quarterly. Aim for 100–200 pg/ml estradiol levels and total testosterone levels below 50 ng/dl.
3. If on spironolactone treatment, patients should also have their blood potassium levels checked to monitor for hyperkalemia. This should be done quarterly in the first year and once a year thereafter.
4. Patients should undergo cancer screening in a manner corresponding to their biologic sex, as native tissues such as the prostate gland are still in place.
5. Consider obtaining a baseline bone mineral density (BMD). Retesting should be done for transgender patients with a low risk of osteoporosis at the age 60, or for those with irregular compliance to hormonal therapy.
6. Due to reports that male-to-female transgender patients on estrogen therapy have higher blood prolactin levels (up to 20%) than normal – which may be due to estrogen stimulation of the pituitary cells or concurrent use of the antiandrogen cyproterone acetate – baseline prolactin levels should be measured and then rechecked every 1–2 years for patients on high doses of estrogen.

1.2 Progesterone

Some male-to-female transgender individuals take progesterone in combination with estrogen believing that breast development would more closely resemble that of natural puberty compared to taking estrogen alone. Progesterone is also believed to have positive effects on mood and sexuality. However, current studies are inadequate to confirm the definitive benefits and risks of progesterone in male-to-female transgender individuals. Therefore, it is not considered a standard GAHT regimen for male-to-female transgender individuals⁹ (Recommendation level 2).

1.3 Antiandrogens

One major difference between GAHT in male-to-female transgender individuals and GAHT in female-to-male transgender individuals is that male-to-female transgender individuals who have not undergone orchiectomy will need antiandrogen therapy. On the other hand, female-to-male transgender individuals will not need estrogen suppression for hormones produced by the ovaries. Two types of antiandrogens, spironolactone and cyproterone acetate, are recommended for male-to-female transgender individuals in Thailand (Cyproterone acetate is not available in some countries like the United States) with the following dosages: ([Recommendation level 2](#))

- Spironolactone: 100 – 300 mg/day
- Cyproterone acetate: 25 – 50 mg/day

Additionally, 3.75 mg of GnRH agonist can be injected monthly or 11.25 mg injected every 3 months to suppress androgen ([Recommendation level 2](#)). However, this is not widely used because it is expensive and overly suppresses sex hormones. It can be used instead in cases where spironolactone or cyproterone acetate cannot be given.

Box 8

5 α -reductase inhibitors are not recommended as antiandrogen therapy for male-to-female transgender GAHT because they do not suppress blood testosterone levels and have serious side effects¹⁰

The goal antiandrogen therapy for testes hormonal inhibition is to lower total testosterone levels to less than 50 ng/dl ([Recommendation level 2](#)). Male-to-female transgender individuals who have not undergone orchiectomy should use estradiol in conjunction with antiandrogen drugs. If they already had an orchiectomy, male-to-female transgender individuals may stop taking antiandrogens and take only estradiol. ([Recommendation level 1](#))

The goal antiandrogen therapy for testes hormonal inhibition is to lower total testosterone levels to less than 50 ng/dl ([Recommendation level 2](#)). Male-to-female transgender individuals who have not undergone orchiectomy should use estradiol in conjunction with antiandrogen drugs. If they already had an orchiectomy, male-to-female transgender individuals may stop taking antiandrogens and take only estradiol. ([Recommendation level 1](#))

Healthcare providers should monitor the usage of estradiol in combination with antiandrogens by aiming for blood total testosterone levels below 50 ng/dl and a satisfactory physical transition for the transgender women. This is because antiandrogens work at the cellular receptor level and is unable to be accurately measured by testing blood levels. Hormone level measurements, including protocols and equipment used, vary by laboratory, and present another limitation to accurate testing.

2. GAHT in female-to-male transgender adults

The key principles of GAHT in female-to-male transgender adults are to aim for testosterone levels close to the normal range in biologic males while avoiding potential side effects of therapy. These latter include erythrocytosis, high blood pressure, salt and water retention, changes in lipid profile, severe acne, and obstructive sleep apnea. As mentioned earlier, female-to-male transgender adults can take testosterone only without the need for ovarian suppression drugs. Testosterone is currently available in Thailand for hormone-deficient biologic male individuals but has been used off-label for female-to-male transgender GAHT. Below are the different formulations used in current clinical practice:

2.1 Testosterone enanthate or cypionate

These are the most commonly used forms because of their low price. However, it should be used with caution because of increased risk of erythrocytosis. More frequent injections than testosterone undecanoate are required. The recommended dose of testosterone enanthate is 100-200 mg injected either subcutaneously or intramuscularly every two weeks. Alternatively, the dose can be reduced by half but with weekly injections. (Recommendation level 2) Testosterone cypionate is currently not available in Thailand.

2.2 Testosterone undecanoate

This oil-based hormone is slowly absorbed and can be injected every 12 weeks, which is an advantage. However, it is costly and requires a greater volume for each injection. The recommended dose is 1000 mg per injection every 12 weeks⁴ (Recommendation level 2). Pulmonary oil microembolism has been reported but is rare.

2.3 Testosterone gel 1%

Transdermal gels can be applied once a day. The recommended dose is 50-100 mg/day (Recommendation level 2). However, it is expensive and may be transferred to other people via physical contact with skin areas with applied gel.⁴

2.4 Testosterone transdermal patch

The recommended dosage of a testosterone patch is 2.5-7.5 mg/day (currently not available in Thailand).

Regardless of the testosterone formulation, dosage must be adjusted based on total testosterone levels, targeted at approximately 400 -700 ng/dl (Recommendation level 2).

Oral testosterone with alkylation of the 17th carbon atom is not recommended because it may cause hepatotoxicity. (Recommendation level 2) Furthermore, it requires absorption via the lymphatic system, which may be inconsistent.⁵ On the other hand, injectable and transdermal testosterone formulations rarely cause hepatotoxicity.^{11,12}

Cessation of menses in female-to-male transgender individuals will result after a few months of testosterone treatment, however, some individuals may require a higher dose. If bleeding continues, a short course of progestogen can be prescribed. Physicians may also consider injecting depot medroxyprogesterone or GnRH agonists as another option for menstrual cessation before initiating testosterone treatment^{5,13} (Recommendation level 2).

Box 9 **Monitoring female-to-male transgender adults on testosterone hormonal therapy⁵**
(Recommendation level 2)

1. Perform quarterly assessments in the first year and monitor patients every six to twelve months to track the virilization progress and potential side effects.
2. Measure total testosterone blood levels quarterly until it reaches a level normal for biologic males (400-700 ng/dl).
 - For testosterone enanthate or cypionate injections, draw blood levels midway between injections. For example, if the drug is injected every four weeks, draw blood levels in the 2nd week after injection. If this is inconvenient and the blood testosterone level is 400-700 ng/dl, collect blood at any time.
 - For testosterone undecanoate injections, draw a blood level on the day prior to the next injection to measure testosterone levels. If the blood testosterone level is lower than 400 ng/dl, increase the frequency of testosterone undecanoate injections.
 - For transdermal testosterone, measure testosterone levels at least a week after treatment. Blood should be drawn at least two hours after application.
3. Baseline hematocrit or hemoglobin levels are recommended. This should then be repeated quarterly in the first year, followed by every six to twelve months. Moreover, blood pressure, weight, and blood lipid levels should be monitored periodically, depending on each patient.
4. Conduct osteoporosis screening tests in those who stop taking testosterone, use it irregularly, or in those with other risks of osteoporosis.
5. Individuals who have not undergone a hysterectomy (with the natal cervix still in place), cervical cancer screening is recommended, just like in biologic females.
6. Consider hysterectomy and oophorectomy if patients so desire, and have been treated with gender-affirming hormones for at least a year.
7. Individuals who have undergone mastectomies should have a clinical breast examination once a year, which special emphasis on areas under and around the nipples because some residual breast tissue may be left in these areas. Those who have not undergone a mastectomy should have breast cancer screening mammograms following the same guidelines as biologic females.

5. Suspension of hormone treatment to reduce the risk of deep vein thrombosis before and after surgery

As mentioned above, oral estrogen increases the risk of deep vein thrombosis due to its “first-pass hepatic effects”. Estrogen affects coagulation factors produced by the liver, especially when ethinyl estradiol in contraceptives or conjugated equine estrogen is used. Therefore, healthcare providers should prescribe oral 17β -estradiol or estradiol valerate instead because they have a lower risk of deep vein thrombosis. Alternatively, usage of transdermal 17β -estradiol may be considered, as it does not have first-pass hepatic effects.

For major surgeries such as gender affirmation surgery, individuals are generally hospitalized for days, with limited physical movement. Immobility is one of the risk factors for deep vein thrombosis. Individuals must hold oral estrogen therapy at least two weeks prior to major surgery. This can then be restarted three to four weeks after the surgery when they can walk comfortably¹⁴ (**Recommendation level 2**). While this is expert recommendation, in practice, each individual’s risk for deep vein thrombosis should be individually considered based on age, obesity, or other underlying conditions that may increase inherent risk. Healthcare providers can then customize the suspension and resumption of estrogen therapy as appropriate for each particular individual.

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Chapter

4

Gender Affirmation Surgery

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1. Definition and objectives of gender affirmation surgery

The Medical Council of Thailand's Regulations on Ethics of the Medical Professionals, Re: Criteria for Gender Reassignment Treatment 2009, define gender reassignment surgery as surgery that reassigns the gender from male to female or from female to male. It includes surgeries or other treatments that aim to induce permanent physical or sex hormone changes.

"Gender affirmation surgery" (GAS) is a broader term than gender reassignment surgery. GAS includes all types of surgeries to change the natal gender's physical characteristics to match gender identity. GAS includes genital reassignment surgery (vaginoplasty, metoidioplasty, phalloplasty), orchiectomy, hysterectomy and oophorectomy, breast augmentation or male chest contouring, and facial and body masculinizing/feminizing surgery.² Currently, GAS is as important as other therapies, such as hormonal treatment and mental healthcare, for the transgender individual's well-being.³⁻⁶

GAS is usually the last step of the gender affirmation process. Although some transgender individuals can live a normal and happy life without surgery, others may wish to undergo surgery even if they have gone through other gender affirmation procedures. In this subset of individuals, GAS has been shown to improve quality of life, reduce psychological pressure, enhance individuals' ability to socialize, and reduce public anxiety.⁸⁻¹² In other words, GAS is the final step to complete the gender transition.

2. Medical ethics and gender affirmation surgery

Transgender individuals may undergo genital reassignment surgery (orchiectomy, hysterectomy, and oophorectomy) after being assessed and by two psychiatrists per the Medical Council of Thailand. However, the Medical Council of Thailand does not currently have clear guidelines for other types of GAS, and therefore we the authors defer to the World Professional Association for Transgender Health (WPATH)¹³ guidelines, which are different for each surgery type. Of note, in Thailand, GAS is non-reimbursable by both the public and private health insurance systems, and therefore, patients will have to self-pay.¹⁴

Physicians authorized to perform genital reassignment surgery are those specifically trained or those demonstrating knowledge and experience in this type of surgery. In practice, they are subspecialists, comprised of plastic surgeons, urologists, and gynecologists. Other types of GAS (i.e., facial and body feminization or masculinization) are often performed by plastic surgeons, facial plastic surgeons, and general surgeons.

Those undergoing GAS generally aim to alter their physical appearance to match their gender identity rather than correct any underlying physical abnormalities. Therefore, surgeons specializing in GAS must have a good understanding of the gender affirmation process and the risks and benefits to individual patients seeking to undergo a procedure. This usually mandates a multidisciplinary approach involving surgeon, psychiatrist, and endocrinologist* to ensure that surgical intervention is called for. Patients with HIV or chronic hepatitis B or C may undergo GAS after these formers are treated and controlled.¹³

* "Psychiatrist" refers to a medical professional who has received a medical diploma or license in psychiatry or child and adolescent psychiatry from the Medical Council of Thailand.

"Endocrinologist" refers to a medical professional who has received medical a diploma or license in endocrine and metabolic diseases, pediatric endocrinology and metabolic diseases, and obstetrics-gynecology from the Medical Council of Thailand.

3. Preoperative patient assessment and preparation

GAS involves several procedures and can be divided into two categories based on the nature of physical changes as follows:

1. **Reversible procedures** refer to those that can be reversed to the previous state, for example breast or hip augmentation with a silicone implant. If patients later change their minds, surgery can be performed to remove the silicone.
2. **Irreversible procedures** refer to procedures that cause a permanent physical change, for example, male chest contouring in female-to-male transgender individuals, orchiectomy, hysterectomy, oophorectomy, and genital reassignment surgery.

Preoperative assessment reduces the risk of patients' regression after surgery, especially when irreversible procedures are undertaken. For genital reassignment surgery, the patients must be diagnosed with gender dysphoria by 2 different psychiatrists. Moreover, they must have successfully lived in society as the desired gender for at least 12 months and gained acceptance from society, family, friends, or partners as the desired gender. They should also have undergone other gender affirmation procedures (such as hormone treatment and dressing and living as the opposite sex) but still experience distress in their physical nonconformity to the desired gender. The surgeon must carefully assess each patients' motivations for surgery and address any unrealistic expectations that may be present. Lastly, the surgeon must explain all reasonable surgical options, including the risks, potential complications, benefits, and alternatives of each (Table 1).

Table 1 Points to be discussed with patients before GAS

- All surgical options (including procedures that the surgeon is not personally experienced with but can refer to another experienced surgeon)
- Pros and cons of each method of surgery
- Surgeon's experience and patients' limitations that may prevent the treatment from achieving the expected result
- Potential complications

Before surgery, the patients are required to give informed consent. They must have at least 24 hours to study information about the surgery and decide before signing the consent form written in an easy-to-understand language.

4. Criteria before GAS (Recommendation level 1)

1. Criteria for male-to-female GAS

Breast augmentation

1. Must have a diagnosis of gender dysphoria
2. Aged 20 (Patients aged over 18 but less than 20 must also provide parental consent).
3. Must have sufficient understanding of the surgery and competence to sign the consent.
4. No comorbid conditions preventing surgery or anesthesia.
5. Individuals with a concomitant psychiatric disorder must be treated until the symptoms are well controlled prior to surgical intervention.

Feminizing hormonal therapy before breast augmentation surgery is not mandatory. However, we recommend that patients be on hormonal therapy for at least 12 months before surgery to maximize growth of breast tissue and to ensure a more natural-looking female appearance post-operatively ([Recommendation level 2](#)).

Vaginoplasty

1. Must have a diagnosis of gender dysphoria, certified by two psychiatrists.
2. Aged 20 (Patients aged over 18 but less than 20 must also provide parental consent).
3. Must have sufficient understanding of the surgery and competence to sign the consent.
4. No comorbid conditions preventing surgery or anesthesia.
5. Individuals with a concomitant psychiatric disorder must be treated until the symptoms are well controlled prior to surgical intervention.
6. Must have taken feminizing hormone therapy for at least 12 months (unless there are contraindications that prevent individuals from using hormonal therapy)
7. Have been successfully living a life as a female in society for at least 12 months.

Orchidectomy

1. Must have a diagnosis of gender dysphoria, certified by two psychiatrists.
2. Aged 20 (Patients aged over 18 but less than 20 must also provide parental consent).
3. Must have sufficient understanding of the surgery and competence to sign the consent.
4. No comorbid conditions preventing surgery or anesthesia.
5. Individuals with a concomitant psychiatric disorder must be treated until the symptoms are well controlled prior to surgical intervention.
6. Must have taken feminizing hormone therapy for at least 12 months (unless there are contraindications that prevent individuals from using hormonal therapy)

2. Criteria for female-to-male GAS

Male chest contouring: subcutaneous mastectomy/breast amputation

1. Must have a diagnosis of gender dysphoria, certified by one psychiatrist.
2. Aged 20 (Patients aged over 18 but less than 20 must also provide parental consent).
3. Must have sufficient understanding of the surgery and competence to sign the consent.
4. No comorbid conditions preventing surgery or anesthesia.
5. Individuals with a concomitant psychiatric disorder must be treated until the symptoms are well controlled prior to surgical intervention.

Hysterectomy and salpingo-oophorectomy

1. Must have a diagnosis of gender dysphoria, certified by two psychiatrists.
2. Aged 20 (Patients aged over 18 but less than 20 must also provide parental consent).
3. Must have sufficient understanding of the surgery and competence to sign the consent.
4. No comorbid conditions preventing surgery or anesthesia.
5. Individuals with a concomitant psychiatric disorder must be treated until the symptoms are well controlled prior to surgical intervention.
6. Must have taken masculinizing hormone therapy for at least 12 months (unless there are contraindications that prevent individuals from using hormonal therapy)

Metoidioplasty/phalloplasty

1. Must have a diagnosis of gender dysphoria, certified by two psychiatrists.
2. Aged 20 (Patients aged over 18 but less than 20 must also provide parental consent).
3. Must have sufficient understanding of the surgery and competence to sign the consent.
4. No comorbid conditions preventing surgery or anesthesia.
5. Individuals with a concomitant psychiatric disorder must be treated until the symptoms are well controlled prior to surgical intervention.
6. Must have taken masculinizing hormone therapy for at least 12 months (unless there are contraindications that prevent individuals from using hormonal therapy)
7. Have been successfully living the life as a male in society for at least 12 months.

5. Preoperative physical preparation¹⁵

Male-to-female transgender individuals who take estrogen should stop the hormone before surgery to reduce the risk of venous thromboembolism. Female-to-male transgender individuals who received testosterone should also stop the hormone to prevent polycythemia. (Details on preoperative hormone suspension are in Chapter 3.)

Smokers must quit smoking at least a month prior to surgery and two weeks after surgery. (Recommendation level 1) Alcohol abstinence at least a week before surgery is recommended (Recommendation level 2). Furthermore, patients on medications such as aspirin, NSAIDs, and some types of herbs and vitamins that can have blood-thinning effects like ginkgo, garlic, cordyceps, and vitamin E, should hold them least two weeks before surgery. (Recommendation level 2)

Patients undergoing vaginoplasty are advised to have a soft diet three days prior to surgery. On the day of admission to the hospital, the physician will prescribe laxatives for bowel preparation. Patients should inform the surgeon of any history of keloid formation, as keloids may form in the surgical area.

6. Types of gender affirmation surgery

1. Male-to-female GAS

Vaginoplasty

Vaginoplasty refers to a surgical procedure to construct a neovagina to allow male-to-female transgender individuals to have sexual intercourse in the same manner as a natal female. The procedure also includes the construction of external female genitalia, including clitoroplasty, labiaplasty, urethroplasty, and orchiectomy.¹⁶

Techniques of vaginoplasty vary based on the type of tissue used to line the neovaginal wall.^{17, 18} In cases where the patient has enough penile or scrotal skin, the standard method is penile skin inversion with scrotal skin graft extension. This method is relatively simple and uncomplicated.

However, a drawback of this technique is that the neovagina must be constantly dilated to prevent vaginal stenosis.¹⁸⁻²²

Other underlying complications that may arise^{7, 23, 24} include keloid formation, wound dehiscence, urethral stenosis or split urinary stream, loss of sexual arousal or inability to reach orgasm, and rectovaginal fistula.*

If penile or scrotal skin is insufficient, such as secondary to prior circumcision or orchiectomy, alternative options for neovaginal lining include colonic flap, peritoneal flap, or skin grafting from a different area.

*Rectovaginal fistula and colonic anastomosis leakage

Rectovaginal fistula after vaginoplasty is rare but could be severe and difficult to treat. Possible causes include inappropriate postoperative care, such as premature sexual intercourse, too large or too deep vaginal dilators, and inadvertent injury to the rectum during the operation. The patient may pass stool in their neovagina. If the fistula is small, simple repair of the fistula can be undertaken. However, if it is too large and could not be fixed with a primary suture repair, an ostomy may be temporarily required to divert fecal content. Once the fistula is fully healed, vaginoplasty may then be re-performed by using colon or peritoneal tissue.

Colonic anastomosis leakage may occur in colonic vaginoplasty. This complication is very rare and could be treated by surgical repair, drainage, or together with a temporary colostomy.

Common vaginoplasty techniques

- Penile skin inversion
- Penile skin inversion with scrotal skin graft extension
- Total scrotal skin grafting
- Colonic vaginoplasty
- Peritoneal vaginoplasty
- Vaginoplasty using skin from other areas, such as the groin or thighs

Colonic vaginoplasty is a surgical procedure in which the colon is used to construct a neovagina. An advantage of the technique is that the neovagina can be deeper and has a lower probability of stenosis. Moreover, colonic mucosa naturally produces mucus, which serves as a lubricant. However, main drawbacks of this technique include scars in the abdominal area, a more complex surgery, longer recovery time, and has a risk of having more severe complications.* Moreover, adhesions may occur and may result in gut obstruction.^{25, 26} Colonic vaginoplasty is suitable for patients who do not have enough penile and scrotal skin, prefer a deep neovagina, or need secondary correction of neovaginal stenosis.

Peritoneal vaginoplasty is widely used to treat women with vaginal agenesis.^{27, 28} However, this technique is now frequently used to construct a neovagina for transgender women.²⁹⁻³² An advantage of this technique is it results in a neovagina that is smooth with a similar consistency to biologic vaginas and that contains a small amount of lubricant. However, this procedure's drawback is that it requires abdominal surgery (which may cause adhesions) and creates abdominal scars. Furthermore, the neovagina constructed from the peritoneal tissue can stenose and also requires regular dilation.

Skin grafting from groin or thigh is typically used as a corrective surgery in cases where the neovagina has minor stenosis. It also can be used as the primary procedure if the patient does not have enough penile and scrotal skin but wants to avoid abdominal surgery. A drawback of this procedure is surgical scars at the donor area.

Choosing a vaginoplasty technique depends on various factors, such as the patient's needs, the amount of available penile and scrotal skin, history of genital surgery such as prior circumcision or orchiectomy, and the patient's pelvic size that determines the depth of neovaginal construction. The surgeon must explain the advantages, drawbacks, and possible complications that may arise and to help guide patients towards a final decision together (Recommendation level 2).

Orchiectomy

The purpose of orchiectomy in gender affirmation surgery is to decrease the amount of testosterone level so that the use of androgen antagonists is no longer required. Moreover, this procedure could also reduce estrogen use. Some patients undergo orchiectomy to aid genital tucking.³³ In terms of cancer prevention, orchiectomy is found to help prevent testicular, prostate, and male breast cancer.³⁴⁻³⁶

However, side effects of orchiectomy include erectile dysfunction, reduced sexual arousal, and permanent loss of fertility.³⁷ Furthermore, patients who undergo orchiectomy before vaginoplasty may have a significant retraction of the scrotal skin. If they undergo gender affirmation surgery later, the surgical procedure would be more difficult. In those cases, alternative options for neovaginal lining, such as the colon or peritoneal tissue, may be required.

Orchiectomy should be deferred in transgender women who plan to undergo male-to-female GAS in the future. Instead, they should suppress androgen production with androgen antagonists under the care of an endocrinologist. However, patients who definitively do not want male-to-female GAS and still require high doses of estrogen may confer with their physician for an orchiectomy to reduce the probability of future complications that arise from long-term estrogen usage ([Recommendation level 2](#)).

Breast augmentation

In general, transgender women who receive estrogen treatment will have a certain amount of breast development, but not usually enough for prominent breast growth compared to biological women. Therefore, most transgender women tend to undergo breast augmentation surgery with a silicone implant.³⁸ Although the surgical technique is similar to breast augmentation in female patients, the implants must be placed subpectorally because most transgender women do not have sufficient breast tissue to cover the implants.^{39,40}

Complications that may arise as a result of breast augmentation include postoperative bleeding, infection, dislocated or deformed silicone implants, and long-term complications of the silicone, such as capsular contracture and breast implant-associated anaplastic large cell lymphoma (BIA-ALCL).⁴¹⁻⁴³

Reduction thyroid chondroplasty

Laryngeal prominence, or Adam's apple, is a cartilaginous structure wrapped around the larynx. In males, the left and right portions of the cartilage form a more acute angle than in females. Thus, their Adam's apple appears to be more prominent. Reduction thyroid chondroplasty is a surgical intervention that reduces Adam's apple size by cutting off the cartilage's edges to make them smoother. This procedure will not increase pitch for a more feminine voice, but may temporarily result in a softer voice due to postoperative vocal cord edema, which usually self-resolves in three to four weeks⁴⁴ (Details on voice feminization in transgender women will be discussed in chapter 5).

One standard precaution that must be considered for reduction thyroid chondroplasty is if the patient is more than 30 years old, the cartilage of their Adam's apple will be more calcified, which hardens the structure. The surgery may require special instruments, such as a surgical drill and general anesthesia. For patients with an extremely hard Adam's apple, reducing their Adam's apple size may be difficult, and their Adam's apple may not appear as smooth.

Facial and body feminizing surgery

It is an aesthetic surgical procedure to alter the facial and body proportions for a more feminine appearance. The types of surgery frequently performed include hair transplant, forehead augmentation, frontal bossing reduction, rhinoplasty, orthognathic surgery, and hip augmentation.^{45, 46} Like other general plastic surgery procedures, it could be performed without a clearance from a psychiatrist.

1. Female-to-male GAS

Male chest contouring: subcutaneous mastectomy/breast amputation

Male chest contouring is the most widely used surgery in transgender men⁴⁷ so that they no longer need chest binding to hide their breasts in public. Long-term chest binding may result in the loss of breast skin elasticity, the feeling of discomfort, inconvenience of daily breast wrapping, and fungal infection or pressure sores.⁴⁸

Techniques of male chest contouring vary depending on the size and amount of breast tissue and each individual surgeon's technique. Male chest contouring can be divided into three main categories, as follows:

1. Subcutaneous mastectomy, areolar incision
2. Breast amputation with or without free nipple grafting
3. Endoscopic subcutaneous mastectomy

During male chest contouring, the surgeon will remove the entire breast tissue, with only a portion of breast fat remaining to prevent uneven skin texture after surgery.⁴⁹ In general, patients with small breasts (no larger than cup B) could undergo the surgery using small incisions. This procedure's advantage is that it creates just a small scar hidden at the areolar area, and nipple sensation remains. A concentric circular periareolar incision can be performed if simultaneous areolar size reduction is needed.⁵⁰ However, a drawback of this procedure is that skin sagging may occur after surgery and requires around three to six months of continuous chest wrapping post-operatively.

Patients who have large breasts (larger than cup C) or have done chest binding for so long that the skin loses its elasticity tend to require a larger incision, together with nipple repositioning. The advantage of this procedure is that it flattens the chest area within a single stage of surgery. However, drawbacks are the presence of longer scars on the chest wall and loss of nipple sensation.

In patients whose breast size falls between cup B and C, the surgical procedure employed is selected based on skin quality (**Recommendation level 2**). Surgery through a small incision may be done in patients with high skin elasticity in combination with chest wrapping after surgery. However, patients with significant skin sagging due to prolonged chest binding may require surgery through a larger incision to limit the presence of extraneous skin post-operatively.

Endoscopic subcutaneous mastectomy techniques are similar to gynecomastia surgery in male patients. Breast tissue is removed via trans-axillary instrumentation.^{51,52} This procedure is suitable for patients with small breasts and small and male-like nipple-areolar complexes. Since this is a trans-axillary approach, there will be no scars on the actual chest wall and breasts. Limitations are higher costs and that the procedure needs to be performed by experienced centers. Therefore, this procedure is not currently widely used for gender affirmation surgery.

Complications that may arise from male chest contouring include postoperative bleeding, seroma, infection, and partial nipple-areolar complex necrosis (frequently seen).⁴⁹ For patients who underwent small incision surgery, a second operation may be needed to correct the remaining skin sagging. For long incision surgery, a keloid may appear at the surgical incision.

Hysterectomy and oophorectomy

Hysterectomy and oophorectomy are considered a major step in female-to-male GAS.⁵³ It has a psychological benefit since the female-specific organs are no longer in situ. It may also serve as a part of metoidioplasty and phalloplasty in the future. Moreover, hysterectomy or oophorectomy may be required in those with tumors and diseases related to the endometrium or ovaries or a family history of cancer in these organs.

In general, the surgery is performed by a gynecologist. Many different surgical techniques are used such as open abdominal surgery, laparoscopic surgery, or transvaginal hysterectomy and oophorectomy.^{54, 55} If the patient also wants the reconstruction of male genitalia, metoidioplasty or phalloplasty can be done all at once. Alternatively, it can be performed separately by starting with hysterectomy and oophorectomy, followed by metoidioplasty or phalloplasty. Those who do not plan for metoidioplasty/phalloplasty but only want hysterectomy and oophorectomy must receive a thorough preoperative assessment and counseling and be cleared by two psychiatrists.^{1, 13} This is because the surgery will affect the body's hormonal system and result in permanent infertility. ([Recommendation level 1](#))

Metoidioplasty

Metoidioplasty is the construction of microphallus from the existing clitoris that has been enlarged through testosterone treatment. This technique allows patients to urinate standing. However, they are usually not capable of penetrative sexual intercourse. This technique is suitable for those who want to avoid a complicated surgery and prefer a less costly procedure. Patients who have undergone a metoidioplasty can later opt for a phalloplasty if a larger penis is desired.

The metoidioplasty procedure consists of separating the clitoral hood and suspensory ligament to increase the clitoral length and elevating its position anteriorly while preserving erectile tissue and sexual sensation. A neourethra will need to be constructed which opens at the microphallus tip. If metoidioplasty is performed with colpectomy, the surgeon will use the anterior vaginal flap to construct a urethra.⁵⁶ However, if the patient has had previous colpectomy, they may need to undergo skin or mucosal grafting (such as from the buccal mucosa) instead.

The surgeon should counsel the patient that not every case can urinate standing (successful in approximately 90 - 95% of all patients). Metoidioplasty patients should have a clitoral length of at least 3 cm after full anterior stretching preoperatively to ensure a successful surgery.⁵⁷ A major complication of metoidioplasty is urethral stricture or fistulas, which occur in 5% and 15% of all cases, respectively.⁵⁸

Phalloplasty

Phalloplasty is a surgical construction of a penis that is near the size of an adult erect penis (neophallus). This procedure is done using vascularized flaps from other body parts, such as the arms, legs, abdomen, or groin.⁵⁹ Phalloplasty enables patients to urinate while standing and to have sexual intercourse. It can be done as the first surgery or after metoidioplasty.

The most widely used techniques for phalloplasty are the radial forearm free flap and anterolateral thigh flap.^{60, 61} These require both vascular and neuronal anastomoses between the neophallus and clitoris to allow for sensation during intercourse.⁶⁰ Erectile function can be created by penile prosthesis implantation, of either the rigid or inflatable type.^{62, 63} Some authors reported the use of the fibula free flap phalloplasty so that there is no implanted foreign body.⁶⁴

Complications that may arise from phalloplasty⁶⁵ include

1. Issues involving the urinary system, such as urethral stricture or fistulas, incomplete bladder emptying, hair growth in the urethra (in cases where skin grafting was used), or vesicoureteral reflux.
2. Flap failure
3. Lack of sensation at the constructed neophallus or inability to have sexual intercourse.
4. Donor site morbidity
5. Other complications, such as bleeding, infection, wound dehiscence or non-healing wound.

Phalloplasty is quite a complicated procedure and may require staged operations to ensure a successful outcome. For example, the urethra may be constructed first, followed by construction of the neophallus. For this reason, this operation is not yet currently popularized in the trans population. In addition, individual preferences play an important role: some trans men may place more importance on the size and appearance of the neophallus rather than on erectile function and sexual sensation. Those who wish to undergo this surgical procedure should undergo extensive counseling with a surgeon to first be educated on both benefits and possible complications of the surgery before deciding. (Recommendation level 2)

Scrotoplasty

A scrotoplasty can be performed using skin from the labia majora, along with testicular silicone implantation.⁶⁶ This procedure can be performed together with metoidioplasty or phalloplasty, or as an isolated procedure. The most common technical challenge in a scrotoplasty is that usage of the labia majora skin results in a scrotum that is too posteriorly located which may require advancement of the major labia.⁶⁷ In cases with insufficient labial skin, a tissue expander may need to be placed prior to implant insertion.⁶⁸

Facial and body masculinizing surgery

In general, transgender men who received testosterone therapy tend to develop male secondary sex characteristics, such as beard growth, hair follicle changes, or male-pattern alopecia.⁶⁹ Consequently, facial and body masculinizing surgery is not usually required. Nonetheless, the procedures that can be done are rhinoplasty, jaw augmentation, thyroid cartilage augmentation, and pectoralis muscle augmentation.⁷⁰ These surgical procedures fall in the domain of general plastic surgery and can be performed without the psychiatrists' clearance.

7. Postoperative follow-up

Long term follow-up for patients after gender affirmation surgery should be conducted by both the surgeon and other physicians involved in the treatment of gender dysphoria (i.e.: psychiatrists and endocrinologists). In this manner, any post-operative issues may be corrected and managed in a timely fashion while allowing the surgeon to personally assess the results of the operation that can then be used to improve the surgical techniques further.⁶⁰

Some types of gender affirmation surgery may directly affect the long-term health of transgender people. For example, vaginoplasty, orchiectomy, hysterectomy, or oophorectomy may cause permanent hormonal changes. Another example is that male chest contouring in transgender men may lower the risk of breast cancer. **(For cancer screening in transgender individuals, see chapter 12.)** Therefore, postoperative care should be undertaken with a multidisciplinary team approach for an efficient referral system to the relevant specialists.

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Chapter

5

Voice Feminization in Transgender Women

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1. Objective of voice feminization in transgender women

Voice feminization aims to turn a 90 to 150-hertz male vocal pitch into a 160 to 220-hertz female vocal pitch.¹ Normally, the larynx size is fully developed, and the voice becomes deeper when men turn 12–15 years old. There are currently two medical methods of voice feminization:

1. Speech therapy

Performed by speech therapists, this method increases the vocal pitch and adjusts gestures, rhythms, and intonation to develop a more authentic feminine voice. It involves the control of mouth and tongue movement and breath. It is recommended to those who wish to avoid surgery. However, it requires regular practice while the natural voice remains masculine. Alternatively, this therapy can be used in conjunction with voice feminization surgery to ensure a naturally feminine voice quality.

2. Male-to-female voice surgery

This method is recommended only when the individual's larynx has fully developed, and when patients have a female appearance. Two types of surgery are commonly used in Thailand:

2.1 Cricothyroid approximation surgery²

This surgery brings the thyroid cartilage close to the cricoid cartilage with sutures to increase tension of the vocal cords and thereby raise vocal pitch. This method requires an anterior neck incision, through which a concurrent tracheal shave to reduce the Adam's apple for a more feminine appearance of the neck, could be performed. While this technique rarely results in scarring of the vocal cords, a disadvantage is that after initial results, the pitch elevation may fade back to the baseline pitch in long-term follow-up.

2.2 Anterior web formation or reapproximation of anterior commissure^{3,4}

This surgery, either a transoral endoscopic surgery or open surgery (via an anterior neck incision), brings the anterior commissures into approximation with sutures to reduce their length. Alternatively, it may use a laser to fuse the vocal cords. This method offers a permanent pitch elevation because of surgical fusion. However, the voice quality may change or vocal range may be limited. For example, patients may experience hoarseness after surgery until the wound is healed.

2. Preoperative and postoperative preparation

Before surgery, an ENT doctor completes a detailed preoperative exam through a laryngostroboscopy in the clinic. Different surgical interventions and their specific benefits and disadvantages are discussed in detail at that time. The patient can then be referred to a speech therapist to prepare for postoperative vocal cord rehabilitation. Transoral endoscopic surgery requires general anesthesia. Prior to any surgery type, smoking cessation and avoidance of excessive voice usage is recommended. The patient should also stop taking medicine or supplements that may affect blood coagulation for at least 1 week preoperatively.

After surgery, the doctor makes follow-up appointments every 1-2 weeks initially, then every 3-6 months for a year, depending on the type of surgery.

After surgery, it takes at least a few months until the pitch elevation becomes stable, depending on several factors like surgery method, age, postoperative practice, and pronunciation practice.

Postoperative instructions (Recommendation level 1)

1. Total voice rest is recommended for at least a week. Thereafter, minimal usage is permitted for at least two to four weeks.
2. Avoid harsh coughing, sneezing, or throat clearing for at least a week.
3. Avoid eating food that stimulates reflux for at least two weeks.
4. Start speech therapy rehabilitation with a speech therapist one or two months after surgery (depending on the type of surgery).
5. Avoid general anesthesia (where endotracheal intubation is needed) one to three months after surgery to prevent inflammation of the larynx secondary to intubation.

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Chapter

6

Sexual Health in Transgender People: HIV and Hepatitis

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1. HIV in transgender people

Transgender people are much more vulnerable to HIV acquisition than the general population. While the prevalence of HIV in the cisgender population is 1.1%¹, transgender women face up to 49 times greater risk.² The prevalence of HIV among transgender people in Thailand is 9.3%³, a similar rate to that seen in The United States of America (9.2%), with figures among transgender women being higher than that seen in transgender men (14.1% and 3.2% respectively). There are multiple factors that increase the risk of HIV acquisition among transgender people, such as having condomless anal sex, having less bargaining power with sex partners in using condoms, having sex under the influence of alcohol, frequent sex partner changes, having sex partners with high HIV acquisition risk, using injectable hormonal and/or recreational drugs, and engaging in sex work.^{2,4}

HIV prevention and treatment in transgender people aims to reduce HIV-related illnesses, reduce onward transmission, and maximize quality of life. Such services should ideally be provided both within and beyond healthcare facilities. (Table 1)

Table 1

Recommended healthcare services to prevent, diagnose, and/or treat HIV for transgender people.⁵

Recommended services in healthcare facilities

1. Condoms and lubricants
2. Harm reduction services for substance addiction including education, needle exchange and opioid replacement therapy
3. Risk reduction counselling
4. HIV testing
5. Care for people living with HIV
6. Prevention and treatment of comorbidities, such as opportunistic infections, tuberculosis, other sexually transmitted infections (STIs), and psychiatric disorders.
7. Sexual and reproductive health services

Key environmental success factors

1. Laws, policies, and financial support, including decriminalization of activities of transgender people, such as sex work
2. Policies promoting destigmatization and prohibiting discriminatory practices against transgender people in healthcare facilities
3. Empowering transgender people
4. Promotion of legislation and policies against the use of physical and mental abuse towards transgender people

2. HIV prevention

Transgender people can reduce their risk of HIV acquisition by use of condoms, avoidance of insertive sexual intercourse, regular screening and treatment for STIs, and male genital circumcision where applicable. Additionally, available HIV prevention methods are the use of post-exposure prophylaxis (PEP) and pre-exposure prophylaxis (PrEP).

1. Post-Exposure Prophylaxis (PEP)

Those with a history of exposure to HIV, whether from blood or secretions, within 72 hours should consider taking PEP. **(Recommendation level 1)** High-risk secretions include blood, semen, vaginal secretions, and pus. Exposures to mucus, saliva, tears, sweat, phlegm, vomit, feces, and urine without visible blood contamination are considered very low risk. High-risk activities include condomless anal or vaginal sex or in situations with condom breakage (for both insertive and receptive partners) and penetrating wounds with blood-contaminated hollow instruments, such as needles.⁶ Transgender women with neovaginas utilizing penile inversion or graft transplantation may be at higher risk of HIV acquisition if they engage in insertive sexual intercourse without the use of artificial lubrication due to the absence of naturally occurring lubricants predisposing such tissue to be vulnerable to tearing.⁷

2. Pre-Exposure Prophylaxis (PrEP)

PrEP is another increasingly accessible modality available in the prevention of HIV infection. Its use is recommended in Thailand National Guidelines on HIV/AIDS Treatment and Prevention 2017 and the Thailand National Guidelines on Pre-Exposure Prophylaxis: HIV-PrEP 2018.^{6,7} Daily oral PrEP is recommended for transgender people receiving gender-affirming hormone therapy. Event-driven PrEP is not recommended due to known drug-drug interactions between PrEP and hormonal drugs that may reduce the effectiveness of PrEP.⁸ **(Recommendation level 1)** Healthcare facilities providing PrEP should also offer other preventive measures, such as condoms and lubricants, and emphasize the importance of regular HIV testing. If clients are found to be HIV positive, ART should be initiated promptly. **(Recommendation level 1)** Service providers should be gender-sensitive and offer care through a holistic approach, which includes considerations towards mental health, gender-affirming care (both medical and surgical), encouragement of safe sex practices, and substance addiction, all in accordance with the UNAIDS 'reach-test-treat-retain' policies.

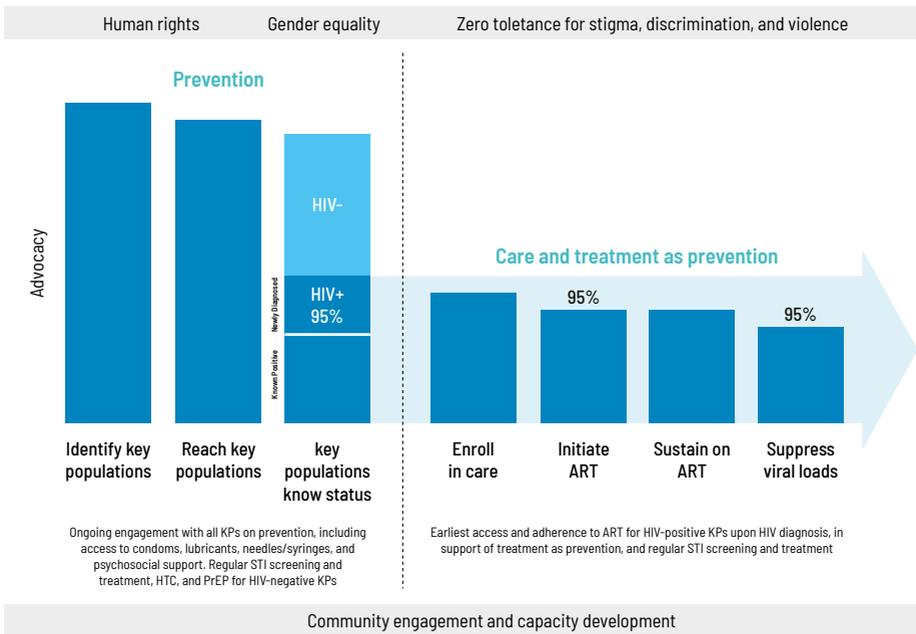
Transgender women are frequently concerned about side effects from using PrEP and gender-affirming hormonal therapy, particularly with regards to the impact on their physical appearance. Service providers should be conscious of this and provide information to address any concerns to support drug adherence. To address osteoporosis concerns for transgender women who have undergone orchidectomy, dietary advice, exercise, and smoking cessation are recommended, with further referral to endocrinologists as needed. Transgender people with any potential risk exposure to HIV anticipated in the next 3 months should be offered daily oral PrEP, which is now reimbursable under the National Health Security Office (NHSO) Universal Health Coverage Scheme⁷ (**Recommendation Level 1**). This package includes PrEP (300mg tenofovir diphosphate and 200mg emtricitabine), HIV testing 4 times a year, creatinine testing twice a year, hepatitis B (HbsAg) testing once a year, STI testing twice a year, and condoms. (See Appendix 9.)

Transgender people may have access to a larger variety HIV prevention options in the foreseeable future. Tenofovir alafenamide (TAF) may replace the currently used tenofovir disoproxil fumarate due to its superior bone and renal side effect profile. Its access is currently limited by cost. Injectable cabotegravir is currently under investigation in worldwide clinical trials. It has so far seen very promising results and given its route of administration could potentially help to address challenges related to daily drug adherence with existing PrEP regimens.

3. Reaching the transgender population

It is crucial that HIV at risk transgender populations are reached to provide HIV testing. This should be performed in conjunction with gender-affirming health services to build rapport, an important foundation for both short- and long-term retention in services.⁵ (Recommendation level 1) Access to high-risk transgender populations must begin with accurate population estimations followed by thorough risk and needs assessments. Those found to be HIV positive should be treated promptly at all CD4 levels. (Recommendation level 1) (Figure 1).

Figure 1 Guidelines on HIV prevention, care, and treatment for high-risk populations¹⁰ (Reproduced with permission of FHI360)



When providing antiretroviral therapy (ART) for transgender people with HIV, service providers should consider potential interactions with gender-affirming hormones. As ART can reduce the gender-affirming hormone therapy drug levels, hormone levels should be monitored every 3 to 6 months.² (Recommendation level 1) Service providers should reassure their transgender service users of the safety in taking gender-affirming hormone therapy in conjunction with ART to support drug adherence.

4. Viral Hepatitis A, B, and C

Hepatitis B and C viruses are transmitted through blood and secretions, while hepatitis A can be transmitted orally and anally. It is recommended service providers inform transgender people who take part in oral and/or anal sex of its risks. Serological testing is recommended to determine their current infection status and provided treatment as needed. Vaccines are recommended for those not infected. ([Recommendation level 1](#))

Table 2 Hepatitis profile interpretation

Type of Hepatitis	Laboratory Test	Test Result	Result Interpretation
Hepatitis A		Anti-HAV +ve	<ul style="list-style-type: none"> Immune to Hepatitis A
		Anti-HAV -ve	<ul style="list-style-type: none"> Non-immune to Hepatitis A Vaccination recommended
Hepatitis B	HBsAg +ve	Anti-HBs -ve	<ul style="list-style-type: none"> Infected with Hepatitis B Referral for treatment recommended
	HBsAg -ve	Anti-HBs +ve>10 IU/mL	<ul style="list-style-type: none"> Immune to Hepatitis B
	HBsAg -ve	Anti-HBs -ve<10 IU/mL	<ul style="list-style-type: none"> If completed course of 3 vaccine doses during childhood, presumed waning of immunity, a single booster dose recommended. 3 vaccination doses recommended if no previous history of vaccination.
Hepatitis C		Anti-HCV +ve	<ul style="list-style-type: none"> Previous infection with Hepatitis C. HCV RNA test is recommended to determine whether infection is chronic.

Service providers should inform all transgender clients of the availability of hepatitis A and B vaccines. (Recommendation level 1) There are 2 types of hepatitis A vaccine: the live vaccine requires a single dose whereas the killed vaccine requires 2 doses, 6 to 12 months apart.

Since 1992, at least 3 doses of the hepatitis B vaccine have been administered to children under 1 year of age. Thus, those born after this year in whom anti-HBs > 10mIU/ml is detected are taken to be immune to hepatitis B and need no further vaccination. However, for those with anti-HBs levels < 10mIU/ml, a history of previous vaccination for hepatitis B should be taken. Those who have previously received 3 doses of the vaccine should be assumed to have some degree of immunity which has waned, and just one booster dose is recommended. However, those with no history of previous vaccination are recommended to receive 3 doses of the hepatitis B vaccine at months 0, 1-2 and 6).

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Chapter

7

Sexual Health in Transgender People: Sexually Transmitted Infections

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Introduction

Sexually transmitted infections (STIs) affect all population groups, including transgender people. In the context of previous gender-affirming surgery or gender affirming hormone therapy, diagnosis of STIs can be different to that in the cisgender population with different presenting signs and symptoms.

1. Key points of sexually transmitted infections

- STIs can occur to people of any age or gender, with adolescents and young adults being most affected.
- Most STIs are asymptomatic, so can be unknowingly transmitted.
- STIs can affect individuals, their partners and may also be transmitted from mother to child.
- Some STIs can increase the risk of cancer. For example, certain strains of human papilloma virus (HPV) can cause cervical cancer, genital cancer, and rectal cancer in both cisgender and transgender people.
- STIs can be prevented by a number of ways, such as risk behavior reduction and condom use. Some can be prevented by vaccines, such as for hepatitis A virus, hepatitis B virus, and human papilloma virus (HPV).
- Some STIs are curable, such as those caused by bacteria (e.g. syphilis, gonorrhea, and chlamydia).
- Some STIs can result in chronic conditions, such as viral diseases (e.g. HIV, herpes, and genital warts). However, their severity and complications can be reduced.

2. Risks associated with STIs

There are several risk factors associated with STIs in transgender people, including sexual behavior or techniques used on genital gender-affirming surgery. These factors can be divided as follows:

1. Transgender women

- 1.1 Transgender women who have not undergone genital gender-affirming surgery have a similar risk of STIs to the cisgender population.
- 1.2 Transgender women who have undergone genital gender-affirming surgery are at varying levels of risks of gonorrhea and chlamydia infection, depending on tissue used to construct their neovagina as follows:
 - A neovagina constructed from penile skin using a graft technique can be infected with gonorrhea.¹
 - A neovagina using urethral tissue, peritoneum or the intestinal wall can be infected with gonorrhea and/or chlamydia.
 - It has been reported that transgender women whose neovagina is constructed from colon mucosa, if infected with gonorrhea, can bleed during or after sex.²

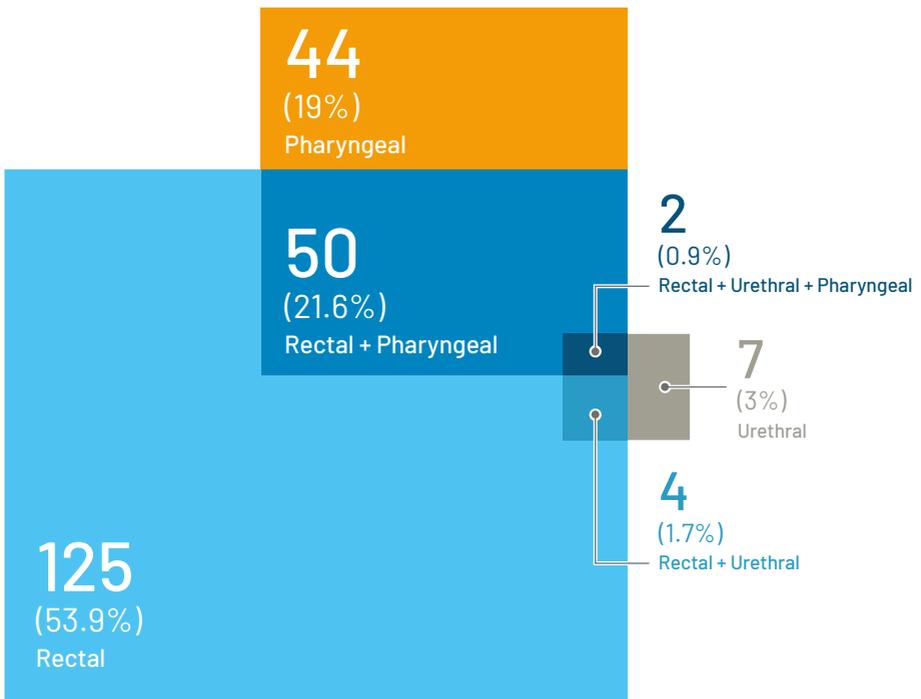
2. Transgender men

- 2.1 Transgender men who have not undergone genital gender-affirming surgery and have used testosterone long-term may have thinner vaginal mucosae. Sexual intercourse with male partners may cause abrasion or bleeding, which may increase the risk of STI and HIV infection.
- 2.2 It is very rare for transgender men who have undergone genital gender-affirming surgery to have gonorrhea in their neopenis.¹

3. Prevalence of gonorrhea and chlamydia in Thai transgender people³

- The prevalence of gonorrhea and chlamydia at all sites is high among transgender women in Thailand (30.4%).
- The highest incidence of gonorrhea and chlamydia infection is found in the anus, gonorrhea 9.6% and chlamydia 19.5%.

Chart 1 The Prevalence of Gonorrhea and Chlamydia in Thai Transgender women³



4. Screening for gonorrhea and chlamydia in transgender people

- Screening for gonorrhea and chlamydia in all routes is recommended because single site screening may miss 9-20% of diagnoses of gonorrhea and chlamydia infection.³ (Recommendation level 1)
- Screening for gonorrhea and chlamydia by means of pooled sample testing, e.g. oral + urethral + rectal samples is recommended to save time and cost.⁴ (Recommendation level 1)

5. Signs and symptoms of STIs in transgender people

Generally, STIs can be classified into those that are symptomatic and asymptomatic. The signs and symptoms of STIs in transgender people are not different from those in the cisgender population.^{5, 6}

6. Specimen collection and screening for STI diagnosis in transgender people

1. Symptomatic

- 1.1 **Gonorrhea and chlamydia:** Collect specimens from symptomatic sites for gram stain, culture and/or NAAT (nucleic acid amplification testing).
- Gram stain is not recommended for oral sites as it may produce false positive results. [\(Recommendation level 1\)](#)
 - A speculum or anoscope can be used for neovagina examination as well as specimen collection for gram stain or culture.
 - A small speculum with sufficient lubrication should be applied when collecting vaginal specimens for gram stain or culture from transgender men who receive gender affirming hormone treatment. This is because testosterone thins vaginal mucosa, which can cause pain or bleeding during the examination. [\(Recommendation level 2\)](#)
 - For NAAT, a speculum or anoscope is not needed.
- 1.2. **Syphilis:** Blood testing is recommended. [\(Recommendation level 1\)](#)
- 1.3 **Genital warts:** Generally diagnosed by appearance. A biopsy may be necessary. HPV testing is not recommended. [\(Recommendation level 1\)](#)
- 1.4 **Genital and rectal lesions:** Generally diagnosed based on symptoms. If diagnosis uncertain, swabs for NAAT/PCR (polymerase chain reaction) from lesions are recommended. [\(Recommendation level 2\)](#)

2. Asymptomatic

Most STIs are asymptomatic. As asymptomatic STIs are a major cause of ineffective disease control, asymptomatic STI screening should be available to provide rapid treatment to reduce complications and onward transmission. While STIs screening is recommended, types of screening can be considered on an individual basis depending on risk activity.^{7,8} It is recommended the following are screened for: HIV, syphilis, hepatitis B, hepatitis C, gonorrhea, and chlamydia.

- 2.1 For asymptomatic gonorrhoea and chlamydia, NAAT is recommended at all sites (Recommendation level 1) with the following considerations:
- Clients can carry out self-collection as this has been shown to be equally as effective as healthcare provider collection (Recommendation level 1)
 - Neovaginal specimens can be collected from either urine or neovaginal swabs. (Recommendation level 1)
 - For transgender men who have undergone genital gender-affirming surgery, urine collection is recommended. (Recommendation level 1)
 - For transgender men who have not undergone genital gender-affirming surgery, vaginal swab collection is recommended. (Recommendation level 1)
 - Herpes and HPV screening are not recommended. Treatment should be symptom-based. (Recommendation level 2)
- 2.2 Neovaginal HPV screening and pap smears are not recommended. However, an annual examination is recommended to screen for STIs and other abnormalities.⁹ (Recommendation level 2)
- 2.3 For transgender men who have not undergone hysterectomy or who have undergone a supracervical hysterectomy, HPV screening and pap smear can be performed in accordance with Thai National Guidelines for cervical cancer screening. (Recommendation level 2)

7. STIs screening time frame

Frequency of STI screening should be based on individual risk.

- Those with high risk (e.g. multiple sex partners, inconsistent condom use, sex work, chemsex), should be screened for STIs every three months.⁸ (Recommendation level 2)
- Transgender individuals with occasional risk exposure should be tested at their visit. Repeat testing should be performed where needed after the window period.^{10, 11} (Table 2) (Recommendation level 2)

Table 2 Window Period and Types of Tests for STIs

STI	Window period	Test
Gonorrhea	24 hours	PCR/LCR (NAAT)
Chlamydia	2-7 days	PCR (NAAT)
Syphilis	3-12 weeks	Treponemal/Non-treponemal test

Remark: STI: Sexually Transmitted Infection; PCR: Polymerase Chain Reaction; LCR: Ligase Chain Reaction; and Window period: The time between first infection and when the test can reliably detect that infection.

8. STI treatment and follow-up

Treatment and follow-up for STIs in transgender people and their partners is similar to those in cisgender population. Details can be found in the Thai Guidelines for STI Treatment, 2015⁵, and the Thai Guidelines for Gonorrhoea Treatment, 2019⁶.

9. STI vaccinations

Recommended vaccines include:

1. Hepatitis A virus vaccine
2. Hepatitis B virus vaccine
3. Human papillomavirus vaccine (HPV vaccine). (**Recommendation level 1**)

HPV vaccination

- Individuals aged 9-26 years: recommended for all cisgender and transgender people. (**Recommendation level 1**)
- Individuals aged 27-45: Should be considered on an individual basis (**Recommendation level 1**) by discussing the following details with clients:
 - » The HPV vaccine does not treat HPV-related disease.
 - » No tests are available that can predict HPV immunity.
 - » Many adults aged 27-45 have already been exposed to HPV.
 - » Those in a long-term mutually monogamous relationship are unlikely to acquire a new HPV infection..
 - » Those with few partners or no previous sexual activity should benefit from the vaccine at this age.^{12, 13}

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Chapter

8

Mental Health in Transgender Adults

Sorawit Wainipitapong, M.D.

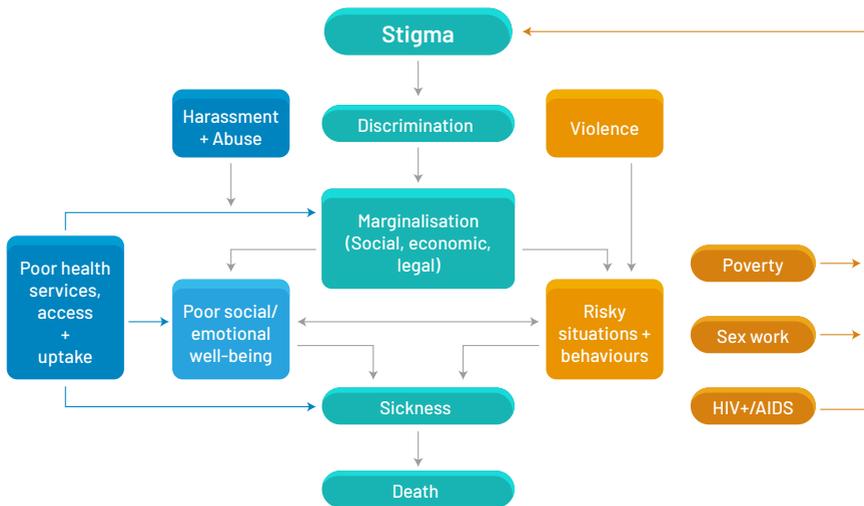
Panom Ketumarn, M.D.

Introduction

Mental health is another dimension of human health. Staying mentally healthy is not only about being free from psychiatric illness, but rather, the interaction between physical, mental and social factors together influences the individual's overall well-being.¹

The contributor to mental health issues among transgender people is stigma^{2,3} This includes structural stigma (i.e.: loss of work opportunities in some fields or access to certain services), interpersonal stigma (i.e.: bullying, physical abuse, and sexual abuse), and individual stigma (i.e.: feelings of insecurity, anxiety, and avoidance of situations with potential discrimination). All of these factors are critically important to the daily life and mental health quality in the transgender population. (Figure 1)

Figure 1 Impact of Stigma on Transgender People³



Due to the different forms of stigma, there is a high prevalence of some mental health problems among the transgender population such as depression, anxiety, self-injury, and post-traumatic stress.³⁻⁵

1. Common mental health issues in transgender people and recommendations for caregivers

Depression

Depression is a mood disorder characterized by feelings of sadness and diminished interest in activities once enjoyed. Usually other symptoms are present, such as loss of appetite or overeating, insomnia or excessive sleep, fatigue, lack of energy, slow movement or restlessness, impaired concentration, and recurrent thoughts of death or self-injury. Several risk factors associated with depression are common in the transgender population such as unemployment, trauma, a lack of social support, family conflict and rejection, history of substance use, history of chronic medical conditions, and partner violence.⁶

The prevalence of depression among transgender people is high, especially in the elderly, in those with low self-esteem, in those with interpersonal relationship issues, and in those with low social support. Gender-affirming hormone treatment can reduce the risk of depression.⁷

Screening for depression can be carried out using questionnaires, such as Patient Health Questionnaire-9 (PHQ-9) (**Recommendation level 2**). PHQ-9 is suitable for depression screening at primary care facilities. The questionnaire, which has been already translated into Thai, is presented in Table 1 along with result calculation and interpretation.⁸

Table 1 Patient Health Questionnaire-9⁸

For the past two weeks, how often have you had the following symptoms?	Not at all	Some days (1-7 days)	Quite often (> 7 days)	Nearly every day
1. Little interest or pleasure in doing activities?				
2. Feeling down, depressed, or hopeless?				
3. Trouble falling asleep, sleeping fitfully, or sleeping too much?				
4. Feeling tired or having little energy?				
5. Losing appetite or overeating?				
6. Feeling bad about yourself – or think that you are a failure or that you let yourself or your family down?				
7. Trouble concentrating on things, such as reading the newspaper or watching television?				
8. Moving or speaking noticeably slower? Or so fidgety and restless that you have been moving a lot more than usual?				
9. Thoughts that you would be better off dead, or thoughts of hurting yourself in some way?				

Result interpretation

The result is interpreted as follows: Not at all = 0 point, Some days = 1 point, Quite often = 2 points, and Nearly every day = 3 points. The points are added up. Please note that the cut-off score of the PHQ-9 could vary in different cultural contexts. We recommend that users interpret PHQ-9 scores according to validity and reliability studies specific to their language and culture. In the PHQ-9 Thai version, if the total score equals to 9 or more, the respondents may have major depression.

In case of severe and continued depression that impairs daily life and functioning, the individual is diagnosed with a major depressive disorder, according to the depression diagnosis criteria by the American Psychiatric Association⁹ as follows:

1. The individual must be experiencing at least five of the following symptoms during the same two-week period, which significantly affects some aspect of their daily life or function. At least one of the symptoms should be either (1) or (2).
 1. Depressed mood most of the day, every day.
 2. Loss of interest or pleasure in activities he/she once liked most of the day, nearly every day.
 3. Weight loss or weight gain (at least five percent of weight within a month) or decrease or increase in appetite nearly every day.
 4. Insomnia or excessive sleep nearly every day.
 5. Restlessness or lethargy nearly every day.
 6. Fatigue or loss of energy nearly every day.
 7. Feelings of worthlessness or excessive or inappropriate guilt nearly every day.
 8. Diminished ability to concentrate, or indecisiveness, nearly every day.
 9. Recurrent thoughts of death, recurrent suicidal ideation, or a suicide attempt or a specific plan to commit suicide.
2. The symptoms cause great distress or result in a significant impairment in social, occupational, or other important areas of functioning.
3. The symptoms do not result from other medical conditions or substance use.

Healthcare providers caring for transgender individuals suffering from depressive symptoms should take a history and physical examination to differentiate the condition from other disorders that can mimic depression such as bipolar disorder, depressive disorder due to another medical condition (i.e.: from hypothyroidism or stroke), substance/medication-induced depressive disorder, and adjustment disorder with depressed mood.^{6,9} They should consider referring the individuals to a psychiatrist to receive appropriate treatment. ([Recommendation level 1](#))

The providers may also assess other potential psychiatric conditions or comorbidities, such as risks associated with suicide, substance use, anxiety, and other psychosocial issues that may result in depression, such as stigma and low social support. In addition, they should assess protective factors, such as interpersonal relationships.¹⁰

Recommendations for healthcare providers with transgender patients suffering from depression (Recommendation level 2)

1. Have a strong fund of knowledge such as the ability to differentiate between gender identity, sexual orientation, and sexual expression. Display an appropriate attitude.¹¹
2. Assess common possible risk factors associated with depression such as stigma, substance use, low social support, and family issues.
3. Screen for depression through interviews and/or questionnaires i.e.: PHQ-9.
4. Conduct additional interviews to differentiate depression from other psychiatric or medical conditions, and/or evaluate for the presence of other concomitant psychiatric or medical comorbidities, and/or psychosocial issues.
5. Assess risks of suicide or self-injury.
6. Provide psychosocial treatment using guided self-help,¹² counseling, or family counseling, for example.¹³
7. Treat moderate or severe depression patients with medication, whereby selective serotonin reuptake inhibitors (SSRIs) such as fluoxetine and sertraline are first line treatment choices. The common side effects of SSRIs include headaches or gastrointestinal disturbances. Care should be taken in administering these medicines in conjunction with other medications and hormone therapy.¹³
8. Administer medication based on symptoms, for example, benzodiazepines for insomnia.
9. Consider referring severe cases, those at risk for suicide, those with other concomitant psychiatric comorbidities, those with complex medical conditions, or those with treatment-resistant depression to a psychiatrist.¹³

Anxiety

Characterized by fear, anticipation, or thinking of potential dangers in the future. Anxiety is a common mood that can be found in general population; however, if it is so severe that it affects daily life functioning or co-exists with other symptoms, for instance, insomnia, impaired concentration, irritability, or physical bodily pain, it may be classified as an anxiety disorder. This is a common psychiatric disorder among transgender people.^{10, 14, 15} Providers may screen for anxiety using tests such as the Generalized Anxiety Disorder 7-item (GAD-7) scale,^{16, 17} taking a full history, and provide primary care based on recommendations for treatment of clinically significant anxiety using antidepressants (Recommendation level 2).

Other potential mental health issues among young transgender people include self-injury, substance use, eating disorders, and mental disorders.¹⁵

2. Mental health impacts of gender-affirming hormone treatment

Taking gender-affirming hormones may affect mental health as follows:

Depression

The prevalence of depression among transgender people who receive gender-affirming hormone therapy is lower than among their counterparts who do not.⁷ However, some research suggested that in long-term follow-up, the level of depression does not change after gender-affirming hormone treatment. Nevertheless, treatment can increase the level of self-esteem.¹⁸

Anxiety

Gender-affirming hormone treatment can reduce the level of anxiety in transgender people.¹⁸

Personality-related Psychopathology

Feminizing hormone treatment can reduce personality-related psychopathology, which may affect the mental wellbeing among transgender women.¹⁸

Quality of life related to mental health

Transgender men receiving masculinizing hormone treatment were found to have a better quality of life in emotional and social terms. Quality of life in psychosocial and mental health terms is increased for transgender men and transgender women who receive gender-affirming hormone treatment compared to their counterparts who do not.¹⁸

Dissociative disorder

Dissociative disorder is a spectrum of mental illness which involves a disconnect between thoughts, perceptions, actions, and identity. Gender-affirming hormone treatment reduces symptoms of dissociation statistically and significantly.¹⁸

Psychosocial Life, Interpersonal Relationships, and Emotion

The emotional benefit of gender affirming hormone treatment is greater in transgender women than in transgender men. In addition, hormone treatment helps to reduce the issues with socialization and interpersonal relationships.¹⁸

Distress

Can be comprised of social distress (such as avoidance of social interactions), and perceived distress (for example, self-perceived impairment of social interactions). Transgender individuals who do not receive gender affirming hormone treatment were found to have a greater level of distress than those who do. Transgender women who receive gender affirming hormone treatment suffer less body uneasiness, which is associated with higher estradiol levels; however, such difference is not found in transgender men.

The effects of gender affirming hormone treatment on mental health vary according to type and blood hormone levels. Masculinizing hormones like testosterone increase sexual desire.¹⁹ The higher level of testosterone or a supraphysiologic blood level may result in exacerbation of mania or psychosis, such as in bipolar disorder and schizoaffective disorder.²⁰ Hormones administered to transgender women, such as estrogen, or anti-androgen, reduce sexual desire.¹⁹

Conclusion

Healthcare providers should be equipped with knowledge and understanding of issues facing transgender individuals, as well as their potential mental health issues, especially depression. From a basis of positive provider-patient relationship, they may screen and assess individual risk and protective factors by using interviews and questionnaires. In this manner, providers can appropriately intervene primarily and also refer transgender patients to mental health specialists as needed.²¹

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Chapter

9

Transgender Children and Adolescents

Chansuda Bongsebandhu-phubhakdi, M.Sc., M.D.

Introduction

Management of transgender children and adolescents differ from those of transgender adults because children and adolescents are in the process of growth and maturity. They go through physical, mental, and social changes with age. Physicians and counselors must consider all factors, including age, developmental process, and other potential mental disorders, to provide appropriate guidance and treatment options to each individual patient.

1. Definition of children and adolescents¹

- Children refer to “individuals aged younger than 18”.
- Adolescents refer to “individuals aged 10 – 21”.
 - » Early adolescents refer to “individuals aged 10 – 14”.
 - » Middle adolescents refer to “individuals aged 15 – 17”.
 - » Late adolescents refer to “individuals aged 18 – 21”.

2. Sexual development

1. Infancy and childhood

At birth, an infant is assigned male or female status based on physical characteristics. Sexual development is static during the infancy period because the gonads are inactivated. However, aspects such as gender identity, experienced gender, and sexual attraction, begin to develop. Children aged 6 - 12 months can classify the gender of people around them.²

Children aged 2 - 4 distinguish gender differences based on appearance. They self-identify as being male or female and often prefer to play with same-sex children rather than the opposite sex. They also begin to recognize different gender roles and perceive common “rules” applied to those in different gender roles. For example, men must have a short hair cut or wear pants while women must have long hair or wear a skirt.

Children aged 4 - 6 may play with their genitalia or act like they are masturbating.

School-age children have a better understanding of sex. They realize that there are no fixed rules. For example, a man may have long hair. At some point, children may be curious or begin to explore their sexuality. For instance, they may be interested in or want to play with toys of the opposite sex or try cross-dressing. However, if any children are particularly interested in toys or dresses of the opposite sex for an extended period, it may be a sign that they are dissatisfied with their gender. The parents may need to monitor this development.^{3,4}

2. Early adolescence

At this age, adolescents experience the most significant physical and reproductive changes. They become more interested in sex, both in terms of physical appearance and reproductive function. They often compare themselves with friends. Adolescents begin to develop attitudes toward sex. They also express interest in the opposite sex but in general interactions, such as starting a conversation on the phone, sending e-mails, texting, or chatting online.^{5,6}

3. Middle adolescence

At this age, the reproductive system will be as fully developed as in adulthood. With more sexual drive, the adolescents may start superficial dating or having a romantic relationship. However, relationships are mostly driven by mere attractiveness and sexual experimentation rather than intimacy. Most sexual behaviors involve exploring what works best for them. The middle adolescents try to understand their sexual orientation and find the essential meaning of love and relationship. The individuals with non-conforming gender identity tend to recognize whether they are male, female, or non-binary.^{5,6}

4. Late adolescence

In late adolescence, young adults start to develop a sense of self-identity and have a stable gender identity. They have opposite sex companions, talk about sex overtly with the opposite sex, and have increasing involvements in love and commitments.⁵

3. Challenges of transgender children and adolescents

Transgender children and adolescents usually feel distressed by gender dysphoria, making them more vulnerable to mental disorders. This situation mainly happens to children and adolescents unable to express their identity publicly.

Because the sexual development of transgender children and adolescents is still in process, it is impossible to predict if they will become transgender adults or have an interchangeable identity, also known as "gender fluidity." This mostly happens in early adolescence (age 10 - 13). Therefore, appropriate counseling, especially on gender identity and social expressionism during the transition period, can reduce individuals' distress levels without medical interventions.⁷

4. Interventions for transgender children and adolescents

Some transgender children and adolescents decide not to seek healthcare personnel services because they want to avoid a negative experience. As a result, all physicians, nurses, counselors, and staff caring for transgender children and adolescents should have the right knowledge and non-judgmental attitudes and behaviors. The healthcare providers should also pay attention to details, for example, in addressing their name or choosing transgender children and adolescents' pronouns. They should introduce themselves first and ask transgender children and adolescents how these youths prefer to be addressed. Moreover, all providers should use appropriate body language with transgender children and adolescents.⁷ (Recommendation level 1)

1. Interventions during childhood or prepubertal period

Because it is not recommended to prescribe drugs and hormones to children of this age group, the best intervention is helping transgender children and adolescents develop their gender identity. Intervention should also focus on preventing potential problems, with special attention

to psychosocial adaptation. Social acceptance should be encouraged. Providers should be aware that these children may feel distressed when rejected by some society members. In severe cases, surrounding people, such as family, teachers, and friends, must be educated to ensure the right understanding of transgender children and adolescents and acceptance of their identity. Furthermore, the environment should be adjusted for transgender children and adolescents for example preferred title, uniform, and restrooms.

In supporting transgender children and adolescents, counselors should consider their development and age-related perception. Counselors should also ensure that the families have an objective and non-judgmental attitude so that these children can eventually explore and accept their gender identity.⁷ In cases with a concomitant severe mental disorder, a transgender child should be referred to a child psychiatrist for further supervision. **(Recommendation level 1)** At this age, the counselor may provide information about a treatment plan in the future.

2. Interventions during pubertal period

2.1 Early and fully reversible medical interventions

When transgender children begin to experience physical changes during puberty (Tanner stage 2*), physicians should consider starting gonadotropin-releasing hormone (GnRH) analogues to suppress sex hormone production and consequently delay the physical changes of puberty. **(Recommendation level 1)**. If the treatment is later discontinued, their original natal hormonal production resumes which makes this a reversible intervention. Side effects of GnRH analogues can be local reactions: erythema, induration, wheal and sterile abscess formation. Bone density decreases during therapy, but final peak bone mass is in the normal range. There is no reported serious side effect. However, GnRH analogues subsidized by the Universal Health Insurance Scheme in Thailand do not cover gender dysphoria cases.

Studies have demonstrated that GnRH analogues treatment could decrease the distress level caused by gender dysphoria in transgender children and adolescents. It also prevents undesired physiological changes in transgender children and adolescents in puberty, such as deepening of voice and breast development. It allows time for individuals to explore their gender identity before deciding to receive the next treatment, including surgery. Alternatively, they can decide to stop the treatment if later discovering that they are not transgender.^{8,9}

2.2 Partially or fully irreversible medical interventions

Gender-affirming hormone treatment in adolescents aims to change the physical characteristics to match their gender identity. Before initiating the intervention in

* Tanner stage 2 can be evaluated from breast development in females assigned at birth or testicular growth in males assigned at birth

Indications for GnRH analogues treatment in transgender children and adolescents⁸

1. Clear diagnosis of gender non-conformity or gender dysphoria in transgender children or adolescents over a long period of time.
2. Transgender children or adolescents with initial development of gender dysphoria, or worsening of symptoms with physical changes during puberty.
3. Other physical, mental, and social disorders were assessed and treated until under control.
4. Have received a full explanation and understand the treatment's pros and cons and steps of treatment before signing a consent. (If a transgender child or adolescent is under 18 years old, parental consent must also be obtained).

transgender adolescents, service providers must conduct a complete psychosocial assessment. The adolescent has given informed consent. (If the patient is under 18 years old, the parents or other caretakers or guardians have consented to the treatment and are involved in supporting the adolescent throughout the treatment process. **(Recommendation level 1)**)

Most gender-affirming hormone treatments begin when transgender adolescents are 16 years old. Sometimes, however, transgender children or adolescents may self-medicate with gender-affirming hormones before puberty (or at the age of 10 to 11) at the recommendation of their peers or other external sources. The improper use of hormones can be harmful. However, the counselor should be careful about recommending that transgender children or adolescents stop taking the hormone immediately in these cases because it may make them lose self-confidence and decide to discontinue treatment.

Providers should start by forming a functional working relationship with transgender children or adolescents so that they are willing to disclose prior usage of gender-affirming drugs and hormones in detail. Providers can then gradually begin the process of gender-affirming hormone treatment as follows:

1. Assess the risks and contraindications to prescribing gender-affirming drugs and hormones.
2. Instruct patients on the correct usage of gender-affirming drugs and hormones.
3. Prescribe gender-affirming drugs and hormones (as shown in Tables 1 and 2).
4. Explain the side effects that may arise from the use of gender-affirming drugs and hormones (**Table 3**).

Table 1 Gender-affirming treatment guidelines for transgender children and adolescents⁹

Age 11-12 (Tanner stage 2)	Age 15-16 or older
<p>Treatment: GnRH analogues</p> <p>Pre-treatment assessment</p> <ul style="list-style-type: none"> • History of underlying diseases, regular medications, and risk factors associated with the treatment • General physical examination • Blood pressure measurement • Body mass index (BMI) calculation • Bone mineral density • Blood test <ul style="list-style-type: none"> » Liver and renal functions » Lipid profiles » Fasting plasma glucose or insulin level • Karyotype as indicated 	<p>Treatment: Gender-affirming drugs and hormones</p> <p>Pre-treatment assessment</p> <ul style="list-style-type: none"> • History of underlying diseases, regular medications, and risk factors associated with the treatment • General physical examination • Blood pressure measurement • Body mass index (BMI) calculation • Bone mineral density • Blood test <ul style="list-style-type: none"> » Liver and renal functions » Lipid profiles » Fasting plasma glucose or insulin level • Karyotype as indicated <p>Transgender men</p> <ul style="list-style-type: none"> • Hemoglobin and hematocrit <p>Transgender women</p> <ul style="list-style-type: none"> • Prolactin level
<p>Follow-up every three to six months</p> <ul style="list-style-type: none"> • General physical examination • Physical development test based on Tanner stages • Bone mineral density every few years • Assessment for side effect of drugs and hormones 	

Table 2 Recommended type and dosage of gender-affirming hormones

1. Gradual pubertal induction

Transgender women: Administer 17 β -estradiol and increase the dosage every six months, starting from:

- 5 μ g/kg/day
- 10 μ g/kg/day
- 5 μ g/kg/day
- 20 μ g/kg/day
- Up to 2 μ g/day

Transgender men: Administer testosterone and increase the dose every six months, starting from:

- 25 mg/body surface area (BSA)(sq m) by intramuscular injection every two weeks
- 50 mg/BSA (sq m) by intramuscular injection every two weeks
- 75 mg/BSA (sq m) by intramuscular injection every two weeks
- 100 mg/BSA (sq m) by intramuscular injection every two weeks

2. In cases where transgender children and adolescents initiate hormone at the age of 15 – 17

Transgender women:

- Start from 1 mg of 17 β -estradiol/day.
- After six months, increase the dosage to 2 mg/day.

Transgender men:

- Start from 75 mg of testosterone/week.
- After six months, increase the dosage to 100 mg/week.

Table 3 Side effects of gender-affirming hormone treatment^a

Transgender women taking estrogen	Transgender women taking testosterone
High-risk side effects <ul style="list-style-type: none">• Thromboembolic disease	High-risk side effects <ul style="list-style-type: none">• Erythrocytosis (Hematocrit >50%)
Medium-risk side effects <ul style="list-style-type: none">• Macroprolactinoma• Breast cancer• Coronary artery disease• Ischemic stroke• Gall Stone• High triglycerides	Medium-risk side effects <ul style="list-style-type: none">• Severe liver malfunction (Transaminase enzyme three times higher than normal level)• Coronary artery disease• Ischemic stroke• High blood pressure• Breast and uterine cancer

2.3 Gender affirmation surgery

Gender affirmation surgery in transgender adolescents should follow the following clinical practice guidelines^a:

1. Transgender adolescents who have reached 18 years old are allowed to undergo sex reassignment surgery in Thailand.
2. Transgender adolescents should live life as the desired gender for at least 12 months to gain confidence and real-life experience before sex reassignment surgery.
3. Transgender adolescents must be evaluated and cleared for surgery by at least two professional psychiatrists.

Details of sex reassignment surgery and other gender affirmation surgeries are in Chapter 4.

Conclusion

Intervention for transgender children and adolescents requires a multidisciplinary team. Therefore, counselors play an essential role in evaluating and referring them to experts in the relevant field so that they grow into physically and mentally healthy adults who can adapt and live in the society happily.

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Chapter

10

Guidelines for Psychological Practice with Transgender Children and Adolescents

Pantri Kirdchok, M.D.

1. Self-preparation for mental health professionals supporting transgender children and adolescents

Mental health professionals supporting transgender children and adolescents should make the following preparations:

1. Knowledge and attitude toward transgender children and adolescents

- 1.1 Mental health professionals should know and understand the normal sexual development of children and adolescents. They should be able to distinguish between gender identity, gender orientation, and sexual expression. Despite being different, these three aspects are interrelated.^{1,2} (Recommendation level 1)
 - Gender identity is defined as a person's internal sense of gender and how one identifies oneself, such as female, male, non-binary, or other.
 - Sexual orientation/attraction refers to a person's feelings or attraction towards other people, such as gay, lesbian, homosexual, heterosexual, and bisexual.
 - Gender expression means a person's outward presentation of gender, including the style, clothing, body language, and voice.³
- 1.2 Mental health professionals should be aware that gender is not limited to two sexes, male or female, but includes non-binary. Moreover, an individual's gender identity does not have to match the sex assigned at birth.¹ (Recommendation level 2)
- 1.3 Mental health professionals should take note of their attitudes toward transgender individuals. They should understand that their attitudes toward this matter may subconsciously affect their expression, rapport building, counseling, and the quality of treatment in this patient population.¹ (Recommendation level 2)

2. Specific issues to be considered when working with transgender children and adolescents

2.1 Language

Mental health professionals should use the names and pronouns the patients prefer instead of gender-suggestive language such as "Mr." or "Mrs.". They should also be familiar with the specific language used only by transgender people.⁴ (Recommendation level 2)

2.2 Relationship with the therapists

A good relationship between the therapists, the patient, and the patient's parents, combined with a safe environment, is critical for effective delivery of care. Therefore, the therapists should build a healthy relationship by being non-judgmental and creating a safe environment.⁵

2.3 Keeping confidentiality

Transgender children and adolescents are often concerned that their gender identity or sexual orientation will be exposed, especially in the presence of their parents. Therefore, the therapists should always talk to children and adolescents separately and reiterate that all therapists adhere to the principle of confidentiality.^{2, 3, 5} (Recommendation level 1)

2.4 Working with the families

Therapists regularly work with both transgender children or adolescents and their families. However, sometimes, children's or adolescents' needs may differ from their families'.⁵

2.5 Individual care

Each child or adolescent, together with the family, has different needs when meeting mental health professionals. Therefore, therapists need to understand those needs and provide specific care.^{1, 3}

2.6 Trauma-informed lens

Children or adolescents may have negative experiences, such as being bullied or insulted, or treated disrespectfully by people in society and public health workers. As a result, the therapists should be sensitive and respond appropriately to those negative experiences.⁵

2.7 Multidisciplinary care

Caring for transgender children and adolescents requires a multidisciplinary team, including but not limited to pediatricians, pediatric endocrinologists, pediatric infectious diseases specialists, and surgeons.¹⁻³

3. Responsibilities of mental health professionals supporting transgender children and adolescents¹

- 3.1 Evaluate sexual development and diagnose gender dysphoria accurately.
- 3.2 Evaluate common physical and mental comorbidities.
- 3.3 Counsel children or adolescents and their families so that these youths have an opportunity to explore gender identity and reduce stress arising from gender dysphoria and other psychosocial issues.
- 3.4 Provide useful sources of information or social groups for children and adolescents and their families.

2. Evaluating children and adolescents with gender incongruence

Evaluation guidelines for those in early childhood are beyond the scope of this chapter. To evaluate transgender children and adolescents, healthcare professionals should delicately and sensitively ask questions and use methods based on age-related development. Furthermore, they should always create a safe environment for children and adolescents. The evaluation can be divided into the following key points:

1. Gender-related history taking

Gender-related history taking consists of five sub-topics:

1. Gender identity
2. Sexual orientation
3. Gender expression and gender transition
4. Coming out
5. Gender dysphoria diagnosis

The first four topics do not have a standard evaluation method. Hence, examples of evaluation questions are shown in Table 1.⁵⁻⁷

Table 1 Examples of gender-related history taking

Evaluation Topic	Example Questions
Gender identity	<ul style="list-style-type: none">• Do (pronoun/name) experience yourself as female, male, or non-binary?• Since when have (pronoun/name) felt this way?• Can (pronoun/name) tell me what it was like when starting to feel this way?• Have (pronoun/name) ever felt confused about which gender you are?
Sexual orientation	<ul style="list-style-type: none">• People are different in their sexual attraction to other people. What• best describes your sexual attraction? How sure are you about it now?
Gender expression and history of gender transition	<ul style="list-style-type: none">• What have (pronoun/name) tried in terms of gender transition?• What else would (pronoun/name) like to change (i.e.: appearance, clothing, and hairstyle)?• What is the picture of (the desired gender, such as female, male, or non-binary)(pronoun/name) have in mind?
Coming out	<ul style="list-style-type: none">• Have (pronoun/name) told anyone about your gender or the need for gender transition?• Do (pronoun/name) feel uncomfortable telling anyone about your gender?

The diagnosis of gender dysphoria is essential for appropriate treatment planning, especially

Box 1: Diagnosis criteria for gender dysphoria (DSM-5) in children

- A. A marked incongruence between one's experienced/expressed gender and assigned gender, of at least 6 months' duration, as manifested by at least six of the following (one of which must be Criterion A1):
1. Have a strong desire to be the other gender or insistence that one is the other gender
 2. In boys (assigned gender) A strong preference for cross-dressing or simulating female attire; or in girls (assigned gender), a strong preference for wearing only typical masculine clothing and a strong resistance to the wearing of typical feminine clothing.
 3. A strong preference for cross-gender roles in make believe play or fantasy play.
 4. Have a strong preference for the opposite sex's toys, games, or other activities.
 5. Love to have friends of the opposite sex.
 6. (For males assigned at birth) Vehemently refuse to play with boys' toys, games, or activities and avoid playing roughly; (For females assigned at birth) vehemently refuse to play with girls' toys or activities.
 7. Dislike their genital anatomy.
 8. Desire to have a physical appearance corresponding to the experienced gender.
 9. Such condition causes significant distress or impairs function, such as in a social, academic, or other setting.

hormone treatment or sex reassignment surgery in the future. The diagnosis must be made by a psychiatrist. The diagnostic criteria for children and adolescents are shown in Boxes 1 and 2, respectively⁸ ([Recommendations level 1](#)).

Box 2: Diagnosis criteria for gender dysphoria (DSM-5) in adolescents

- A. A marked incongruence between one's experienced/expressed gender and assigned gender, of at least 6 months' duration, with at least two out of six of the following manifestations shown below:
1. Feelings of distress because expressed or experienced gender differs from the primary and/or secondary sex characteristics.
 2. Strong desire to eliminate the primary and/or secondary sex characteristics of the sex assigned at birth or wish to prevent the development of those sex characteristics.
 3. Strong desire to have the physical characteristics of the opposite sex.
 4. Strong desire to become the opposite sex.
 5. Strong desire to be treated as the opposite sex.
 6. Firm belief that they have the same feelings and responses as the opposite sex.
- B. Such condition causes significant distress or impairs function, such as in a social, academic, or other setting.

2. Key history taking in children and adolescents^{2, 5, 9}

- Developmental history, such as academic ability and social skills
- Upbringing history and education about sex and gender expression
- Relationships with friends, someone that are romantically or sexually attracted to, and sexual experiences, including risky behaviors
- Strengths, for example, how can they get through difficulties? Who do they talk to when they need help?

3. Psychological evaluation^{2, 5, 6, 9, 10}

The following mental disorders are more common in transgender children and adolescents than in the cisgender population. Therapists should always evaluate for the presence of these conditions. (Recommendation level 2)

- Mood disorder
- Anxiety disorder
- Self-injury or suicide attempt
- Victim of bullying and social discrimination
- Post-traumatic stress disorder
- Eating disorder
- Autistic spectrum disorder
- Substance use disorder

4. Family evaluation^{2, 5, 6, 9, 10}

- Evaluate the caregivers' attitudes and acceptance toward the children's or adolescents' wish for gender transitioning.
- Evaluate and write down a family tree or family map.
- Evaluate the family function and relationships.
- Evaluate the impacts and conflicts that arise from the children's or adolescents' need to be transgender.

5. Physical and mental status examination

6. Psychiatric testing

- Gender identity evaluation and the diagnosis of gender dysphoria are not in themselves indications for psychiatric testing. Referrals for psychiatric testing should only be made when other indications are present ([Recommendation level 2](#)).

3. Mental health interventions for children and adolescents with gender incongruence

Because the care for prepubertal children wishing to live their lives in line with their gender identity differs from the care for adolescents, guidelines were divided to reflect these differences:

1. Interventions for prepubertal children with gender incongruence

The number of long-term studies on this group of patients is limited. So, the appropriate time and approach to children with gender incongruence or gender-nonconforming children are not as evident as in adolescents. However, guidelines for transgender children have continuously evolved. In the past, people viewed children with gender incongruence as having a disorder and must be “cured.” For example, therapists tried to change children’s gender identity back to that of the sex assigned at birth. Currently, this approach is ineffective and is considered unethical.¹¹

A study following children with gender dysphoria revealed that only 10–30 percent of them still have gender dysphoria when entering adolescence.^{11,12} This suggests that while some gender dysphoria in childhood is due to a stable gender identity, some cases may be due to environmental influences.¹³ As a result, some therapists use an objective approach to monitor children’s sexual development without encouraging them to try cross-living. Some call this the “watchful waiting approach,” while others use the “gender-affirming approach” as described below.¹⁴

The “gender-affirming approach” aims to help children who wish to go through gender transition. The therapists will create a safe, supportive, and non-judgmental environment for patients. Furthermore, therapists must reduce the children’s guilt regarding the wish to transition and foster their self-esteem. At the same time, therapists must help the parents understand gender diversity and realize that family acceptance is a crucial part in these children’s good mental health outcome.¹⁵ The effort includes encouraging families to help children explore their gender identity¹⁶ and plan and try out “social transition”.

Social transition is the experimental change in gender roles to match the child’s gender identity, such as changing of name, language, hairstyle, clothing, activities, and friends. This transition must be based on the child’s needs and readiness. Changes to only some elements may be made, without making a complete transition. Moreover, each social transition is also reversible.¹⁵ Social transitioning was found to reduce the children’s stress from gender dysphoria and improve their emotional well-being.¹⁷

2. Interventions for adolescents with gender incongruence

The key to care management in transgender adolescents is to build a therapeutic relationship with both patients and their parents and to set a collaborative treatment goal. However, the recommended approach to transgender adolescents can be different and are further subdivided as follows:

1. Transgender adolescents without gender dysphoria since early childhood

These adolescents may conceal their own feelings for fear of being rejected or because they are confused about their gender identity and gender orientation. Their parents may also be confused by the child's apparently sudden transgender identity. The current recommended interventions are as follows: ¹(**Recommendation level 2**)

- Help the patients explore their gender identity gradually.
- Support the patients when they are confused or cannot decide.
- Be cautious of gender identity foreclosure.
- Encourage parents to allow the patients to explore their gender identity.
- Educate parents about gender diversity and the planning of treatment processes.

2. Transgender adolescents with gender dysphoria since early childhood

Adolescents with gender dysphoria since early childhood and prolonged symptoms usually have a stable gender identity. Moreover, gender dysphoria tends to continue if left untreated. At present, the following interventions are recommended: ¹

- Provide mental care and manage both gender-related and non-gender-related stress
- Advise adolescents on social transitioning and experimenting with gender expression, which uses the same principles as that in children. This may include physical alterations, such as chest binding in female-to-male transgender adolescents. ¹⁻³
- Help patients come up with better problem-solving skills, communicate with their family, and develop their strengths.
- Treat physical and mental comorbidities. ^{2, 5}

- Educate the parents about gender diversity, gender dysphoria, and this group's gender identity stability. Emphasize the importance of the family's understanding and support.^{1, 2, 5}
- Help the parents understand, accept, and respond appropriately to the patients.^{1, 2, 5}
- Provide mental support for the parents if they feel disappointed, lost, angry, or conflicted.^{1, 2, 5, 6}
- Psychotherapy is not a mandatory treatment for adolescents who wish to live their lives in line with their gender identity.² However, it is mandatory in some cases to reduce significant distress arising from gender dysphoria or other associated psychiatric comorbidities.

Conclusion

In caring for children and adolescents who wish to live their lives in line with their gender identity, mental health professionals must have knowledge, a positive attitude, and good skills. They must also be aware of important issues when working with these patients. It requires a comprehensive evaluation and appropriate support for both the patients and the parents so that the patients can understand themselves and make the right decision. This implementation will reduce the psychological impact on both patients and their families. It will also increase the patients' self-esteem so that they will grow into healthy adults.

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Chapter

11

Reproductive Services for Transgender People

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Introduction

Transgender individuals need access to reproductive services like everyone else¹, such as contraception for both male-to-female and female-to-male individuals. However, special considerations need to be made in this population, an example being fertility preservation, which may be affected by gender-affirming treatment and the use of assisted reproductive technologies. These are further detailed as follows:

1. Contraception

Pregnancy can occur when the right conditions are met between individuals of opposite biologic sex. For example, a biologic male must be able to produce viable sperm and ejaculate during intercourse to deliver the sperm load into the vagina. At the same time, a biologic female must be able to produce viable eggs, ovulate, and have the egg fertilized by the sperm to become an embryo. The embryo implants in the endometrium (uterine lining), leading to pregnancy.

Contraception guidelines for transgender individuals are not explicitly mentioned in the World Health Organization (WHO)² and the United States Centers for Disease Control and Prevention documents.³ Therefore, the recommended contraception practice for transgender individuals is based on recommendations for cisgender individuals and the few available studies on the transgender population.

1. Contraception in male-to-female transgender individuals⁴

Male-to-female transgender individuals who have not undergone genital gender-affirming surgery can produce sperm from the testes regardless of the feminizing hormone treatment they have received. If that male-to-female transgender individual has unprotected penile-vaginal sexual intercourse with a biologic female who has an intact reproductive system and can ovulate, the female can risk unwanted pregnancy. Although male-to-female transgender individuals taking estrogen have lower sperm counts (because the hormone inhibits the testosterone production in the testes, a key factor of sperm production), estrogen is not an approved male contraceptive method. Consequently, male-to-female transgender individuals should either consider using the same contraceptive methods as biologic males – such as condoms or vasectomy – or have their biologic female partner apply the usual contraceptive measures for natal females.

Medical professionals should counsel male-to-female transgender individuals who have intercourse with biologic females on proper contraceptive methods and STI prevention by using condoms with every intercourse. (Recommendation level 1)

2. Contraception in female-to-male transgender individuals⁴⁻⁶

Female-to-male transgender individuals with intact reproductive organs (uterus, oviducts and ovaries) engaging in unprotected penile-vaginal sex with biologic males can be at risk for an unwanted pregnancy.⁷ It should be noted that the use of testosterone in female-to-male transgender individuals does not completely suppress ovulation. Therefore, it is not considered an appropriate contraceptive method.⁸ Female-to-male transgender individuals may be able to ovulate even when the effects of testosterone therapy have caused the cessation of menstruation. However, female-to-male transgender individuals who did not take testosterone are three times more likely to conceive than those using testosterone. Female-to-male transgender individuals who stopped testosterone therapy will be able to ovulate and become pregnant even before the resumption of menses. Pregnancy in female-to-male transgender individuals on testosterone therapy will result in hormonal effects on the fetus, which may cause harm.⁹

Testosterone is not a contraindication to any type of contraception.¹⁰ Female-to-male transgender individuals with an intact natal reproductive system may use non-hormonal female contraceptive methods, such as copper IUDs, sterilization, cervical caps, or female condoms. Using condoms has an advantage of STI prevention. If hormonal contraception is desired, female-to-male transgender individuals can consider non-estrogen methods to avoid effects on female secondary sex characteristics. These methods, including progestin-only contraceptives, progestin-only IUD, three-month injectable contraceptives, or contraceptive implants, will complement the testosterone effect of stopping menstruation (examples of estrogen-based contraception include the combination pills, monthly injectable contraceptives, contraceptive patches, and birth control rings). Furthermore, female-to-male transgender individuals can choose to use emergency contraceptive pills or a copper IUD in emergencies. The same precautions and contraindications for emergency contraception should be considered as that for natal females.⁷

Female-to-male transgender individuals with an intact reproductive system engaging in penile-vaginal sex with biologic males may have their partner use male contraceptive methods instead, such as male sterilization or condoms. They must also consider the limitations and contraindications of male contraception.

Healthcare professionals should advise female-to-male transgender individuals with an intact reproductive system along with their natal male partners on suitable contraceptive methods. Condoms with every intercourse should be advocated to prevent STIs ([Recommendation level 1](#)).

2. Fertility preservation for transgender individuals¹¹

Many transgender individuals want to have children, regardless of whether or not they will be genetically related.¹² A study revealed that 40 percent of transgender individuals using gender-affirming services also use fertility preservation technologies.¹¹

Many gender-affirming hormone treatments and surgeries have adverse effects on fertility. Some reports revealed that estrogen reduces sperm counts, and the result is irreversible in some male-to-female transgender individuals.¹¹⁻¹⁴ This is different from the use of testosterone in female-to-male transgender individuals. In these latter, when the hormone is stopped, regular ovulation resumes and conception is possible if the natal reproductive system is intact. Children born in this manner are no different in health status than those born from biologic females who never use testosterone.¹⁵ However, pregnancy can be an unpleasant experience to some, as it symbolizes femininity.¹¹

Gonadectomy prevents transgender individuals from producing eggs or sperm. Therefore, they cannot have children genetically related to themselves naturally. Additionally, a hysterectomy will prevent female-to-male transgender individuals from conceiving.

Transgender individuals should consider fertility preservation before receiving gender-affirming treatments that irreversibly affect fertility, such as taking feminizing hormones or undergoing genital gender-affirming surgery (**Recommendation Level 1**). Healthcare providers should provide counsel and planning on fertility preservation, including guidance on family building, before treatment is started.^{1, 16-19}

1. Fertility preservation for male-to-female transgender adolescents and adults

Male-to-female transgender individuals who have not undergone genital gender-affirming surgery and stop taking hormonal therapy may produce semen and have children of their own. Physicians can consider fertility preservation by stopping the prescription of feminizing hormones and waiting until more sperm is detected, at which time referrals to the appropriate specialists can be completed.

- If male-to-female transgender individuals can ejaculate, semen cryopreservation should be taken into consideration.
- If male-to-female transgender individuals cannot ejaculate or have a low sperm count or no sperm at all, semen, sperm and testicular tissue cryopreservation are recommended.

If no egg from a natal female is available for fertilization, male-to-female transgender individuals may consider freezing their sperm. If available, they can have their sperm fertilize donated eggs or eggs from their lawful spouse with a stable relationship ([Recommendation level 2](#)). Fertility preservation can be accomplished by either cryopreserving the fertilized embryo or sperm cryopreservation alone. Alternatively, both methods can be used together. Sperm should be collected before gender-affirming hormone treatment or as soon as possible after starting estrogen. Alternatively, testicular tissue may be saved during genital gender-affirming surgery. Male-to-female transgender individuals who wish to preserve their fertility should be referred to a suitable institution to assess for available fertility preservation methods as mentioned above.

2. Fertility preservation for pre-pubertal male-to-female transgender children

Male-to-female transgender children receiving puberty-suppressing GnRH analogs can preserve fertility by stopping the drug. After puberty, they will be able to ejaculate and get sperm cryopreservation¹⁷ ([Recommendation level 2](#)). Physicians should advise patients that the cessation of GnRH analogs will result in the appearance of male secondary sex characteristics.

If male-to-female transgender children do not wish to stop GnRH analogs due to concerns about the potential appearance of male secondary sex characteristics, ejaculation for sperm cryopreservation will not be possible. In that case, physicians may put in a referral to specialists for sperm and testicular tissue cryopreservation ([Recommendation level 2](#)). However, this method has not been widely used and is still under research. Therefore, it has less available supporting data than sperm cryopreservation.

3. Fertility preservation in female-to-male transgender adolescents and adults

For female-to-male transgender individuals who still have a uterus and ovaries and use masculinizing hormones, stopping hormonal therapy will make it possible to resume ovulation. Conception before resumption of menstruation is possible. If patients wish to undergo a hysterectomy and oophorectomy yet preserve fertility, they should be referred to an appropriate fertility preservation facility. The facility may use several methods such as ovarian stimulation, egg retrieval, and egg cryopreservation ([Recommendation level 2](#)). These individuals should be advised that ovarian stimulation monitoring and egg retrieval can be performed via either the transvaginal or transabdominal route. They must stop taking gender-affirming hormones during this process.¹⁸

Another issue female-to-male transgender individual should consider in fertility preservation is that ovarian stimulation leads to an increase in female sex hormones and subsequent menstruation. This may cause frustration.¹¹ Therefore, in such cases, physicians may consider prescribing aromatase inhibitors to lower estrogen levels during the ovarian stimulation process to prevent increased manifestations of female secondary sex characteristics¹⁶ (Recommendation level 2).

If female-to-male transgender patients find the side effects or potential complications secondary to ovarian stimulation and egg retrieval prohibitive, physicians may consider referring them to a suitable facility for surgical ovarian tissue cryopreservation. In those planning on undergoing genital gender-affirming surgery, ovarian tissue can be collected during the oophorectomy (Recommendation level 2). Ovarian tissue cryopreservation is currently considered a standard fertility preservation method for women receiving treatments that affects their fertility, such as chemotherapy for cancer.^{21, 22 *}

Female-to-male transgender individuals may consider freezing their eggs, having their eggs fertilized with donated sperm, or sperm from their lawful spouse with a stable relationship (Recommendation level 2). Fertility preservation may be done by either cryopreserving the fertilized embryo, egg cryopreservation alone, or a combination of both methods.

4. Fertility preservation in pre-pubertal female-to-male transgender children

Female-to-male transgender initiating gender-affirming hormonal treatment after the onset of puberty will already have physical and physiologic changes from female hormones produced by the natal ovaries. Therefore, they can undergo ovarian stimulation. Patients who wish to preserve fertility after puberty and agree to ovarian stimulation monitoring and egg retrieval (via either transvaginal or transabdominal approaches) should be referred to an appropriate specialist facility. The facility will preserve fertility by ovarian stimulation, egg retrieval, and egg or embryo cryopreservation.

Pre-pubertal female-to-male transgender children who received GnRH analogs to suppress puberty may discontinue the drug to enter puberty and preserve fertility by ovarian stimulation, egg retrieval, and egg or embryo cryopreservation¹⁷ (Recommendation Level 2). Physicians should counsel patients on the effects of GnRH analog discontinuation on female secondary sex characteristics. Physicians may also consider prescribing aromatase inhibitors to lower estrogen levels during ovarian stimulation to decrease the excessive development of female secondary sex characteristics¹⁸ (Recommendation Level 2).

* Hysterectomy and oophorectomy for gender-affirming purposes in Thailand can be performed when patients are 18 years old or more. ^{17, 23}

If female-to-male transgender children decline fertility preservation by ovarian stimulation, they may be referred to an appropriate facility to be considered for ovarian tissue cryopreservation (**Recommendation level 2**). However, pre-pubertal ovarian tissue cryopreservation is still experimental and has fewer supporting data compared to post-pubertal ovarian tissue cryopreservation.**

Table 1 Summary of fertility preservation methods in transgender individuals^{11, 12, 24, 25}

Female-to-male transgender individuals	Male-to-female transgender individuals
Post-pubertal period <ul style="list-style-type: none"> • Ovarian tissue cryopreservation • Egg cryopreservation • Embryo cryopreservation (fertilized by donated sperm or the spouse's sperm) • Uterine preservation 	Post-pubertal period <ul style="list-style-type: none"> • Testicular tissue cryopreservation • Semen/sperm cryopreservation • Embryo cryopreservation (fertilized by donated eggs or the spouse's eggs) • Uterine Transplant**
Pre-pubertal period <ul style="list-style-type: none"> • Ovary/Ovarian tissue cryopreservation* 	Pre-pubertal period <ul style="list-style-type: none"> • Testicular tissue cryopreservation*

Note: * Being practiced but still experimental. ** Theoretically possible but not widely practiced.

** The current practice in Thailand does not allow physicians to perform a hysterectomy and oophorectomy in people younger than 18.^{17, 23}

3. Family building for transgender individuals

Transgender individuals can build a family similarly to their cisgender counterparts. In doing so, they should take legal and socio-cultural considerations into account. For instance, some transgender couples cannot have children naturally because, for example, they no longer have a uterus or cannot produce sperm or eggs. In that case, couples may consider alternative ways to have children. Current studies show that children raised by transgender couples do not have different developmental or social issues compared to those raised by cisgender couples.^{1,20}

If it is not mandatory for the transgender couple to have a child with both of their genetic makeups, adopting a child or using donated embryos or sperm/eggs from the partner's siblings or an anonymous donor are possible considerations. They may also use surrogacy in combination with one of these methods^{20,24} (Recommendation level 1). If, however, they wish for a child with both of their genetic makeups, but neither one of them has a uterus, then in vitro fertilization can be used in combination with surrogacy (Recommendation level 1). Using artificial gametes – so that couples with the same type of gametes can have a child with both of their genetic makeups – and uterine transplantation – for male-to-female transgender individuals who wish to conceive themselves – are still experimental and have not been widely used.¹¹

The use of assisted reproductive technologies for transgender couples to build a family must comply with the Protection of a Child Born by Medically Assisted Reproductive Technology Act, B.E. 2558 (A.D. 2015).²⁶ This Thai law stipulates that clients must be lawfully married in order to receive intrauterine insemination services, use donated embryos or gametes, have in vitro fertilization, receive embryo transfer, or request consideration for surrogacy. Since lawful marriage between transgender couples of the same natal sex (i.e.: biologic male and male-to-female transgender couples, or biologic female and female-to-male transgender couples) is currently prohibited in Thailand, these couples cannot currently use assisted reproductive technologies.

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Chapter

12

Cancer Screening in Transgender Individuals

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Introduction

Cancer is the leading cause of death in almost every country worldwide, with wide-ranging societal and economic repercussions.¹ Cancer screening, aimed at early detection and prevention, targets a unique window of opportunity that offers the patient the best possible clinical outcome.

Screening refers to the detection of premalignant or early disease in asymptomatic people by means of physical examinations, laboratory and radiological investigations, or other tests.² To ensure a balance between cost-effectiveness and yield, screening studies should target diseases with high prevalence in the population being screened. The greatest impact factor results from early detection and treatment of diseases that would otherwise result in high societal and medical costs with delayed diagnosis.

However, screening tests are a double-edged sword. Screening may result in false-positive results that may subsequently lead to patient anxiety and additional interventions, such as radiation exposure or invasive procedures. Over-screening can lead to overtreatment of diseases that may not otherwise have caused the patient harm. On the other hand, under-screening may also delay disease detection and treatment.³ For this reason, clinical judgement and decision-making are critical in evaluating each individual patient's risk profile.

Transgender individuals represent a unique population when it comes to screening. Their unique lifestyles – such as prolonged use of cross-sex hormone therapy to achieve the desired secondary sexual characteristics, gender reassignment surgery, or specific social behaviors – can influence the incidence of specific cancers. As a result, cancer screening in transgender individuals must take these factors into account when compared to the protocol used in cisgender individuals.

1. Cancer screening theory

Cancer screening in the trans population can be categorized into two types:

1. Cancer screening in transgender individuals with the same protocol as cisgender individuals

Some cancers have equal incidence in cisgender and transgender individuals. It stands to reason therefore that the screening criteria for cisgender and transgender individuals are identical for these diseases, which include colorectal cancers, hepatobiliary cancers, and lung cancer. The screening criteria for these diseases are beyond the scope of this chapter.

2. Cancer screening protocols specific to transgender individuals

In natal females, the use of hormone replacement therapy increases the risk of cancer in sex hormone-responsive organs, such as breast (responding to estrogen and progesterone)⁴ and uterus (responding to estrogen).^{5,6} However, the relative risk to transgender individuals is unclear due to a dearth of studies on this topic. The most-reported studies available are on breast cancer, likely due to its high incidence and the fact that it is likely related to feminizing hormone therapy. Breast cancer incidence among transgender individuals, especially in male-to-female patients, is not as high as in natal females but is higher than the incidence of breast cancer in natal males.^{7,8}

Theoretically, the use of cross-sex hormones in transgender individuals can increase malignancy risk in other organs, examples being cervical and ovarian cancer.⁹ On the other hand, cross-sex hormones may be protective in some instances. It may lower the incidence of prostate cancer in male-to-female transgender women, as evidenced by the fact that prostate cancer in this subset of patients are mostly reported in those who started feminizing hormones after the age of 50.⁹

In addition, gender reassignment surgery can affect the incidence of certain cancers.

- **In male-to-female transgender individuals:** Orchiectomy can prevent testicular cancer and reduce prostate cancer risk. Penectomy decreases the risk of penile cancer.
- **In female-to-male transgender individuals:** Hysterectomy prevents cervical and endometrial cancers. Bilateral oophorectomy prevents ovarian cancer and may reduce the risk of breast cancer. Male chest wall contouring surgery (bilateral total mastectomy, skin-sparing mastectomy, or nipple-sparing mastectomy) significantly reduces – but does not eliminate – breast cancer risk.

Awareness and compliance with routine cancer screening is lower in the transgender population compared to that in cisgender groups.^{10, 11} However, that is not the only reason trans men and women may be at higher risk for certain types of cancers. Socially-related risk factors including substance use, smoking, drinking, and obesity may all increase the risk for certain cancer types. Human papilloma virus (HPV) infection, which is commonly associated with Human Immunodeficiency Virus (HIV), can cause rectal neovaginal cancers in male-to-female transgender individuals (especially in those who underwent penile skin inversion vaginoplasty).¹²⁻¹⁴ HPV also increases the risk of cervical cancer and vaginal cancer in female-to-male transgender individuals.¹⁰

2. Guidelines on cancer screening for transgender individuals in Thailand

Guidelines on cancer screening specific to transgender individuals in Thailand are broken down by cancer type as detailed below:

1. Breast cancer

Two major studies on the risk of breast cancer among transgender individuals were available, one from the Netherlands⁷ and the other from the United States.⁸ Both studies found that male-to-female transgender individuals had a lower incidence of breast cancer compared to natal females⁷ but a 33-fold higher incidence than natal males.⁸ However, both studies had limitations because they were retrospective studies.

Furthermore, other factors that influence breast cancer risk in transgender people include:

- Genetic factors that increase breast cancer risk include BRCA1/BRCA2 gene mutations¹⁵, having first degree relatives (parents or siblings) with breast cancer, Klinefelter's syndrome in male-to-female transgender individuals, and Li-Fraumeni syndrome and Cowden syndrome in female-to-male transgender individuals.
- Duration of estrogen therapy in male-to-female transgender individuals, where the risk of breast cancer is increased in a statistically significant manner with more than five years of usage.
- Chest wall contouring surgery in female-to-male transgender individuals, which reduces the risk of breast cancer. However, absolute risk reduction rate depends on the type of surgery and how much breast tissue is left.

These aforementioned factors are consolidated into guidelines on breast cancer screening for male-to-female and female-to-male transgender individuals in Tables 1 and 2, respectively.

Table 1

Breast cancer screening for male-to-female transgender individuals¹⁵⁻¹⁸
(Recommendation level 2)

Male-to-Female Individuals Undergoing Screening		Practice Guidelines
Duration of Cross-Sex Hormone Use	Inherent Risk Factors*	
Less than 5 years	No	<ul style="list-style-type: none"> No screening required
Less than 5 years	Yes	<ul style="list-style-type: none"> Annual clinical breast examination, starting from the age of 35 Mammography and ultrasound if indicated
5 years or more	No	<ul style="list-style-type: none"> Mammography and ultrasound every two years, starting from the age of 50
5 years or more	Yes	<ul style="list-style-type: none"> Annual clinical breast examination, starting from the age of 30 Mammography and ultrasound every two years, starting from the age of 40

* Inherent risk factors include being a BRCA1/BRCA2 gene mutation carrier, having Klinefelter’s syndrome, or having first degree relatives (parents or siblings) with breast cancer.

Table 2

Breast cancer screening for female-to-male transgender individuals
(Recommendation level 1)

Female-to-Male Individuals Undergoing Screening		Practice Guidelines
Type of Male Chest Wall Contouring Surgery	Inherent Risk Factors	
Reduction mammoplasty or no prior surgery	No	<ul style="list-style-type: none"> Mammography and ultrasound every two years, starting from the age of 40¹⁹
Reduction mammoplasty or no prior surgery	>20% lifetime risk for breast cancer, such as BRCA1/BRCA2 gene mutation carrier, Li Fraumeni syndrome, Cowden syndrome	<ul style="list-style-type: none"> Annual mammogram and ultrasound, starting from the age of 30 Breast MRI, starting from the age of 25-30^{15, 20, 21}
Bilateral mastectomy, including skin-sparing and nipple-sparing mastectomy		<ul style="list-style-type: none"> Annual physical examination (chest wall and axilla)²⁰
Pre-operative workup prior to undergoing chest wall contouring surgery		<ul style="list-style-type: none"> Breast ultrasound for those younger than 30 Breast ultrasound and mammography for those > 30

If a patient is found to harbor the BRCA1 or BRCA2 mutation prior to reduction mammoplasty,^{20, 21} a total mastectomy or nipple-sparing mastectomy is recommended. If the BRCA1 or BRCA2 mutation is only found after reduction mammoplasty, any residual breast tissue should be removed. If the patient refuses additional surgery, a breast MRI should be performed annually. (Recommendation level 1)

2. Cervical cancer

Female-to-male transgender individuals taking testosterone do not have an increased risk of cervical cancer as compared to natal females.³ Patients in this subpopulation who have not had a hysterectomy or underwent a subtotal hysterectomy (in which the cervix was not removed) should undergo the same screening for cervical cancer as natal females.

Recommendation: Pelvic examination every three to five years, starting from the age of 30²²
(Recommendation level 1)

3. Ovarian cancer

The risk of ovarian cancer may be higher in trans men but there is currently insufficient evidence of such.^{3, 23}

Recommendation: Low-risk individuals do not need to be screened.²⁴ (Recommendation level 2)

4. Endometrial cancer

The risk of endometrial cancer may be higher in trans men but there is currently insufficient evidence of such.^{3, 23}

Recommendation: Low-risk individuals do not need to be screened.²⁵ (Recommendation level 2)

5. Prostate cancer

Prostate cancer is rarely found in male-to-female transgender individuals due to estrogen cross-sex hormone usage. Only four cases have been reported in the literature. Most cases were found in those who started cross-sex hormone treatment after the age of 50, therefore it is entirely possible that these patients actually had prostate cancer before initiating estrogen therapy.²⁶ Theoretically, both orchiectomy and estrogen hormonal therapy can cause prostate

Recommendation: Male-to-female transgender individuals should have a serum PSA level drawn every 1-4 years (with the upper limit of normal PSA value lowered to 1 ng/mL). They should have digital rectal examination or prostate examination during a pelvic examination (for those who underwent a vaginoplasty). The screening tests should start at the age of 40. (Recommendation level 2)

gland atrophy and reduce the risk of prostate cancer, especially if these interventions were undertaken prior to the age of 40. However, prostate cancer screening in male-to-female transgender individuals is still recommended using the same protocol as natal males. BRCA1 / BRCA2 gene mutation carriers or those started on cross-sex hormones after the age of 50 should be diligently screened because they are at higher risk than the general population.⁹ When present, prostate cancer in male-to-female transgender individuals receiving cross-sex hormone treatment may be more aggressive than that present in natal males as these tumor cells subsist even in a condition of high estrogen and low testosterone concentrations. Trans women who underwent orchiectomy were found to have a lower prostate-specific antigen (PSA) level than natal males and possess a smaller-sized prostate gland. For this reason, the cut-off level for prostate cancer PSA screening may have to be decreased from 4 ng/mL to 1 ng/mL in this population of patients.

6. Other cancers

- **Anal and neovaginal cancers** as it relates those who underwent penile skin inversion in their gender reassignment surgery most commonly occurs 20 or more years post-operatively.
- **Breast implant-associated anaplastic large cell lymphoma (BIA-ALCL)**²⁹ can be found in patients who underwent breast augmentation surgery with textured-surface silicone implants.²⁹ It manifests long after the index surgery.

Recommendation: Trans women should have an anal and pelvic examination annually.
(Recommendation level 2)

Recommendation: Patients who had textured silicone breast implants placed should be advised to see a physician if there is breast swelling, pain, or a palpable mass.
(Recommendation level 2)

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Chapter

13

Long-Term Effects of Gender-Affirming Hormone Treatment in Transgender People

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Introduction

There is limited information or research on the long-term effects of gender-affirming hormone treatment on older transgender people. Most information was obtained from the medical professionals' clinical experience or case reports. Side effects are incomparable to those in hormone replacement therapy for patients with hypogonadism. That is because gender-affirming hormones trigger physical transition in those who have never received hormonal therapy before. Importantly, the hormone dosage in such therapy is higher than that in hypogonadism cases. That being said, side-effects of long-term gender-affirming hormone treatment do not differ from those in biologic women and men.

1. Guideline on the follow-up of gender-affirming hormone treatment

Below is a guideline for follow-ups in transgender people using gender-affirming hormones:¹

1. Monitor the treatment results once or twice a year by evaluating signs and symptoms of hormone exposure, including taking information on smoking, depression, weight changes, and blood pressure. (Recommendation level 2)
2. Periodically evaluate laboratory results, such as complete blood count, electrolytes, plasma glucose, HbA1c lipid profiles, and liver and renal function. (Recommendation level 2)
3. Periodically test sex hormone levels, especially during hormonal dosage adjustment. (Recommendation level 2)
4. Counsel transgender individuals on avoidance of risk factors, such as abstaining from smoking and controlling weight. (Recommendation level 1)
5. Use the smallest dose of gender-affirming hormones. Male-to-female transgender individuals should choose transdermal estrogen, while female-to-male transgender individuals should use testosterone gel or long-acting injectable testosterone. (Recommendation level 1)

2. Effects of gender-affirming hormone treatment on body systems

Effects of gender-affirming hormone treatment on body systems can be divided into the following topics:

1. Cancer and tumors

Data from male and female patients with hypogonadism revealed that hormone replacement therapy might be associated with an increased incidence of hormone dependent tumors, such as breast cancer, endometrial cancer, and prostate cancer. As a result, long-term usage of gender-affirming hormones at a higher dose than that typical for hormone replacement therapy must be done with caution.²

• Male-to-female transgender individuals

There is a lower incidence of breast cancer found in male-to-female transgender individuals compared to biologic women, but this incidence is higher than in biologic men. Prostate cancer found in male-to-female transgender individuals occurs less frequently than in biologic men.³ Other cancers, such as testicular cancer, has the same incidence as in cisgender people.

The incidence of prolactinoma and meningioma is increased among those taking estrogen and anti-androgens, such as cyproterone acetate, but the cause remains unknown.^{1,4}

Recommendations

- Perform the same breast examination as offered to biological women. This is especially important in those who have been on estrogen for more than 30 years, male-to-female individuals over the age of 50, or those at risk for developing breast cancer, such as those with a positive family history of cancer.^{3,4} (Recommendation level 2)
- Perform a prostate examination and monitor the level of prostatic surface antigen (PSA) following the same recommendations for biological men. Note that a PSA level greater than 1 ng/mL indicates an abnormality, whereas the level for biological men is 4 ng/mL.^{5,6} (Recommendation level 2)
- While the patients are on estrogen, monitor prolactin levels periodically, and consider imaging the patient if the prolactin level increases.^{1,5} (Recommendation level 2)

- **Female-to-male transgender individuals**

Long term studies revealed that the risk of uterine, vaginal, ovarian, and cervical cancer does not increase. Rather, these diseases are associated with known risk factors, including smoking, drinking, sexually transmitted diseases, and failure partake in cancer screening.

Recommendations

- Follow the same screening guidelines as in the cisgender population. (Recommendation level 2)
- In female-to-male transgender individuals with no prior mastectomy, the same guidelines for breast cancer screening as biological women should be used (annual mammogram starting at the age of 40) (Recommendation level 2).
- In female-to-male transgender individuals with a prior mastectomy, an annual physical examination should be undertaken.^{4,5} (Recommendation level 2)
- Perform an annual pelvic examination. Consider an additional endometrium ultrasound examination in those aged over 40 or those with abnormal vaginal bleeding.²⁻⁵ (Recommendation level 2)

2. Cardiovascular and cerebrovascular systems

It is generally known that biologic men have a higher cardiovascular mortality rate than biologic women. Furthermore, the studies have shown that hormone replacement therapy in postmenopausal women resulted in a higher cardiovascular mortality rate.

- **Male-to-female transgender individuals**

The incidence of cardiovascular disease in male-to-female transgender individuals did not differ from that of biologic men. Some reports found that the incidence is higher than in biologic women. It was reported that the incidence of cerebrovascular disease in this group increased compared with that in biologic women. This is especially true for those taking high doses of hormones such as Ethinyl estradiol or those taking progesterone combined with anti-androgens.

Recommendations

Use the lowest dose of transdermal estrogen. Do not use progesterone or anti-androgens. (Recommendation level 2)

- **Female-to-male transgender individuals**

The risk of cardiovascular and cerebrovascular diseases is not higher than that of biologic men and women. However, some studies found that the incidence of cardiovascular disease in this group was higher than in biologic women,⁷ which may result from lipid profile changes approaching that typical for

Recommendations

Avoid risk factors, especially smoking. ([Recommendation level 1](#))

3. Metabolism

Below are the effects of gender-affirming hormones on metabolism:

- **Change in cholesterol level**

Testosterone reduces HDL (high-density lipoprotein) levels but increases triglyceride and LDL (low-density lipoprotein) levels. Estrogen increases triglyceride and HDL levels but lowers LDL levels.^{3,7}

- **Diabetes**

Testosterone does not increase insulin resistance but causes ovarian changes similar to those found in polycystic ovarian syndrome (PCOS), while estrogen increases insulin resistance. It does not directly increase the incidence of diabetes, however.

- **Hypertension**

Estrogen causes weight gain and bloating and potentially increases blood pressure.

4. Venous thromboembolism and increasing hematocrit

Venous thromboembolism is known to be associated with female sex hormone exposure. This condition is often found in those who have received high doses of hormones for an extended period. The male sex hormone is associated with an increased hematocrit.

- **Male-to-female transgender individuals**

The incidence of venous thromboembolism, especially in those taking transdermal hormones, does not increase. Most patients who develop venous thromboembolism have prothrombotic risk factors, such as a genetic predisposition, age over 50, obesity (BMI > 27 kg/m²), and smoking.

Recommendations

Use transdermal estrogen and address risk factors that may cause that condition. (Recommendation level 2)

- **Female-to-male transgender individuals**

There is no evidence that testosterone causes a higher risk of venous thromboembolism. The hematocrit may increase but there is no clinically significant effect.³

Recommendations

- Select a hormone formulation with a relatively stable blood level such as transdermal or long-acting injectable formulations. Avoid risk factors associated with vascular disease, such as smoking. (Recommendation level 2)
- Test hematocrit level once or twice a year. (Recommendation level 2)

5. Effects on bones

Male sex hormones play a crucial role in radial bone expansion, while female sex hormones strengthen the endosteal bone apposition. As a result, bones in males are generally thicker and larger than those in females.⁸

Gender-affirming hormone treatment can be divided into two stages:

1. Puberty suppression with gonadotropin-releasing hormone (GnRH) agonist
2. Gender-affirming hormone administration. Additionally, gender reassignment surgeries like orchiectomy and oophorectomy decrease the inherent sex hormone production in transgender people and affect their bone development.¹

- **Male-to-female transgender individuals**

Studies have shown that male-to-female transgender individuals have a lower bone mineral density (BMD) than cisgender individuals even before gender-affirming hormone treatment.⁸ The cause remains unknown. This may be because of fewer outdoor activities in this population, resulting in lower vitamin D levels.

Risk of bone fractures does not increase in the short and long term in male-to-female transgender individuals on feminizing hormone therapy. Their bones are more similar to those in biologic women than those in biologic men. Therefore, hormonal therapy cessation, especially in those with a prior orchiectomy, will cause a decreased bone density.

- **Female-to-male transgender individuals**

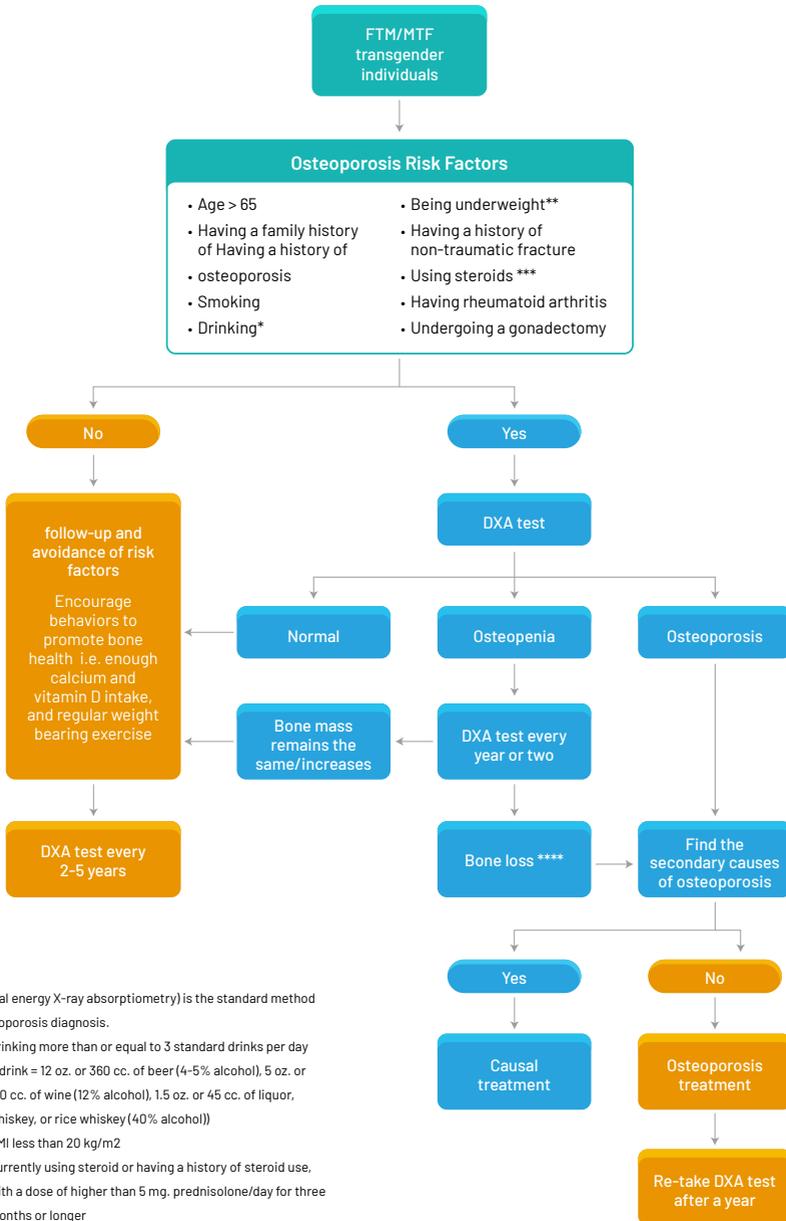
BMD in female-to-male transgender individuals before taking testosterone does not differ from that of biologic women. After testosterone treatment, the bones will become larger, thicker, and more similar to those in biologic men. Testosterone treatment can prevent bone mass decline in the short and long terms for those who have undergone an oophorectomy. It does not affect the incidence of bone fractures.

Recommendations

- Use the same criteria for BMD monitoring as those for biologic women.^{3,8} (Recommendation level 2)
- Adequate intake of calcium and vitamin D. The vitamin D level should be greater than 30 ng/mL. Daily intake of vitamin D should be 800–1,000 IU per day. Daily intake of calcium should be at least 1,000 mg per day. (Recommendation level 1)
- Avoidance of risk factors damaging to bone health, such as smoking, drinking, being underweight, and using steroids. Additionally, adequate weight-bearing activities should be performed. (Recommendation level 1)
- Both male-to-female and female-to-male transgender individuals can use gender-affirming hormones in the long term; there is no need to stop it above the age of 50. (Recommendation level 2)
- In female-to-male transgender individuals, besides testosterone level, luteinizing hormone (LH) levels can be monitored to determine the optimum testosterone level.¹⁸ (Recommendation level 2)
- The same criteria for the diagnosis and monitoring of osteoporosis should be applied as that in the general population (Chart 1). BMD testing should be done at the age of 65 if there are no concomitant risk factors. However, male-to-female transgender individuals with prior gender reassignment surgery or prior orchiectomy should have a BMD test immediately after the discontinuation of feminizing hormone treatment or in case of poor compliance with hormone therapy. (Recommendation level 2)

Chart 1

Bone assessment guidelines for transgender people⁹



Note:

DXA (Dual energy X-ray absorptiometry) is the standard method for osteoporosis diagnosis.

* Drinking more than or equal to 3 standard drinks per day (1 drink = 12 oz. or 360 cc. of beer (4-5% alcohol), 5 oz. or 150 cc. of wine (12% alcohol), 1.5 oz. or 45 cc. of liquor, whiskey, or rice whiskey (40% alcohol))

** BMI less than 20 kg/m²

*** Currently using steroid or having a history of steroid use, with a dose of higher than 5 mg. prednisolone/day for three months or longer

**** Lower BMD by 5 percent a year or more (based on the least significant change calculation)

Source: Adapted from Stevenson MO, Tangpricha V. Osteoporosis and Bone Health in Transgender Persons. Endocrinol Metab Clin North Am. 2019;48(2):421-7.

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Chapter

14

Substance Use in Transgender People

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1. Epidemiology of substance use in transgender people

In the transgender-specific literature, only a small amount of data related to smoking, alcohol use, and illegal substance use (including marijuana, methamphetamine, ketamine, ecstasy, poppers, and inhalants) is available compared to that of LGB (Gay, Lesbian, and Bisexual) individuals. However, there is an observation that the transgender population may exhibit a higher rate of substance use than the heterosexual population. This was reported in meta-analysis research, which collected data from LGB individuals. The study found that compared to heterosexual individuals, LGB individuals have 1.5-2 times greater risk of having alcohol and illegal substance use problems.¹ A survey in the United States reported that 26.7% of male-to-female transgender individuals used illicit substances, 20.2% used marijuana, and 13.7% used alcohol and other substances. This rate was higher than that of the heterosexual population.^{2,3}

In Thailand, surveys were conducted on transgender individuals living in different locations. Guadamuz et al.⁴ observed the behavior of a group of 474 transgender people in Bangkok, Chiang Mai, and Phuket in 2005. The study revealed that the sample group's average age was 24. In the past three months, 81% consumed alcohol, and 42.6% misused hypnotics. Another study conducted by Suwat et al.⁵ observed the behavior of 140 transgender people in Chiang Mai province from 2008 to 2009. It was found that 85.3% consumed alcohol, 13.9% were heavy alcohol users (drinking more than seven times per week), 10% used methamphetamine, 0.7% used marijuana, and 0.7% used heroin. Additionally, Nemoto et al.⁶ conducted a study in 112 male-to-female transgender individuals who lived in Bangkok and engaged in sex work (average age of 25). The study found that 99.1% of the sample group used alcohol within the past year, 32.1% used marijuana, 35.7% used ecstasy, 19.6% used ketamine, and 9.8% used amphetamine. Furthermore, the study found that in the past six months, 97.3% of the sample group had sex with their clients under the influence of alcohol, 98.3% had sex with their non-client partners under the influence of alcohol, 43.2% had sex with their clients under the influence of an illegal substance, and 23.3% had sex with their partners under the influence of an illegal substance. These factors could contribute to a higher risk of HIV, hepatitis, and other sexually transmitted diseases. The details related to substance use in transgender people are shown in table 1.

Table 1 Substance use in transgender people in Thailand

Substance	Mechanism of action, symptoms, and possible abnormalities that may result from usage	Addiction treatment
Nicotine (Cigarette)	Stimulates the brain's nicotinic acetylcholine receptors, resulting in alertness and better concentration, memory, and mood. It can easily lead to addiction. Many toxins in cigarettes can contribute to various cancers, cardiovascular diseases, and stroke.	Medication for treatment include varenicline, bupropion, and nicotine replacement therapy, along with psychosocial therapy.
Alcohol (Whiskey, beer, wine)	Acts as a sedative and increases GABA function, thereby decreasing neural input. Additionally, alcohol produces a sense of relaxation, decreases self-restraint, and causes irregular movement and drowsiness. If used in a high dose, it could lead to respiratory suppression and death. Regular alcohol consumption could contribute to addiction, withdrawal symptoms, various cancers, and other hepatic diseases, such as hepatitis and cirrhosis.	Benzodiazepine drugs are used to reduce alcohol withdrawal symptoms. Topiramate baclofen and disulfiram are used to reduce alcohol craving (under physician supervision) together with psychosocial therapy.
Heroin	Acts as a sedative and interacts with opioid receptors, causing a sense of dizziness, pleasure, and addiction. It also reduces pain and increases drowsiness. If used in high doses, it could suppress respiration and result in death. If used as an injection, it can contribute to a higher risk of HIV, hepatitis B, and hepatitis C.	Medication used for withdrawal symptoms and prevention of relapse include methadone and psychosocial therapy.
Amphetamine/ Methamphetamine	Acts as a stimulant and increases dopamine levels in the brain, causing alertness, a sense of happiness, and eventually addiction. Psychologically, it may cause anxiety, paranoia, or hallucinations. For some users, this substance may be used for sexual arousal. If administered as an injection, it could contribute to a higher risk of HIV, hepatitis B, and hepatitis C.	Currently, there is no medication for addiction treatment. Management may include psychosocial therapy, such as motivational interviewing, cognitive and behavioral psychotherapy (CBT), contingency management, environment change, or therapeutic community.
Ecstasy	Acts as a stimulant and hallucinogen that increases the function of dopamine and serotonin, resulting in alertness, a sense of pleasure, and abnormal sensations. It may also result in anxiety, paranoia, and visual or auditory hallucinations.	

Table 1 Substance use in transgender people in Thailand

Substance	Mechanism of action, symptoms, and possible abnormalities that may result from usage	Addiction treatment
Ketamine	Interacts with NMDA receptors, resulting in a dissociative state, a sense of happiness, double vision, change of internal feelings, change in visual perception, and addiction. Possible side effects include hepatitis and cystitis.	Currently, there is no medication for addiction treatment. Management may include psychosocial therapy, such as motivational interviewing, cognitive and behavioral psychotherapy (CBT), contingency management, environment change, or therapeutic community.
Popper	A nitrite inhalant that acts as a vasodilator, resulting in a warm sensation and flushed face. It may increase sexual arousal. If used for a long time, it can cause cardiovascular problems.	
Marijuana	A cannabinoid substance that interacts with cannabinoid receptors in the brain, causing a sense of pleasure and decreasing anxiety, results in slower actions and addiction. It may also contribute to cognitive abnormalities or psychological disorders, such as hallucination.	
Hypnotics	Acts as a sedative like alcohol, causing drowsiness and possibly dizziness and impaired decision-making. If used with other sedatives, it may contribute to a higher risk of respiratory suppression and death.	Gradual dosage reduction until treatment dosage. Sedatives may be given when treatment is initiated.

Several factors could account for the higher prevalence of alcohol and illegal substance use in transgender individuals. For example, they may have used these substances to self-medicate, such as to alleviate stress, anxiety, or depression that may occur in their daily lives or by gender discrimination. These substances may also be used to help socialize with others in the transgender community. On the other hand, risks of substance use may not be completely understood by the user at the time, such as addiction (losing the ability to control substance usage), drug resistance (a higher dose is needed to elicit the same action), and withdrawal symptoms after quitting. Furthermore, these substances may cause work, study, and relationship problems, including legal issues.

2. Effects of substance use on gender reassignment surgery

Substance use is one factor that can hinder gender reassignment surgery. That is because, before gender reassignment surgery, the patient must undergo a psychological evaluation, which includes the evaluation of alcohol and substance use. If the patient uses substances, surgery plans could be put on hold because the patient may have withdrawal symptoms or substance craving during hospitalization.

Physician generally recommends that patients should be treated and control their substance addiction before undergoing surgery.⁷ Moreover, some substances, such as toxins in cigarette, may delay postoperative recovery.⁸ The use of stimulants, such as methamphetamines, could contribute to vascular problems and affect wound healing. Additionally, a history of substance use could become a stigma that acts as a barrier to medical treatment because patients may be worried about legal ramifications or being discriminated against by medical professionals.

3. Initial Screening

Two methods can be used for substance use screening. The first method is used when healthcare providers would like to screen for substances frequently detected in individuals using only a few substances. They may use separate evaluation forms for each type of substance, such as the Fagerstrom Test for Nicotine Dependence (FTND) for nicotine addiction or the Alcohol Use Disorder Identification Test (AUDIT) for evaluating the risk of alcohol use. The second method is used when healthcare providers would like to globally screen for substance use. Epidemiological studies have shown that transgender individuals have a higher chance of being on multiple substances at once. Therefore, the Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) is the most appropriate for multiple substance screening. Thus, it is more suitable for the transgender population.

ASSIST was developed by the WHO (World Health Organization) with committee members from many different countries. It aims to serve as a screening tool that is easy to use, is not time intensive (requires only 5- to 10-minutes to complete) and can be readily used in primary healthcare facilities to evaluate risk of substance and effect. Moreover, ASSIST was developed for use in various cultural contexts. It can screen for many types of substances, such as tobacco (cigarettes, cigar, pipes), alcoholic beverages, marijuana, cocaine, amphetamine stimulants (methamphetamine and amphetamine), sedatives or hypnotics, hallucinators, inhalants (such as glue, volatile solvents, and poppers), opioids (heroin, opium, tramadol) and other substances. Its screening results can be used as a risk indicator for substance use and as a counseling tool for patients. After risk assessment, healthcare providers can then decide on course of treatment, which may span from short-term therapy to referral to specialist for further evaluation and treatment.⁹

ASSIST allows healthcare facilities to learn about the patient's history of substance use and substance use behaviors in the past three months. Additionally, this form can also highlight problems arising from substance use during different periods, such as toxicity, intoxication, addiction, problems in relationships and life, and behaviors related to intravenous substances. ASSIST, translated into Thai and checked for consistency for use in the field, consists of eight questions, as shown in table 2.

Table 2 Examples of questions in ASSIST⁹

No.	Objective	Sample Question
1	To ask the patient about the types of substances used in the past	In your life, have you ever used the following substances? (non-medical use only)
2	To ask the patient about the frequency of recent substance use	In the past three months, how often have you used?
3	To ask the patient about the frequency of recent cravings or intense cravings for the substance	In the past three months, how often have you had a strong urge or desire to use?
4	To ask the patient about the frequency of recent problems in different aspects of life caused by substance use	In the past three months, how often has use led to health, family, social, legal, and financial problems?
5	To ask about the most recent impact of substance use on the patient's job or responsibilities	In the past three months, how often were you not able to do what was expected of you, because of your use of?
6	To ask the patient about other people who may have noticed that the patient's substance use may cause problems and if those people have expressed concern.	Has a friend, relative, or anyone else ever expressed concern (or worry) or warned you about your use of?
7	To ask the patient about their failed attempts to reduce or quit using the substance	Have you ever tried and failed to stop or cut down the use of?
8	To ask the patient about their recent or historical use of injectable substances, which could impose harm	Have you ever used any drug by injection? (non-medical use only)

The scores from all questions are added up and categorized into three levels: low, medium, and high risk of substance use. The score range of alcohol use differs from that of other substances. If the patients are low risk, healthcare providers can give information on substances without providing therapy. If the patients have medium risk, healthcare providers will choose a brief intervention. If patients are high risk or have recently used injectable drugs, they will be referred to a specialist for further evaluation and intense therapy. The place patients are referred to must have a psychiatrist or psychologist who can treat substance abuse patients. The scores and guidelines for patient care can be found in table 3 (download the full screening form from reference number 9).

Table 3 Substance use in transgender people in Thailand

Substance Type	Score		
	Low Risk	Medium Risk	High Risk*
Tobacco	0-3	4-26	27+
Alcoholic Beverages	0-10	11-26	27+
Marijuana	0-3	4-26	27+
Cocaine	0-3	4-26	27+
Amphetamine Stimulants	0-3	4-26	27+
Inhalants	0-3	4-26	27+
Sedatives or Narcotics	0-3	4-26	27+
Hallucinogens	0-3	4-26	27+
Opioids	0-3	4-26	27+
Others (Please specify)	0-3	4-26	27+
Post-Evaluation Patient Care	Provide Knowledge	Brief Intervention	Transfer to Specialist

* Patients who use an intravenous substance are categorized as high risk. They should also be referred to a specialist and tested for blood-borne viruses, such as HIV, Hepatitis B, and Hepatitis C.

4. Brief intervention¹⁰

Brief intervention (BI) is counseling aimed at risk reduction in smoking, alcohol use, and substance use. BI typically takes 3–15 minutes after patients complete ASSIST. It is performed only in those with medium or high risk. BI has been proven to reduce the frequency of alcohol drinking¹¹ and the use of marijuana^{12, 13}, opioids¹⁴, and amphetamine stimulants.¹⁵ The concept of BI is shown in table 4. ([Download the full guideline from reference number 10](#)).

Table 4 The Procedure, objective, and sample sentences used in brief intervention (BI)¹⁰

Procedure	Objective	Sample Sentence
1. Asking	To ask the patient about their willingness to receive their scores to increase their sense of control and decrease resistance	"Would you like to know your ASSIST score?"
2. Feedback	To provide a specific score for each substance by using ASSIST report to counsel the patient on possible risks of substance use	"This is your risk score for each substance. Your use is at risk level, which may cause symptoms such as now and in the future."
3. Advice	To provide impartial suggestions on harm reduction or risks of substance use	"The best way to reduce harm/risk is to reduce or quit use."
4. Responsibility	To let the patient take full responsibility for their decisions.	"It depends on your decision. I am only providing you with information."
5. Concerned I	To ask about their concerns after receiving feedback	"How do you feel now? Are you worried?"
6. Good things	To ask about the perceived benefits of substance use	"What are the benefits of use?"

Table 4**The Procedure, objective, and sample sentences used in brief intervention (BI)⁰**

Procedure	Objective	Sample Sentence
7. Less good things	To ask the patient about their willingness to receive their scores to increase their sense of control and decrease resistance	"Would you like to know your ASSIST score?"
8. Summarize and reflect	To provide a specific score for each substance by using ASSIST report to counsel the patient on possible risks of substance use	"This is your risk score for each substance. Your use is at risk level, which may cause symptoms such as now and in the future."
9. Concerned II	To provide impartial suggestions on harm reduction or risks of substance use	"The best way to reduce harm/risk is to reduce or quit use."
10. Take-home materials	To let the patient take full responsibility for their decisions.	"It depends on your decision. I am only providing you with information."

While using ASSIST and conducting BI with the interviewees, the interviewers should be as unbiased as possible. They should ask further questions to better understand the patient's history of substance use and their problems and concerns. They should not express bias towards any end, such as repeatedly convincing the interviewee to quit their substance use or criticizing the interviewees who still use, cannot quit, or reduce their substance use. They should not judge what is right or wrong. Instead, the interviewers should demonstrate empathy with the interviewees for the problems they are facing. Keeping strict confidentiality, they should inform the interviewees that the information obtained from this evaluation will be kept confidential so that the interviewees would feel more comfortable answering questions truthfully.

Based on the information given above, the guidelines on initial screening and evaluation of substance use in transgender people for public health facilities could be summarized as follows: **(Recommendation level 2)**

1. Conduct substance use screening and provide information on smoking, drinking, and illegal substance use for the high-risk transgender individuals receiving medical services, such as those living with human immunodeficiency virus (HIV) or those being tested for sexually transmitted infections (STIs).
2. Conduct substance use screening and provide information on smoking, drinking, and illegal substance use for high-risk transgender people in communities, such as those engaging in sex work or work night jobs.
3. Use the Thai version of ASSIST9 to screen for those smoking, drinking, and using illegal substances. Provide brief intervention in cases where the individual presents with medium-level risk or higher. Referral to a specialist should be completed for high risk patients or for those who use intravenous substances.

5. Harm Reduction

Harm reduction measures refers to policies, programs, or treatments that aim to reduce harmful health, economic, or social impact on the individual, community, or society caused by substance use.¹⁶ This was first implemented between 1960 and 1970 to reduce the spread of hepatitis and HIV among intravenous heroin users. During the initial stage, measures included the Needle-Syringe Program (NSP) and Methadone Maintenance Therapy (MMT). Studies have shown that harm reduction measures could reduce the rate of HIV and hepatitis B transmission, prevent overdose, improve access to care, and increase treatment adherence.¹⁶

The objective of harm reduction is to reduce harm from substance use rather than aim for abstinence. This measure focuses on respecting the user's individuality, respecting their values as a human, emphasizing the harm of substance use, and having concrete goals.¹⁶

The harm-reduction measure should be integrated as a component of substance use treatment programs, although some measures are used as alternatives for users who are not ready to quit. This is to provide treatment flexibility by placing primary emphasis on the user's readiness.

6. The significance of substance use problems and harm reduction measures for transgender people

The Substance Abuse and Mental Health Services Administration (SAMHSA)¹⁷ reported in 2014 that Substance Use Disorder (SUD) was present in 8.4% of the heterosexual population, compared to 25-28% in the transgender population. SAMHSA reported that substance use increases HIV transmission through the sharing of needles and risky sexual behaviors.

Another U.S. study found that male-to-female transgender individuals had a higher prevalence of HIV than female-to-male transgender individuals.¹⁸ This finding may demonstrate a difference between male-to-female and female-to-male transgender individuals. Therefore, policies to prevent or reduce harm from substance use should consider this factor.⁵

This chapter aims to demonstrate how harm reduction measures could be implemented in the transgender population. These measures are divided into suggestions for service providers, general harm reduction measures, and harm reduction measures for intravenous substance users. This chapter also examines the current status of harm reduction in Thailand.

1. Suggestions for service providers

In designing specific harm reduction measures, various factors, including the type of substance used, route of administration, and pattern of use should be taken into consideration. The process could be conducted as follows: **(Recommendation level 2)**

- Realize and understand the harm of all substances used by the patient. **(Table 1)**
- Evaluate harm and risks that may occur to substance users. Analyze the drug use pattern with the concept of 6Ws, consisting of When, Where, Why, With/From, Whom, and What happened, because the amount of substance use and different administration routes pose different impacts on health. For example, intravenous drug administration could cause an open wound, blood vessels injury, and sexually transmitted diseases, especially when needles are shared.
- Evaluate and counsel users regarding how substance use behaviors may harm them. Healthcare providers should provide information on negative impacts of substance use while motivating patients to change their behavior.

- Health care provider and substance user should collaborate in figuring out ways to reduce harm and identify problems and obstacles that may happen.
- Encourage substance users to set their own goals related to substance use, identify associated harmful behaviors, and plan methods to achieve their goals.
- Track the substance user's behavior, promote positive change, and provide guidance in dealing with difficulties in behavioral change.

2. General harm reduction strategies¹⁹

• Education strategies

The first step in harm reduction strategies is to provide information on the effects of the substance, discuss potential risks of substance use, and promote risk reduction behaviors. The education given should consist of information about the health and psychosocial risks secondary to substance use, overdose, infectious diseases, and psychological disorders. Education should be provided together with other treatment methods, such as brief intervention, either privately or in groups. It may be conducted in healthcare facilities or other locations.

A study found that 43.2% of transgender sex workers in Thailand had sex under the influence of substances.⁶ Therefore, the education should emphasize safe sexual behaviors, methods to reduce the risk of STIs, and possible risks of substance intoxication. Those able to access treatment may be educated in healthcare facilities, while those without access may receive outreach services in their communities or workplaces.

• Brief interventions and counselling

Brief interventions focus on changing risky behaviors and may incorporate cognitive-behavioral therapy (CBT) and motivational interviews to motivate patients' behavioral change. (The concept of brief interventions is in table 3.)

- **Intervention to reduce injury and violence**

The use of certain substances, such as alcohol, is correlated with injury, violence, and social problems. Research revealed that policy measures, such as controlling alcohol sales and strictly enforcing drunk driving laws, can effectively reduce harm of alcohol consumption.

- **Availability of measures to prevent acute consequences of stimulant use**

There are much fewer studies related to stimulant harm reduction measures than those of opioids. Stimulant harm reduction measures usually focus on providing physical and mental care in emergency conditions (violence, self-injury and non-self-injury, suicide, and homicide). For example, Indonesia had developed an amphetamine harm reduction program that operated proactively to provide substance users with safe equipment and prevent health-related harm.²⁰

Currently, there is no specific stimulant harm reduction program for transgender people. However, a US study has investigated the feasibility of a mobile harm reduction service in men who have sex with men (MSM) who cannot access services during regular operating hours.²¹ The mobile nighttime services included the needle and syringe programs (NSP), education and consultation, oral HIV testing, and urine testing to screen for STIs.

3. Harm reduction measures for intravenous substance users²²

Harm reduction measures for intravenous substance users can be divided into eight components as follows:

1. Needle and Syringe Program (NSP)

The NSP measure could effectively reduce the incidence of HIV and other blood-borne infections²³ by reducing sharing needle behavior between substance users. A good NSP should also provide information and better access to services, including addiction treatment, physical health services, and legal and social services. Besides needles and syringes, the NSP offers the following services:

- » Educating people about the infectious risks of intravenous substance use
- » Providing information and recommendations on safe substance injection
- » Providing sterile needles and syringes
- » Educating people about the safe disposal of used needles and syringes

The NSP service is usually provided for opioids users. However, transgender people are more likely to use methamphetamine. Intravenous methamphetamine use differs from intravenous opioids because users inject methamphetamines more often, leading to a higher risk of disease transmission. As a result, more needles are needed. Additionally, NSP should include services for those who also concomitantly use gender-affirming hormones, which could be administered intramuscularly. Therefore, the NSP must cover both substance and hormonal injections.

2. Opioid Substitution Therapy (OST)

A study found that Opioid Substitution Therapy (OST), including methadone or buprenorphine maintenance therapy, could reduce heroin use. Furthermore, OST could reduce risks of HIV and hepatitis C, increase adherence to antiretroviral therapy, and reduce risks of opioid overdose in intravenous substance users.

In Thailand, methadone maintenance therapy is available for opioid users who cannot quit completely. However, opioids are less popular in the transgender population than other substances. Therefore, no study has been conducted on the efficiency of harm reduction in this sub-group. Healthcare providers should recommend OST for transgender opioid users who cannot quit and have indications for OST. However, both patient and provider should come to a decision together regarding OST use.

3. Overdose treatment

Naloxone is a drug used for opioid overdose treatment. Currently, the World Health Organization (WHO) suggests that those at risk for opioid overdose should have access to naloxone and be trained to administer naloxone. Nevertheless, in Thailand, naloxone could only be prescribed by medical professionals. This practice differs from the regulations of countries in Europe and North America, which have already implemented the take-home naloxone program.²⁴

Since the take-home naloxone program is still unavailable in Thailand, measures that can be implemented instead at this time is peer-to-peer education on basic first-aid and resuscitation. If overdose is suspected, friends and relatives are encouraged to immediately call emergency medical service.

4. HIV testing and counselling

HIV testing and counseling are considered the first steps in HIV treatment. Thus, in some cases, outreach screening needs to be implemented in communities because not all substance users can access healthcare facilities. Additionally, the HIV screening services should be linked with treatment programs for those found to be HIV positive. Healthcare providers should also counsel such patients on the prevention of HIV transmission.

5. Emphasizing non-injection routes of administration over injection routes

This strategy aims to reduce the adoption of the intravenous route in substance users who have never injected and to reduce intravenous substance use among users who are currently practicing this way. Healthcare providers should recommend other, safer routes of administration.

6. Prevention and treatment of sexually transmitted diseases

STIs can increase the risk of HIV transmission. Related harm reduction measures include using condoms, providing education about safe sex, screening for STIs, and providing treatment for afflicted patients. To ensure treatment adherence, healthcare facilities providing STI treatment should be the same place where substance users receive substance-related services.

7. Wound care and vein maintenance

Recommendations regarding the importance of sterility, care, and selection of safe injection sites should be part of patient education. Intra-arterial injections should be avoided. The frequency of injections should be minimized, and selection of types of substances with a safer profile emphasized. In addition to substance use, patients may simultaneously be on injectable hormones. Healthcare providers should be aware of this fact and include this in their history-taking, along with recommendations for usage of drugs or substances that meet medical standards.

8. Prevention, vaccination, diagnosis and treatment for viral hepatitis

The WHO recommends that intravenous drug users receive hepatitis B vaccination and encouraged the vaccinated users to complete the full dose series.²²

4. Status of harm reduction policies in Thailand

According to a report of the Joint United Nations Program on HIV/AIDS (UNAIDS)²⁵ on the statistics of harm reduction service access in 2014, Thailand had 71,000 intravenous substance users, 21% of whom had HIV. A total of 5,956 users received opioid substitution therapy. An average of 14 sterile needles per person per year was provided. 95% of substance users used sterile needles in their most recent injection. 51% of all substance users used a condom during their most recent sexual activity. When these numbers are compared to those obtained from developed countries, such as France, France had a higher number of intravenous substance users than Thailand (145,000 people). Its people also had higher access to harm reduction measures than those in Thailand. There were more proactive measures to increase access to health services and a take-home naloxone program to prevent the consequences of substance overdose in France. This information indicates that Thailand's harm reduction measures should be further improved to allow patient-access at a level approaching that in developed countries. However, there is currently no Thai-based study evaluating access to harm reduction measures among the transgender population.

Based on the information above, recommendations for public healthcare service organizations related to harm reduction measures in transgender people could be summarized as follows: [\(Recommendation level 2\)](#).

1. Harm reduction measures should be provided for transgender people unable to achieve abstinence.
2. The pattern of substance use and possible harms of substance use should be evaluated for all patients to provide specific strategies to reduce specific harms.
3. Service providers should not neglect substance users who are not committed to achieving abstinence. Instead, they should provide flexibility in treatment by motivating users to quit their substance use in conjunction with harm reduction measures.

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Chapter

15

Health Service Implementation for Transgender People

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Introduction

In relation to chapter 1, this chapter will focus on the key elements that can improve the quality of transgender health service implementation in all areas of the operation that health service providers should take into consideration when preparing to implement transgender health service. Health service providers who are currently offering health service to transgender people may consider adapting or integrating the following recommendations to complement their existing works as well. Always remember that the key principle in providing health service to transgender people is to prevent all kind of stigma and discrimination that may take place under any circumstances in the healthcare setting. It has been clearly suggested that setting up appropriate service in a friendly, accepting, stigma and discrimination free atmosphere will not only promote a good relationship between health service providers and the transgender clients, it can also help retain the clients in the healthcare system.¹

1. Staff

It is essential that health service providers should provide gender sensitivity trainings or workshops for all relevant staff, regardless if they are transgender or non-transgender individuals. The training should include those who may not be required to be in direct contact with the clients as well, including housekeepers and security guards, because every staff members' actions and expressions can contribute to the clients' experience.

The training should be held annually or as often as it fits with the facility, to ensure the staff stay motivated and updated with any new knowledge. The content of this training could be set up based on the information in topic number 2. Key concepts to understand when providing health service for transgender people and Dos and Don'ts in providing health services for transgender people provided in Chapter 1.

2. Facility

Apart from complying with state's rules and regulations on setting up the healthcare facility and laboratory operation in some cases, to create a transgender friendly and welcoming facility, health service providers should take the following points into consideration.

1. To ensure the facility has a comforting and accepting atmosphere, the decoration and arrangement of the facility should match with the gender identity of the transgender people. This can be done in many ways, for example, by adding posters, paintings, flags, or photos that represent the identity of transgender people in your clinic.
2. If possible, the information and communication materials used in the facility should also be transgender-specific or friendly. (Figure 1)

Figure 1

Example of transgender-specific information sheets provided at Tangerine Community Health Clinic.



3. The examination or counselling room should be a private space to create reassuring atmosphere for the clients.
4. All-gender or gender-inclusive restrooms should be available and open for transgender clients. Restroom's safety should also be maintained for everyone.
5. A suggestion box should be available to collect clients' feedback and complaints. It should be placed in an easy-to-notice location or made available online.

Figure 2 Example of the All-gender restroom sign, designed to include everyone, regardless of gender identity and expression.



3. Health service package

For full resource health facility, health service package for transgender people may be set up based on their existing services. However, to truly understand the health needs of the community, health service providers may host a focus group or community consultation meeting to discuss the preferred service packages with community members. On the other hand, the health facility with limited resource may still hold the focus group or community consultation meeting with the community members to identify service packages that truly address the health priority of the community in that area.

4. Medical record and data collection forms

Since gender recognition law is still not applied in Thailand, transgender people are often faced with stigma and discrimination on the basis that their gender identity is different from the gender marker displayed on their identification document. This often brings stress and uncomfortable feelings to transgender people in many different situations. It is also part of the reasons many transgender people try to avoid going to healthcare facilities because of their fear of being questioned, judged or mistreated. To create an accepting and welcoming atmosphere, apart from having transgender friendly staff, service providers should also take the following points into consideration when setting up the medical record or data collection forms.

1. All forms should be transgender friendly. If there is no medical restriction, transgender clients should be free to use gender title and name that they prefer on any related forms, such as OPD card, medical report, referral form, appointment card, and etc.

2. When collecting personal or demographic information of the transgender client, both for regular health service and for research purpose, apart from question about biological sex or sex assigned at birth, the inquiry should also include option on gender identity. Study from the United States shows that the question on gender identity helped improve the accuracy of individual's personal information and helped disaggregate the population more precisely.²

Figure 3 An example of a case report form used at Tangerine Community Health Clinic.

Demographic Background Client number _____	(Sticker) Initial (ชื่อย่อ) ____ ACID (รหัสคลินิกมีรนาม) _____ UID (รหัสคลินิก) P _____ Date of visit (วันที่มารับบริการ) ____/____/____ Visit <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Page 1 of 2

Demographic Background	
Client data (ข้อมูลผู้รับบริการ)	Record (บันทึก)
Sex assigned at birth (เพศกำเนิด)	<input type="radio"/> Male (ชาย) <input type="radio"/> Female (หญิง) <input type="radio"/> Intersex (มีเพศสรีระทั้งชายและหญิง)
Gender Identity (อัตลักษณ์ทางเพศหรือเพศที่คุณรับรู้)	<input type="radio"/> 1. Questioning (ไม่แน่ใจ/ยังไม่สามารถระบุได้) <input type="radio"/> 2. Male (ชาย) <input type="radio"/> 3. Female (หญิง) <input type="radio"/> 4. Transgender woman (หญิงข้ามเพศ) <input type="radio"/> 5. Transgender man (ชายข้ามเพศ) <input type="radio"/> 6. Gay man (เกย์) <input type="radio"/> 7. Lesbian (เลสเบี้ยน) <input type="radio"/> 8. Gender variance/non-binary (ไม่อยู่ในกรอบเพศชายหญิง) <input type="radio"/> 9. Prefer not to disclose/decline to state (ไม่ต้องการระบุ/ไม่ตอบ)

3. When composing letters or certificates, sending mails, parcels or leaving phone messages, service providers should ask the clients what name or pronoun they like to use in advance. There may be cases where trans clients would prefer or need their legal name/title/ pronouns to be used in documentations or communications. It is helpful to have this information clearly marked in records for all staff including administrators.

5. Community engagement

Community engagement is another crucial part in transgender health service implementation. Building up community engagement can create a sense of respect, ownership and good relationship between health service providers and the community. Community engagement can also be a mechanism to enhance and improve service quality of the health service provider. Community engagement can be created and formed in many different ways as some of the following examples.

1. Hiring community members or opening for volunteer positions.

Depending on local context and resources, hiring community members in the local area or opening for volunteer positions could be one of the simple ways to create community engagement. Apart from creating trust around the community, the community staff could also play an important role in transferring their real experiences into the job, as well as being a communication link between service providers and the community.

Multi-disciplinary collaboration is a key element in transgender health service implementation. Creating network and cross-referral system can help improve access to health service for transgender people.

2. Organizing community consultation meetings to listen to the community.

Another way to create community engagement is to set up a community consultation meeting or community focus group to listen to the community needs and feedback. The meeting may be scheduled as a routine or as it fits between the health service provider and the community. For a new facility or research study, the community should be engaged from the very early stage of the establishment and all along the process, to ensure the operation is conducted in the best interest of the community. It will also help health service providers and researchers in shaping up their service and study plan into the right direction, and at the same time gaining trust and cooperation from the community.

3. Setting up a Transgender Community Advisory Board.

Depending on the resource or the context of the facility, setting up a Transgender Community Advisory Board could be another way to create community engagement. The Transgender Community Advisory Board can perform many different functions and serve both the community and health service providers.

The Transgender Community Advisory Board may consist of experts from the following areas or as it may fit in the local context. It is not a requirement that all board members should be transgender persons, but it is important to include some transgender board members to ensure their voices are heard.

1. Public Communication
2. Policy Advocacy
3. Academic and research
4. Laws and human rights
5. Sexual health and HIV
6. Fundraising and networking
7. Child, youth and elderly specialists
8. Community Organization

Roles and responsibilities of the Transgender Community Advisory Board may cover the following areas.

- To provide community's feedback, recommendations and guidance to health service providers.
- To monitor and ensure that service provision and research conducted, comply with international ethical standards and are delivered with respect and dignity to the community.
- To relay information and research findings from health service providers or researchers to the community.
- To encourage and facilitate the process of turning research findings into implementation.
- To advocate and promote transgender health and well-being.

Term of Office

Term of office for the Transgender Community Advisory Board member may depend on the local context. At the end of the term, there might be a selection process to recruit new qualified board members.

Board Member Structure

Board member structure should be set up with transparency in relation to the local context or as agreed between health service providers and the community. Key board member positions may be elected by board members.

Communication and coordination

To ensure smooth flow of the communication and coordination between the Transgender Community Advisory Board members themselves and the health service providers, board meetings may be held regularly to exchange progresses and updates. A specific board member may be assigned to represent or look after some specific areas of transgender health, based on their expertise.

Board Member Compensation

To ensure transparency, board member roles should be a pro bono service. Nonetheless, health service providers should cover all logistic expenses for the board member where appropriate, based on its policy.

Communication channels are available through different platforms these days. Health service providers may apply regularly used communication platforms in their area as a tool to promote community engagement. For example, the LINE application is one option often used in Thailand as it has many features including an official account, group chats, and individual chats.

6. Quality assessment

Quality assessment or monitoring plan, is an essential tool to assess and improve the work of the health service providers. Quality assessment may be applied in different areas of health service operation, such as in health service delivery, in data collection, etc., depending on the context of the health service facility.

1. Quality assessment conducted by health service provider itself.

Health service providers may apply its existing or a newly-designed tool to assess its quality by itself.

2. Quality assessment conducted in cooperation with third-party.

Health service providers may work with third-party organization and use their tools to assess its quality, based on the third-party's area of expertise.

3. Quality assessment conducted with community engagement.

Health service providers may work with the community to assess its quality by setting up a community consultation meeting or by working with the community advisory board as mentioned earlier to gather feedback and suggestions from the community.

4. Quality assessment conducted with combined-methods.

Health service providers may also use more than one assessment methods to assess its quality where appropriate, based on their context and resources.

Summary and take-home message

There are several ways to improve transgender health service implementation and every step taken means a better access to healthcare and better quality of life of the transgender people. Due to geographic or resource limitation, it may not be possible for health service providers to take or integrate all the steps recommended in this chapter into their work. It may not also be possible for health service providers in some areas to provide health service in full scale as well. In such cases, health service providers need to work with the community to identify and prioritize the urgent health issues that truly address the needs of the community in the area.

Qualities of a good transgender health service worker

- Be a good listener and listen with empathy.
- Be professional; perform duties, offer helps and supports without judging.
- Understand and respect the principle of human rights.
- Keep updating with the latest transgender health knowledge.

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Chapter

16

Social, Legal and Cultural Perspectives on Transgender People in Thailand

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1. Gender norm in Thai context

According to the Thai gender norm, gender is generally linked to biological sex, which only consists of male and female. Gender roles are also based only on the femininity and masculinity concept valued and formed by the society. Some examples of gender roles include, women should pay attention to their appearance, behave appropriately, be good at household work, while men should be leaders, strong and heads of the family.

The concept of valued femininity and masculinity appears in several institutions and systems, such as in family, education, public health, religion, law, and it continues to be consistently reproduced across the society. Such concept and reproduction finally create the fixed perception among the society that human beings consist of only two genders and these two genders are the only appropriate genders. This is in line with Asst. Prof. Madee Limsakul's article on sexuality knowledge,¹ which stated that physical anatomy of the human body often has been used to determine an individual's gender. The differences between the two genders are only based on biological sex, genetic traits and reproductive organs, which are also used to form the normative gender role. Gender is, therefore, fixed under the binary system that consists of only male and female. As a result, heterosexual relationship becomes the only kind of relationship that is valued and validated as normal and natural by the society. While other kind of relationships are seen as abnormal, deviant and disorder.

2. Terms and definitions of being transgender people in Thai context

The identity and life path of “kathoei” (One of the Thai terms for transgender woman.) have been variously defined through different sciences and sources.

According to the Office of the Royal Society’s dictionary, the term “kathoei” means an individual who has both male and female genitals or an individual whose gender identity and expression do not go in line with their biological sex. It can also be referred to a fruit with aborted seed.²

Another source defines “kathoei” as an individual born with a male biological sex, but expresses their gender differently, in the way that does not conform with social expectations.³

“kathoei” in general public view often means a man who has a female identity and behaves like a woman.⁴

“kathoei” is a man full of male physical characteristics, yet thinks and feels about oneself as a woman.⁵

Those definitions portrayed by academics, physicians, and linguists somehow share common ideas that a transgender woman is a man who feels and expresses oneself as a woman. These days, new terms have been created to refer to transgender people (in Thai context), such as “khon kham phet” (Transgender people), “phu ying kham phet” or “sa tri kham pate” (Both mean transgender woman.). However, the transgender spectrum does not consist of only male to female transgender individuals, there are also female to male transgender individuals, which is now known as “chai kham phet” (Transgender man). The Asia Pacific Transgender Health Blueprint by the Asia Pacific Transgender Network has defined transgender people as below;⁶

“Trans or Transgender Persons are people who identify themselves in a different gender than that assigned to them at birth. They may express their identity differently to that expected of the gender role assigned to them at birth. Trans/transgender persons often identify themselves in ways that are locally, socially, culturally, religiously, or spiritually define.”

“Trans woman is a term used to refer to a trans person who identifies as female (i.e., someone whose sex was assigned male at birth and identifies as female). The acronym MTF (Male to Female) is also used to describe a trans woman.

Trans man is a term used to refer to a trans person who identifies as male (i.e. someone whose sex was assigned female at birth and identifies as male). The acronym FTM (Female to Male) is also used to describe a trans man.”

The terms non-binary, gender diverse, or gender non-conforming are increasingly used to refer to those who do not identify one-hundred percent as male or female, especially among transgender youth.

People whose gender identity is the same as their sex assigned at birth are referred to as Cisgender people.

However, terms evolve over time. The commonly used terms today may be changed into new ones in the future.

According to the National Social Welfare Promotion Board's eligibility criteria for social welfare recipient B.E. 2555 (2012), transgender people were defined as people whose gender expression do not go in line with their sex assigned at birth and gender norm expected by the society. It is a personal feeling of an individual.

Nonetheless, “transgender” is an umbrella term that covers variety of transgender people in the gender spectrum, including those who identify themselves as neither male or female.

How transgender people have been variously defined reflects the ever-changing view of public on gender and sexuality under the dynamics of the Thai language in a different period of time. In practice, however, all the terms must be used with precaution because each transgender person has a different background and experience.

For example, the transgender women in Pattaya area may prefer to be referred as “sao pra phet song” (second-type woman) to “kathoey” because they take the word “kathoey” as a negative and biased term. While, middle class male to female transgender individuals living in the city often call themselves “ying kham pate” (the exact translation for transgender woman). On the other hand, many transgender rights activists may prefer to call themselves “kathoey”, to reclaim the positive meaning of the term. Additionally, while there has been little understanding about transgender men in the past compared to transgender woman, there is now more visibility for trans men who are having more conversations about the terms used to identify themselves, such as trans men, FTM, and “chai kham phet”.

This is also seen as a battle on language that often limits to only two genders, while, in fact, there are more than two genders exist in the world. In order to address a transgender individual properly, it is, therefore, sensible to ask for the person's preference.

3. Transgender people population size in Thailand

According to the National Statistical Office's population survey, based on people's age, sex and location, there were 66,413,979 people in Thailand, of which 32,556,271 were men and 33,857,708 were women. This survey, nonetheless, was conducted based on sex assigned at birth. So far, there has been no information on official transgender people population size that was systematically collected under the national scheme. However, based on the information from relevant health projects run by the Ministry of Public Health, it was estimated that there were about 200,000 transgender women in Thailand in 2012.⁷ Other source of information on transgender population size also came from the Personnel Recruitment Division of the Territorial Defense Command, Ministry of Defense, whose role is to enroll Thai male citizen into the country's annual conscription. Transgender women age over 21 years old are also abided by this law to enroll in this process. They, however, could be exempted from the process under the following conditions:

1. The person has undergone permanent physical transition, such as gender affirming surgery on the genital.
2. The person has undergone physical transition on some parts of the body, such as breast.
3. The person has not undergone any physical transition, but identified oneself as female and classified as having gender dysphoria.

The data from 2013 to 2019 revealed that 29,608 transgender people have been enrolled in the process, as shown in Table 1.

Table 1 The number of transgender people enrolled in the conscription in 2013-2019

Conscription Year	Number of Transgender People enrolled
2013	6,328
2014	2,623
2015	4,210
2016	4,309
2017	4,130
2018	4,684
2019	3,324

(source: หนังสือ นท 0462.11/199 และ นท 0462/548 หน่วยบัญชาการรักษาดินแดน)

4. Violence against Transgender people in Thailand

Report from the Foundation for SOGI Rights and Justice (FOR-SOGI) based on the Diverse Sexuality in Family Context project, reveals that 38% of transgender people are faced with violence under the social and cultural structure. The area where violence took place most is in family, followed by educational institutions and workplaces. Another report indicates that the most common forms of violence include verbal abuse, such as condemnation and sarcasm on one's gender identity, followed by physical violence and sexual harassment.⁸ The whole situation seems to be in the same trend as in the international context. According to a report from Transgender Europe (TGEU)'s Trans Murder Monitoring Project, transgender people are killed every 72 hours worldwide, based on hatred on gender diversity.⁹

5. Transgender people in Thai families

Nowadays, children's and youths' rights are being recognized as a global agenda. They are the main focus of attention both in family and society level. All children and young people have needs that should be addressed appropriately for their best interest. These needs include being raised with respect and dignity. Children and young people should be treated with no stigma and discrimination based on their gender. Gender variant children and youths should also be protected from any forms of violence to ensure they could settle and grow up safely in the society.

Nonetheless, gender variant children and youths in Thailand still face many vulnerable situations, due to the misconception and bias on gender diversity. They still face physical, verbal and mental violence from their families and the society, based on the phobia against gender variance.¹⁰ The result of physical violence could range from body injury to fatality, while mental violence could lead to stress, depression, self-harm or suicide.¹¹ This is in line with Being LGBT in Asia: Thailand Country Report¹² on violence faced by gender variant people. In addition to physical, verbal, and mental violence, gender variant people also face with sexual violence. For gender variant children and youths, lacking support and protection from their families also mean they could easily be exposed to sexual abuse and harassment. Furthermore, many transgender girls are known to be cursed and abused by their fathers as a punishment for their feminine expressions. Many of them were also forced to leave their houses because being themselves is considered tarnishing the family's reputation. Additionally, many gender nonconforming female youths, including lesbians, also face the risk of being raped by family members with an excuse to cure their sexual orientation.

Being rejected and lacking support from the family, leads gender variant children and youths to lose their self-confidence and feel insecure when presenting in the society. As they grow up, they might not have the self-capacity that can help them handle issues related to their gender identity or make important decisions. For these reasons, many gender variant children and youths choose not to disclose their gender identity and wait until they become an adult, based on their fear of rejection and negative reaction. According to Ryan CQ's study¹³, when families do not express fear or disapproval over gender identity or sexual orientation of their gender variant children and youths, they will not feel rejected or face negative reaction from their family members and people around them, based on their gender identity and sexual orientation.

Many studies show that Thai families still lack of understanding about gender diversity. Since, family is a primary social institution responsible for children's support, capacity building and well-being, families that accept and support their gender nonconforming children can vastly boost their children's personality and confidence to lead their own lives in the future.¹⁴

Families with gender variant children must learn about gender diversity, because it is the fundamental source to help them understand their children. Families, parents, and guardians with a lack of understanding about gender diversity often see no need for specific expertise support. As a result, transgender children seeking to medically transition often have no proper health support, and may take unregulated hormones by themselves. They mostly rely on self-exploration, their senior peers' advice or information available on online platforms.¹⁵ Receiving incorrect or unsupervised health information puts them in a vulnerable condition that could affect their health in short and long-term.

6. Transgender people in Thai media

Nowadays, the media tend to utilize stories about gender and sexuality to capture audiences' attention, such act often driven by capitalism.¹⁶ As a result, the media play a crucial role in controlling people's gender expression and sexuality.¹⁷ Gender variant people (LGBTIQ+) are often in the media interest. Their stories on the media coverage have been on the rise since 2004. However, most of the stories tended to make fun of them.¹⁸

Media coverage can also affect gender variant people at both individual and collective levels. For example, in an individual level, Thai transgender women, who are abided by the Military Service Act, B.E. 2497¹⁹ based on their sex assigned at birth to enroll and participate in the country's annual conscription, despite of their transition, often receive a lot of inappropriate media coverage. Time and again the media have often been demanded to change the tone of the content. Jetsada Taesombat, a transgender rights activist from the Foundation of Transgender Alliance in Human Rights has reflected her thoughts about this on an interview for Face Time television program as, "TV and newspaper coverage often violate the rights to privacy of transgender people by disclosing their gender markers. Media also only focus on their beauty, femininity or physical transition, such as breast and gender affirming surgery. They fail to cover the core issues about what steps should be taken or what are the challenges faced by transgender people in the conscription process. These cause a lot of distress and drive transgender people to do whatever they can to avoid the process. Many of them were abused, sexually harassed. Some of them even wanted to take their own life."²⁰

At the collective level, gender variant people are often presented negatively in the media, without the understanding of sexuality, gender identity and gender expression. Such action produces bias, hatred, discrimination and also violates the individuals' human rights. It also turns gender variant people into a marginalized group.²¹ For that reason, a media guidebook for gender sensitive coverage²² has been developed for media workers to use as a guide on how to present gender variant people in the media with sensitivity and respect, and at the same time promote the right understanding and the correct use of respectful terms when referring to gender variant people.

7. Transgender people in Thai laws



All human beings are born free and equal in dignity and rights. Human beings of all sexual orientations and gender identities are entitled to the full enjoyment of all human rights.



The Yogyakarta Principle ¹²³

Legal recognition and protection related to transgender and gender variant people usually involve with three laws:

1. Anti-discrimination Law
2. Marriage Law
3. Gender Recognition Law

At present, the only protective law that is applicable to gender variant people in Thailand is the Gender Equality Act B.E. 2558. Its statement under Article Three on "gender-based discrimination", could be defined as any act or omission that illegitimately separates, excludes, or restricts any benefits, whether directly or indirectly from a person, because that person is male or female or has gender expressions that differ from their sex assigned at birth. Nevertheless, this law does not grant the rights for gender variant people to legally marry or to choose gender marker that may be different from their sex assigned at birth. Civil society organizations and related government agencies that work to advocate for gender equality and rights are currently working together to push forward Equal Marriage Law and Gender Recognition Law to ensure that all life aspects of gender variant people are legally recognized and protected. Legal recognition and protective law can also be considered as one of the factors that could determine gender variant people's health.

8. Thai transgender people and their right to found a family

According to the international human rights principles, the right to found a family is considered one of the basic human rights, whether it is an adoptive or non-adoptive family. Such right is clearly recognized in Thailand and by many international human rights conventions of which Thailand is a state member, such as, the Universal Declaration of Human Rights 1948, the International Covenant on Civil and Political Rights 1966, the International Covenant on Economic, Social and Cultural Rights 1966.

The Yogyakarta Principle 24²³ states that;

“Everyone has the right to found a family, regardless of sexual orientation or gender identity. Families exist in diverse forms. No family may be subjected to discrimination on the basis of the sexual orientation or gender identity of any of its members.

States shall: a) Take all necessary legislative, administrative and other measures to ensure the right to found a family, including through access to adoption or assisted procreation (including donor insemination), without discrimination on the basis of sexual orientation or gender identity;”

The study on what gender variant people need for their relationship⁹ in 4 regions of Thailand shows that legal recognition of their relationship is the most needed element, without it, they are not entitled to the same rights and benefits that applied in legally married heterosexual couples, such as right to tax allowance and exemption, right to be a life insurance beneficiary, right to guarantee their partner's credit or make a joint loan application.

Regarding life insurance, even though it is not particularly stated by law that only legally married couples are allowed to form such document together, due to the related insurance law, the insurance companies will not allow people to have a non-family member as their beneficiary. Nonetheless, insurance companies would allow unmarried heterosexual couples to do so if they are listed in the same house registration book, while this is not the case for gender variant couples. Banks are also in favor of a credit guarantee or joint application made by family members rather than couples who are not legally recognized by law. Therefore, gender variant couples are restricted to make these important financial agreements.

For legally married heterosexual couples, if one of them serves as a government official, the spouse will be automatically entitled to medical coverage, social welfare and benefits provided by the government. This, however, does not apply with gender variant couples. Other family benefits that are excluded from gender variant people who serve in a government agency include, housing, education loan for their children, spouse leave (to accompany their spouse should they be required by work to travel or go overseas), etc.

The movement to push forward the legal right to marry and found a family for gender variant people currently consists of two approaches. The first approach is to propose the Civil Partnership Bill, which is a new law. However, it is still under debate on how practical it is, and how it has different definitions for "partner" and "spouse". It also does not cover some key rights, such as the right to adopt children. This proposed bill could also indirectly inflict discrimination and contradict with the Gender Equality Act B.E. 2558. The second approach is a proposal to make an amendment to the Civil and Commercial Code, Book, Section 1448, of the Family Registration Act B.E. 2478, which states that legal marriage could only be formed between male and female. This specific clause has restricted gender variant people from entering legal marriage, and obstructed their right to found a family and be protected by law.

9. Thai transgender people and their right to legal gender recognition

Legal gender recognition is generally known as the law that legally recognizes and allows transgender people to officially change their gender marker to match with their gender identity. While legal gender recognition is mostly available without specific restriction in many countries, such as, in the UK, Sweden, the Netherlands, the United States, Canada, Brazil and Argentina, in some countries, having undergone gender affirming surgery on the genital could be a requirement.

In order to inspect if the Thai society recognizes the diversity in its social and cultural structure as well as ready to accept and amend the law in response to the social evolution, The National Institute of Development Administration (NIDA) has conducted a poll on "What the Thai society thinks about third-gender people?" in July, 2019, among 1,259 people, aged 15 and over at all levels of education, occupation, and income across the country. The poll asked for people's view about adding "Third gender" or "Alternative Gender" into all official documents. The result showed that the majority of the people, 65.59%, agreed with the suggestion, because doing so will clearly show an individual's gender that is not based only on male and female. It will also provide more options for people to choose the gender that really reflects who they are. This could be implied that people in the society generally agree with the gender recognition law.

By all means, legal gender recognition is not a "privilege" for transgender people. It is, instead, a legal protection needed for people whose gender identity are different from what listed in the official documents. The absence of legal gender recognition leads transgender people into many vulnerable states that affect social acceptance, health and their quality of life by creating difficulties in accessing employment, education. It could also lead to difficulty when travelling as well. Many transgender people were denied entry into the destination country because their gender identity did not match with the gender marker on their travel document. Based on the same reason, it could also cause job application rejection.⁷

Nonetheless, there are still concerns over the abuse of the gender recognition law among the Thai society. Some see it as a means for some people to commit fraud or escape from law enforcement. These ideas are often stemmed from stereotyping of the transgender people. In fact, fraud and wrongdoings could take place regardless of the offender's gender. Additionally, identification fraud could be countered by numerous verification methods, such as fingerprints and DNA identification. Unlike Thailand, such concerns tend to be very low among the countries where legal gender recognition is in place.¹²

Lastly, since gender recognition law will affect a large number of people, its implementation should ensure to promote justice, inclusion and not be in favor of any particular group. Its key principle should be to protect everyone in the society equally. Otherwise, it will cause discrimination and lead to social inequality.

Key actions to promote transgender people's health and well-being.

For the State

Apart from biological determinants, public health system must also focus on social determinants that affect health of the transgender people, such awareness of gender diversity, gender bias and human rights. Because they play as important role in promoting transgender health and well-being.

Policies and laws related to gender and sexuality must be updated to reflect the situation in the society.

Healthcare professional at all levels must learn and understand the concept of gender diversity and sexuality to eliminate all kind of prejudice that may take place in the healthcare settings and ensure health services are delivered to transgender or gender variant people in a sensitive manner.

For Civil society

Build a robust network to systematically create a transgender health resource and use it as a tool to promote health and well-being of the transgender people.

Collaborate with related sectors to advocate for government commitment to promote rights, health and welfare of transgender people.

Collaborate with the media in communicating with the government and public by using evidence-based information to advocate for positive changes towards transgender community.

Recommendations for transgender people facing with legal issues or rights violation in Thailand

- General information on legal rights in different areas could be obtained from different agencies, such as, government agencies, human rights NGOs, Office of the Human Rights Commission, Parliamentary Ombudsman, Office of the Prime Minister, and Medical Council of Thailand.
- If facing with legal issues or rights violations, record the details of the incident as soon as possible. Collect all the materials that could be used as evidence, such as photos, audio or video clips, with the following details: date, time, place, offender, witnesses, feelings, and the damage or potential damage.
- If facing an incident that requires help from professionals, such as sexual assault, seek help from the nearest specialists (such as police officer or doctor) as soon as possible.
- If there is no barrier in getting access to justice system or social assistance, submit the record of the incident with the evidence to the responsible agency as soon as possible.

More details on transgender people's human rights protection organizations could be found in the appendix.

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Appendix

Table 1 Gender-affirming hormone treatment in transgender adults

Gender-Affirming Hormone Treatment in Male-To-Female Transgender Individuals	Gender-Affirming Hormone Treatment in Female-To-Male Transgender Individuals
<p>1. Estradiol</p> <ul style="list-style-type: none"> • Oral estradiol <ul style="list-style-type: none"> » Either 17β-estradiol or estradiol valerate can be administered. (Estradiol valerate is hydrolyzed into estradiol in the intestines and liver.) The recommended dosage is 2-6 mg/day. » The use of estrogen contained in oral contraceptives (ethinyl estradiol) is not recommended for male-to-female transgender individuals because some reports revealed that it increased the risk of complication. It may cause a significantly higher chance of venous thromboembolism than 17β-estradiol does to the users, especially male-to-female transgender individuals aged over 40. » Use conjugated equine estrogens and conjugated estrogens with caution because they may pose a higher risk of venous thrombosis than 17β-estradiol does, especially in male-to-female transgender individuals aged over 40. (Conjugated equine estrogens made from mare's urine is no longer available in the Thai market. However, plant-derived conjugated estrogens are still available.) With only a few clinical studies to support its result, this drug is rarely used.) • Transdermal estradiol <ul style="list-style-type: none"> » The recommended dosage of the 17β-estradiol patch is 25 -200 μg/24 hours (half to four patches). Replace patches every 3.5 days (twice a week). » Apply 2.5-10 g of 0.06% 17β-estradiol gel once a day. 	<p>Testosterone</p> <ul style="list-style-type: none"> • Testosterone enanthate <ul style="list-style-type: none"> » It is most commonly used in Thailand due to the reasonable price. » The recommended dosage is 100-200 mg injected subcutaneously or intramuscularly every two weeks. Alternatively, the weekly dosage can be reduced by half. • Testosterone undecanoate <ul style="list-style-type: none"> » The recommended dosage is 1000 mg per injection every 12 weeks. • 1% Testosterone gel <ul style="list-style-type: none"> » The recommended dosage is 50-100 mg/day. • Testosterone transdermal patch <ul style="list-style-type: none"> » The recommended dosage is 2.5-7.5 mg/day. (It is unavailable in Thailand.) • Regardless of any forms of testosterone, the dose must be adjusted based on the total testosterone levels, targeted at approximately 400 -700 ng/dl. • Oral testosterone with alkylate groups in the 17th carbon atom is not recommended because it may cause hepatotoxicity. Furthermore, the absorption is at an unstable state.

Gender-Affirming Hormone Treatment
in Male-To-Female Transgender Individuals

Gender-Affirming Hormone Treatment
in Female-To-Male Transgender Individuals

- **Injectable estradiol**
 - » Estradiol valerate or cypionate
 - » 5-30 mg every two weeks or
 - » 2-10 mg every week
 - » Note: Injectable estradiol is not available in hospitals.
- **In administering all types of estradiol, adjust the dose based on its blood content, with the target of 100-200 pg/ml.**

2. Anti-androgens

- **Primary option**
 - » 100-300 mg of Spironolactone/day or
 - » 25-50 mg of Cyproterone acetate/day
- **Secondary option**
 - » Inject 3.75 mg of GnRH agonist once a month or 11.25 mg quarterly (not widely used because of high price and over suppression of sex hormones)
- The testis hormone suppression with an anti-androgen drug is administered to lower the total testosterone level to less than 50 ng/dl.

Table 2 Estrogen and testosterone treatment for transgender people in Thailand

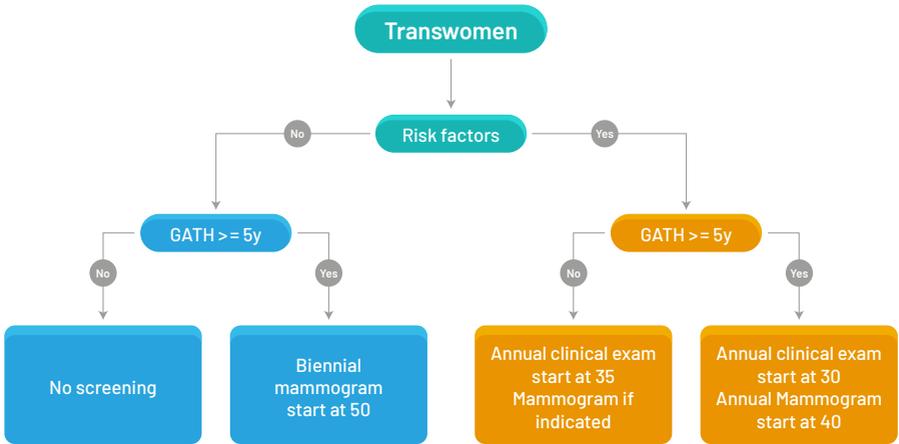
Drug Type	Trade Name
Estrogen	
<u>Oral estradiol</u> <ul style="list-style-type: none"> • 17β-estradiol hemihydrate • Estradiol valerate 	Estrofem Progynova
<u>Other oral estrogens (not recommended)</u> <ul style="list-style-type: none"> • Conjugated equine estrogen (Currently unavailable in Thailand) • Conjugated estrogen • Ethinyl estradiol contained in combined contraceptive pills 	Premarin Estromon Contraceptives under different trademarks
<u>Transdermal estradiol</u> <ul style="list-style-type: none"> • 50 μg of 17β-estradiol patch/24 hours • 0.06% 17β-estradiol gel in a tube or pump bottle • 0.1% 17β-estradiol gel 	Climara Oestrogel (tube), Oestrodose (pump bottle) Divigel
<u>Injectable estradiol</u> <ul style="list-style-type: none"> • Estradiol valerate (Injectable estradiol is unavailable in hospitals) 	Progynon
Testosterone	
<ul style="list-style-type: none"> • Injectable testosterone enanthate • Injectable testosterone undecanoate • Oral testosterone undecanoate (not recommended for female-to-male transgender people) • 1 % Testosterone gel • Testosterone transdermal patch (Unavailable in hospitals) 	Testoviron Nebido Andriol Androgel Androderm

Table 1 Preoperative evaluation of gender affirmation surgery in Thailand

	Gender dysphoria Diagnosis	Psychological Evaluation Certificate	Age 18 or above*	Able to Sign the Consent Form	No Severe or Uncontrollable Physical or Mental Disorders	Receiving a Gender-Affirming Hormone Treatment for At Least 12 Months	Social Transitioning for At Least 12 Months
Feminizing surgery							
Breast augmentation	✓		✓	✓	✓	Optional	
Vaginoplasty	✓	2	✓	✓	✓	✓	✓
Orchiectomy	✓	2	✓	✓	✓	✓	
Thyroid chondroplasty	✓		✓	✓	✓		
Facial and body feminizing surgery	✓		✓	✓	✓		
Masculinizing surgery							
Male chest contouring: subcutaneous mastectomy/breast amputation	✓	1	✓	✓	✓		
Hysterectomy and salpingo-oophorectomy	✓	2	✓	✓	✓	✓	
Metoidioplasty/phalloplasty	✓	2	✓	✓	✓	✓	✓
Scrotoplasty	✓		✓	✓	✓		
Facial and body masculinizing surgery	✓		✓	✓	✓		

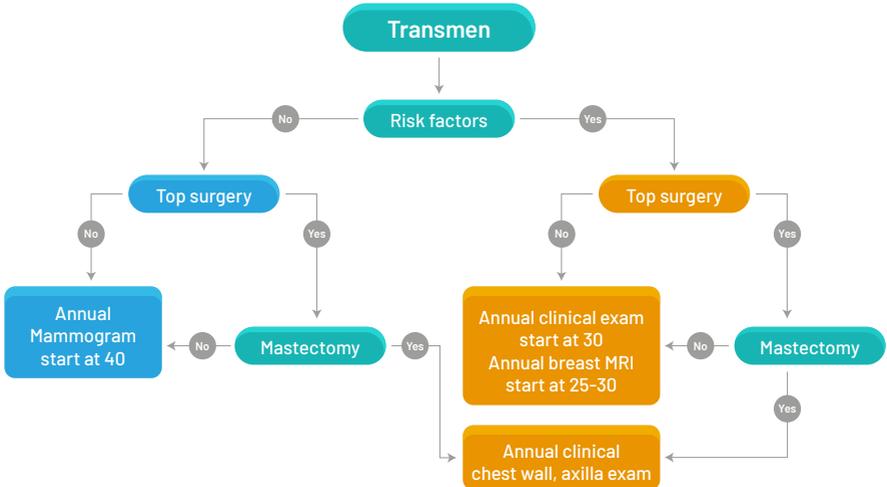
* The clients aged between 18 and 20 must receive the guardian's consent in addition to their own.

Chart 1 Breast cancer screening for transgender women



Remark: Risk factors include being a BRCA1/BRCA2 gene mutation carrier, having Klinefelter’s syndrome, having first degree relatives (parents or siblings) with breast cancer; or undergoing gender-affirming hormone treatment (GAHT).

Chart 2 Breast cancer screening for transgender men



Remark: Risk factors include being a BRCA1/BRCA2 gene mutation carrier, having Li Fraumeni syndrome, Cowden syndrome, or having first degree relatives (parents or siblings) with breast cancer.

Steps to take when facing gender-based violence

1. Stay focused. Assess the situation and the potential danger. Do not retaliate with violence.
2. If possible, try to memorize the details of the incident, such as the offender's appearances, time of the incident, abusive acts or words.
3. Get out of the scene or situation. If unable to do so, shout out for help immediately.
4. Numbers to call in an emergency;
 - 191
 - One Stop Crisis Center at 1300
 - Damrongtham Center at 1567.
5. If facing an incident that requires help from professionals, such as sexual assault, seek help from the nearest specialists (such as a police officer or a doctor) as soon as possible.
6. Make a record of the incident details, such as who did what, where the incident took place, and how it affected or harmed you.
7. Make a decision if you want to report the incident. (You may find both supportive and discouraging reactions from people around you.) If you decide to make a report, contact the following organizations:

- **Office of the National Human Rights Commission of Thailand**

Hot line: 1377 or 0-2141-3978-83 (Operating hours: 08:30 AM – 04:30 PM)

Mail: Office of the National Human Rights Commission of Thailand, The Government Complex Commemorating His Majesty the King's 80th birthday anniversary, 5th December B.E. 2550 (2007), 6th – 7th floor, 120, Moo 3, Chaengwattana Road, Tung Song Hong Sub-district, Laksi District, Bangkok 10210

Fax: 0-2143-9578

Walk-in: Office of the National Human Rights Commission of Thailand

E-mail: help@nhrc.or.th

Make an online report through Website: <http://demo7.softdebut.com/Complaints/Online-complaints.aspx>)

- **Rights and Liberties Protection Department, Ministry of Justice**

Justice Hot line: 1111 # 77 **Fax:** 02-143-9681

Address: 120, 3rd floor, The Government Complex Commemorating His Majesty the King's 80th birthday anniversary, Ratchaburi Direkrit Building (Building A), Moo 3, Chaengwattana Road, Tung Song Hong Sub-district, Laksi District, Bangkok 10210

Website: <http://www.rlpd.go.th/>

• **Gender Equality Act, B.E. 2558 (2015) Office**

Tel. 02-642-7742, 45 Fax: 02-642-7770

Mail: Department of Women's Affairs and Family Development (DWF), 255 Rajvithi Home for Girls, Rajvithi Road, Tung Phayathai Sub-district, Rajthevi District, Bangkok 10400

E-mail: gidentity@hotmail.com

Website: <http://www.dwf.go.th/>

(Source: The Foundation of Transgender Alliance for Human Rights)

List of transgender healthcare facilities

Public facilities

1. Gender Health Clinic, King Chulalongkorn Memorial Hospital, the Thai Red Cross Society
Tel: 02-256-5286
2. Transgender Children and Adolescent Clinic, King Chulalongkorn Memorial Hospital, the Thai Red Cross Society
Tel: 02-160-5372
3. Gen V Clinic, Ramathibodi Hospital
Tel: 02-201-2799

Community based facilities

- | | |
|---|-------------------|
| 1. Tangerine Community Health Clinic | Tel: 02-160-5372 |
| 2. RSAT Health Center, Bangkok | Tel: 02-731-6217 |
| 3. RSAT Health Center, Hat Yai | Tel: 0-7423-2101 |
| 4. RSAT Health Center, Ubon Ratchathani | Tel: 045-957-070 |
| 5. Swing Thailand, Bangkok | Tel: 02-632-9501 |
| 6. Swing Thailand, Pattaya | Tel: 095-259-7594 |
| 7. Mplus Foundation, Chiang Mai | Tel: 086-919-4840 |
| 8. Mplus Foundation, Chiang Rai | Tel: 052-026-357 |

Transgender Health Service Implementation Readiness Assessment

This draft could be used to assess your organization's readiness in implementing transgender health services.

Transgender Health Service Implementation Readiness Assessment for Community Based Organization

Topic	Mark ✓ If Ready	Note
1. Have you already had transgender health service packages?		
2. Has your facility, blood collection, and laboratory operation been officially certified?		
3. If you send the specimen to the third-party laboratory, have you got all the officially certified tools needed?		
4. Have all the relevant staff been trained on relevant health counselling and gender sensitivity?		
5. Have all the relevant staff been trained on data collection and management?		
6. Has the dry-run on service flow been conducted for all the relevant staff?		
7. Has the Transgender Community Advisory Board or the service quality monitoring plan been set up?		
8. Has the physical environment in the facility been prepared for trans clients (e.g. bathrooms, signage and resources)?		
9. Have trans friendly forms been prepared to include clients' details? (e.g. chosen name, title, pronouns, gender identity and other pertinent details)		

Source: Tangerine Academy for Transgender Health, Tangerine Community Health Clinic

