



Guidelines for Gender Affirming Healthcare for Gender Diverse and Transgender Children, Young People and Adults in Aotearoa New Zealand



ISBN: 978-0-473-45837-9

October 2018

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Suggested Citation: Oliphant J, Veale J, Macdonald J, Carroll R, Johnson R, Harte M, Stephenson C, Bullock J. *Guidelines for gender affirming healthcare for gender diverse and transgender children, young people and adults in Aotearoa, New Zealand*. Transgender Health Research Lab, University of Waikato, 2018.

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Acknowledgements: This guideline would not have been possible without the contributions and support of many people from around Aotearoa, New Zealand. We would like to thank Abbi Pritchard-Jones, Ahi Wi-Hongi, Alex Kerr, Dr Andrew Marshall, Dr Aram Kim, Dr Bridget Farrant, Dr Debbie Hughes, Duncan Matthews, Evolve Youth Service, Dr Esko Wiltshire, Dr Fionna Bell, Frances Arns, Gender Minorities Aotearoa, Jack Byrne, Dr Jane Kennedy, Dr Jane Morgan, Jay Kuhtze, Jeanette Mackenzie, Dr Louise Albertella, Lyndon Moore, Mani Mitchell, Prof. Mark Henrickson, Dr Massimo Giola, Dr Michael Roberts, Dr Nicole McGrath, Prof. Patrick Manning, Dr Paul Hoffman, Phylesha Brown-Acton, Piripi Wills, Raj Sing, Rebecca Zonneveld, Dr Rick Cutfield, Roxanne Henare, Dr Simon Denny, Dr Susie Mollar, Taine Polkinghorne.

We would also like to thank the Northern Region Clinical and Consumer Advisory Group for their guidance in developing this document.

Endorsements: These guidelines have been endorsed by the Australian and New Zealand Professional Association for Transgender Health, the New Zealand Sexual Health Society and the New Zealand Society of Endocrinology.

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Terminology

Gender identity

A person's concept of their self as male, female, a blend of both or neither. Gender identity can be the same as, or different to, the sex assigned at birth.

Gender expression

The external presentation of one's gender. This can be expressed through one's name, clothing, behaviour, hairstyle, voice or any other way. A person's gender expression may or may not conform to socially defined behaviours and characteristics typically associated with being either solely masculine or feminine.

Gender diverse

A term to describe people who do not conform to their society or culture's expectations for males and females. Being transgender can be one way of being gender diverse, but not all gender diverse people identify as being transgender and vice versa. Gender creative or gender expansive are other similar terms that are used when referring to children.

Assigned male at birth

A person who was thought to be male when born and initially raised as a boy.

Assigned female at birth

A person who was thought to be female when born and initially raised as a girl.

Trans or transgender

A term for someone whose gender identity does not align with their sex assigned at birth. This term is often used as an umbrella term, recognising that people may describe themselves in many ways including the use of indigenous terms such as; whakawāhine, tangata ira tāne, tāhine (Māori), mähū (Hawai'i and Tahiti), vakasalewalewa (Fiji), palo- pa (Papua New Guinea), fa'afafine (Samoa), akava'ine (Rarotonga), fakaleiti or leiti (Tonga), fakafifine (Niue).

Cis or cisgender

A term for someone whose gender identity aligns with their sex assigned at birth.

Trans boy/male/man

A term to describe someone who was assigned female at birth who identifies as a boy/male/man.

Transmasculine

A term to describe the spectrum of transmasculinity that includes binary identified trans men and also transmasculine people who do not identify as binary men.

Trans girl/female/woman

A term to describe someone who was assigned male at birth who identifies as a girl/female/woman.

Transfeminine

A term to describe the spectrum of transfemininity that includes binary identified trans women and also transfeminine people who do not identify as binary women.

Non-binary

A term to describe someone who doesn't identify exclusively as a man or a woman. There are many different ways that people may be non-binary male or female.

Gender fluid

A person whose gender identity varies over time.

Agender

A term to describe someone who doesn't identify with any gender.

Gender dysphoria

A term that describes the distress experienced by a person due to the incongruence between their gender identity and their sex assigned at birth.

Social transition

The process by which a person changes their gender expression in social situations to better align with their gender identity.

Gender affirming healthcare

Healthcare that is respectful and affirming of a person's unique sense of gender and provides support to identify and facilitate gender healthcare goals. These goals may include supporting exploration of gender expression, support around social transition, hormone and/or surgical interventions. This may also involve providing support to whānau, caregivers or other significant supporting people.

Pronoun

A word used in place of a noun (or name). These are third person pronouns, and in English pronouns include: he/him, she/her, they/them. Other gender neutral pronouns in use include ze and hir.

Children, young people and adults

For the purposes of this guideline: those aged up to 11 years are considered children; those aged from 12 to 24 years are considered to be young people; those aged 25 years and older are considered to be adults.

Introduction



*Tuia i runga
Tuia i raro
Tuia te hunga tangata
Ka rongo te pō
Ka rongo te ao
Tuia te muka tangata i takea mai i
Hawaiki nui i Hawaiki roa i Hawaiki pāmamao
I te hono i wairua
Ki te wheiao
Ki te ao mārama
Tīhei mauri ora!*

Tēnā koutou katoa, i roto i ngā tini āhuatanga o te wā.

Ki te hunga mate, koutou kua whetūrangitia, hoki hoki hoki atu rā. Nā koutou tēnei hua i para. Waiho mā mātou ngā roimata e tuku, mā mātou te hua e takahī.

Āpiti hono tātai hono, rātou ki a rātou, tātou ki a tātou. Ka huri ki te hunga ora.

Ki te hunga tāhine, pakeke mai, rangatahi mai, tamariki mai. Ki a koutou ngā tāngata whakawahine, ki ngā tāngata ira tāne, ki ngā tāngata i waenganui, i waho rānei o tēnei pūnaha tāhūrua. Tēnei te mihi.

Ki a koutou ngā kaimahi hauora katoa, koutou e whakapau kaha ana, ahakoa tō tūranga, mō te hauora o te hunga tāhine, tēnei te mihi.

Ko te mihi whakamutunga, kei te mihi ki a koe, e te rangatira, Mason Durie. Nāu i kōkiri tē māramatanga nei, e kore e tutuki te hauora o te tangata, mei kore tōna whānau, tōna hapū, tōna hapori, me tōna iwi.

Nō reira, e te rau rangatira mā, kia huihui tātou i runga i te whakaaro kotahi, arā ko te mana o te hunga tāhine i runga i te ara ki te hauora. Kia arahina tātou e ngā whetū o te pae māhutonga.

Tēnā koutou, tēnā koutou, tēnā tātou katoa.

Internationally and within New Zealand there has been a substantial increase in the demand for gender affirming healthcare over the past decade. The Youth'12 secondary school survey, estimated that approximately 1.2% of adolescents in New Zealand identify as transgender.¹ It is likely that this level of referrals to health services will continue in the foreseeable future.

This guideline has been developed following the recognition that New Zealand's previous good practice guide, *Gender Reassignment Health Services for Trans People within New Zealand*,² which was based heavily on the World Professional Association of Transgender Health, Standards of Care, version 6 (WPATH SOC v6),³ requires updating to be in step with current practice and international guidelines.

Transgender healthcare is a rapidly evolving area of medicine. WPATH is the international body responsible for producing standards of care. WPATH SOC v7,⁴ was published soon after New Zealand's good practice guide and version 8 is currently in development. This guideline is not intended to replace the WPATH SOC but to present additional guidance for the provision of gender affirming healthcare in Aotearoa, New Zealand. We hope that this guide will be used to support the development of health services providing gender affirming healthcare around the country and provide guidance to District Health Boards (DHBs).

We use Sir Mason Durie's health framework to inform the kaupapa or approach of these guidelines. WPATH SOC v7 encourages culturally appropriate approaches which are contextually based.⁴ Durie's model for health promotion development, Te Pae Māhutonga (the Southern Cross), has two guiding principles which correspond to the pointer stars of the constellation, Te Mana Whakahaere and Ngā Manukura.⁵

Te mana whakahaere: autonomy

This principle encompasses people and communities' control and self-determination of their own health.⁵ Autonomy in the context of transgender healthcare involves transgender people being able to make informed choices for themselves regarding gender affirming care and being free from experiencing harmful pathologisation and other barriers to accessing this care. Te Mana Whakahaere also informs us that to successfully enhance the health and wellbeing of transgender people, providers need to partner with transgender communities to shape these services.⁵

The medical necessity of gender affirming healthcare has been acknowledged by WPATH, the Australian and New Zealand Professional Association for Transgender Health (ANZPATH) and many other international organisations.⁶ The Yogyakarta Principles pull together existing international human rights legal standards which state that transgender people have the right to access the highest attainable standard of gender affirming care.⁷

The 2008, New Zealand Human Rights Commission (HRC) report, *To Be Who I Am*, identified major gaps in "the availability, accessibility, acceptability, and quality" of this medically necessary care, in "both obtaining general health services that many other people take for granted, and in being treated with dignity and respect throughout that process."⁸ Since 2008, work to improve gender affirming healthcare services has been undertaken by small groups of dedicated health professionals around New Zealand, but there is evidence that much of what was highlighted by the HRC may still remain true.

In the Youth '12 survey transgender young people reported significant barriers to accessing appropriate healthcare at both primary and secondary care levels with 39% unable to see a healthcare professional when needed (in the past 12 months), compared to 18% of their cisgender peers.¹ While there is no New Zealand data for older trans people, it is likely that they also face barriers. Social stigmatisation and discrimination, including within the healthcare system, present additional barriers to accessing health services and contributes to adverse health outcomes.

Ngā manukura: community leadership

This guiding principle of Te Pae Māhutonga informs us that for health promotion to be effective it needs to be led by relevant communities. Durie stated “health professionals have important roles to play but cannot replace the leadership which exists in communities; nor should they”.⁵ An example of this is the partnership between transgender communities and the Northern Region DHBs throughout the Transgender Health project, from 2014 to present. Transgender people have been involved in the steering of the project, including development of services and these guidelines. The importance of trans community leadership in the development of trans healthcare services is paramount.

“Hauora Tāhine – Pathways to Transgender Healthcare Services” is the name given to the collective services across the Auckland region. Hauora tāhine, means transgender health and contains a new word in the Māori language, tāhine.

At the Hui Takatāpui in November 2016, a group of Māori transgender women met to discuss language. Hira Huata noted “the word tāhine came out of my mouth as we were exploring other words that we feel describes us and we feel we have an affinity to...we together decided that the word tāhine empowers us”.⁹ The word tāhine, meaning transgender, has received mana through its use by those who live daily as tāhine, those who walk the talk and named that walk.

The use of the word, tāhine, has been endorsed by Te Taura Whiri i te Reo Māori, Māori Language Commission¹⁰ and Dame Naida Glavish ONZM, JP, Chief Advisor Tikanga Māori Health, He Kāmaka Waioara, Waitematā, Auckland and Counties Manukau DHBs.¹¹

The name Hauora Tāhine was gifted to the Northern Region Transgender Clinical and Consumer Advisory Group in 2017 by Shannon Anahera White, a member of the advisory group, to provide an identity for secondary health services providing specialist gender affirming healthcare across Auckland.

Many Māori who identify as transgender also identify as takatāpui. Takatāpui, is a traditional Māori word, meaning ‘intimate companion of the same sex’¹² that is being used to more broadly encompass everyone under the LGBTQI umbrella.¹³ Other words, drawing on traditional Māori concepts, such as whakawāhine and tangata ira tāne, have been created to more specifically describe being transfeminine and transmasculine. Different people feel comfortable with different words or may use a range of words depending on their context.

Transgender health in Aotearoa

Te Whare Tapa Whā, described by Sir Mason Durie, conceptualises health and wellbeing as the four cornerstones of the whareniui (meeting house).¹⁴ This model recognises the equal importance of: Taha Wairua (spiritual health), Taha Whānau (family health), Taha Hinengaro (mental health) and Taha Tinana (physical health). Historically transgender healthcare has suffered from the pathologising of gender diversity and the inappropriate labelling of gender/cultural identity and expression as a diagnosed mental health illness. The resulting legacy of this pathologisation is a tension in health services between the need to avoid further stigmatisation while simultaneously acknowledging the importance of the wider concept of mental health as part of holistic healthcare delivery. The practice of informed consent in relation to gender affirming healthcare is important because it reaffirms the self-determination of the transgender person and their knowledge of their needs, identities, and self. Informed consent enables the health provider to work alongside the transgender person in a flexible and responsive way.

We use Te Whare Tapa Whā as a health framework for these guidelines because it repositions mental health as an equal partner among all of the components of health and we hope that use of this model for transgender healthcare will provide a template for a holistic approach to the provision of gender affirming healthcare in Aotearoa, New Zealand.

The Treaty of Waitangi

It is important to acknowledge in the development of any health service, the obligations and commitments that exist under the Treaty of Waitangi with its principles of partnership, protection and participation. Healthcare services must also be available, accessible, acceptable and of quality to Māori.¹⁵

Recommendations for provision of gender affirming healthcare

We recommend that:

1. All health services provide equitable and accessible gender affirming healthcare services that align with international standards, evidence-based literature and community feedback.
2. DHBs enable flexible and responsive pathways on the basis of informed consent and self-determination.
3. Health services enable the involvement of trans and gender diverse people, including Māori trans people, in decisions that affect them with regard to the development and provision of services.

4. Health services must support the development of culturally appropriate practice within clinical settings that acknowledges kaupapa Māori health frameworks.

In addition we recommend that:

5. DHBs provide clear information about pathways to access gender affirming healthcare services. This is inclusive of health services delivered by DHBs and primary health care.
6. Health services collect patient data, including ethnicity, in order to make visible the experiences of trans and gender diverse people in health systems.
7. Health services have a process for receiving feedback and evaluating people's experience that report on outcomes and commit to acting on the feedback/data received to improve services.



Taha wairua | spiritual health

Ko te wairua tētehi pou o te whare tapawhā.

Spirituality is one of the posts that stabilises the house.



Taha wairua | spiritual health

The spiritual essence of a person is their life force. This determines us as individuals and as a collective; who and what we are, where we have come from and where we are going.¹⁶

Pre-colonial Māori society

It is increasingly apparent that, in Aotearoa pre-colonial Māori society, people of diverse genders and sexualities were both accepted and valued within whānau.^{13,17,18} The colonisation in the 1800s by the British had a huge impact on Māori culture and society. Any expression of gender or sexual fluidity was strongly discouraged by the missionaries.¹⁸ Recorded histories overlooked or erased stories of takatāpui.¹³

The intersections of ethnicity and gender diversity are complex, particularly when the effects of colonisation are added. Gender diverse Māori no longer inhabit a world that views them as part of the normal range of human expression. The effects of living in a society that has marginalised people who are gender diverse are compounded by the addition of the negative health outcomes that colonisation has delivered to Māori in general.¹⁹

As outlined in the Rainbow health report from 2013, *“In short, tangata takatāpui moved from a social and cultural situation where minority stress was simply not a factor in the pre-colonial world of Māori, to one where it has become a key force in the negative health outcomes they experience”*.¹⁹

Likewise, Pacific cultures also accepted gender diversity as part of the normal range of human expression. The impact of colonisation of many of the Pacific Island nations through faith-based missions and colonial government administrations has had a negative impact on the acceptance of gender diverse people. Traditional social roles such as in caregiving, continue to value, and protect, gender diverse people such as fa’afafine (Samoan) and fakaleiti (Tongan), from those who disapprove. Consequently, Pacific families in Aotearoa will vary in their acceptance of gender diversity.

Aotearoa today and minority stress

Minority stress theory suggests that trans and gender diverse people experience stressors as a result of sociocultural sanctions about being transgender and/or gender nonconforming. These include prejudice, discrimination and violence which negatively impact on physical, social, spiritual, and psychological wellbeing. It is important to note that minority stress results from a multitude of everyday events that trans people experience.²⁰ Daily stressors for trans people can include not being affirmed by health providers, being asked invasive questions in inappropriate settings, or not having access to a safe public bathroom.

As noted in the New Zealand HRC report, *To Be Who I Am*, transgender people may face discrimination in housing and employment as well as within health services.⁸ Minority stress

here includes the economic stressors that many trans and gender diverse people also negotiate. Supporting the wellbeing of transgender people includes recognising that barriers to health, housing and employment will have negative health impacts. Improving health services is part of creating health, education, housing, and employment environments that are accessible, respectful, and inclusive of trans and gender diverse people.

Trans positive health services: flexible and responsive

A person's gender identity and their gender expression develops over time in response to complex interplay between nature, nurture and culture and each trans person will undertake a unique journey to affirm their gender.²¹

For some Māori and others, cultural affiliation and spirituality may play an important role in their gender identity.²² Spiritual considerations such as relationships with tūpuna/ancestors or atua may be a distinct and important part of a transition journey for some people, and for others this may be irrelevant or woven into the process as whole. Recognising the self-determination of the transgender person enables health providers to respond flexibly and respectfully to the uniqueness of each person's transition.

Primary and secondary health services that are respectful and affirming of people's gender identities can have a positive impact on trans people's well-being.²³ There are many important non-medical supports that can be useful for health services to be aware of when supporting people who are socially transitioning.

Social transition

Social transition consists of the steps many transgender people choose to take to alter their presentation in the world to better align with their gender identity. Transition looks different for every individual and it is important to note that neither social or medical transition is required in order to be recognised as a trans or gender diverse person. Social transition may involve:

- Using a different preferred name.
- Requesting to be referred to by a different pronoun (he/him, they/them, she/her etc).
- Changing hairstyle, using makeup or wearing different clothes.
- Wearing a chest binder to achieve a more masculine chest appearance.
- Using a packer to simulate the appearance of male genitals (through clothing).

Note: there can be some health risks associated with binder use when worn for long periods of time. It is recommended to discuss safe usage of binders.

Transgender people should be supported through these steps of social transition to allow them to have positive experiences in the world as a truer representation of themselves. Social transition can also start out part-time in known safe environments, such as home or school.

PRACTICE POINTS

To combat the harmful effects of minority stress and promote wairua among trans people, primary and secondary health services should:

- Promote gender diversity inclusion in clinic and on-line information.
- Recognise that each individual is the expert of their own gender identity and that their unique journey needs to be acknowledged (respect self-determination).
- Train staff on how to ask sensitive questions around gender identity in a safe and appropriate way, recognising that people present to health services at different stages in their social transition with different levels of comfort around how they wish to describe themselves.
- Enquire about and use preferred name and pronouns.
- Register the person's self-identified gender identity on electronic patient records and update the National Health Index (with discussion and consent from the person whose record is being updated).
- Provide training for clinicians to enable safe discussions of gender identity if people want to discuss their gender identity with clinicians.
- Be knowledgeable about options such as binders or packers.
- Work with people around plans for socially transitioning safely. This may include advice on transitioning in the work place or linking people to agencies that can provide support.
- Recognise the impact of minority stress, which impacts different people differently but may include negative effects on social, spiritual, psychological and physical health and affirm the inherent worth of each person as deserving respect and inclusion.
- Display material, such as health promotion posters, that are inclusive of gender diversity.
- Provide gender neutral toilet options.

Recommendations for trans positive health services

We recommend that:

1. DHBs provide compulsory training for staff on supporting trans and gender diverse patients.
2. DHBs promote work environments that are respectful of gender diversity and are trans positive.



Taha whanau | family health

Unuhia te rito o te harakeke, kei hea te kōmako e kō?

Ka rere ki uta, ka rere ki tai

Ui mai ki ahau, 'He aha te mea nui o te Ao?'

Māku e kī atu,

'He tangata, he tangata, he tangata.'

*If you pluck out the heart (central shoot) of the flaxbush,
where will the bellbird find rest?*

It will fly in-land, it will fly seawards.

If you were to ask me, 'What is the most important thing in the world?'

I would reply,

'It is people, it is people, it is people.'

Taha whānau | family health

Whānau are the link to our ancestors, our ties with the past, the present and the future. Fundamental to understanding Māori concepts of well-being, is understanding the importance of families in providing the strength to be who we are, as well as providing an environment conducive to good health.²⁴

There are many forms of whānau support; a parent looking out for their trans child, an adult supporting their trans partner or parent through transition, a family advocating for respectful care of their trans relative in a resthome. In reality it is not just one person who 'transitions' but the whole whānau.

Whānau and young people

Whānau support is a highly protective factor for trans young people.²⁵⁻²⁷ Research shows that trans young people reporting strong family connectedness have a greatly reduced likelihood of poor mental health, even when experiencing stigma and discrimination elsewhere.²⁵

*"Whānau support provides a place from which takatāpui rangatahi can draw strength and resilience to help deal with the challenges they face outside the whānau."*²⁸

Parents report a range of emotions following disclosure from their child that they are transgender, including confusion, the need to have time to process, the need to grieve for the loss of a son/daughter, fear for the future and acceptance of their child.²⁹ While the young person is likely to have spent considerable time developing an understanding of who they are, families may perceive the change as being sudden and require time to adjust.³⁰ Whānau report that they need information and time to understand their loved one's journey. It is an important part of the role of health services to support this process. Some families find joining parent support groups helpful.

PRACTICE POINTS

Primary and secondary health services need to provide education, promote connection to family and to support whānau to be able to support gender diverse children and young people through simple advice:

- Assure your child/young person that they have your unconditional love and support, or at least that you will commit to their journey with them.
- Encourage exploration of how they express themselves. It is important that young people have spaces in which they feel safe enough to explore their gender.
- Use the child/young persons preferred gender pronouns (he/him, she/her, they/them etc) and preferred name when they are ready to do so. Support family and friends to do the same, providing it is safe to do so.
- Provide written/online information for whānau.

Gender diverse children

Many children explore different ways of expressing their gender through play. Most of these children are comfortable with the sex they were assigned at birth, although some are not.

Some children will assert themselves as a gender different from the sex assigned at birth. These transgender children are usually insistent, consistent and persistent in their gender identity and may exhibit distress or discomfort with their physical body.²¹

**“insistent,
consistent
and
persistent”**

Some transgender children are aware of their gender identity from a very early age, while others may take some time to figure it out or find a safe way to express it. Children can be very aware of the disapproval of those around them and may try to hide their feelings about their gender.

For gender expansive children, including those who may identify as transgender, no medical intervention is needed pre-puberty. Supporting trans and gender diverse children requires a developmentally appropriate and gender affirming approach which involves assisting children to create an environment where their gender can be affirmed. This might require providing education and support for families and schools to be able to support the gender diverse child to navigate a social transition and helping children to develop the coping skills to address any negative reactions that they might experience for being gender diverse.³¹

Whānau may want support from their primary care health team, a paediatrician, child and adolescent mental health service or parent support group to work out how best to support their child. This is particularly important if there is associated distress related to gender identity.

**“no medical
intervention
is needed
for children”**

Young people

Trans young people may present to a range of health providers requesting support with their gender identity, so all health teams need to be able to provide an inclusive environment where young people will feel safe talking about their gender.³²

Some young people present with longstanding diverse gender identities since childhood, while others find that adolescence was a crucial time for the development of their gender identity. Identity may emerge during or after the onset of the physical changes brought on by puberty and the changing social and romantic interactions with peers.³³ Similarly, some previously gender-expansive children may shift along the gender spectrum to find their gender identity more aligned with the sex assigned at birth. In all of these situations, these young people and their families will benefit from supportive healthcare providers who pay attention to how the young person is expressing their gender.

PRACTICE POINTS

Primary and secondary health services need to be aware of the importance of the following in provision of services for young people:

- Discussion regarding privacy of health information and the limits of confidentiality is important in every consultation with a young person. Young people need to understand that their concerns and information will be kept private and confidential within the limits around their own and others safety.
- Seeing young people on their own for at least part of the consultation should be routine practice otherwise there may be no opportunity for a young person to talk about their gender identity.
- Trans young people need to be assessed routinely for risks around abuse, bullying, drug and alcohol use, nutrition and unhealthy eating behaviours, sexual health and any mental health concerns.
- Trans young people often benefit from being linked into supportive peer groups, including online groups.
- Peer and other social supports, counselling or other primary mental health interventions can be useful in assisting with identity development and reducing any distress experienced throughout this process.
- Use of language, including names and pronouns, can be an important part of young people exploring identity. Use the names and pronouns requested by the young person and be sensitive that use of these may be situational depending on who is present.

Anticipation of and/or experiencing pubertal body changes can be very distressing. There is good evidence that puberty blocking and gender affirming care for trans young people significantly improves mental health and wellbeing outcomes.²³ Decisions regarding medical interventions are ideally made collaboratively between the trans young person, their whānau and the health team. However, it is not always possible to involve family. Lack of whānau support does not preclude trans young people from accessing care. While young people aged 16 years and older are considered to be able to make decisions about their medical care (Care of Children Act 2004), under the Code of Health and Disability Services Consumers' Rights, (1996) younger people are not prohibited from consenting to medical interventions if the young person is deemed to be competent to make an informed choice. To assist this informed consent process, we recommend that gender affirming healthcare for young people is provided within a multi-disciplinary team.³³

Schools

Feeling connected to school is also a significant protective factor for trans young people.²⁵ Schools have an obligation to provide safe environment for their students.³⁴ The Youth '12 New Zealand school survey found that while 74% of trans young people thought that school was okay, 54% were

afraid that someone at school would hurt or bother them.¹ Many schools now allow choice around wearing a school uniform that is appropriate for the student, provide gender neutral bathrooms and diversity support groups. There are a range of support materials available for schools.³⁵ However, many students have reported to us that they still experience barriers to updating school records to correctly reflect their gender identity and experience gender-based exclusion from activities such as joining sports teams, choirs and kapa haka groups.

PRACTICE POINTS FOR SCHOOL HEALTH TEAMS

- Have information on gender affirming healthcare services readily available and on display.
- Provide training on working with transgender students for the whole student health team.
- Have information and support available for transgender students who experience discrimination from students or teachers.
- Be connected to local health and social services in your area that specialise in working with transgender young people.
- Enable students to establish a diversity group or other support for transgender students (if they desire to do so).

Partners and friends: young people and adults

Transgender people transition at all ages, and people who are transitioning need support not only from family but also their partners and friends. Provide simple advice for partners, family and friends (such as the list below)³⁶ and continue to listen to the wishes of the transgender person as to how they would like their family and friends to respond. Some people will have requests about how they want to be supported and what their partners, relatives, and friends can do to demonstrate their care and respect.

Provide simple advice, such as:

- Listen first and foremost. Be available to listen to your family member's or friend's experiences. Make an active effort to listen without judgment. Remember that advice isn't always necessary; sometimes all they need is a kind ear.
- Respect trans people's pronouns and use the names/pronouns that your friend or family member is using to refer to their partner.
- Support your family member or friend's decisions about their relationship. Trust that they are making the right decisions for themselves.
- Educate yourself and others. Read and listen to the stories of transgender people and their partners. This will give you a better understanding of their experiences and enable you to interact in a positive way with your friend or family member.

- Keep any questions respectful. Don't ask questions that you wouldn't ask other people, such as questions about their sex life or whether their partner has had gender affirming surgery.

Whānau and self-determination

Family and whānau include all significant people in a person's social network, not just their immediate nuclear family structure (many people have family structures that are non-nuclear for many reasons), and it is important to recognise that a person's whānau is who they say it is. This is part of respecting self-determination. Many people have chosen family, or whānau who are not the people who raised them or their legal kin. Asking inclusively about whānau and social support means not focusing solely on a person's parents/caregivers, or children, but also expanding this to include other people who are significant supports in that person's life.

PRACTICE POINTS

- Recognise the importance of social support and the broad definition of whānau.
- Asking inclusively about family/whānau so that people know you are referring to this broader definition. This will enable more accurate information to be shared about where social and familial support is more or less available in that person's life.
- Connect family and whānau to support groups where needed, or to resources about supporting and affirming their family member who is transitioning.
- Centre the needs of the transgender person as part of a wider social network of relationships.
- Find out about local social support groups, which may be formal or informal peer networks, face to face or online, in order to share that information if needed.

Recommendations for services that are supportive of whānau

We recommend that:

1. DHBs provide easily accessible information and access to peer support services for trans people of all ages and their whānau.
2. DHBs have clear and timely referral pathways for young people and their whānau to access information about gender affirming care.
3. That gender affirming healthcare services for children and young people are provided by clinicians with expertise in child and youth development.
4. That aged care facilities should be provided with training and support around provision of care for older trans and gender diverse people.



Taha hinengaro | mental health

E koekoe te tūi, e ketekete te kākā, e kūkū te kereru

*The tūi chatters, the parrot gabbles,
the wood pigeon coos. It takes all kinds of people...*



Taha hinengaro | mental health

The capacity to communicate, to think and to feel mind and body are inseparable.

Thoughts, feelings and emotions are integral components of the body and soul.¹⁶

Mental health

Trans and gender diverse people have the same inherent potential to flourish and thrive as other people, but currently experience increased risk of harm because of discrimination, social exclusion, bullying and assault,³⁷ as well as institutional barriers such as difficulties accessing healthcare, bathrooms, and appropriate legal identification.³¹ Trans people from ethnic minority or refugee backgrounds are likely to be at even greater risk of experiencing harm. It is becoming increasingly accepted that it is the additive effects of minority stress that results in mental health difficulties.^{20,31,38} It is important that health services acknowledge these wider determinants of health and the potential role they play in leading positive societal change to improve health outcomes.

Being transgender is often but not always accompanied by gender dysphoria, a person's discomfort or distress with their body or gender roles associated with their sex assigned at birth.⁴ Constant reminders can be experienced when showering or dressing. However, increasing evidence demonstrates that supportive, gender affirming care for trans people significantly improves gender dysphoria and mental health and wellbeing outcomes.^{23,27,39,40}

International studies consistently show high rates of mental health issues such as anxiety and depression for trans people.^{29,39,41} In New Zealand the Youth'12 secondary school survey highlighted the mental health disparities experienced by transgender young people compared to their cis gender peers with 41% vs 12% experiencing significant depressive symptoms and 20% vs 4% reporting an attempted suicide, respectively, in the past 12 months.¹ Because of the high prevalence of mental health problems among trans people, health services that are multidisciplinary and include mental health professionals will be more responsive to the on-going needs of trans people accessing gender affirming health care.

The role of mental health professionals

Trans people may seek support from mental health professionals for a range of reasons, including support related to their gender or concerns with their mental health. Mental health professionals should be aware that mental health problems may be related to the effects of minority stress for being transgender or may be due to other causes.³¹ While many trans people access psychotherapy for support with living in their affirmed gender, psychotherapy is not a requirement of accessing gender affirming care.⁴

Mental health professionals with the appropriate skills and knowledge can assist with the informed consent process for readiness for gender affirming hormones or readiness for surgery.⁴ The WPATH SOC state that it is important for mental health professionals to have open dialogue with prescribing practitioners, surgeons, and other providers of a trans person's care and to access regular peer consultation and feedback. These mental health professionals should have the knowledge to provide information to trans people regarding gender affirming care treatment options and community support availability.⁴

Finally, an important component of ethical health care provision is for providers to be advocates for the trans people who use their services. This could include educating or working with family members, schools, workplaces, healthcare settings, and other parts of the community on being inclusive and affirming of trans people.⁴ Recognising stigma, discrimination, and violence as the source of many issues that trans people face in Aotearoa, New Zealand,⁸ all health professionals should work collaboratively with trans people to advocate for social and public policy change to reduce the negative effects of minority stress.³¹

PRACTICE POINTS

- Include mental health issues as part of a holistic psychosocial assessment, for example discussion of anxiety, depression, risk of self-harm, while being clear that having mental health issues is not a barrier to accessing gender affirming services.
- With the involvement and consent of the transgender person, plan for provision of on-going support for any mental health issues identified.
- Respect the self-determination of each person as being the expert on their experience. This is often referred to as the “informed consent model” of gender affirming healthcare because it counteracts pathologisation and repositions the transgender person as being at the centre of their own life.
- Recognise the impact of hostile environments on trans and gender diverse people, (i.e. minority stress) and validate the experiences that people have navigating those environments.
- When discussing stressors, follow the transgender person's lead as to whether their current challenges and health needs are focused on their gender or on something else in their life.
- Find and provide information about how transgender people can access peer support, counselling or other primary mental health services as needed.
- Ensure access to gender affirming health services alongside secondary mental health services: provide clear information about what to expect from secondary mental health services if referrals are appropriate, and work alongside secondary mental health services if they are involved.

- Listen to each transgender person about ways that they would appreciate you advocating for them, which may be on an immediate interpersonal level (for example with family members or other health providers) or on a broader level in relation to other settings such as schools and workplaces.
- Listen and reflect back the language each person uses about themselves, including gender identity terms, preferred names (even if not legally changed) and correct pronouns.

Neurodiversity and gender diversity

It has been increasingly recognised that neurodiversity (autism spectrum) is common among the transgender community.⁴² Involving clinicians with the relevant diagnostic skills can be helpful for some people, as being able to identify as being on the autism spectrum can be helpful to understand behaviour and learn strategies to manage any difficulties.

It is important to acknowledge that the person presenting is the expert on their own experience. Although some neurodiverse people may have difficulty in articulating their gender identity, this should not create an unnecessary barrier to access any relevant gender affirming services. Some people may express their gender identity non-verbally.

The presence of neurodiversity can add complexity and extra time and support may potentially be required to help navigate all stages of the gender health journey including gender exploration, social, medical and surgical transition.⁴³

Family and whānau may need support to understand more about the co-existence of neurodiversity and gender diversity, so that they understand that it is a common overlap and that being on the autism spectrum does not invalidate being transgender or seeking health services as part of transitioning.

PRACTICE POINTS

It is recommended that clinicians consider two key questions when working with people on the autism spectrum:

- Is the gender identity clear, urgent, pervasive, and persistent over time?
- Does the gender dysphoria increase or decrease with interventions?⁴³

Recommendations for supporting positive mental health

We recommend that:

1. All health services acknowledge the need to support the mental health and wellbeing of trans and gender diverse people.

2. All providers of mental health services receive training on supporting trans and gender diverse people.
3. DHBs provide clear referral pathways for trans and gender diverse people who choose to access primary or secondary mental health services.
4. DHBs support staff working in gender affirming care to work collaboratively and not in isolation (multidisciplinary and/or interdisciplinary teams).



Taha tinana | physical health

Ki te kore ngā pūtake e mākūkūngia, e kore te rākau e tupu

If the roots of the tree are not watered, the tree will never grow



Taha tinana | physical health

Our physical 'being' supports our essence and shelters us from the external environment. The physical dimension is just one aspect of health and well-being and cannot be separated from the aspect of mind, spirit and family.¹⁶

These guidelines are based on Te Mana Whakahaere, the principle of trans people's autonomy of their own bodies, represented by healthcare provision based on informed consent. This is also consistent with the current version of the WPATH SOC v7.⁴

Transition goals

Physical health is part of every person's wellbeing and is therefore relevant to every person's transition. Medical treatments such as hormone therapies and surgical interventions may also be an important part of a person's transition and physical health. While many trans people will benefit from hormone therapies and surgical interventions, some may choose only one of these options and others may decide to have neither.³⁰ For those who are seeking medical support, access to competent care through an informed consent model is of paramount importance.

In regards to transition goals, it is important to recognize that each person will articulate these differently. It is not helpful to assume that everyone wants to conform to binary gender norms and clinicians need to be aware not to impose a binary view of gender.⁴ The importance of discussing individual transition goals and individualising treatment options is especially true for non-binary people but also applies to those with a more binary gender.³⁰

“withholding gender affirming treatment is not considered a neutral option”

Avoiding harm is a fundamental ethical consideration for health professionals when considering healthcare. Withholding gender affirming treatment is not considered a neutral option, as this may cause or exacerbate any gender dysphoria or mental health problems. Conversely, access to gender affirming care may reduce the mental health pressures a trans or gender diverse person is experiencing. This does not discount that clinical decisions can be complex, particularly where there is family opposition for young people, the person is neurodiverse or has complex mental health needs. It is best practice that gender affirming healthcare is provided by well-resourced multidisciplinary teams that include mental health professionals⁴ and have good links with peer support groups. In complex scenarios case discussion helps to achieve the best outcomes for the patient and helps clinicians to feel supported.

Informed consent

Utilising an informed consent process involves several conversations between the person and clinician(s) before they start treatments that have an irreversible component to increase certainty that they are adequately prepared and are making a fully informed decision. Health teams have a

duty to approach care holistically. Involving team members with expertise in psychological health is important to identify and address any mental health needs. Social transition can be a stressful time for some people who may benefit from extra mental health support, but it is important to ensure that they consent to having this support and it is not enforced as a requirement for accessing gender affirming care.

Accessible gender affirming care involves people being able to access this care as close to home as possible. There are limited numbers of teams that are specialised in gender affirming care in New Zealand and these are receiving increasing demand.⁴⁴ Primary health providers should be aware of the barriers and potential harms with requiring people to travel or wait to access care and might consider assessment and provision of gender affirming hormones within the primary care setting.

General healthcare

Access to primary and secondary healthcare services that are supportive of gender diversity is fundamental to the provision of good healthcare. Apart from transition related health needs, transgender people experience the same health needs as other patients. Those who have not undergone surgical removal of their breasts, cervix, uterus, ovaries, prostate or testicles remain at risk of cancer in these organs and should undergo screening as recommended for these cancers. It is important to be aware that this needs to be managed carefully by primary care health teams, as many gender diverse people find cancer screening extremely challenging, both physically and emotionally.

For cervical screening consider:

- Asking what words are preferred when referring to their body parts.
- Use of internal oestrogen cream prior may reduce discomfort and reduce the chance of an inadequate smear test.

For breast screening for trans people with breast tissue:

- Regular mammograms as per the national breast screening programme are recommended.

Healthcare for young people

Health services providing gender affirming healthcare for transgender young people need to be mindful of the needs of young people in general.

PRACTICE POINTS

Acknowledge that withholding gender affirming healthcare is not considered a neutral option.

- Arrange the consultation so that all young people can be seen on their own, for at least part of the consultation, and include a discussion around confidentiality. This needs to be routine practice to ensure that young people have the opportunity to voice their gender related concerns to their health professional in private.

- Recognise that some transgender young people may not have the support of their parents/guardians, but this should not preclude them from receiving support and care.
- Refer promptly to appropriate services to access early interventions pre/during puberty, as timeliness is particularly important in relation to long-term outcomes.
- Assess young people routinely for risks around abuse, bullying, drug and alcohol risk taking, sexual health and mental health concerns. Provide links to appropriate mental health or other services as needed.

Fertility preservation and contraception

Fertility preservation should be discussed, prior to starting puberty suppression or gender affirming hormone therapy.⁴⁵ Gonadotropin Releasing Hormones (GnRH) agonists are reversible and should not affect long term fertility. However, prior to starting gender affirming hormone therapy, adolescents are often reluctant to cease puberty blockers in order to conduct fertility preserving interventions.³⁰ For younger adolescents a focus on preservation of gametes rather than a discussion on desire for future fertility may be more developmentally appropriate. Be aware that some whānau might feel a strong sense of loss if there is no possibility of having mokopuna/grandchildren. The need to protect and preserve lineage or whakapapa may be important for some.

There are many reports of trans men having successful pregnancy outcomes for those who have ceased testosterone for the purposes of achieving conception.⁴⁶ However it is unknown what effect the duration of testosterone therapy has on ovarian function.

It is important that contraception advice is provided, prior to starting testosterone. Testosterone therapy does not provide a guarantee of adequate contraception and is contraindicated in pregnancy because of potential harm to the foetus from the androgenising effects of treatment.⁴⁷ Progesterone based Long Acting Reversible Contraception (LARCs) such as (Depo provera[®], Jadelle[®]) or IUDs (Mirena[®])/ IUCDs are suitable options for contraception, while condoms provide additional protection against the acquisition of sexually transmitted infections. Note that insertion of an IUD may be more painful and technically more challenging in someone who has a degree of cervical atrophy from testosterone therapy.

For those considering taking feminising hormones who have reached at least Tanner stage 3 (Appendix A), it is recommended that cryopreservation of sperm be considered.⁴⁵ For those in early adolescence (Tanner stage 2-3), collection of mature sperm will not usually be possible as mature sperm are produced from mid puberty (Tanner stage 3-4).³⁰ Cryopreservation of testicular tissue obtained via biopsy is being offered in some countries but is considered experimental. Appendix B provides an example of fertility information that might be provided for those starting feminising hormones.

For those considering taking masculinising hormones, the option of egg or ovarian tissue storage should be discussed, recognising however, that this does involve invasive procedures that are not

currently publically funded unless reproductive organs are being removed. There is no current evidence to suggest that testosterone exposure affects the likelihood of future healthy egg harvesting.

Puberty suppression using GnRH agonists

Health teams need to be aware of the positive impact of puberty blockers (GnRH agonists) on future well-being. Be mindful of the need to refer promptly and be aware of referral pathways. Puberty blockers can be prescribed from Tanner stage 2 to suppress the development of secondary sex characteristics, although are still beneficial when prescribed later in puberty to prevent on-going masculinisation/feminisation.⁴⁵

Puberty blockers are considered to be fully reversible and allow the adolescent time prior to making a decision on starting hormone therapy.⁴⁵ They do not stop growth or weight gain, and monitoring of height is recommended as adult height may potentially be increased if prolonged puberty suppression delays epiphyseal fusing.⁴⁵ A bone age may be helpful to assess whether epiphyseal closure has occurred when considering what rate of hormonal induction to use as this may potentially impact on final height.

Puberty blockers halt the continuing development of secondary sexual characteristics, such as breast growth or voice deepening, and relieve distress associated with these bodily changes for trans young people.^{23,48} For trans women and transfeminine people, they will prevent further masculinisation of the face and body that typically occurs into early adulthood.³⁰ For trans men and transmasculine people, the puberty blockers will induce amenorrhoea, reducing distress associated with menstruation, although other options for this are also available. If required the addition of non-hormonal contraception should be discussed.

Currently in New Zealand, goserelin (Zoladex®) SC implants have sole subsidy status, although leuprorelin (Lucrin®) IM injections continue to be fully funded for children and adolescents, who are unable to tolerate administration of goserelin, where the prescription is endorsed accordingly.⁴⁹

Consideration should also be given to those in early adolescence who may desire genital gender affirming surgery in adulthood. For trans women and transfeminine people, puberty suppression at Tanner stage 2-3 may limit the availability of penile and scrotal skin used to create a neovagina and labia.⁵⁰ This needs to be balanced with the desire to avoid voice deepening and other secondary sexual characteristics which will progress if continuing past Tanner stage 2-3.

There is some concern regarding the long term impact of puberty suppression on bone mineral density.⁴⁵ It is advisable to encourage young people on puberty blockers to have an adequate calcium intake, provide vitamin D supplementation where needed and encourage weight bearing exercise.³⁰ For those requiring a prolonged period on puberty blockers or who have other significant additional factors for reduced bone density, a DEXA scan to monitor bone densitometry should be considered.

Puberty blockers should be continued until a decision is made regarding further treatment options including: starting other anti-androgen agents or accessing orchiectomy or other surgical options for trans women and transfeminine people; starting testosterone for trans men and transmasculine people.

Table 1: Puberty blockers. See Appendix C and D for sample puberty blocker consent forms

Medication	Dose
GnRH agonist options	
Leuprorelin (Lucrin®)	11.25 mg IM every 12 weeks*
Goserelin (Zoladex®)	10.8 mg SC implant insertion into lower abdomen every 12 weeks*

*If evidence of insufficient pubertal suppression e.g. LH > 2 IU/L, pubertal progression, continued menses the interval between GnRH blockers can be shortened to 10 weeks or the dose increased.

Table 2: Recommended medical examination and investigations during suppression of puberty

Examination	Every 3-6 months: height, weight, consider sitting height, BP, Tanner stage to ensure complete suppression
Blood tests	Every 6-12 months: LH, oestradiol or testosterone Consider Vitamin D levels/or treat
X-rays	Bone age on left hand if clinically indicated
If major risk factors for osteoporotic # or prolonged time on puberty blockers	Consider bone density scan (DEXA)*

* Unless concerns around bone mineral density then regular monitoring of bone density is not routinely done in NZ.

Gender affirming hormone treatment

Gender affirming hormones oestrogen and testosterone are used to either feminise or masculinise a person's appearance by inducing onset of secondary sexual characteristics of the appropriate gender. Some of the effects of these medications are irreversible, whilst others have a degree of expected reversibility.³⁰

WPATH SOC v7 guidelines provide internationally recognised standards and criteria for accessing gender affirming hormone treatment.⁴

WPATH SOC v7 criteria for access to gender affirming hormone treatment:

- Persistent, well-documented gender dysphoria.

- Capacity to make a fully informed decision and to consent for treatment.
- Age of majority.
- If significant medical or mental health concerns are present, they must be reasonably well controlled.

In New Zealand young people aged 16 years and older are considered to be able to consent to medical care (Care of Children Act 2004), however it is increasingly recognised that there may be compelling reasons to initiate hormones prior to the age of 16 years for some individuals, although there is as yet little published evidence to support this.⁴⁵ Consideration should be given to the individual circumstances including family support, length of time on blockers, concerns around final height, risks of delaying hormones and most importantly the ability to consent. Further discussion around fertility should be carried out prior to hormone initiation. Using a multidisciplinary team approach to support initiation of hormones is recommended for all young people.

It is important when commencing hormones in younger adolescents to consider the Induction of Puberty Protocols as detailed by Hembree et al⁴⁵ and Telfer et al.³⁰ For trans men within two years of menarche who may have further growth potential, the gradual increase in testosterone doses described may be beneficial to increase final height. Conversely, for trans women in later puberty, who are still growing, earlier oestrogen commencement on standard doses will support epiphyseal closure in those wishing to reduce final predicted height.

When commencing testosterone, continuation of the GnRH agonist is recommended until the full dose of testosterone is reached, to help prevent breakthrough menses (bleeding). If breakthrough bleeding occurs once on full dose testosterone alone a progesterone may need to be added.

There is no upper age limit to starting hormone therapy. Provide information based on an individual risk assessment and discussion on likely benefits to guide an informed consent process highlighting those body changes that are considered permanent.

Drug Free Sport NZ has information for clinicians who are asked to provide documentation for trans athletes applying for therapeutic use exemptions for any substance on the prohibited list. This list which is decided by the World Anti-Doping Agency currently includes testosterone, spironolactone and also GnRH agonists but only for those competing in a male sports category.

The WPATH standards emphasise that the having medical or mental health concerns does not mean gender affirming care cannot be commenced, rather that these need to be responded to alongside gender affirming care. According to the standards, this readiness can be assessed by a prescribing provider or mental health professional who is experienced and competent at working with trans people.⁴

Prior to starting hormone therapy, it is important to evaluate and address any medical conditions that could be exacerbated by treatment with sex hormones of the affirmed gender.⁴⁵ The following medical conditions are not necessarily contra indications to starting hormone therapy but may need to be considered.

Consider

- Current or recent smoker
- Heart failure, cerebrovascular disease, coronary artery disease, atrial fibrillation
- History or family history of venous thromboembolism including deep vein thrombosis (DVT)
- Cardiovascular risk factors – Body mass index (BMI) > 30, hyperlipidaemia, hypertension
- Migraine
- History of hormone-sensitive cancers e.g., breast, prostate, uterine, testicular
- Possible drug interactions
- Sleep apnoea
- Sex variations for some intersex people.

Note: while discussion on intersex is outside the limits of this guideline it is important to acknowledge that some intersex people may present as gender diverse and that there are unique considerations for this group of people.

The prescribing and monitoring of maintenance hormonal therapy is best done in primary care as part of the patient's overall care. Consultations should include:

- Assessment of the effects of taking hormones on both physical and emotional health
- Review of doses and desire for change
- Presence of side effects
- Assessment of mental health and body image
- Current social supports or issues
- Enquiry about lifestyle factors such as nutrition, exercise and smoking
- Monitoring of blood pressure and BMI.

Feminising hormonal therapy

Oestradiol valerate can be started in conjunction with an anti-androgen agent or added to a GnRH agonist (leuprorelin/goserelin). Goserelin (Zoladex[®]) is an option for those trans women, transfeminine, and/or non-binary people who cannot tolerate oral anti-androgen agents. Anti-androgen agents are no longer required if orchiectomy or genital gender reassignment surgery is performed.

Start a low dose of oestradiol valerate (Progynova[®] /Estradot[®]) and increase the dose every 6 months approximately, depending on the clinical effect. Transdermal oestrogen has lower risks for thromboembolism than oral oestrogen and should be considered, particularly for those aged > 40 years, with raised BMI or any other increased risks for thromboembolism.

Table 3: Recommended medical examination and investigations prior to starting feminising hormones

Physical Examination	Investigations
Blood pressure	Electrolytes – if starting spironolactone
Height	HbA1c – if risk factors suggest indicated
Weight	Lipids – if risk factors suggest indicated
BMI	Prolactin
Tanner stage (in adolescents)	LH
	Testosterone level
	Oestradiol level

Table 4: Feminising hormones. See Appendix E for example consent form

Medication	Dose (Adults and older adolescents)
Anti-androgen agent options (not required post gonadectomy)	
Cyproterone	Starting dose: 25-50 mg po daily Usual maintenance dose: 25-50 mg po daily, although smaller doses (12.5 mg) may be effective
Spironolactone	Starting dose: 50-100 mg po daily Usual maintenance dose: 100-200 mg po daily
Oestrogen options	
Oestradiol valerate (Progynova®)	Starting dose: 1 mg po daily* Usual maintenance dose: 2-4 mg, maximum 6 mg po daily
Oestradiol patch (Estradot®)	Starting dose: 25 mcg patch twice weekly Usual maintenance dose: 100-200 mcg patch twice weekly

* **Note** Consider Induction of Puberty Protocols for adolescents^{30,45}

Table 5: Effects of feminising hormones (Adapted from The Endocrine Society Guidelines 201745 and The Royal Children’s Hospital Standards of Care³⁰)

Effect of oestrogen	Expected onset	Expected maximum effect	Reversibility
Redistribution of body fat	3-6 months	2-3 years	Likely
Decrease in muscle mass and strength	3-6 months	1-2 years	Likely
Softening of skin/decreased oiliness	3-6 months	unknown	Likely
Decreased sexual desire	1-3 months	3-6 months	Likely
Decreased spontaneous erections	1-3 months	3-6 months	Likely
Breast growth	3-6 months	2-3 years	Not possible
Decreased testicular volume	3-6 months	2-3 years	Unknown
Decreased sperm production	unknown	> 3 years	Unknown
Thinning and slowed growth of body and facial hair	6-12 months	> 3 years ^a	Possible
Male pattern baldness	Variable	^b	
Voice changes	None	^c	

a – Complete removal of hair requires laser treatment.

b – Familial scalp hair loss may occur if estrogens are stopped.

c – Treatment by speech-language therapists for voice training is most effective.

Table 6: Ongoing investigations for maintenance feminising therapy

Annual blood tests	Electrolytes – monitor more frequently if on spironolactone LFT HbA1c – if risk factors suggest indicated Lipids – if risk factors suggest indicated Oestradiol - avoid supraphysiological levels (target < 500 pmol/L) Testosterone (aim for level < 2 nmol/L)
Every two years	Prolactin
If major risk factors for osteoporotic #	Consider bone density scan (DEXA)

Potential complications for feminising therapy:

- Venous thromboembolism:
 - particularly if aged > 40 years
 - most common in first 2 years of treatment
 - reduced risk on transdermal oestrogen
 - if aged > 40 years or other DVT risks, consider switching to transdermal oestrogen
- Cardiovascular disease – adverse lipid profile, hypertension
- Insulin resistance
- Liver dysfunction
- Gallstones
- Alterations in mood and libido
- Small risk of osteoporosis, breast cancer, and (rarely) hyperprolactinaemia.

Masculinising hormonal therapy

Testosterone can be added to a GnRH agonist or started on its own. It is contraindicated in pregnancy; always discuss whether there is a need for contraception. For those trans men, transmasculine, and/or non-binary people who have started on a GnRH agonist, periods will usually cease within the first 3-6 months of treatment. Start a low dose of testosterone and increase gradually. Following initiation of testosterone it is advisable to continue the GnRH agonist until the person is on the full dose of testosterone and well virilised to avoid any undesired bleeding. For those who have not started on a GnRH agonist and are not yet ready to start testosterone other interventions to achieve bleeding cessation may be beneficial including:

- Primolut® (norethisterone) po 5mg bd to 10 mg tds. Norethisterone is partially metabolised to ethinylestradiol in the body, which at these high doses is equivalent to levels in the combined oral contraceptive.^{51*}
- Provera® (medroxyprogesterone) po 10 mg tds or 20 mg nocte*
- Combined Oral Contraception – continuous active pill taking to avoid menstruation (note: some people may not be comfortable with being prescribed oestrogens)
- Depo-provera® (medroxyprogesterone acetate) 150 mg IM every 12 weeks
- Mirena® (levonorgestrel) – intra-uterine device

***Note:** not considered effective contraception.

The additional consideration of need for adequate contraception may affect the choice made.

Table 7: Recommended medical examination and investigations prior to starting masculinising hormones

Physical Examination	Investigations
Blood pressure	LFT
Height	HbA1c – if risk factors suggest indicated
Weight	Lipids
BMI	LH
Tanner stage (in adolescents) FBC	Oestradiol
	Testosterone
	Urine/serum HCG if appropriate*

* Testosterone is contraindicated in pregnancy.

Table 8: Masculinising hormones. See Appendix F for example consent form

Testosterone	Maximum doses (Adults and older adolescents)
Androderm® patches	7.5 mg daily (local irritation common)
Sustanon® (testosterone esters)	250 mg/ml IM every 3 weeks*
Depo T (testosterone cypionate)	100 – 200 mg IM every two weeks or, 100 mg SC weekly - 200 mg SC every 2 weeks
Reandron® (testosterone undecylate)	1000 mg IM every 10 - 12 weeks (second dose at six weeks to achieve steady state)

*Sustanon contains arachis oil and should be potentially avoided in those with peanut allergies.

Note Consider Induction of Puberty Protocols for adolescents^{30,45}

Table 9: Effects of masculinising hormones (Adapted from The Endocrine Society Guidelines 2017⁴⁵ and The Royal Children’s Hospital Standards of Care³⁰)

Effect of testosterone	Expected onset	Expected maximum effect	Reversibility
Skin oiliness/acne	1-6 months	1-2 years	Likely
Facial body/hair growth	6-12 months	4-5 years	Unlikely
Scalp hair loss	6-12 months ^a	variable	Unlikely
Increased muscle mass/strength	6-12 months	2-5 years	Likely
Redistribution of body fat	1-6 months	2-5 years	Likely
Cessation of periods	1-6 months		Likely
Clitoral enlargement	1-6 months	1-2 years	Unlikely
Vaginal atrophy	1-6 months	1-2 years	Unlikely
Deepening of voice	6-12 months	1-2 years	Not possible
Increased sexual desire	variable	variable	Likely

a – Highly dependent on age and inheritance; may be minimal.

Table 10: Ongoing investigations for maintenance masculinising therapy

Blood tests	FBC – every 3 months in first year, then 1-2 times yearly* LFT HbA1c – if risk factors suggest indicated Lipids Testosterone (aim for normal male range)**
If major risk factors for osteoporotic #	Consider bone density scan (DEXA)

* Polycythemia risk, consider testosterone dose reduction if Hct > 0.54.

** Testosterone should be measured midway between injections for Depo-testosterone or Sustanon, and immediately prior to an injection for Reandron.

Potential complications for masculinising therapy:

- Polycythemia – If severe, risk of thrombotic event
- Adverse lipid profile
- Mood and libido changes
- Obstructive sleep apnoea.

Small risk of liver dysfunction, insulin resistance, cardiovascular disease, endometrial hyperplasia, and osteoporosis.

Gender affirming surgical treatment

While some transgender people are comfortable with the expression of their gender identity without some form of surgery, for others surgery is essential to alleviate their body dysphoria and/or live fully and authentically in their gender.

Availability and funding are significant issues within New Zealand. DHBs do have expertise around provision of; chest surgery (chest reconstruction to masculinise/breast augmentation to feminise where there has been no response to oestrogen), hysterectomy, oophorectomy and orchidectomy. Some DHBs have expertise in plastic surgical techniques such as laryngeal shaves and facial feminisation while other interventions such as laser hair removal are not provided at all. Currently access to publically funded genital reconstruction surgery (metoidioplasty or phalloplasty (masculinising) and vaginoplasty (feminising)) is via the Ministry of Health (MOH) high cost treatment pool. The MOH require a referral from a DHB specialist in order to access funding through the high cost treatment pool.

WPATH SOC v7 guidelines provide internationally recognised standards and criteria for accessing individual surgeries.⁴ These are currently being revised and SOC v8 will inform practice internationally, including in Aotearoa, New Zealand.

WPATH SOC v7 criteria for access to chest reconstruction surgery:⁴

- Persistent, well-documented gender dysphoria.
- Capacity to make a fully informed decision and to consent for treatment.
- Age of majority.
- If significant medical or mental health concerns are present, they must be reasonably well controlled.

Note that hormone therapy is not a pre-requisite for masculinising chest surgery but is recommended for a minimum of 12 months prior to consideration of feminising chest surgery.

WPATH SOC v7 criteria for access to hysterectomy, salpingo-oophorectomy and orchidectomy:

- Persistent, well documented gender dysphoria.
- Capacity to make a fully informed decision and to consent for treatment.
- Age of majority.
- If significant medical or mental health concerns are present, they must be well controlled.
- 12 continuous months of hormone therapy as appropriate to the patient's transition goals (unless the patient has a medical contraindication or is otherwise unable or unwilling to take hormones).

The aim of hormone therapy prior to gonadectomy is primarily to introduce a period of reversible estrogen or testosterone suppression, before the patient undergoes irreversible surgical intervention.

WPATH SOC v 7 criteria for access to metoidioplasty or phalloplasty (masculinising) and for vaginoplasty (feminising):

- Persistent, well documented gender dysphoria.
- Capacity to make a fully informed decision and to consent for treatment.
- Age of majority.
- If significant medical or mental health concerns are present, they must be well controlled.
- 12 continuous months of hormone therapy as appropriate to the patient's gender goals (unless the patient has a medical contraindication or is otherwise unable or unwilling to take hormones).
- 12 continuous months of living in a gender role that is congruent with their gender identity (note that this can include gender identities other than male and female).

In New Zealand, current practice is that the person must be 18 years or older to access publically funded surgeries, as above and in addition to the referral letter from the prescribing clinician, a letter of support from a mental health professional should be provided. The role of the mental health professional is to ensure that the person is psychologically prepared for the surgery (for example, has made a fully informed decision with clear and realistic expectations and is practically prepared for the event).⁴ While WPATH SOC v7 advises that both letters should be provided by mental health professionals, in New Zealand it is usually the prescribing clinician who has the best knowledge of the client and is therefore seen to be the most appropriate person to make the referral.

Laser hair removal

Laser hair removal is not publicly funded in New Zealand. However, this can form an important part of gender affirming treatment for some transgender people, particularly as anti-androgens and oestrogen therapies will not completely halt facial hair growth that is already established.

Be aware of local providers of laser hair removal, and work with trans and gender diverse people to find ways they may be able to afford to access this treatment.

Voice and communication training

Speech and communication are fundamental to the way in which we express our gender. The goal of speech-language therapists is to help transgender and gender diverse people develop voice and communication that reflect their unique sense of gender.

When outer expression is congruent with an inner sense of self, transgender people may find increased comfort, confidence, and improved function in everyday life.⁵²

Recommendations for provision of gender affirming healthcare

We recommend that:

1. DHBs provide clear pathways for timely access to gender affirming healthcare, including puberty blockers, hormonal therapies, fertility preservation, voice therapy, counselling and mental health support, and gender affirming surgeries.
2. Primary care is responsive to the general healthcare needs of trans and gender diverse people.
3. Primary healthcare providers have access to training on trans and gender diverse health and are resourced to provide gender affirming care.

References

1. Clark TC, Lucassen MF, Bullen P, Denny SJ, Fleming TM, Robinson EM, et al. The health and well-being of transgender high school students: results from the New Zealand adolescent health survey (Youth '12). *J Adolesc Health* 2014 Jul;55:93-99.
2. The Gender Reassignment Health Services for Trans People within New Zealand, Good Practice Guide for Health Professionals. Counties Manukau District Health Board. 2011. Wellington: Ministry of Health.
3. The Harry Benjamin International Gender Dysphoria Association. The Harry Benjamin International Gender Dysphoria Association's Standards Of Care For World Professional Association for Gender Identity Disorders, 6th Version. 2001.
4. Coleman E, Bockting W, Botzer M, Cohen-Kettenis P, DeCuypere G, Feldman J et al. Standards of care for the health of transsexual, transgender, and gender-nonconforming people, version 7. *Int J Transgend*. 2012;13(4):165-232.
5. Durie M. Te Pae Māhutonga: a model for Māori health promotion. *Health Promotion Forum of New Zealand Newsletter* 49, 2-5 December 1999.
6. <https://transcendlegal.org/medical-organization-statements> [cited 2018 Jun 13]
7. International Commission of Jurists (ICJ), Yogyakarta Principles – Principles on the application of international human rights law in relation to sexual orientation and gender identity, March 2007. Additional principles and state obligations on the application of international human rights law in relation to sexual orientation, gender identity, gender expression and sex characteristics to complement the Yogyakarta Principles. Geneva 10th November 2017.
8. *To Be who I am*. Kia noho au ki tōku anō ao. Report of the enquiry into discrimination experienced by transgender people. Human Rights Commission. 2007.
9. Hira Huata (personal email 30th August 2017).
10. Te Taura Whiri i te Reo Māori. Lee Smith (personal email 28th August 2017) "Te Taura Whiri i te Reo Māori support the development of new vocabulary when recommended by users of that word."
11. Dame Naida Glavish (personal email 15th March 2018)
12. Williams 1871. The traditional word 'takatāpui', reclaimed from the manuscripts of Wīremu Maihi Te Rangikāheke (c1840s) by Professor Ngahuia Te Awekotuku and Lee Smith, is defined as meaning 'intimate companion of the same sex'. (Williams 1871:147).
13. Kerekere Elizabeth. Part of the whānau: The Emergence of Takatāpui Identity, He Whāriki Takatāpui. A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy. Te Kawa a Māui School of Māori Studies Victoria University of Wellington. April 2017.
14. Durie, M.H. (1994). Whaiora: Maori health development. Auckland: Oxford University Press.
15. <http://www.moh.govt.nz> He Korowai Oranga. Māori Health Strategy Discussion Document. 2001. [cited 23rd April 2018]
16. <http://www.moh.govt.nz> Te Whare Tapa Whā. [cited 25th April 2018]
17. Te Awekotoku, N. (1996) Māori: People and culture. In J. Davidson, N. Te Awekotuku, A. T. Hakiwai, R. Neich, M. Pendergrast and D. C. Starzecka (eds) *Maori Art and Culture* (Auckland: David Bateman).
18. Salmond Anne. *Tears of Rangī, experiments across worlds*. 2017. Auckland University Press, University of Auckland.
19. Stevens, M. W. (2013) *Rainbow Health: The Public Health Needs of LGBTTI Communities in Aotearoa New Zealand with Policy Recommendations*. Auckland: Affinity Services.
20. Hendricks M, Testa R. A conceptual framework for clinical work with transgender and gender nonconforming clients: an adaptation of the minority stress model. *Prof Psychol Res Pract* 2012;43:460–467.
21. Ehrensaft D. Gender non-conforming youth: current perspectives. *Adolescent Health, Medicine and Therapeutics*. 2017;8:57-67.
22. Henrickson M. Ko wai rātou: Managing multiple identities in lesbian, gay and bisexual New Zealand Māori. *NZ Sociology*. 2006;21(2):247-269.
23. de Vries AL, McGuire JK, Steensma TD, Wagenaar EC, Doreleijers TA, Cohen-Kettenis PT. Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics*. 2014;134:696-704.
24. Tuha – NZ. A Treaty Understanding of Hauora in Aotearoa-New Zealand. © 2002 Health Promotion Forum of New Zealand – Runanga Whakapiki ake i te Hauora o Aotearoa. www.hpforum.org.nz.
25. Veale JF, Peter T, Travers R, Saewyc EM. Enacted stigma, mental health and protective factors among transgender youth in Canada. *Transgend Health* Dec 2017;2(1):207-216.
26. Simons L, Schrager SM, Clark LF, Belzer M, Olson J. Parental support and mental health among transgender adolescents. *J Adolesc Health* 2013;53(6):791–793.

27. Olson K, Durwood L, DeMeules M, McLaughlin K. Mental health of transgender children who are supported in their identities. *Pediatrics*. 2016;137(3):e20153223.
28. Kerekere E. (2017) Growing up takatāpui: whānau journeys. Auckland: Tiwhanawhana Trust and RainbowYouth.
29. Stauss P, Cook A, Winter S, Watson V, Wright Toussaint D, Lin A. Trans Pathways: the mental health experience and care pathways of trans young people, Summary of results. 2017. Telethon Kids Institute, Perth, Australia.
30. Telfer M, Tollit M, Pace C, Pang K. Australian Standards of Care and Treatment Guidelines for Trans and Gender Diverse Children and Adolescents. Melbourne: The Royal Children's Hospital; 2017.
31. American Psychological Association. Guidelines for Psychological Practice With Transgender and Gender Nonconforming People. *Am Psychol*. 2015;70(9):832-64.
32. Oliphant J. Practice audit: Inclusive primary health care for gender diverse clients. Royal New Zealand College of General Practice. 2017.
33. Leibowitz S, De Vries A. Gender dysphoria in adolescence. *Int Review of Psychiatry*. 2016;28(1):21-35.
34. Affirming diversity of sexualities and gender identities in the school community. Guidelines for principals, boards of trustees and teachers. PPTA May 2017. <http://ppta.org.nz/dmsdocument/226>
35. Making schools safer for trans and gender diverse youth. InsideOUT. <http://insideout.org.nz/wp-content/uploads/2016/03/Making-Schools-Safer-For-Trans-and-Gender-Diverse-Youth-web.pdf>
36. Chester K. Five key ways to support transgender people and their partners. 2017. <http://mro.massey.ac.nz/handle/10179/8591>.
37. Couch M, Pitts M, Mulcare H, Croy S, Mitchell A, Patel S. *Tranznation: A Report on the Health and Wellbeing of Transgendered People in Australia and New Zealand*. Melbourne: The Australian Research Centre in Sex, Health & Society, La Trobe University; 2007.
38. Goldblum P, Testa RJ, Pflum S, Hendricks ML, Bradford J, Bongar B. The relationship between gender-based victimization and suicide attempts in transgender people. *Prof Psychol Res Pract* 2012;43:468-475.
39. Dhejne C, Van Vlerken R, Heylens G, Arcelus J. Mental health and gender dysphoria: A review of the literature, *International Review of Psychiatry*. 2016;28(1):44-57.
40. White Hughto J, Reisner S. A systematic review of the effects of hormone therapy on psychological functioning and quality of life in transgender individuals. *Transgend Health* 2016;1(1):21-31.
41. Veale J, Saewyc E, Frohard-Dourlent H, Dobson S, Clark B & the Canadian Trans Youth Health Survey Research Group (2015). *Being Safe, Being Me: Results of the Canadian Trans Youth Health Survey*. Vancouver, BC: Stigma and Resilience Among Vulnerable Youth Centre, School of Nursing, University of British Columbia.
42. Van Der Miesen A, Hurley H, De Vries A. Gender dysphoria and autism spectrum disorder: A narrative review. *Int Review Psych* 2016;28(1):70-80.
43. Strang J, Meagher H, Kenworthy L, de Vries A, Menvielle E, Leibowitz S, et al. Initial Clinical Guidelines for Co-Occurring Autism Spectrum Disorder and Gender Dysphoria or Incongruence in Adolescents. *J Clin Child & Adolesc Psychol*, 2018;47(1):105-115.
44. Delahunt J, Denison HJ, Sim DA, Bullock JJ, Krebs JD. Increasing rates of people identifying as transgender presenting to endocrine services in the Wellington region. *NZMJ*. Jan 2018;131(1468):33-42.
45. Hembree WC, Cohen-Kettenis PT, Gooren L, Hannema SE, Meyer WJ, Hassan Murad M, et al. Endocrine Treatment of Gender-Dysphoric/ Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline. *J Clin Endocrinol Metab*, November 2017, 102(11):3869-3903.
46. Obedin-Maliver J, Makadon HJ, Transgender men and pregnancy. *Obstet Med*. 2016;9(1):4-8.
47. Hines M (2006) Prenatal testosterone and gender-related behaviour. *European Journal of Endocrinology* (2006) 155 S115-S121.
48. de Vries AL, Steensma TD, Doreleijers TA, Cohen-Kettenis PT. Puberty suppression in adolescents with gender identity disorder: A prospective follow-up study. *J Sex Med*. 2011;8(8):2276-83.
49. Pharmac. Pharmaceutical Management Agency Update, New Zealand Pharmaceutical Schedule. Effective 1 March 2017.
50. Cornelisse V, Jones R, Fairley C, Grover S. The medical care of the neovagina of transgender women: a review. *Sexual Health* 2017;14:442-450.
51. Mansour D. Safer prescribing of therapeutic norethisterone for women at risk of venous thromboembolism. *J Fam Plann Reprod Health Care*. 2012;38(3):148-9.
52. Shelagh Davies, Viktória G. Papp & Christella Antoni (2015) *Voice and Communication Change for Gender Nonconforming Individuals: Giving Voice to the Person Inside*, *International Journal of Transgenderism*, 16:3, 117-159.

Appendix A. Tanner stages

Tanner Stages of Breast Development and Male External Genitalia

For breast development:

1. Prepubertal
2. Breast and papilla elevated as small mound, areolar diameter increased
3. Breast and areola enlarged, no contour separation
4. Areola and papilla form secondary mound
5. Mature; nipple projects, areola part of general breast contour.

For penis and testes:

1. Prepubertal; testicular volume, <4 mL
2. Slight enlargement of penis; enlarged scrotum, pink, texture altered, testes 4–6 mL
3. Penis longer, testes larger (8–12 mL)
4. Penis and glans larger, including increase in breadth; testes larger (12–15 mL), scrotum dark
5. Penis adult size; testicular volume, 15 mL.

Appendix B. Fertility information

Can I still have children? Information for young people using oestrogen

This information is for young people who are about to have puberty blockers and /or oestrogen which may affect their fertility. It aims to help you make decisions now which may preserve your chance of having children in the future. We hope that it answers all your questions, if not, please speak to your doctor/nurse.

What are the effects of my treatment?

Puberty blockers and/or oestrogen can affect your ability to have children. Although puberty blockers do not affect sperm production in the long term, use of oestrogen has been known to permanently stop sperm production which will cause infertility.

What are my options?

Before you start puberty blockers and/or oestrogen, some of your semen, containing sperm, can be frozen and stored at your local Fertility Clinic until you wish to start a family. You will need to produce your semen sample at the clinic where you will be storing your sperm.

Here are some tips for producing a semen sample:

- Tucking (pushing your testicles inside your body) may affect sperm production. New sperm produced take approximately 12 weeks to mature.
- Obtain self collected sample of semen.
- Do Not use a condom or any form of lubricant – this can damage the sperm.
- Make sure you collect all of the semen – the first portion often contains most of the sperm.

At the Fertility Clinic you will be asked to bring your photo ID and to sign a consent form to allow the clinic to store your sperm. The clinic will freeze the sperm sample, then thaw and check a small sample of sperm. They may ask you to repeat your sample if more sperm is needed. In New Zealand the law (the Human Assisted Reproductive Technology [HART] Act) allows for a ten year storage limit, although extended storage is possible. This service is fully funded. It is very important to notify the Fertility Clinic with any change in address or phone number so that they will be able to contact you in the future to discuss your stored sperm. If the Fertility Clinic is unable to contact you then after ten years the law requires them to discard your sperm.

Does freezing damage the sperm?

The sperm are prepared for freezing by mixing them with a protective solution, putting them into tiny straws and then reducing the temperature gradually. They are stored in liquid nitrogen at -196°C . Some of the sperm are killed in the process of freezing, the results vary but usually 25% to 50% will survive. The use of sperm that has been frozen and thawed is not associated with any increased health risks to your child.

What happens when I want to start a family?

Different fertility methods are used depending on the quality of the semen after storage. You may qualify for funded treatment.

- **Intrauterine insemination (IUI)** – your semen is thawed and the sperm is placed into a person's uterus. This method can be used if there is plenty of semen containing large numbers of motile (moving) sperm but you may need to have stored multiple samples of sperm before this is possible (usually three or more).
- **In-vitrofertilisation (IVF)** – eggs are collected from ovaries and fertilised with your sperm in the laboratory, the embryo(s) are then placed in a person's uterus. Usually one sample of sperm will be enough for one IVF cycle but this will depend on your sperm concentration. The staff at Fertility Plus will discuss this with you and advice accordingly.
- **Intracytoplasmic sperm injection (ICSI)** – this is done as part of IVF and is used when there are only small numbers of sperm available. In this method a single sperm is injected into each egg in the laboratory. Usually one sample of sperm will be enough for several ICSI cycles.

What is a testicular biopsy?

Some young people may be unable to collect semen or there may be no sperm in the semen because of pubertal stage or other reasons. In this situation it may be possible to collect sperm from your testicles using a needle or a scrotal incision via a small procedure called testicular biopsy. Sperm collected from the testicle may be frozen and used later by intracytoplasmic sperm injection (ICSI). This procedure is not offered routinely.

What are my chances of having a child?

There is no guarantee of success. The chance of assisted reproduction being successful is dependent on many factors, including the person's age.

I've already started gender transition using medication, can anything be done?

If you have started puberty blockers or oestrogen and you do not have sperm stored, there are some options to improve your chances of having children in the future. If it is acceptable to you to stop the blockers you will start to produce sperm after a number of months. This sperm could be collected and stored before restarting the puberty blockers. It is not known how the use of oestrogen will impact on testicular tissue in the longer term.

Talking it over

You might not want to have children now but it is difficult for anyone to know how they will feel years ahead in the future. Take time to talk to your family and other support people about these options. Whether or not to freeze sperm is an important decision that you need to consider carefully.

Appendix C. Consent form for blocking male hormones

This consent form outlines important information you might want to talk to your health team about before starting blockers to block male hormones.

Lucrin (Leuprorelin acetate) injections or **Zoladex** (Goserelin acetate) implants work by blocking the production of male hormones in the testes.

The blockers are given every 10–12 weeks and will reduce the level of the male hormone testosterone in the body.

Blockers are a reversible medication used to stop the physical changes of puberty. It can be started in early puberty (Tanner stage 2–3). If started then blockers will halt the male changes of puberty such as voice changes, facial hair growth, enlargement of penis and testicles.

Blockers can also be started later in puberty to prevent further masculinisation of the body including facial changes and broadening of the shoulders. It will slow down facial and body hair growth and decrease muscle development but will not reverse other changes that have already happened.

Starting blockers often improves psychological distress associated with having the unwanted male hormone and allows time to think about whether starting oestrogen is right for you.

Common side effects

- Hot flushes
- Mood swings – mostly in the first few weeks of starting
- Possible fatigue.

Most side effects should settle within a few days to weeks of starting the medications. Allergic reactions can happen but are rare. Please tell your health team if you have any problems.

Potential risks of blockers

- Increased height (unlikely if already through puberty)
- Decrease future bone density.

Bones

Puberty is a time of increased calcium uptake and growth of bones. Blockers may interfere with this. For this reason it is important to look after your bones while on the blockers by keeping active and having enough calcium and vitamin D. It is not known if being on blockers increases the risk for osteoporosis (thinning of bones) in older age.

Fertility

Your fertility (ability to get someone pregnant) is likely to be affected by the blockers, but this is not guaranteed. Contraception will be needed if there is any sexual contact that would put you at risk of getting someone pregnant.

For those starting on a blocker in late puberty storing sperm is an option to preserve fertility before starting the blocker.

For those starting on a blocker in early puberty sperm storage may not be possible. Fertility information will be discussed and decisions around this can be revisited again at any point before starting on hormone therapy. If you decide to stop the blockers it is not expected that there will be any long term impact on fertility.

Sex

Being on blockers may lower your desire to have sex. It may stop your erections or make them less hard. It will decrease the size of your testicles over time. If blockers are stopped then puberty changes should resume but may take a little time to do so.

Risks of withholding blockers

Withholding the use of blockers may cause additional distress leading to anxiety and depression. Not using blockers can also lead to irreversible unwanted physical changes.

The Health Team

Keeping in touch with your health team for regular checkups and blood tests is an important part of your care and will reduce the risks of being on blockers.

It is your health team’s responsibility to best support you to make the decisions that are right for you and to keep ourselves up to date so that we can best inform you.

For many different reasons people question whether or not they want to continue to be on blockers. This can be a normal part of your journey. Please feel free to discuss this with your prescriber before you stop your medication. Come and talk – your health team is always ready to listen.

Are there any other questions you want to ask?

I wish to start hormone blockers:	
Name:	Date:

Prescribed by:	
Name:	Date:

Appendix D. Consent form for blocking female hormones

This consent form outlines important information you might want to talk to your health team about before starting blockers to block female hormones.

Lucrin (Leuprorelin acetate) injections or **Zoladex** (Goserelin acetate) implants work by blocking the production of female hormones in the ovaries.

The blockers are given every 10–12 weeks and will reduce the level of the female hormone oestrogen in the body. It will not make the body more masculine.

Blockers are a reversible medication used to stop the physical changes of puberty. It can be started in early puberty (Tanner stage 2–3). If started then blockers will usually stop significant breast development and further pubertal changes such as starting periods and widening of the hips.

Blockers can also be started later in puberty where it may cause breast tissue to soften but not usually to reduce significantly in size. Blockers will stop periods but may take up to 3–6 months to do so.

Starting a blocker often improves psychological distress associated with having the unwanted female hormone and allows time to think about whether starting testosterone is right for you.

Common side effects

- Hot flushes
- Mood swings – mostly in the first few weeks of starting
- Possible fatigue.

Most side effects should settle within a few days to weeks of starting the medications. Allergic reactions can happen but are rare. Please tell your health team if you have any problems.

Potential risks of blockers

- Increased height (unlikely if already through puberty)
- Decrease future bone density.

Bones

Puberty is a time of increased calcium absorption and growth of bones. Blockers may interfere with this. For this reason it is important to look after your bones while on the blockers by keeping active and having enough calcium and vitamin D. It is not known if being on blockers increases the risk for osteoporosis (thinning of bones) in older age.

Fertility

Your fertility (ability to get pregnant) is likely to be affected after starting on a blocker, but this is not guaranteed. Contraception will be needed if there is any sexual contact that would put you at risk of getting pregnant. It is important not to get pregnant while on blockers as it may be harmful to the pregnancy.

If you decide to stop the blockers it is not expected that there will be any long term impact on fertility but periods may take a little time to return to normal.

Sex

Being on blockers may lower your desire to have sex. It may cause your vagina to become drier. This increases the risk of sexually transmitted infections (STIs), including HIV if you are having any sexual contact with this part of the body. Condoms provide good protection against STIs and lubricant helps to prevent any discomfort.

Risks of withholding blockers

Withholding the use of blockers may cause additional distress leading to anxiety and depression. Not using blockers can also lead to irreversible unwanted physical changes.

The Health Team

Keeping in touch with your health team for regular checkups and blood tests is an important part of your care and will reduce the risks of being on blockers. It is your health team's responsibility to best support you to

make the decisions that are right for you and to keep ourselves up to date so that we can best inform you.

For many different reasons people question whether or not they want to continue to be on blockers. This can be a normal part of your journey. Please feel free to discuss this with your prescriber before you stop your medication. Come and talk – your health team is always ready to listen.

Are there any other questions you want to ask?

I wish to start hormone blockers:

Name:

Date:

Prescribed by:

Name:

Date:

Appendix E. Consent form for feminising hormone therapy

This consent form outlines important information you might want to talk to your health team about before starting hormones to feminise the body.

Progynova (oestradiol valerate) tablets or **Estradot** (oestradiol hemihydrate) patches provide the feminising hormone oestrogen. Testosterone blockers are needed as well unless gender reassignment surgery has occurred.

Oestrogen tablets/patches will gradually feminise the body.

Permanent body changes (even if you stop taking the tablets):

- Gradual increase in breast size over 2–3 years
- Your oestrogen dose is increased slowly for best breast development
- It is not known if taking oestrogen increases the risk of breast cancer. Take care of your breasts – it is recommended to follow the normal breast screening guidelines for women.

Non-permanent body changes (that may reverse if you stop the oestrogen):

- Softer skin
- Decreased muscle mass
- Less body hair
- More fat on buttocks, hips and thighs.

Things that don't change much:

- Facial hair slows down but doesn't stop completely
- Voice stays the same
- Bone structure of your face and Adam's apple doesn't change.

If you stop taking your hormones some body changes stay but you may find that your body will slowly masculinise.

Fertility

Taking the hormones stops your testicles producing testosterone. Your testicles may shrink by up to 50% and may eventually stop sperm production. If it is important for you to

preserve your fertility you might want to freeze your sperm before you start treatment. Your health team will talk to you about this.

Sex

Taking the tablets may lower your sex drive so that you are not as interested in having sex anymore. You may find that you get erections less often and that your penis doesn't get as hard anymore. If you want to be able to use your penis for sexual pleasure talk to your health team and they will review your medications.

Mental health

Some people may feel more emotional taking oestrogen. Some people find their mental health improves – the effects of hormones on the brain are not fully understood. Transitioning can be a stressful time and many people need some help adjusting to the physical and emotional changes. It is really important that you let your health team know if you are having problems so that they can help you access the support you need.

Common side effects

- Nausea
- Headaches
- Tender breasts
- Weight gain.

Most side effects should settle within a few days to weeks of starting the medications. Please tell your health team if you have any side effects, especially headaches or migraines.

Potential risks of oestrogen

The full medical effects and safety of taking hormones are not fully known. The potential risks of taking oestrogen must be weighed against the benefits that hormones can have on your health and quality of life.

Likely increased risk:

- Blood clots – deep vein thrombosis (DVT), pulmonary embolism (blood clot in the lung), stroke, heart attack
- Changes to cholesterol (may increase risk of pancreatitis and heart disease)
- Gallstones.

Possible increased risk:

- Increased blood pressure
- Liver problems
- Increased prolactin and possibility of benign pituitary tumours.

Possible increased risk if you have extra risk factors:

- Heart disease
- Diabetes

No increased risk/unknown risk:

- Breast cancer.

Some of these risks are reduced by using oestrogen patches instead of tablets.

Go to the emergency department or seek medical help urgently if:

- You have a swollen painful leg

- Chest pain or difficulty breathing
- Vision or speech problems.

These symptoms might mean you have a serious problem like a blood clot.

The risk of having a blood clot is much higher if you smoke or are overweight.

Blood clots are more common as you get older. Stopping oestrogen before and after surgery can help reduce the risks of blood clots around this time.

Keeping in touch with your health team for regular checkups and blood tests is an important part of your care and will reduce the risks of taking hormonal therapy.

Are there any other questions you want to ask?

It is your health team's responsibility to best support you to make the decisions that are right for you and to keep ourselves up to date so that we can best inform you.

For many different reasons people question whether or not they want to continue to take hormones. This can be a normal part of your journey. Please feel free to discuss this with your prescriber before you stop your medication. Come and talk – your health team is always ready to listen.

I wish to start feminising hormone therapy:

Name:

Date:

Prescribed by:

Name:

Date:

Appendix F. Consent form for masculinising hormone therapy

This consent form outlines important information you might want to talk to your health team about before starting hormones to masculinise the body.

There are different types of testosterone that are taken to masculinise the body. Everyone is different in how quickly they respond to testosterone but you will start to notice changes in your body gradually over the first few months. It may take several years before the full effect is felt. While there are different ways of getting testosterone into the body most people are on injections.

Permanent body changes (*even if you stop taking testosterone*):

- Deeper voice
- Increased growth of hair – with thicker hairs on arms, legs, chest, back and abdomen
- Gradual growth of moustache/beard hair
- Hair loss at the temples – possibly becoming bald with time
- Genital changes – clitoral growth (typically 1-3 cm) and vaginal dryness.

Non-permanent body changes (that may reverse if you stop the testosterone):

- Skin changes – increased oil and acne
- Change in body shape – less fat on buttocks, hips and thighs
- Increased muscle mass and upper body strength
- Increased sex drive
- Periods usually stop after 1–6 months.

Things that don't change much:

- Breast tissue looks a bit smaller due to fat loss
- Possible weight gain or loss.

Fertility

While it is not known what the long term effects are of taking testosterone some transmen find that if they stop their testosterone they will become fertile again

and can get pregnant. There are no guarantees for anyone and it is probably harder to get pregnant the older you are and the longer you have been on testosterone.

Testosterone is dangerous for the developing fetus – **you must not get pregnant while you are on testosterone**. Even after your periods stop you might still be at risk of getting pregnant. If you are having any sexual contact that puts you at risk of pregnancy you must talk to your health team about contraception options.

Sex

Taking testosterone causes your vagina to become dryer and more fragile. This increases the risk of sexually transmitted infections (STIs), including HIV if you are having any sexual contact with this part of the body. Condoms provide good protection against STIs and lubricant helps to prevent any discomfort.

Mental health

Some people find that testosterone can cause emotional changes such as increased irritation, frustration and anger. Some people find their mental health improves – the effects of hormones on the brain are not fully understood. Transitioning can be a stressful time and many people need some help adjusting to the physical and emotional changes. It is really important that you let your health team know if you are having problems so that they can help you access the support you need.

Potential risks of testosterone

The full medical effects and safety of taking hormones are not fully known. The potential risks of taking testosterone must be weighed against the benefits that hormones can have on your health and quality of life.

Likely increased risk:

- Increased red blood cells (polycythemia) – might thicken the blood and increase the risk of a stroke or heart attack
- Sleep apnoea (sleep disorder).

Possible increased risk:

- Changes to cholesterol (may increase risk for heart disease)
- Liver problems.

Possible increased risk if you have additional risk factors:

- Diabetes
- Increased blood pressure.

No increased risk or unknown:

- Breast cancer
- Cervical, ovarian, uterine cancer
- Blood clots – deep vein thrombosis (DVT).

The risk of health problems is higher if you are a smoker or overweight.

Keeping in touch with your health team for regular checkups and blood tests is an important part of your care and will reduce the risks of taking hormonal therapy.

Are there any other questions you want to ask?

It is your health team's responsibility to best support you to make the decisions that are right for you and to keep ourselves up to date so that we can best inform you.

For many different reasons people question whether or not they want to continue to take hormones. This can be a normal part of your journey. Please feel free to discuss this with your prescriber before you stop your medication. Come and talk – your health team is always ready to listen.

I wish to start masculinising hormone therapy:

Name:

Date:

Prescribed by:

Name:

Date:

