Transgender Health and Gender Diversity
GP Management Guidelines – consult specialist if needed.
As written by Hunter and New England Health Pathways (Australia) 2018
Minor edits to specify SA relevant information.

Key Point!

Timely and appropriate management reduces the risk of self-harm and suicidal intent, and is associated with better health outcomes. [1][2][3]

Management of a gender diverse person for medical practitioners

1. Provide patient information and support as below.

2. If mental health support or treatment is required, refer to a mental health professional with appropriate experience in gender dysphoria.

   Mental health support or treatment may be required if:
   - suicidal ideation or intent, or self-harming behaviour
   - requested by patient
   - diagnostic uncertainty
   - co-existing mental health disorder
   - doubt about person's ability to consent

3. Discuss:
   - lifestyle changes to reduce any cardiovascular risks associated with hormone treatments e.g., smoking cessation, weight loss, hypertension, diabetes.
   - comorbidities e.g., sexually transmitted infections, and drug or alcohol dependency.
   - school or work environment. Not all schools are part of the Safe School Coalition.

4. Ensure appropriate cancer screening according to National Guidelines.

   Cancer screening:
   - Sex and gender diverse people who have not undergone the surgical removal of breasts, cervix, uterus, ovaries or testicles remain at risk of cancer in these organs and should undergo screening recommended for these cancers.
   - Manage this carefully, as many sex and gender diverse people find cancer screening physically and emotionally challenging.

5. Discuss gamete cryopreservation, as hormonal therapy may affect future fertility.

   Gamete cryopreservation
   - All patients should have a discussion about their desire for fertility preservation. Many will want to have children. It is desirable for patients to make decisions concerning future fertility before starting hormone therapy, or undergoing surgery to reproductive organs.

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[1] Hyde Z, Doherty M, Tilley PJ, McCaul KA. The first Australian national trans mental health study: summary of results. [place unknown]: Curtin University; 2014.
[2] Pitts MK, Couch M, Mulcare H, Croy S. A Report on the health and wellbeing of transgender people in Australia and New Zealand. Feminism and Psychology. 2007.
[3] Smith E, Jones T, Ward R, Dixon J. From blues to rainbows: Mental health and wellbeing of gender diverse and transgender young people in Australia. La Trobe University. 2014.

- Sperm cryopreservation can be achieved by ejaculation, surgical sperm extraction or testicular tissue preservation. Patients wishing to start a family after transition may consider intrauterine insemination of a female partner, in vitro fertilisation using partner, or donor eggs or sperm, and the partner's uterus or a gestational surrogate.
- Oocytes can be obtained using hormonal stimulation and ultrasound-guided egg harvesting techniques. The (unfertilised) oocytes can be cryopreserved or fertilised in vitro (using partner or donor sperm) to allow embryo cryopreservation.
- Patients wishing to start a family after transition may consider intrauterine insemination (using partner or donor sperm) or in vitro fertilisation (using their own or partner's eggs) and their own uterus (after cessation of hormonal therapy) or partner's uterus or a gestational surrogate.
- Patients should be advised that techniques may be costly and are not universally available. Patients who are pre-pubertal have limited options. The impact of long-term exogenous hormone exposure on sperm and eggs and on resulting offspring is unknown. However, the available data does not demonstrate evidence of harm.
- It is possible for patients who have transitioned to stop hormonal therapy in order to provide gametes (eggs or sperm) or conceive. This may be challenging psychologically.
- An appointment with a fertility specialist with an interest in gender transition is highly recommended to discuss options. Ideally this should take place before hormone therapy begins.

6. Provide information on non-medical body interventions:
   Safe chest binding –
   - Creating a male looking chest - http://www.ftmguide.org/binding.html
   - Tips to safely bind your chest - http://point5cc.com/binding-101-tips-to-bind-your-chest-safely/
   - Purchasing binder information in SA – http://www.transhealthsa.com/wp-content/uploads/2018/03/TransMascSA-Where-to-Buy-a-Binder.pdf

   Safe genital tucking –
   - Tucking[4] involves gently pushing testicles up inside the body and then pulling the penis back in between the legs.
   - Use tight fitting underwear or surgical tape to hold in place. Do not use any other tape as skin could be peeled off when removed.
   - Cutting pubic hair short will assist with tape removal.
   - Advise to spend some time each day without tucking as tucking for too long can cause health problems such as chafing, sores and lower sperm count, which will be important to consider if a trans woman wants to have a child.

[4] UNDP Asia Pacific. [place unknown]: UNDP Asia Pacific; Blueprint for the Provision of Comprehensive Care for Trans People and Trans Communities in Asia and the Pacific. 2016.

7. For those pre-HRT, medication to suppress menstruation to relieve distress is recommended. This can be managed in the general practice setting. Start prior to, or at the same time as referral to a specialist gender service:

   Norethisterone (Primolut N) – best option in primary care. Reassure young people who are Tanner stage 3 or beyond requesting GnRH analogues that norethisterone will provide similar suppression.

   GnRH analogues (puberty blockers):
   - Only available following comprehensive specialist assessment and diagnosis of gender dysphoria.
   - GnRH analogues do not provide significant physical advantage over alternative such as norethisterone to a post-pubertal young person.
   - Most useful for young people in the early stages of puberty (Tanner 2 to 3) prior to the development of breasts.

   Combined oral contraceptive pill with the omission of the placebo pill.

8. For patients, arrange access to hormonal therapy, if desired:
   - If referring to a specialist for hormonal treatment, consider initiating bridging hormones if patient is at risk of self-harm and there is likely to be a delay in referral to specialist care.

Prior to 2017, HRT was not available till 18 years of age however this has been amended following the decision of Family Court Case 'Re Kelvin'[5] in which the family court is no longer required to gain permission to commence HRT. For patients under 18 years old it is currently at the discretion of the practitioner to explore parents/carers involvement and consent, or, to alternatively assess an adolescent is competent to the Gillick Standard to authorise that medical treatment.

Bridging hormones:

Standard regimen for initiating feminising therapy-

- Start with an **androgen blocker** e.g., spironolactone 100 mg daily, Cyproterone acetate. Check EUC after 1 to 6 weeks.
- After 6 to 12 weeks, add oestradiol e.g.,
  - **Progynova** 1 mg daily increasing gradually (up to 8 mg daily dose), measure oestradiol level 4 hours post-dose.
  - **Sandrenal oestradiol** gel 1 mg a day (maximum 5 mg) not applied to breast area, measure oestradiol level 4 hours post-application.
  - **Estradot or Estraderm** 50 microgram every 24 hours (change patch twice a week), measure oestradiol 48 hours after application and prior to the new patch.
- These are suggested starting doses, which may need to be increased according to the patient context, and biochemical levels achieved with therapy.
- Progesterone therapy is not recommended as it is associated with cardiovascular disease, breast cancer, weight gain and depression and there is no evidence that it enhances breast development
- Biochemical targets:
  - testosterone <2 nmol/L
  - oestradiol approximately 400 to 600 pmol/L after 6 to 9 months (adjusted according to the patients' biological response)

[5] https://www.humanrights.gov.au/sites/default/files/Re%2BKelvin%2B30%2BNovember%2B2017.pdf

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Standard therapy for initiating masculinising therapy-

- Give Testogel or AndroForte 5 for gradual initiation of testosterone:
- **Testogel**:
    - Two actuations (25 mg) alternate days for one month
    - Two actuations (25 mg) daily for one month
    - Four actuations (50 mg) daily to continue

- **AndroForte 5** (upper body application):
    - mL (50 mg) alternate days for one month
    - mL (50 mg) daily for one month
    - mL (100 mg) daily to continue

Biochemical target – 10 to 20 nmol/L at the end of the titration phase, taken 4 to 6 hours after application. Ensure no topical solution is present on the patient's skin at the site of blood sampling.

Consider transition to injectable therapy. Testosterone monitoring depends on the route of administration and biological response.

Injectables-

- **Primoteston** 250 mg intramuscular 2 to 6 weekly – No longer on PBS
- **Sustanon** 250 mg intramuscular 3 to 6 weekly – Not available in SA Chemists

Target testosterone peak, day 5 to 7, 25 to 30 nmol/L, trough 8 to 12 nmol/L

Note: Sustanon 100 mg has been discontinued.

- **Reandron** 1000 mg:
    - Initial dose – two intramuscular injections at 6 weekly intervals.
    - Maintenance dose – 1 g every 8 to 15 weeks (average 12 weeks)
    - Target testosterone 15 to 20 nmol/L, measured on two separate weeks prior to injection and on day of injection just prior to injection.
    - Menses usually cease 2 to 3 cycles after commencement of testosterone therapy.
    - Consider a Medroxyprogesterone 150 mg depot (single dose) or Mirena IUD if amenorrhea does not occur
    - Ongoing progesterone therapy is not recommended, as it is associated with cardiovascular disease, breast cancer, weight gain, and depression.

If specialist care is not available or required, general practitioners can manage hormonal therapy using an informed consent model:

http://www.transhealthsa.com/wp-content/uploads/2018/01/Informed-Consent-Oestrogen.pdf
http://www.transhealthsa.com/wp-content/uploads/2018/01/Informed-Consent-Testosterone.pdf

9. Surveillance for ongoing monitoring of hormones is important.

A shared care arrangement for initiation and ongoing monitoring of hormones provides best and safest practice.

Surveillance for ongoing feminising therapy

Every 3 to 6 months for first year then every 6 to 12 months:

- FBC, EUC, LFT, FBG, lipids, oestradiol, testosterone
- Blood pressure, height, weight, waist circumference

Annually:

- HbA1c
- Prolactin (recommended although abnormality unlikely)

If patient is on spironolactone:

- Serum electrolytes 1 to 6 weeks after starting or changing dose

Consider BMD testing if risk factors for osteoporotic fracture are present (e.g., previous fracture, family history, glucocorticoid use, prolonged hypogonadism)

- In individuals at low risk, screening for osteoporosis should be conducted at age 60 years, or in those who are not compliant with hormone therapy

General biochemical targets:

- Testosterone: < 2 nmol/L
- Oestradiol:
  - 400 to 600 pmol/L after 6 to 9 months (adjusted according to the patients' biological response.)
  - After menopausal age – 200 to 400 pmol/L

Potential complications:

- VTE
  - particularly if > 40 years old
  - most common in first 2 years of treatment
  - lower on 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

Surveillance for ongoing masculinising therapy

Every 3 to 6 months for first year then every 6 to 12 months:

- FBC, EUC, LFT, FBG, lipids, oestradiol, testosterone, SHBG
- Blood pressure, height, weight, waist circumference

Annually:

- HbA1c

After 2 years:

- Consider ultrasound to monitor endometrial thickness
- Consider hysterectomy and bilateral oophorectomy after 2 to 5 years as long term effect of testosterone on these tissues is unknown

Consider BMD testing if risk factors for osteoporotic fracture are present (e.g., previous fracture, family history, glucocorticoid use, prolonged hypogonadism)

- In individuals at low risk, screening for osteoporosis should be conducted at age 60 years, or in those who are not compliant with hormone therapy

General biochemical targets (depending on patient's biological response):

- Testosterone – 15 to 20 nmol/L
- Oestradiol – < 70 pmol/L

Potential complications:

- Polycythemia – if severe could lead to stroke
- Adverse lipid profile
- Mood and libido changes
- Obstructive sleep apnoea
- Small risk of liver dysfunction, insulin resistance, cardiovascular disease, endometrial hyperplasia, and osteoporosis

10. Once hormonal therapy has been in place for 12 months, consider referral for speech therapy.
    Speech therapy patients aged ≥ 18 years:
    Some transsexual, transgender, or gender-nonconforming people, particularly those transitioning to female, will choose to undergo voice feminisation surgery.
    As the outcomes of this surgery are variable it is important to consult a voice and communication specialist before surgery to maximise the benefit and help protect vocal health.

11. If aged ≥ 18 years, desiring genital or non-genital reconstruction surgery, and criteria are met. Refer for surgical assessment.
    - There are issues of availability and cost within Australia and internationally.
    - A staged process is recommended with most irreversible surgical procedures delayed until adult patients have lived continuously for at least 12 months in their affirmed sex.

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Criteria for upper body surgery[6]

Adults	Chest surgery	Breast implant*
One letter from health provider with experience in transgender health		
Persistent well-documented gender dysphoria	Yes	Yes
Capacity to make a fully informed decision and to consent for treatment	Yes	Yes
Age of majority in a given country	Yes	Yes
If significant medical or mental concerns are present they must be reasonably well controlled	Yes	Yes

*Recommended 12 months of feminizing hormones to improve outcome (not a criterion)

Criteria for lower body surgery

Adults	Gonadectomy	Genital surgery
Two letters from health providers with experience in transgender health		
Persistent well-documented gender dysphoria	Yes	Yes
Capacity to make a fully informed decision and to consent for treatment	Yes	Yes
If significant medical or mental concerns are present they must be reasonably well controlled	Yes	Yes
12 continuous months of hormone therapy as appropriate to goals (unless unwilling or unable to take)	Yes	Yes
12 continuous months of living in gender role congruent with their gender identity		Yes

[6] Coleman E, Bockting W, Botzer M, Cohen-Kettenis P, DeCuypere G, Feldman J. Standards of Care for the Health of Transsexual, Transgender, and Gender-Nonconforming People (version 7). [place unknown]: The World Professional Association for Transgender Health; 2012.

12. Continuing support and care:
    - Support changes in name[7] and gender markers on identity documents.
    - Offer continuity of care and support and advocate for patients within their families and communities (see patient information below).
    - Agree to an ongoing plan of care.

A plan of care may be established by the treating specialists which allows ongoing prescribing and monitoring of therapy as:

- *Joint care with the specialist, or*
- *By the general practitioner without further specialist input.*

From the patients' perspective:

- *Management in primary care is easier.*
- *There is no specific expertise necessary to prescribe for and monitor patient on a stable hormonal regimen.*
- *Health problems unrelated to sex and gender diversity should be managed as usual care.*

- Respect confidentiality in referrals to other health professionals, unless it is clinically necessary to disclose information about their previous transition.
- Patients who are trans or gender diverse experience the same health problems as other patients, and have very few differing needs, particularly after completion of treatment for gender dysphoria.
- Promote LGBTQI+ inclusive behaviour by staff and display validating public health information.

[7] http://www.transhealthsa.com/for-medical-practitioners/ - Website provides direct links to legal name change and birth certificate sex marker change in South Australia as well as links to the Australian Government Guidelines on the Recognition of Sex and Gender document.