MEDICAL TRANSITION

By Melissa Davis- Clinical Nurse Consultant, April 2022

Medical Transition

Guidelines to medical transition for paediatric and adult patients.

Australian Informed Consent Standards of Care for Gender Affirming Hormone Therapy

https://auspath.org.au/wp-content/uploads/2022/03/AusPATH_Informed-Consent-SoC_A4_2022_FINAL.pdf

Australian standards of care and treatment guidelines for trans and gender diverse children and adolescence

https://www.rch.org.au/uploadedFiles/Main/Content/adolescent-medicine/australian-standards-of-care-and-treatment-guidelines-for-trans-and-gender-diverse-children-and-adolescents.pdf

Medical Transition

- Person centered approach.
- Not all people who identify as trans or gender diverse want to pursue a medical transition
- Establish person centred goals.

Medical Transition- Legal framework

- Age dependent pathways to medical transition
- Under 18's require psych assessment, medical assessment, diagnosis of gender dysphoria and informed consent from both parents
- Person should be 16 years old before commencing Gender affirming hormones.
- Over 18's require medical assessment and informed consent.
- If capacity to consent is not able to be established in the over 18 age group, a psych assessment is necessary before consent can be obtained and treatment commenced.

Medical Transition- Holistic assessment

- Initial holistic assessment (getting to know the patient)
- HEADS Assessment
- Ask about their pronouns
- Ask about their journey so far
- Ask about how they would like to express their gender
- Ask them what they already know about hormones and if they see that as part of their path.

Medical Transition- Holistic Assessment

- Fertility and family planning
- Mental health assessment
- Risk assessment
- Safety and abuse

Medical Transition- Investigations and examination

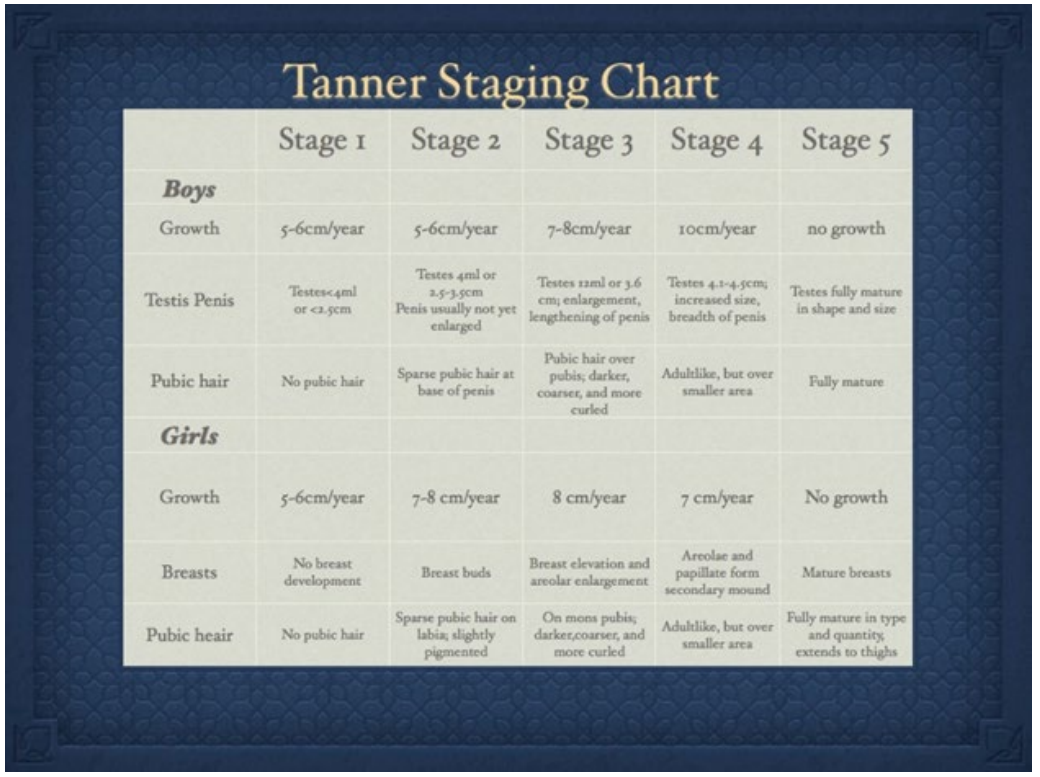
- Bloods prior to treatment
- Consider ECG if cardiovascular risk present
- Baseline vital signs
- Height and weight measurement
- Bone mineral density scan for young people considering puberty blockers
- Bloods and BMD should be carried out in paediatric patients after psych assessment to avoid unnecessary invasive procedures or radiation exposure.

Medical Transition- Hormone Treatment

- Puberty Blockers (GnRH analogues)
- Androgen blockers
- Estrogen
- Testosterone

Medical Transition- Puberty Blockers

- **Puberty Blockers**
- GnRh analoges are used to stop the pituitary gland from producing hormones that promote the production of secondary sex hormones, Estrogen and Testosterone.
- Puberty blockers are used in young people with gender dysphoria who are making a decision about beginning or waiting to be allowed to begin hormonal affirmation, or before accessing some kinds of gender affirming surgeries. They are used to reduce dysphoria associated with menstruation, breast development, voice deepening and other body changes.
- When puberty blockers are stopped, puberty should recommence as normal.



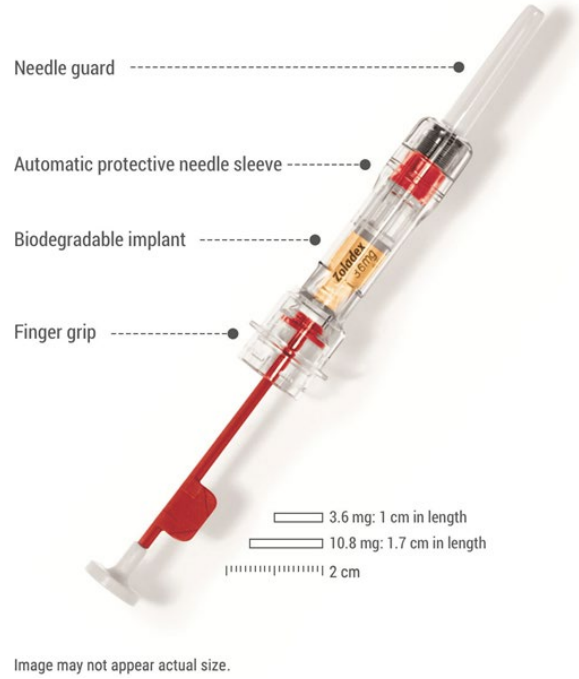
Tanner Staging Chart

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Boys					
Growth	5-6cm/year	5-6cm/year	7-8cm/year	10cm/year	no growth
Testis Penis	Testes<4ml or <2.5cm	Testes 4ml or 2.5-3.5cm Penis usually not yet enlarged	Testes 12ml or 3.6 cm; enlargement, lengthening of penis	Testes 4.1-4.5cm; increased size, breadth of penis	Testes fully mature in shape and size
Pubic hair	No pubic hair	Sparse pubic hair at base of penis	Pubic hair over pubis; darker, coarser, and more curled	Adultlike, but over smaller area	Fully mature
Girls					
Growth	5-6cm/year	7-8 cm/year	8 cm/year	7 cm/year	No growth
Breasts	No breast development	Breast buds	Breast elevation and areolar enlargement	Areolae and papillate form secondary mound	Mature breasts
Pubic heair	No pubic hair	Sparse pubic hair on labia; slightly pigmented	On mons pubis; darker,coarser, and more curled	Adultlike, but over smaller area	Fully mature in type and quantity; extends to thighs

Medical Transition- Puberty Blockers

Goserelin (Zoladex) is what we primarily use at Maple Leaf House

- Deep Subcutaneous injection
- Abdomen or flank area
- Small implant
- 1- 3 monthly injections
- Topical anaesthetic prior to injection
- Self retracting needle



Medical Transition- Androgen Blockers

- Aim for serum T ~ 1.0 pmol/L (PO)

Cyproterone (12.5-25mg daily)

- Low dose ¼ tablet daily gives very good results
- Need a pill-splitter device
- Beware: mood effects from over-suppressed T
- Likely to lower libido markedly
- Possible risk of liver issues and ?meningioma

Spironolactone (100-200mg bd):

- Less effective than Cyproterone – often not to target
- Less issues with libido (if that's an issue)
- More widely used in other conditions, better safety data

Medical Transition- Estrogen

- Use oestradiol
- Patch estrogen (50-100 mic)
- Safer from clot risk perspective – no risk in PMHRT
- Use estradot – smaller and more sticky (PO)
- Issues with skin irritation / contact derm / falling off
- Oral estrogen (estradiol 4-6mg daily)
- First pass metabolism 80% eliminated
- Higher clot risk
- Difficult to measure blood levels

Medical Transition- Estrogen

- Pellet implants (50-100mg)
- Less well studied. Theoretically safer than oral. (PO)
- Risk of tachyphalaxis. Replace only when E < 400 pmol/L on replacement (PO – with some evidence)
- Good, stable levels, but first dose effect
- Injections
- Very unstable levels, hot sweats, irritability
- 3,000 pmol/L day 3 -> 100 pmol/L day 21
- Not recommended (PO)
- MOAR!

Effects of Estrogen

Physiological Effect of Oestrogen	Time of Onset	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 and decreased oiliness	3-6 months	?	Likely
Decreased libido	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	No
Decreased testicular volume	3-6 months	2-3 years	?
Decreased sperm production	?	> 3 years	?
Decreased terminal hair growth	6-12 months	> 3 years	Possible

Adverse effects of Estrogen

- Poorly studied à inadequate knowledge about long-term adverse effects
- Venous thromboembolism
- Arrhythmia
- Hypertension
- Stroke
- Breast tumours/cancer
- Liver inflammation
- Gallstones
- Prolactinoma
- Anaemia
- Changes in sexual drive and sexual function
- Fatigue
- Psychiatric symptoms
- Infertility

Medical Transition- Testosterone

- Testosterone is essentially the only treatment needed
- Endocrinologist / sexual health physician / urologist *agreement* needed for PBS prescription
- Injections
- Mainstay of treatment for most
- Reandron 1000mg every 3/12 – on PBS
- Primoteston/sustenon – IMI 3/52. Not on PBS
- Trans-dermal T
- Gel / patches / cream
- Can be sub-therapeutic (which can be OK)
- On PBS: Androforte, Testogel

Medical Transition- Testosterone

- Aim for T between 10-15 nmol/L at trough
- High levels -> esterification to estrogen
- Main issue is polycythaemia – monitor closely
- HCT > 0.51
- Reduce dosing interval
- Stop smoking!!!
- Can need to switch to transdermal

Effects of Testosterone

Physiological effect of Testosterone	Time of Onset	Maximum Effect	Reversibility
Skin oiliness and acne	1-6 months	1-2 years	Likely
Increased muscle mass and strength	6-12 months	2-5 years	Likely
Fat redistribution	1-6 months	2-5 years	Likely
Cessation of menses	1-6 months		Likely
Facial and body hair growth	6-12 months	4-5 years	Unlikely
Scalp hair loss	6-12 months		Unlikely
Clitoral enlargement	1-6 months	1-2 years	?
Vaginal atrophy	1-6 months	1-2 years	?
Voice deepening	6-12 months	1-2 years	No

Adverse effects of Testosterone

- •Acne
- •Emotional lability
- •Increased risk of cardiovascular disease
- •Polycythaemia
- •Genital atrophy
- •Liver disease and liver tumours
- •Type 2 diabetes
- •Infertility
- •Adverse effect on foetus in case of conception

Medical Transition- Management and monitoring

- 3 monthly check up including vital signs and height and weight
- 6 monthly bloods
- Monitoring for unwanted of adverse effects
- Guided by patients experience and satisfaction as well as blood results

Maple Leaf House

Referral Pathway:

Maple Leaf House Referral form

GP referral to Dr Robert Tait via Health Pathways or via fax to 49236598

Contact Maple Leaf house on (02) 40164980 or email

HNELHD-JHCHMapleLeafHouse@health.nsw.gov.au

Referral Criteria

- -Up to the age of 25
- -Any young person seeking assistance with exploring their gender identity or experiencing gender incongruence
- -Acute mental health co-morbidities must be managed externally
- -Young people wanting to access social and medical affirmation

Resources and Information

- Trans Hub
- Twenty 10
- Minus 18