GAHT Prescribing: The Basics

Bernadette Kiraly, MD

HEALTH
UNIVERSITY OF UTAH

Goals for the talk today…

- Orient new providers to the WPATH SOC 8
- Review Readiness for GAHT criteria
- Review how to start fem and masc GAHT
- Outline a typical Intake Visit and follow up visit schedule.
- Address signed informed consent for patients <26 years of age in Utah
- Provide resource to support any one providing GAHT.

- Things I can't cover today:
  - Adolescent care in UTAH
  - Terminology for Gender diverse people
  - Contraindications to Masculinizing and Feminizing GAHT in Adults
  - Complications and challenges.
  - DSD
  - Gender Affirming Surgeries and criteria

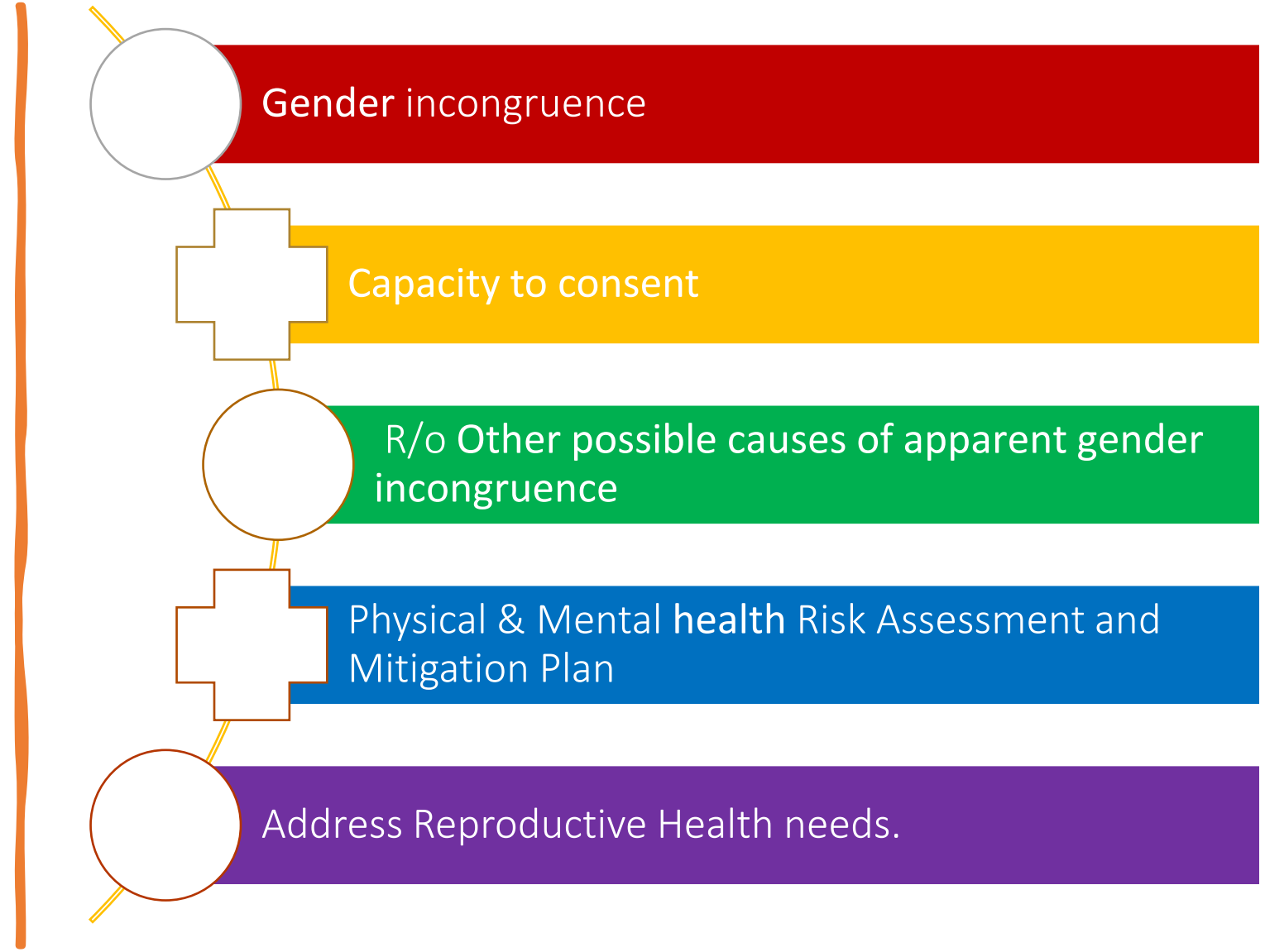
WPATH
WORLD PROFESSIONAL ASSOCIATION FOR TRANSGENDER HEALTH

SOC 8

- Become Knowledgeable
- Match Tx approach to Patient Needs
- Focus on promoting health and well-being
- Shared Decision Making
- Commit to harm reduction
- Improve experiences of health services

SOC8, Statement of Recommendation 2.5

Criteria for GAHT in Adults



GENDER INCONGRUENCE

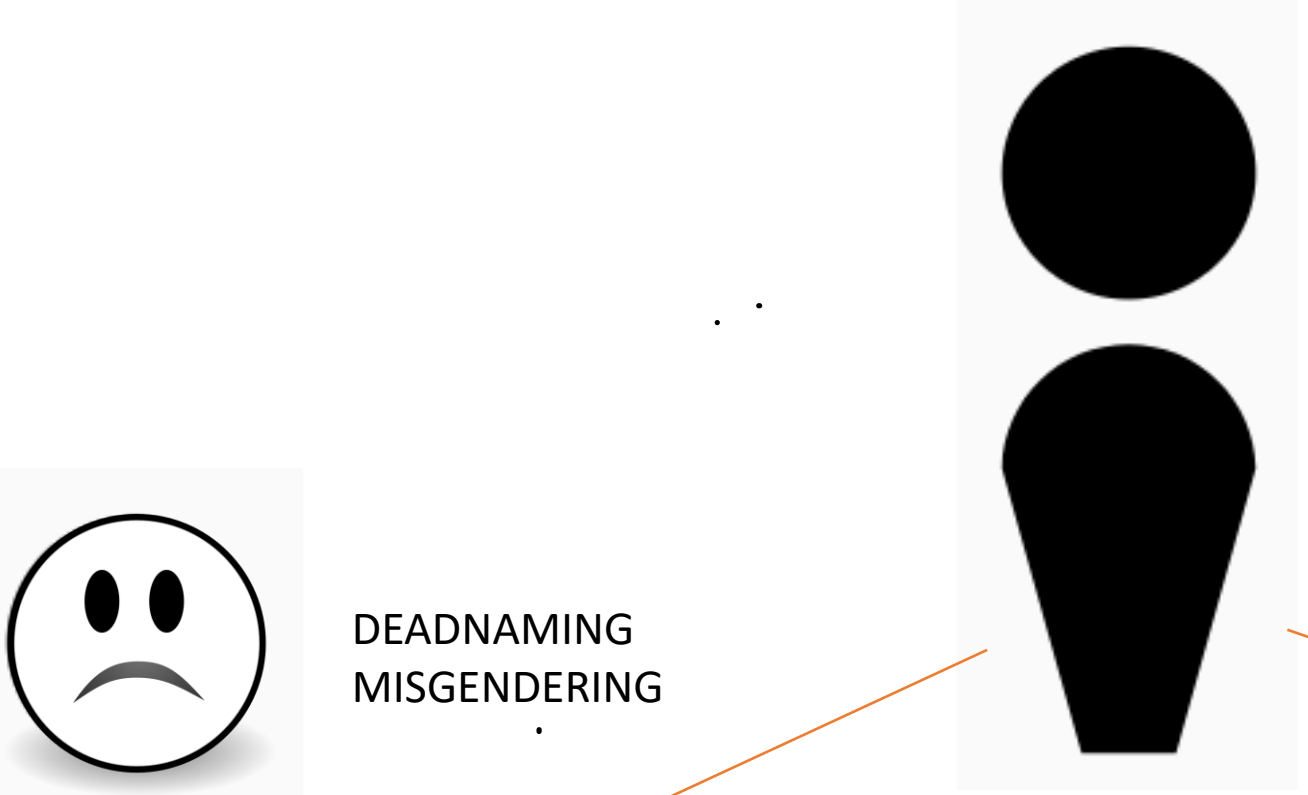
- ~~Gender Identity Disorder~~
- ~~(DSM 4)~~

GENDER INCONGRUENCE IN ADULTS/ADOLESCENTS

ADOLESCENTS/ADULTS

- marked & persistent mismatch between an individual´s experienced gender and the assigned sex
- which often leads to a desire to ‘transition’, in order to live and be accepted as a person of the experienced gender, through hormonal treatment, surgery or other health care services
- to make the individual´s body align, as much as desired and to the extent possible, with the experienced gender.

Ref: ICD 11, WHO
https://icd.who.int/icd10updateplatform/PropD.aspx?prop=2272



DISCONNECTION WITH
ASSIGNED GENDER

DEADNAMING
MISGENDERING

CORRECT NAME
CHOSEN PRONOUNS

INCONGRUENCE

INVALIDATING CLOTHING
INVALIDATING HAIRSTYLE
INVALIDATING BODY

VALIDATING CLOTHING
VALIDATING HAIRSTYLE
VALIDATING BODY

DYSPHORIA

EUPHORIA

RULE OUT OTHER APPARENT CAUSES OF GENDER INCONGRUENCE

DSD

- Disorder of Sexual Development → Differences of Sexual Development
- Most often dx at birth or puberty

Body dysmorphism

Psychosis

Etc.

PHYSICAL & MENTAL HEALTH RISK ASSESSMENT & MITIGATION PLAN

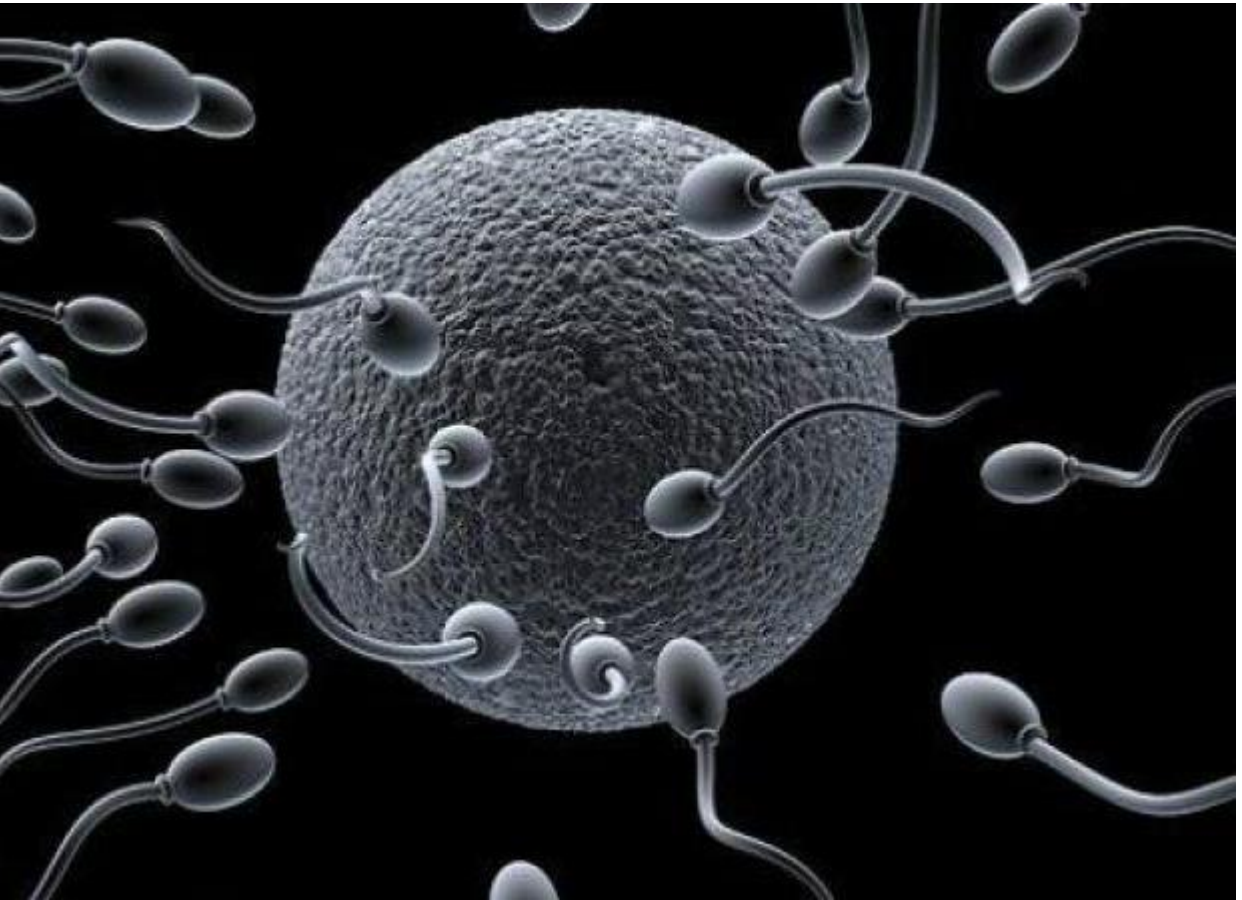
Complete medical history with attention to personal and family h/o hypercoagulability.

- Current Active problems
- PMH/PSH
- Family Hx
- Sexual Hx: including contraception and sexual function needs.

Mental health screening

- NIDA
- PHQ9
- GAD7

FERTILITY PRESERVATION & COUNSELING



- Prior to starting GAHT
- Review fertility & family planning needs.
- Counseling on options
- Referral if desired

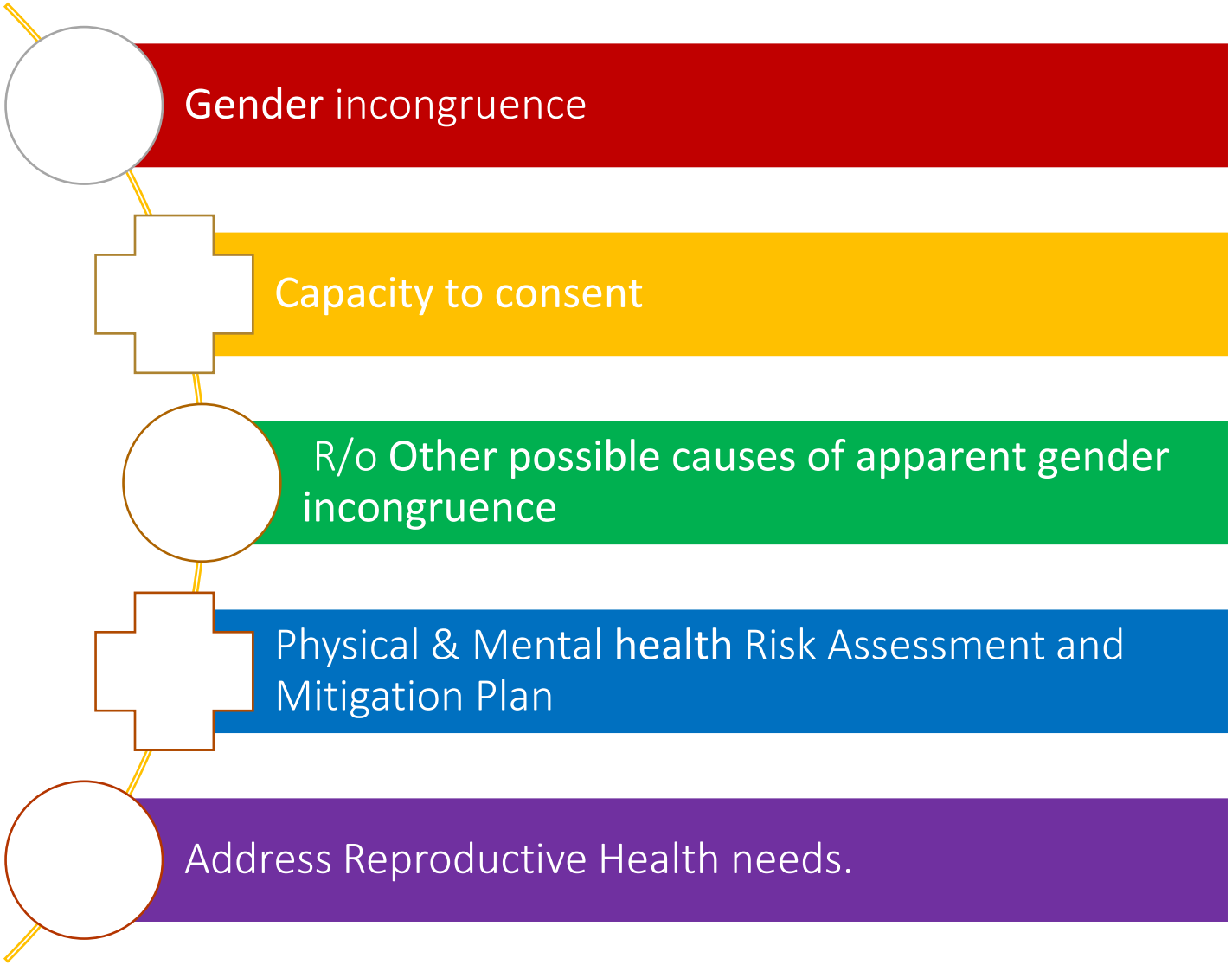
TGD folks AFAB or Have Ovaries

GnRHas	• impact gamete maturation but no permanent damage
Testosterone	• may reduce fertility • evidence of normal ovarian f(x) has been demonstrated
Surgery	• Hysterectomy w/o oophorectomy • Egg Freezing PRIOR to surgery • Ovarian Tissue Cryospreservation at time of surgery

TGD folks AMAB or Have Sperm

GnRHas	• inhibits spermatogenesis • reversible, data suggest d/c med and return to fertility • may take 3 months or more
Estrogen& anti-androgens	• reduce fertility by testicular atrophy & impaired sperm prod • Spermatogenesis might resume after d/c of prolonged tx w/ anti-androgens & E, but data are limited
Surgery	• Sperm banking prior to orchiectomy

Criteria for GAHT in Adults



Ready For Takeoff ?

START WITH THE PATIENT GOALS IN MIND

What are your goals with hormones?

What do you hope these medications will do?

Do you have a picture (in your mind or on your phone) of what you want your body to look like?

What is the most important change you need at this time?

FEMINIZING HORMONE OPTIONS

Estrogen

- Estradiol 2-6mg oral or sublingual
- if > 2 mg daily divide BID

Injectable Estrogens

- Estradiol valerate 5-30mg IM q2 weeks
- Estradiol cypionate 2-10mg IM weekly

Transdermal Estrogens

- Estradiol patch 0.05mg-0.2mg/d twice weekly

FEMINIZING HORMONE OPTIONS

Spironolactone

- an androgen blocker and potassium sparing diuretic
- 100-400 mg/day; divide bid

Finasteride

- 5α-reductase inhibitors block the conversion of testosterone to the more potent androgen dihydrotestosterone.
- Indication is alopecia.

EFFECTS OF ESTROGEN & TESTOSTERONE-LOWERING MEDICATIONS

EFFECT	ONSET	MAXIMUM
Fat Redistribution	3-6 months	2-5 years
Decreased muscle mass	3-6 months	1-2 years
Softening of skin	3-6 months	unknown
Decreased Libido	1-3 months	Unknown
Decreased spontaneous erections	1-3 months	3-6 months
Decreased sperm production	Unknown	2 years
Breast growth	3-6 months	2-5 years
Decreased Testicular volume	3-6 months	Variable
Decreased terminal hair growth	6-12 months	>3 yrs.
Increased scalp hair	Variable	Variable
Voice Changes	None	-

RISKS OF FEMINIZING MEDICATIONS

Likely Increased Risk

- VTE
- Infertility
- Hyperkalemia *
- Hypertriglyceridemia
- Weight Gain

Likely Increased Risk w/ presence of Risk Factor

- CV Dz
- CVA
- Dehydration/Polyuria
- Cholelithiasis

Possible Increased Risk

- HTN
- ED

Possible Increased Risk w/ presence of Risk Factor

- T2DM
- Low Bone Mass/Osteoporosis
- Hyperprolactinemia

No increased Risk/Inconclusive

- Breast CA
- Prostate CA

Ref: Appendix C; WPATH, SOC8

MASCULINIZING HORMONES

Testosterone Injections

- Testosterone Cypionate or Enanthate
- Standard Weekly Dose: 50 – 100 mg / week
- Standard Biweekly Dose: 100-200 mg / 2 weeks

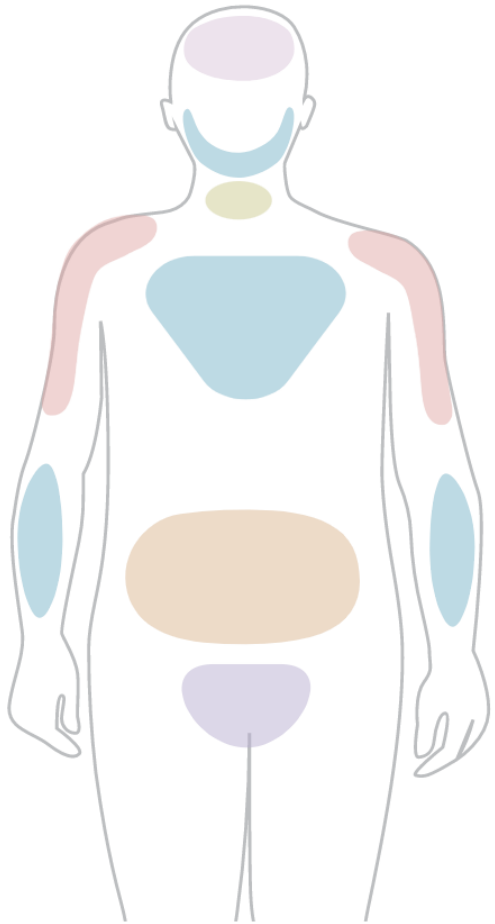
MASCULINIZING HORMONES

Testosterone Transdermal

- Patches
  - 2mg - 8mg/day
- Topical Gel
  - 50mg-100mg/daily

EFFECTS OF TESTOSTERONE

EFFECT	ONSET	MAXIMUM
Skin Oiliness/Acne	1-6 months	2yrs
Facial/body hair growth	6-12 months	5 years
Scalp hair loss	6-12 months	5 yrs
Increased muscle mass	6-12 months`	2-5 yrs
Fat redistribution	1-6 months	2-5 yyears
Cessation of menses	1-6 months	1-2 yreas
Clitoral enlargement	1-6 months	1-2 yrs
Vaginal atrophy	1-6 months	`1-2 yrs
Deepening of Voice	1-6 months	1-2 yrs.



PHYSICAL EFFECTS	REVERSIBILITY	TIME COURSE (YEARS) 0 1 2 3 4 5
Skin oiliness/acne	Reversible	
Deepened voice	Irreversible	
Body fat redistribution	Reversible/Variable	
Increased muscle mass/strength[b]	Reversible	
Facial/body hair growth	Irreversible	
Scalp hair loss[c]	Irreversible	
Cessation of menses	Reversible	
Clitoral enlargement	Irreversible	
Vaginal atrophy	Reversible	
Infertility	Variable	

https://www.rainbowhealthontario.ca/TransHealthGuide/gp-femht.html

RISKS OF TESTOSTERONE

Likely Increased Risk

- Elevated HCT
- Infertility
- Acne
- Androgenic Alopecia
- HTN
- OSA
- Wt Gain
- Increased LDL/Decreased HDL

Likely Increased Risk w/ presence of Risk Factor

- CV Dz
- Hypertriglyceridemia

Possible Increased Risk w/ presence of Risk Factor

- T2DM
- CV Dx

No increased Risk/Inconclusive

- Breast CA
- Cervical CA
- Ovarian CA
- Uterine CA

Ref: Appendix C; WPATH, SOC8

HOW THIS CAN WORK IN THE OFFICE

HOW IT WORKS IN THE OFFICE

VISIT 1: LONG VISIT

- COMPREHENSIVE HX
- NEEDED PHYSICAL
- ASSESS MINIMUM CRITERIA
- OBTAIN BASELINE LABS
- GIVE PT INFORMED CONSENT FORM

VISIT 2: LONG VISIT

- REVIEW LABS
- REVIEW CONSENT
- START GAHT IF INDICATED

Transmasc Start

- Testosterone cypionate 50mg SC or IM weekly

Transfem Start

- Estradiol 2mg oral daily
- Spiro 100mg daily

Baseline Labs

Transfeminizing

- Always: BMP
- Optional
  - Lipids
  - A1C
  - LFT
  - STI (if indicated)

Transmasculinizing

- Always: CBC, HCG
- Optional
  - Lipids
  - A1C
  - LFT
  - STI

INFORMED CONSENT FORMS

TransFeminizing Follow up Schedule

1 month f/u

- Review Tolerability, Questions, BP
- Consider ↑ estradiol by 1-2 mg/d
- Consider ↑ spiro by 50-100 mg/d

3 month f/u

- Hx ** and BP
- Consider ↑ estradiol by 1-2mg/d

6 month f/u

- Hx ** and BP
- Check Testosterone and Estradiol
- Consider ↑ estradiol by 1-2 mg/d
- Consider ↑ spiro by 50-100 mg/d

9 month f/u

- Hx **
- Repeat T & E if dose was adjusted since previous visit.

Yearly

- BMP/CMP*, Testosterone, Estrogen

**Physical changes, impact on dysphoria (if present), psych well-being, and side effects

SEX HORMONE MONITORING TRANSFEM

Serum testosterone level

- Goal is less than 50 ng/dL.

Oral estradiol

- goal is 100-200 pg/mL.
- Measure ???

Transdermal

- Measure at least 2 hours after application of product

Injectional Estradiol

- Measure the serum estradiol midway between injections

TransMASCULINIZING Follow up Schedule

1 month f/u

- Review Tolerability, Questions

3 month f/u

- Hx **
- Check Testosterone and CBC labs
- Consider Testosterone dose adjustment based on lab results.

6 month f/u

- Hx **
- Check Testosterone and CBC

9 month f/u

- Hx **
- Repeat T & CBC if dose was adjusted since previous visit.

Yearly

- BMP/CMP*, Testosterone, CBC

**Physical changes, impact on dysphoria (if present), psych well-being, and side effects

SEX HORMONE MONITORING TRANSMASC

For parenteral testosterone cypionate or enanthate

- Measure the serum total testosterone midway between injections (Day 3-4 after injecting)
- Goal level is 400-700 ng/dL.
- Alternatively, measure peak and trough levels to ensure remain in the range of reference

For parenteral testosterone undecanoate

- testosterone should be measured just before injection.
- If the level is < 400 ng/dL, adjust the dosing interval.

For transdermal testosterone

- the testosterone level can be measured no sooner than after 1 week of daily application
- Measure at least 2 hours after application of product

Resources

Resource	Overview
Guidelines for the Primary and Gender-Affirming Care of Transgender and Gender Nonbinary People	UCSF guidelines. Comprehensive, evidence based, primary care considerations and initiating, maintaining, adjusting gender affirming hormone regimens and complications.
TransLine Hormone Therapy Prescriber Guidelines	TransLine. Collaborative project including clinical guidelines, quick prescribing guide, referral services and other resources. Excellent quick guide for clinic.
WPATH Standards of Care, Version 8	Comprehensive clinical guidance for care of transgender, gender nonconforming persons across specialties, including primary and specialty care, speech/language pathology, mental health services. Available in 19 languages. Updated in 2022

IF WE HAVE TIME….

- QUESTIONS
- COMPLEX CASES.

COMPLEX CASES

- TRANSFEM (estrogen therapy)
  - h/o VTE
  - h/o CVA or CAD
  - h/o migraine with aura
  - Smokers

- TRANSMASC
  - Hct >55%
  - Smokers
  - Acne

- Deleted or unsure slides

FEMINIZING HORMONE OPTIONS

Oral Estrogen

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Injectable Estrogens

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