Welcome to the NCCHC Webinar:
Caring for Transgender Adolescent Patients:
Healthcare for Transgender Youthful Offenders

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Caring for Transgender Adolescent Patients

Healthcare for Transgender Youthful Offenders

John Steever, MD
Assistant Professor of Pediatrics
Disclosures

► No financial disclosures
► Discussion of “off-label” use of medications
► Best available data
Objectives

- Differentiate natal sex, gender identity, gender expression & sexual orientation

- Discuss primary and specialized care that may be needed by transgender adolescents

- Provide initial management strategies for appropriate & competent care to gender non conforming patients
Terminology: What’s in a Name?

**Transgender**—umbrella term for individuals & communities. A person whose identity does not conform unambiguously to conventional notions of male or female gender roles, but blends or moves between them.

**Gender nonconforming**—individuals who do not follow other people’s ideas or stereotypes about how they should look or act based on the female or male sex they were assigned at birth.

**Cisgender**—a person whose gender identity conforms unambiguously to conventional notions of gender, and matches their natal/biologic gender.
Early Childhood & Prepubescent Gender Development
Paradigm of Sexuality

- Sexual Orientation
- Sexual Attraction
- Sexual Behavior
- Biological Sex
- Gender Identity/Expression
Continuum of Sexual Orientation

Solely Heterosexual

Bisexual

Solely Homosexual
The Genderbread Person v2.0

Gender is one of those things everyone thinks they understand, but most people don’t. Like Inception. Gender isn’t binary. It’s not either/or. In many cases, it’s both and. A bit of this, a dash of that. This tasty little guide is meant to be an appetizer for understanding. It’s okay if you’re hungry for more.

- **Gender Identity**
  - Nongendered
    - Woman-ness
    - Man-ness

- **Gender Expression**
  - Feminine
  - Masculine

- **Biological Sex**
  - Female-ness
  - Male-ness

- **Attracted to**
  - (Men/Males/Masculinity)
  - (Women/Females/Femininity)
Awareness of Gender Identity

Between ages 1 and 2
— Conscious of physical differences between sexes

At 3 years old
— Can label themselves as girl or boy

By age 4
— Gender identity stable
— Recognize gender constant
Gender Nonconforming Youth

*Persistent, consistent, insistent*

- Cross gender expression, role playing
- Wanting other gender body/parts
- Not liking one’s gender & body (gender dysphoria)
Development Issues
Pre-pubertal Gender Nonconformity

- Epidemiology depends on definition, populations, survey or instrument, culture
  - Gender variant 1:500
  - 0.5% of US adults identify as Transgender
- Prepubertal developmental considerations
  - Many children 5-12 years with gender dysphoria do not continue to suffer as adolescents
  - Some identify as homosexual or bisexual
    - 50-60% will “out-grow” in their gender dysphoria
All pre-pubertal children play with gender expression & roles

- Passing interest or trying out gender-typical behaviors
- Interests related to other/opposite sex
- Few days, weeks, months, years
Who to Screen?

- All children
  - Developmental stages
- Non-conforming expression
- Concerns/problems with
  - Mood
  - Behavior
  - Social
Family Acceptance Project Data

- 224 LGB white & Latino adults, ages 21 to 25 years
- Open about sexual orientation to at least 1 parent during adolescence

Association *parental rejecting* behaviors & *negative* health outcomes

<table>
<thead>
<tr>
<th>OR</th>
<th>Negative Health Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4</td>
<td>Unprotected sex</td>
</tr>
<tr>
<td>5.9</td>
<td>Depression</td>
</tr>
<tr>
<td>5.6</td>
<td>Suicidality</td>
</tr>
<tr>
<td>8.4</td>
<td>Suicide attempt</td>
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</tbody>
</table>

I love you
Accept you even if not understood
Protective… Resilience
Adolescents & Gender
Treatment Goals

Improve *quality of life* by

- Facilitating transition to physical state that more closely represents the individual’s sense of self
- Experience puberty congruent with gender
- Prevent unwanted secondary sex characteristics
  - Reduce need for future medical, surgical interventions
- Avoid depression, risk taking
- Establish early, strong social support
Phases of Transitioning

Reversible
- clothes, hair, shoes, toys, GnRH analogues

Partially reversible
- masculizing & feminizing hormone therapy

Irreversible
- gender reassignment surgery (GRS)
Benefits of “Blockers”

- Gonadotropin Releasing Hormone (GnRH) analogues block puberty
  - Leuprolide
  - Histrelin

- Delay irreversible 2\textsuperscript{nd}ary sex characteristics
  - Allow time for teen to mature & make decision
  - Allow time for parent & social support to develop
  - Prevent unwanted secondary sex characteristics
    - Reduces needs for future medical interventions
GnRH Analogues

- Continuous GnRH secretion
  - Suppress FSH, LH
  - Initial ↑ LH, FSH followed by desensitized pituitary
  - LH FSH secretion suppressed

- Leuprolelin, Triptorelin, & Goserelin
  - Monthly & 3-monthly depot preparations

- Histrelin implant
  - 12 month
  - Typically not covered by insurance
Select dosing schedule

- Monthly depot SQ or IM
  - Range 3.75, 7.5, 11.5 mg
- 3-monthly long-acting 11.25 mg IM

Counseling & Consent

- Few side effects aside from injection pain, withdrawal bleed if menarchal
- Expect to see some “effects” in 2-4 week range
Phases of Transitioning

Reversible
- clothes, hair, shoes, toys, GnRH analogues

Partially reversible
- masculizing & feminizing hormone therapy

Irreversible
- gender confirmation/affirmation surgery (GCS/GAS)
Beginning Hormonal Treatment

- Establish commitment to next steps
  - Gender incongruency
  - Readiness for transition
  - Expectations, goals
  - Management plan
- Obtain informed consent
- Order baseline labs
- Establish follow up

Letter from mental health professional?
Feminizing Hormones

- Estrogens - induce development female secondary sexual characteristics

- Anti-androgen treatment reduce effect of endogenous male sex hormones
  - Spironolactone
  - Use if no contraindications (renal disease, ↑ K)
Estrogen

- Estradiol
  - Oral or Sublingual 2–8 mg/day
  - Patch 0.1–0.4 mg twice weekly

- Estradiol cypionate or valerate inj
  - 5–20 mg IM q 2 wks

- Premarin (cong. Estrogens) not recommended

- Ethinyl Estradiol not easily measured
<table>
<thead>
<tr>
<th>Effect</th>
<th>Onset (months)</th>
<th>Maximum (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>redistribution of body fat</td>
<td>3 to 6</td>
<td>2 to 3</td>
</tr>
<tr>
<td>decreased muscle mass</td>
<td>3 to 6</td>
<td>1 to 2</td>
</tr>
<tr>
<td>softening of skin</td>
<td>3 to 6</td>
<td>unknown</td>
</tr>
<tr>
<td>decreased libido</td>
<td>1 to 3</td>
<td>3 to 6</td>
</tr>
<tr>
<td>decreased spontaneous erections</td>
<td>1 to 3</td>
<td>3 to 6</td>
</tr>
<tr>
<td>breast growth</td>
<td>3 to 6</td>
<td>2 to 3</td>
</tr>
<tr>
<td>decreased testicular volume</td>
<td>3 to 6</td>
<td>2 to 3</td>
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<tr>
<td>decreased sperm production</td>
<td>unknown</td>
<td>&gt;3</td>
</tr>
<tr>
<td>decreased terminal hair growth</td>
<td>6 to 12</td>
<td>&gt;3</td>
</tr>
</tbody>
</table>
Effects of Feminizing Hormones

- Varies from patient to patient
- Noticeable changes within 4 weeks
- Reversible effects prior to 6 months
- Effects continue at decreasing rate for ≤2 years
- Post ohiectomy “spurt” of breast growth & feminization

- Decrease estrogen dose needed
Risks of Feminizing Hormones

- Complete risks are unknown
  - Most studies performed in natal women
  - Limited research regarding risks
  - Mortality not necessarily increased

- FDA all administration off-label
  - More research needed
Risks of Feminizing Hormones

- Vasc thrombotic events
- Increased Weight
- Decreased Libido
- Erectile dysfunction
- Liver dysfunction
- TG ↑ (pancreatitis)
- HDL ↑ LDL ↓
- Increased BP

- Glucose intolerance
- Gall bladder disease
- Pituitary adenoma
- Breast cancer (3 cases)

Anti-androgens

↑ K      ↓ BP
Issues with Self-Prescribed Hormonal Therapy

- Excessive amounts
  - Increased risks & medication side effects
  - Does not increase feminization nor override heredity
  - Excess estrogen can be converted to testosterone
    - Clinically significant v urban myth

- Quality
  - Purity not guaranteed
  - Medication & dose not guaranteed

- Safety
  - Sharing used needles poses HIV & hepatitis risks
Progesterone

- No good data in transgender women
- Induced an “inflammatory” state in male bodied persons when tried as male birth control
- Weight gain, “tubular breasts”
- Amenorrhea in trans men
Other Feminizing Adjuncts

- **Anti-androgens**
  - Spironolactone 50–100 mg PO BID
  - Finasteride 2–5 mg PO QD

- **Cosmetics**
  - Eflornithine (Vaniqua), laser, electrolysis
Baseline Labs
Feminizing Hormone Therapy

- CBC
- LFTs
- Lipids
- Chem 10 or Comp Met panel

- Estrogen
- Testosterone
- Prolactin
Q 3 months 1-2 years

- Test according to need
- Testosterone level at 1 yr
  - Goal $< 55 \text{ ng/dl}$
- Estradiol
  - If concerns re overuse
  - Goal ‘average female levels’
- K (Cr)
  - If spironolactone

Goals

- Generate desired effects
- Avoid side effects
- Average natal levels
Testosterone

- Multiple dosing regimens

- Oil based testosterone for injection
  - Cypionate or enanthate
  - SQ 50–100 mg SQ weekly
    - Decreased peaks/troughs, side effects
  - IM 50-100 mg weekly or 100-200 mg every other week
Masculinizing Hormones

▶ Other forms
  ▶ Transdermal androderm 2.5–10 mg daily
  ▶ Androgel 2.5–5 mg packets with dosing 50–100 mg daily

▶ Topical testosterone to clitoris will not increase size

▶ Progestins may be used short term to stop menses
## Testosterone

<table>
<thead>
<tr>
<th>Effect</th>
<th>Onset (months)</th>
<th>Maximum (years)</th>
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</thead>
<tbody>
<tr>
<td>skin/ acne</td>
<td>1 to 6</td>
<td>1 to 2</td>
</tr>
<tr>
<td>facial/ body hair</td>
<td>6 to 12</td>
<td>4 to 5</td>
</tr>
<tr>
<td>scalp hair loss</td>
<td>6 to 12</td>
<td></td>
</tr>
<tr>
<td>increased muscle mass</td>
<td>6 to 12</td>
<td>2 to 5</td>
</tr>
<tr>
<td>fat redistribution</td>
<td>1 to 6</td>
<td>2 to 5</td>
</tr>
<tr>
<td>cessation of menses</td>
<td>2 to 6</td>
<td></td>
</tr>
<tr>
<td>clitoral enlargement</td>
<td>3 to 6</td>
<td>1 to 2</td>
</tr>
<tr>
<td>vaginal atrophy</td>
<td>3 to 6</td>
<td>1 to 2</td>
</tr>
<tr>
<td>deepening of voice</td>
<td>6 to 12</td>
<td>1 to 2</td>
</tr>
</tbody>
</table>
Risks of Masculinizing Hormones

- Weight increase
- Mood changes
- Liver dysfunction
- TG ↑ HDL ↓ LDL ↑
- Insulin resistance
- Increased homocysteine
- Polycythemia
- Male pattern baldness
- Possible pelvic pain
Management of Side Effects of Masculinizing Hormones

- Rogaine to treat pattern baldness
- Estrogen vaginal cream for atrophy
- Retinoids for acne
- Progestin for menses

- Spotting may occur for several months followed by amenorrhea
Initial Lab Testing for Masculinizing Hormone Therapy

- CBC
- LFTs
- Lipids
- Cr, Glucose
- Testosterone
Lab Follow-Up for Masculinizing Hormone Therapy

Q 3 months 1-2 years

- Test according to need

- Testosterone level at 1 yr
  - Goal 300-750 ng/dl

- CBC
- Liver function tests
- Lipids

Goals

- Generate desired effects
- Avoid side effects
- Average natal levels
Phases of Transitioning

- **Reversible**
  - clothes, hair, shoes, toys, GnRH analogues

- **Partially reversible**
  - masculizing & feminizing hormone therapy

- **Irreversible**
  - gender confirmation/affirmation surgery (GCS/GAS)
Surgical Options for Trans-men

- Male chest construction
  - Different technique than mastectomy or implants
- Hysteroopherectomy
- Phalloplasty /metoidioplasty
  - No function without pump
  - Rarely covered by health insurance
  - Performed by specialized surgeons
Surgical Options for Trans-women

- Breast implants
- Orchiectomy/penectomy
- Vaginoplasty
- Facial feminizing
- Vocal cord surgery
- Plastic surgery (waist, hip, buttocks)
General Health Concerns

For all transgender youth
Health Care for Trans-Men

- Emotional well being
- STI testing
  - Including HIV
- PCOS
  - Glucose testing
- Fertility
  - Contraception
  - Future pregnancy?
- Breast cancer screening
  - Instructions in self breast exam
  - Mammography
- Pap cancer screening
  - Atrophy looks like dysplasia
- ? Dexa scans
  - Testosterone > 5 yrs
  - Age > 50
Health Care for Trans-Women

- Emotional well-being
- STI testing, prevention
  - Including HIV testing
- Fertility considerations
  - Sperm/embryo banking
  - Contraception
- Breast cancer screening
  - Self breast exam
  - Mammography 10+ years or age 50
- Additional screenings, limited evidence
  - ?Prostate screening for older patients
  - ?”pap” – screen HPV
STI Screening

- CDC guidelines according to anatomy & behaviors
  - Female anatomy: yearly NAAT screen for GC & Chlamydia, wet prep?
  - Receptive vaginal & anal sex with cis males: screen for syphilis, GC/Ct & HIV
Contraception

- Trans-men have some pregnancy risk
  - Testosterone not fail-safe contraceptive
  - May continue to ovulate while on testosterone
  - Testosterone may adversely affect development of fetus
  - Consider DMPA, LARC, & barrier methods

- Avoid assumptions about future children
  - Do you want to be pregnant or have genetic children?
Cultural Competence

- Preferred Name/ Pronouns
- Intake forms & documents
- Bathrooms/ roommates/ floors
- Appropriate confidentiality
- Appropriate history and physical
- Appropriate ROS
- Hx of poor treatment by:
  - Physicians/ Medical establishment
  - Justice system
  - Employers/ landlords/ education
Transgender Youth
Take Home Points

► Screening for gender issues, like sexual health concerns, important throughout life span

► Medical management of treatment, including hormones, safer than self prescribing

► Mental health & support important

► STI & other health care maintenance continue
Transgender youth are a unique population to work with and deserve the same high quality medical care that all teens deserve. They are just like every other adolescent, but with a twist.
Questions?

- Use the webinar chat feature to send questions @NCCHC Organizer

  OR

- Email additional questions after webinar to webinars@ncchc.org