Why is this topic important?

• Transgender and gender-diverse (TGD) individuals experience preventable health disparities
• Gender-inclusive services improve care for everyone
• Current socio-political threats to gender-affirming care for youth
Learning objectives

- Have tools to screen for and discuss gender identity concerns during primary care encounters with children and adolescents
- Understand multidisciplinary model of health care for TGD youth
- Build skills to design more youth-centered and gender-affirming clinical spaces and services
Outline

• Adolescent development and identity formation
• Basics of multidisciplinary assessment and affirming care of TGD youth
• Affirming healthcare environments
• Cases
Adolescent Development

Internal vs. External Identity

**Internal identity:** Youth’s sense of self; who they understand themselves to be
- Gender
- Sexuality
- Race
- Indigenous identity
- Ethnicity
- Ability

**External identity:** Society’s (and healthcare system’s) identity ascribed to that youth’s perceived or communicated identity
- Stereotypes
- Pathologizing identity (“risk factors”)
- Not recognizing identity

Gender identity development

- Boys and girls have group differences in toy preference as young as 12 months of age.
- Children as young as 2 years can label themselves and other children as boys or girls.
- By age 4-5 understand that gender is a stable and lasting aspect of their identity.
- Gender non conforming behavior is common in childhood.
- Most children who exhibit gender non-conforming behavior are not transgender.

Shumer Adv in Ped 2016; Kohlberg Development of Sex Differences 1966; Fausto-Sterling J Homosex 2012
Gender-Expansive and Transgender children

- Gender-expansive children
  - Behavior, preferences or other traits are not gender-typical
  - Not necessarily distressed — except because of bullying or stigma

- Transgender children
  - Distressed about assigned sex and/or expected gender identity
  - May call for gender transition
The Gender Unicorn

Gender Identity
- Female
- Woman
- Girl
- Male
- Man
- Boy
- Other
- Other Gender(s)

Gender Expression
- Feminine
- Masculine
- Other

Sex Assigned at Birth
- Female
- Male
- Other
- Intersex

Physically Attracted to
- Women
- Men
- Other
- Other Gender(s)

Emotionally Attracted to
- Women
- Men
- Other
- Other Gender(s)

To learn more, go to: www.transstudent.org/gender
Definitions

• **Cisgender**: someone whose gender identity is the same as the sex they were assigned at birth.

• **Transgender**: someone whose gender identity is different from the sex they were assigned at birth. For example:
  - **Transfeminine**: Someone assigned male at birth, who now identifies their gender as female
  - **Transmasculine**: Someone assigned female at birth, who now identifies their gender as male
  - **Non-binary**: Someone whose gender identity is not entirely male nor entirely female.

• **Gender diverse**: Describes people with gender behaviors, appearances, or identities that are incongruent with those culturally assigned to their birth sex
TGD as an umbrella term

- Non-binary
- Genderqueer
- Neutrois
- Two-spirit
- MtF
- FtM
- Agender
- Gender non-conforming
Prevalence

- Gender diverse youth are more prevalent than binary transgender youth and may make up
  - 5 to 12% of birth assigned females
  - 2 to 6% of birth assigned males


Herman JL et al. Age of Individuals Who Identify as Transgender in the United States. Los Angeles, CA: The Williams Institute; 2017
Health Disparities

• Transgender youth experience higher levels of bullying, discrimination, violence, family and peer rejection, and homelessness.

• Increased risk of issues including substance abuse, depression, and anxiety.

• Nine-fold increased risk of eating disorders.

• More than 40% of transgender young people attempt suicide.

Diemer et al. 2015. J Adolesc Health
Chronic Exposure to Minority Stressors Fuels Health Disparities

Health and Wellbeing of TGNC Youth

- Stigma
- Lack of Family Support
- Discriminatory Laws and Policies
- Micro-Aggressions
- Internalized Transphobia
- Rigid Gender Norms
- Negative Peer Relationships
- Concealment of Identity
- Bullying & Victimization

Adolescent Development

Care guidelines
Gender affirmation

• Social and psychological affirmation
• Puberty blockers
• Gender-affirming (cross sex) hormone therapy
  • Integrated with comprehensive and gender-affirming primary care
• Gender-affirming surgeries
• Legal affirmation
Diversity of Affirmation Journeys
Psychosocial Affirmation

• Social
  • Pronouns
  • Name
  • Social gender role

• Psychological
  • Addressing psychosocial health concerns
  • Having support in transition process
  • Addressing internalized stigma and transphobia
Eliciting gender identity

- Kids: “Some kids tell me they think of themselves as girls, some as boys, some as part girl and boy, or something entirely different. How do you think about yourself?”
- Teens: “There are lots of ways people describe their gender identity, how do you think of yours?”
  - “Tell me what that term means to you?”
- Pronouns video: https://youtu.be/3xpvricekxU
- Role of diagnostic evaluation
The Q Card is tri-fold pocket communication resource designed to simultaneously empower LGBTQ youth to advocate for themselves and educate healthcare providers.

It allows youth to fill in their sexual orientation, gender identity, preferred gender pronouns, and any specific concerns.

http://www.qcardproject.com
Inclusive Language

• Sex assigned at birth vs. biological/natal/real sex
• A person with ovaries/uterus/cervix vs woman
• A person with penis/testicles vs. man
• Chest vs. breasts
• Genitals or front hole vs. penis/vagina/vulva
• Bleeding vs. menstruation
• People who menstruate/have a period vs. women
Puberty Blockers

- Blockers are gonadotropin releasing hormone (GnRH) agonists

- GnRH
  - **Pulsatile** release from the hypothalamus
  - Stimulates pituitary release of luteinizing and follicle stimulating hormones (LH and FSH)

- LH and FSH
  - Stimulate the gonads to produce sex steroids (estrogen progesterone and testosterone)
Mechanism of Action of Blockers

- Large non-pulsatile dose of GnRH agonist floods the pituitary
- Initial release of FSH and LH
- Initial surge of sex steroid hormones
  - Menstrual bleeding 14-28 days after injection
  - Followed by amenorrhea
- End result
  - Suppression of
    - FSH and LH secretion
    - Testicular release of testosterone
    - Ovarian release of estrogen and progestin
  - Does not affect HPA axis
  - Adrenal gland not affected
GnRHa Treatment

• When?
  • At least Tanner (sexual maturity rating) stage 2
    • Mean age for the first signs of puberty
    • 10.5 years in girls, range 8 to 12 years
    • 11.5 years in boys, range 9 to 13 years

• What
  • Intramuscular leuprolide acetate (Lupron)
    • 7.5 mg monthly
    • 11.25 mg every 3 months
  • Histrelin Implant (Supprelin LA or Vantas)
    • 50 mg histrelin acetate
  • Not FDA approved for this indication
Clinical Effects of GNRHa

• Will slow down
  • Pubertal development
  • Bony changes of puberty
  • Androgen-dependent hair growth
  • Deeping of the voice, enlargement of larynx
  • BMD does not increase as expected but is believed to catch up with subsequent sex steroid administration

• Completely reversible
  • If immediately followed by cross-sex hormones patient will be not be fertile
  • No effect on fertility if discontinued

Devries al 2011 j sex med
Clinical Effects of GNRHa

- May
  - Improve psychological function
    - But has not been found to improve gender dysphoria
  - Increase adult height in affirmed males
  - Decrease adult height in affirmed females
  - Cause hot flashes and first period in affirmed males

De Vries et al; Pediatrics 2014
De Vries et al; J Sex Med 2010
Why Use Puberty Blockers?

- Provide time to explore gender incongruence
- Prevent sex characteristics that are difficult or impossible to reverse
  - Adam’s apple
  - Male pattern hair growth
  - Voice deepening
  - Breast development
Blockers after Puberty

- Prevent menstruation
- Prevent further androgen effects
- Give parents a chance to catch up
- Used post puberty will NOT cause regression in
  - Penis, beard, body hair, Adam's apple, shoulders, jaw
  - Breast or hips
- Allows use of lower doses of affirming hormones
Binders, Packers & STP Devices
Gender Affirming Hormones

• Typically initiated between age 14-16 (widely variable)
  • Number of years living stably in affirmed gender role
  • Number of years of pubertal suppression
  • Degree of dysphoria
  • Distress because physical development is out of sync with peers
  ▸ Puberty is 2-3 year process – mimic this in patients who started blockers at T2/T3
    • Those who present T4-5 have already experienced near-full puberty so hormone regimens may be increased to full replacement doses over a shorter interval
  • Ideally continue blockers until gonadectomy
    • Implants may work for more than 1 year
Masculinizing Hormones

- Testosterone cypionate (or enanthate)
- Starting dose
  - 12.5 mg/wk Sub Cu or IM (or 25 mg / 2wks IM)
- Increase dose every 6 months
  - by 12.5 mg /wk (or by 25 mg/ 2wks IM)
- Mimic total T levels that correspond to Tanner stages appropriate for patient’s age
- Check levels after 1\textsuperscript{st} 3 months and after dose increases

Hembree. Endocrine Society Clinical Practice Guideline 2017
Olson J. LGBT Health 2014

Video from Seattle Children’s: https://www.youtube.com/watch?v=dmjSEf2og1A
Masculinizing Hormones

• Partially reversible
  • Increased lean muscle mass / decreased subcutaneous fat
  • Male pattern hair growth
  • Breast tissue atrophy possible

• Irreversible
  • Deepened voice
  • Clitoromegaly

• Adverse effects
  • Acne
  • Polycythemia, transaminitis
  • Dyslipidemia, weight gain, hypertension
  • Mood lability
Feminizing Hormones

• Continuing blockers
  • Allows lower doses of estrogen; even higher doses may not block effects of testosterone
  • Alternatively use spironolactone
    • Start at 25 bid up to 300 bid
    • Monitor creatinine and potassium

• Decreased height possible
  • With administration of estrogen growth plates will close

Video from Seattle Children’s:
https://www.youtube.com/watch?v=8_gdLCXKISY
Feminizing Hormones

- 17 beta estradiol with gradual increase
  - Oral: daily, start at 0.25 mg (5μg/kg/d)
    - gradual increase every 6 months to adult dose 2 - 6 mg/d
  - Transdermal: twice weekly patches 6.25μg [achieved by cutting a 25-μg patch]
    - gradual increase to adult dose 50 - 200μg/24hr
  - Adjust dose to mimic physiologic estradiol level 100-200pg/ml, testosterone level should be < 50ng/dl
- Check levels after 1st 3 months and after dose increases

Hembree. Endocrine Society Clinical Practice Guideline 2017

Video from Seattle Children’s: https://www.youtube.com/watch?v=8_gdLCXKISY
Feminizing Hormones

• Partially reversible
  • Decreased facial and body hair
  • Fat redistribution
  • Decreased spontaneous erections
  • Softened skin

• Irreversible
  • Breast tissue growth
  • Closure of growth plates

• Adverse effects
  • Thromboembolic disease
  • Liver dysfunction, cholelithiasis
  • Hyperprolactinemia, hypertension
Follow-up

• Ongoing mental health support
• Medical follow-up
  • Assess clinical response
  • Monitor for undesired side effects
  • Monitor labs
• Affirming primary care and specialty services
• Voice training
Gender-Affirming Surgeries

• “Top” surgery
  • To create a masculine chest shape or enhance breasts
• “Bottom” surgery
  • Surgery on genitals or reproductive organs
• Facial feminization
• Hair removal
A note about consent
Family acceptance

- Suicide rates among TGD youth are significantly lower among those with strongly supportive parents (4% vs 60%)
- TGD youth who describe at least 1 supportive person in their life report significantly less distress than those who only experience rejection
- In communities with high levels of support, non-supportive families tended to increase support over time, leading to dramatic improvement in mental health outcomes

Ryan et al. Family Rejection as a Predictor of Negative Health Outcomes in White and Latino Lesbian, Gay, and Bisexual Young Adults. *Pediatrics. 123*(1), 2009
Common parental concerns that may delay access to gender-affirming treatment

- Fear of harassment
- Fear of rejection by peers or other family
- Fear of physical harm
- Worry about preservation of fertility options
- Worry about appropriate timing of transition
- Fear of regret regarding transition
- Parental grief
Addressing parental concerns

• How do I know they are actually transgender?

• What if this is just a phase?

• Why can’t we wait until they have finished puberty or they are an adult before we talk about medical transition? What if my child regrets this?
Community Support

• School policies to support and affirm TGD students
• Community support groups and advocacy efforts
• Inclusive insurance policies
Promoting health of TGD adolescents

- Welcoming environments
- Visual cues
- All-gender restrooms
- Confidentiality
- Inclusive health education curricula
“Karla”

• 8 year old patient assigned male at birth (AMAB) presents for a preventive health visit
  • Karla has preferred feminine hairstyle and dress from a very young age
  • Soon after she began talking, she referred to herself consistently as a girl (and the “sister” of her older sibling)
  • At age 4, Karla requested that her family stop using her birth-assigned name Karl and insisted that they use Karla instead
  • Parents supported Karla to enter elementary school with a gender marker of female, participate on girls sports team and consistent express herself as a girl
  • On exam, Karla demonstrates typical growth and development for her age. She has SMR/Tanner stage 1 genitalia (prepubertal penis, testicles 2 ml)
Next steps for Karla

• Reinforce the range of affirmation journeys experienced by TGD children and teens

• Offer mental health support from a provider with expertise in TGD children and social/community support resources for family

• Monitor for onset of puberty (testicular growth is first sign)

• Refer to multidisciplinary gender program to discuss options related to pubertal suppression and subsequent gender-affirming hormones
“Andy”

• 11 yo AFAB presents for depression evaluation
  • Came out to mom and step-dad 4 months ago as transgender
  • Late in puberty based on age of menarche (10) and physical exam (Tanner 4)
  • Parents are divorced, but share authority for major, non-emergent medical decisions
    • One parent is adamantly opposed to any gender-affirming evaluations or treatments and feels that other parent has raised the child in a way that has negatively influenced their well-being and caused them to be confused about their gender
Next steps for “Andy”

- Screen for safety and refer to Gender Health program
- Initial gender intake:
  - Detailed health history and patient/family goals, knowledge gaps
  - Provided information about multidisciplinary approach to gender care in pediatric patients, normalizing and support
- Child psychology gender evaluation supports diagnosis of gender dysphoria and consideration of gender-affirming medical interventions
- Ongoing counseling sessions with gender-affirming therapist
- 1 month medical follow-up (now age 12):
  - Andy wrote letter to dad with gender story, but did not send.
  - Increasing frustration: “why does dad have to be involved in this decision when he hasn’t been involved in any other decisions and isn’t really in my life?”
  - Physical exam, ordered baseline gonadotropins, bone age
  - Agreement for me to reach out to dad by phone to engage in treatment discussion
“Andy” (continued)

- **2 month follow-up:**
  - Labs and bone age not completed, “doesn’t see the point,” Came out at school, some comments form other classmates. More dysphoria and anger

- **Phone visit with dad**

- **3 month follow-up:**
  - No significant changes in clinical presentation

- **Interval update:**
  - Emergence of SI, worsened depression symptoms.
  - Started SSRI, 3 weeks later - suicidal gesture, admitted to inpatient psych unit x5 days, SSRI continued
  - Depression symptoms improved over summer, attendance at Gender Odyssey, limited interactions with dad, mom exploring avenues to revise parenting plan
Affirm and support without an agenda

• Example language:
  • My role as your health provider is to help you (or your child) live a healthy, safe and authentic life
  • My job is not to determine your (or your child’s) gender. There are no right or wrong answers to my questions.
  • You know your gender, my job is to help you express that in a way that feels comfortable, safe, and healthy for you
  • To parents: I can tell that you care deeply about your child’s health and safety.
Gather and provide information

• Normalize a range of gender identities and journey
  • Address the stereotypical narratives in popular culture
• Discuss guideline-based medical treatment options for youth during and after puberty
• Discuss potential risks of doing nothing as well as the promising effects of supportive and affirming families on youth outcomes
• Orient patients to multidisciplinary care team, assessment and treatment standards
Clinical Research Review: 
Use in treatment for Gender Dysphoria

Also known as: GnRH analogues

Puberty blockers are a medical treatment available to support the healthy development of transgender adolescents. By halting puberty, puberty blocking medications have been shown to reduce gender dysphoria (e.g., discomfort with sex characteristics) and promote mental health [1, 2, 3].

Photography provided by Lindsey Morris from You are You: A Photobook about Gender Unique Children

Gender affirming medical care is considered medically necessary treatment for transgender individuals who experience physical dysphoria (i.e., distress associated with physical sex characteristics) [1, 2]. While not all individuals who experience a discrepancy between their gender identity and sex assigned at birth experience physical dysphoria, many do. Forms of gender affirming medical care include use of hormones and gender affirmation surgeries (e.g., "top surgery," "bottom" surgeries, facial feminization, and laser hair removal). Historically, transgender individuals were required to wait until age 18 to receive gender affirming medical care of any kind. Increasingly, transgender individuals are requesting care at earlier ages due to larger societal shifts in visibility and acceptance that have resulted in earlier ages of "coming out." As a result, gender clinics specializing in the medical treatment of transgender individuals are offering cross-sex hormone therapy at younger ages (16-18 years old) [3, 4]. In addition, a number of doctors are now prescribing puberty blockers to adolescents with strong physical dysphoria that persists or emerges with the onset of puberty. Puberty blockers are prescribed after an assessment process with a multidisciplinary team and adolescents are tracked over time and provided with support during the transition period [5, 6].

The following report provides an overview of puberty blockers including how they work, how they are prescribed, and what research exists to support their use.

Terms and Definitions:
For more information on gender identity, terminology, and experiences commonly reported by transgender children and youth, please see: Understanding Gender Spectrum.org/understanding-gender
Gender Identity Basics gaycenter.org/wellness/gender-identity

**Identity language used within the report references transgender children by their own stated gender identities (e.g., affirmed gender/identity). The terms "male body" and "female body" are used when relevant to discuss physical changes to the non-intersex population as identified by sex at birth. "Gender dysphoria" is used to reference distress associated with a discrepancy in gender identity and assigned sex/gender role whereas "physical dysphoria" is used to reference distress associated with physical sex characteristics.

Disclaimer: This publication is not able to provide medical care recommendations or advice specific to any one individual. If your child is expressing a strong desire for medical gender transition (e.g., hormones, puberty blockers) it is important to connect with supportive professionals. A number of organizations now exist to support transgender children and their families, including, but not limited to: Gender Spectrum, TransYouth Family Allies, Trans Youth Equality Foundation, Transactive, Gender Odyssey

Discuss timing of interventions

**Average Age of Pubertal Changes**

**Female Bodied Individuals**

- Age 8: Breast budding
- Age 9: Pubic hair growth
- Age 10: Growth spurt
- Age 11: First period (menarche)
- Age 12: Underarm hair growth
- Age 13: Change in body shape
- Age 14: Adult breast size reached

**Male Bodied Individuals**

- Age 8: Testes and scrotum growth
- Age 9: Voice change
- Age 10: Penis growth
- Age 11: Pubic hair growth
- Age 12: First sperm production
- Age 13: Growth spurt
- Age 14: Change in body shape
- Age 15: Underarm and facial hair growth
Why not wait?

- When strong and consistent physical dysphoria is present, delaying treatment is linked to higher rates of depression, anxiety, eating disorders, and suicidality

  - Difficulties can negatively impact social and academic functioning, distract from identity development in other areas
Connect families to support

• Mental health provider who can provide trans-competent family therapy
• Local support groups for families
• Annual gender conferences
  • Gender Odyssey
  • Gender Spectrum
• School resources
  • Rainbow club/GSA
  • “Schools in Transition”
Collaborate with multidisciplinary team

- WPATH, Endocrine Society, UCSF guidelines
- When multiple providers have consensus about what treatment and support strategies may be in the best interest of a child, parents may be more supportive of recommendations
- Mental health team can empower and equip child/teen with plan and language to discuss treatment goals with parents
- If legal action is required, having multiple expert assessments can provide additional data to support a decision
Know legal framework

- Washington state minor consent laws
  - Reproductive health care at any age
  - STD evaluation and treatment for 14+
  - Mental health and substance use treatment for 13+
  - No statute or case precedent for gender care among minors

- Current standard in region is to obtain consent from all parents who have legal decision making authority for a minor
Always assess for safety

• Household – parents/caregivers/siblings
• Partners
• School
• Community
Key Take Aways

• Balance affirming identity and treatment goals of young people with parental hesitance and concerns
  • Allow agenda to emerge collaboratively
• Multidisciplinary team approach is standard of care for minors and can assist with disagreement among parents
• Explore additional sources of information and support for parents that may resonate best
• Uphold legal and ethical principles
Hearing from youth

• AHI Video (7:43m) https://www.youtube.com/watch?v=CHN3YhMi-5A
Resources

• https://www.genderspectrum.org
• https://www.umhs-adolescenthealth.org/improving-care/spark-trainings/lgbtq-youth-series/
• Guidelines
  • AAP: https://pediatrics.aappublications.org/content/142/4/e20182162
  • WPATH Standards of Care: https://www.wpath.org/publications/soc
  • UCSF: https://transcare.ucsf.edu/guidelines
• Trans Youth Project: http://depts.washington.edu/scdlab/research/transyouth-project-gender-development/
Thank you!
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