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Transgender children

Katie Larson Ode, MD (she/her/hers)

Assistant Clinical Professor

Pediatric Endocrinology &Diabetes

Relevant to the content of this CME activity, Dr. Larson-Ode indicated she has no financial relationships to disclose.

Objectives

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- After this presentation, I hope you :
  - Know terms relevant to care for transgender people
  - Know what transgender people need from healthcare providers
  - How medical transition works for children

Let's start where I started:
Disorders of Sexual Development

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- Current term: disorder of sexual development (DSD)
- previous term: intersex disorders
  - Still acceptable for use, may become recommended term again
- Old term: (perjorative!) hermaphrodite
  - People who are intersex may refer to themselves using this term, medical professionals should not!

Things I learned from DSDs

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- Male and female are not as clear as we would like them to be (and assume they are!)
  - XX can = male (xx male), XY can = female (turner,swyer,CAIS)
  - Females can have testes (CAIS), males can have ovarian tissue (true hermaphrodite)
  - A male can have a uterus (PMD) and a female a phallus (CAH)
- The only organ that conclusively determines gender is the brain
- Therefore, the only way a doctor can know for sure is to ask the patient

Definitions!

Definitions

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- Sex- determined by factors that include chromosomes, gonads, internal reproductive organs and external genitalia
  - Not always binary
  - Not always consistent
- Gender-a non-binary construct that allows for a range of gender identities and that a person's gender identity may not align with sex assigned at birth[1]
- Gender identity -innermost concept of self as male, female, a blend of both or neither
  - the only thing that determines gender is the brain

[1]American Psychological Association

Definitions

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- Gender role- behaviors, attitudes and personality traits that assign masculinity/femininity culturally
- Gender nonconformity- the extent to which a person's gender identity, role, or expression differs from the cultural norms
- Gender dysphoria- discomfort or distress that is caused by a discrepancy between a person's gender identity and that person's sex assigned at birth[1]

[1]DSM-5

Definitions

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- Transgender- a person who identifies as or desires to be accepted as a gender different to the assigned gender at birth.
- Also persons whose gender identity does not conform to conventional gender roles of either male or female
  - Transsexual- a person who identifies as or desires to be accepted as a member of the gender opposite to birth gender- typically implies some sort of therapy is undertaken, i.e. surgery
- Cisgender- a person who identifies as the same gender as their assigned gender at birth
- MTF- male to female- person transitioning from male to female
- FTM- female to male – person transitioning from female to male

A little history!

A trans* timeline

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- **1910** Magnus Hirschfeld introduces the term "transvestites",
  - distinguishing them for the first time from homosexuals.
- **1920s-30s** sex reassignment surgery was first developed in Germany
- **1953** The physician Harry Benjamin introduces the term "transsexuals", distinguishing them from transvestites.
- **1955** The American psychologist John Money introduces the distinction between "sex" and "gender".
- **1965** The word transgender was first used medically (by Dr. John F. Oliven)
  - However- transgender was given its current meaning by Virginia Prince (a trans woman) in the 1970s to mean people who live full time in their chosen gender without necessarily having surgery or hormones
- **1966** Baltimore, USA: The term 'gender identity' is first used in a press release to publicize a new clinic for transsexuals at The Johns Hopkins Hospital in Baltimore, Maryland.

Some historic trans people

- **1917** USA: Dr. Alan L. Hart, (1890-1962) (expert in TB)
  - undergoes hysterectomy and gonadectomy.
  - Named Alberta Lucille Hart at birth, he lives the rest of his life as a man.
- **1951** USA: Christine Jorgensen
  - first transgender woman in the US to be widely known for having sex reassignment surgery (in 1951)
  - she also was treated with estrogen

But what about children?

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- **1980s-90s** Prof. Dr. **Peggy T. Cohen-Kettenis** established the first treatment center for transgender children and adolescents (in the Netherlands)
  - Her team is the source of nearly all scientific evidence on transgender children
  - We all use their protocol
- **2007** Dr. **Norman Spack** established the first US treatment center for trans children and adolescents

What do doctors need to know to care for trans* patients?

Name and Pronouns

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- The most important thing when caring for trans patients:
- Use their preferred name
  - "what do you like to be called"
- Use their preferred pronouns
  - "what pronouns do you prefer"
  - Some patients may prefer gender neutral pronouns
    - they/them/theirs, etc

Concerns from Trans Patients

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- Access to care
- Respect
  - Use their preferred name and pronouns
  - don't ask about or look at their genitals unless you need to in regards to their specific concern
- Cost
- Provider knowledge/comfort

Barriers specific to kids

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- Parents!
  - In Iowa, there is no "emancipated minor" for the purposes of trans care
  - Consent of at least one guardian (with at least 50% custody) is required to undergo therapy
- Access!
  - There are not enough providers who will see pediatric patients
- Cost
  - Not as much of a problem as for adults, actually . . .

What if parents are unsupportive?

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- This is difficult
- They typically don't have access to care

- Very high risk to become homeless/abuse victims

- Finding foster care can be difficult

Why treat trans* children?

*very similar to why we treat adults

Note: Children know their gender as young as 2 years of age!

Depression

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- rates of depression are 2-3 times higher in transgender youth vs. non-transgender peers[1]
- data suggest this is caused by discrimination, peer rejection and lack of social support[2]
- the best predictor of positive psychological outcomes is parental support[2]
- transgender children that undergo a social transition have rates of depression comparable to non-transgender children[3]

[1]Reisner, S.L., et al 2015; [2]Budge, S.L. et al 2013; [3]Olson, K.R., et al 2016

Suicide

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- 45% of trans 16-25 year olds who don't have any support attempt suicide[1]
- "Even 11 % of our kids … tell us they've tried to kill themselves, and that's with the support."[1]
- "The minute these kids even know they're [getting treated], their suicidal thoughts melt away."[1]

[1] Norman Spack, interview, Boston Children's website

Teens who have gone public

- Above is Corey Maison (14 yo)
- Right is Jazz Jennings (15 yo)

Differences between children and adolescents

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- Gender dysphoria during childhood does not inevitably continue into adulthood.
  - Gender dysphoria persists in only 6-23% of boy children[1] and 12-27% of girl children[2]
  - Boys in these studies were more likely to identify as gay in adulthood than as transgender[3]
  - In contrast, the persistence of gender dysphoria into adulthood is higher for adolescents with essentially all continuing with sex reassignment[4]
- gender ratio
  - In clinically referred, gender dysphoric children <12yrs, the male/female ratio ranges from 6:1 to 3:1[5]
  - In clinically referred, gender dysphoric adolescents >12yrs, the male/female ratio is close to 1:1[6]
  - This is changing- in my clinic, I see more transboys than transgirls

[1]Green, 1987; Money & Russo, 1979; [2]Drummond, Bradley, Peterson-Badali, & Zucker, 2008; Wallien & Cohen-Kettenis, 2008 [3]Zucker & Bradley, 1995; Zuger, 1984; [4] de Vries, Steensma, Doreleijers, & Cohen-Kettenis, 2010; [5]Zucker, 2004; [6]Cohen-Kettenis & Pfäf in, 2003

"reparative or conversion" therapy

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- Therapy with the goal to change a person's gender identity to become more congruent with sex assigned at birth
  - has been attempted in the past without success[1], particularly in the long term[2].
  - Such treatment is not ethical.
  - the American Psychological Association, the American Psychiatric Association and the American Academy of Pediatrics all reject this form of therapy

[1]Gelder & Marks, 1969; Greenson, 1964; [2]Cohen-Kettenis & Kuiper, 1984; Pauly, 1965;

So how do we treat children?

First- diagnosis of gender dysphoria

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- To be made by a mental health professional
- For peds- that person should be pediatric/adolescent trained
  - Establish that GID/transgender is the diagnosis
  - rule out body dysmorphic disorder
  - diagnose and treat any other psychiatric disorders

2nd - Pubertal suppression-- “blockers”

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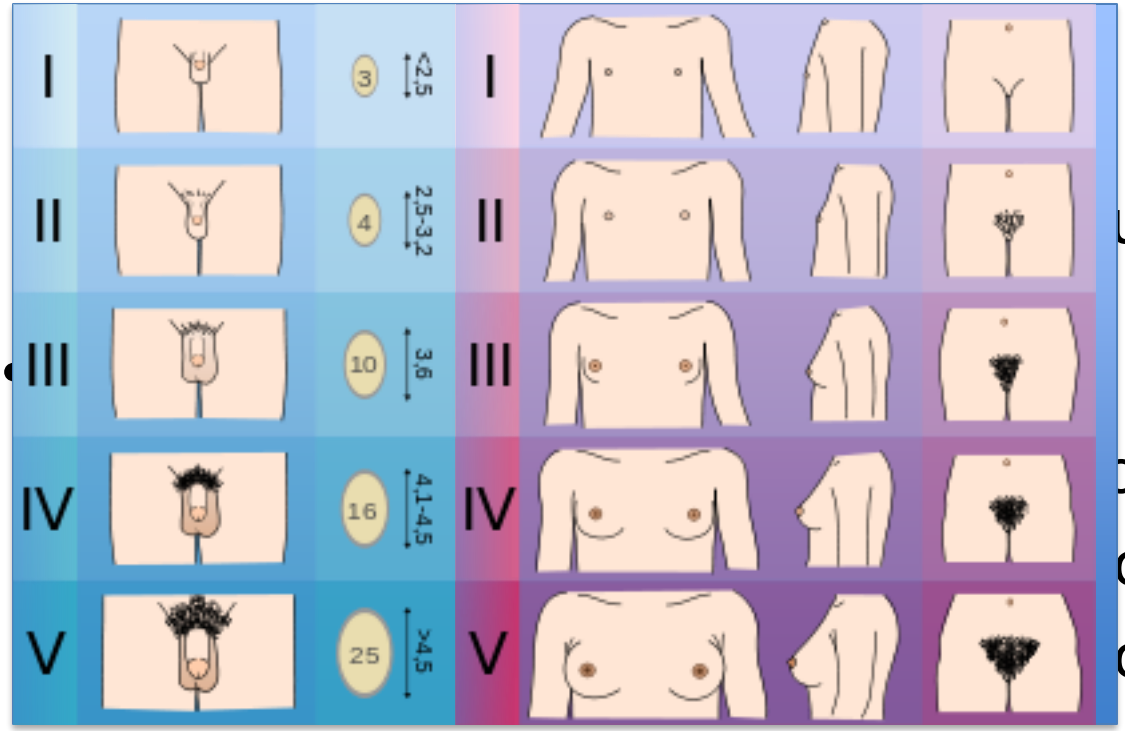
- Pubertal suppression with GnRH analogs is the preferred method
  - starting at tanner 2



ult medicine

oxyprogesterone)

olactone)

o suppress menses.

3rd- Cross-sex steroids

- Recommended regimen is different than for adults!

- We are essentially inducing puberty much as we would in any hypogonadal child

Cross sex steroids

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- Guidelines- start at 16 years
  - (I start nearly everyone at 15)
- IM T/ oral estradiol
- Dose escalation every 6 months starting at low doses
  - Estradiol starting 5ug/kg/d increasing by 5ug/kg/d to 20 ug/kg/d
  - Testosterone starting 25 mg/m^2 im q 2 weeks increasing by 25 mg up to 100 mg/m^2 im q 2 weeks
- GnRH treatment is (ideally) continued until gonadectomy or doses are high enough to suppress HPH axis

What if we just wait until they are adults?

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- withholding puberty suppression and subsequent feminizing or masculinizing hormone therapy is not a neutral option for adolescents
  - functioning in later life can be compromised by
    - development of irreversible secondary sex characteristics
    - years spent experiencing intense gender dysphoria.
  - contributes to an appearance that can provoke abuse and stigmatization
    - the level of gender-related abuse is strongly associated with the degree of psychiatric distress during adolescence[1]

[1]Nuttbrock et al., 2010

4th -surgery

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- Mastectomy is the only procedure that can be done before age 18
  - Eligible at 16 years
- All other procedures must wait
- Note:
  - Vaginoplasty is harder if they transitioned younger as it typically utilizes penis skin
- Come back tomorrow to learn more!

Outcomes

Risks

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- therapy is overall safe
- cancer risk is not higher than expected
- thromboembolic risk
  - significant with ethinyl estradiol preparations
  - very low (<2%) with the current oral and patch 17-beta estradiol
- testosterone may worsen the cardiovascular profile of transmen, but only in comparison with cisgender women, not cisgender men
- the risk of puberty suppression and cross-sex hormones is low in contrast with the **high rate of suicidal attempt of untreated transgender individuals of 41%**

Does it work for children?

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- We now have results from >10 years of follow up on people who transitioned in childhood[1]
- Those who are treated in childhood have much lower rates of suicide and psychopathology than trans patients who present as adults
- And much better cosmetic outcomes
  - If treated starting at tanner 2
    - Height appropriate to affirmed gender
    - Bone structure of affirmed gender
  - Very different appearance than transition as an adult, especially for transfemales

[1]Cohen-Kettenis et al., 2011; Delemarre-van de Waal & Cohen-Kettenis, 2006

Outcomes

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- in adults
  - hormone replacement therapy and gender affirming surgery
    - improve gender dysphoria
    - Improve quality of life
    - Reduce suicide
  - However:
    - persistence of psychiatric comorbidity
    - Still some death from suicide
- In adolescents
  - long term study of 55 transgender adolescents who underwent puberty suppression and cross-sex hormones followed by gender affirming surgery in early adulthood[1]
    - complete resolution of gender dysphoria, and
    - psychological outcomes that were **similar or better than non-transgender, age-matched young adults**
    - none of these patients regretted their decision to transition

[1]de Vries, A.L.et al. 2011

Are there disadvantages to transition in childhood?

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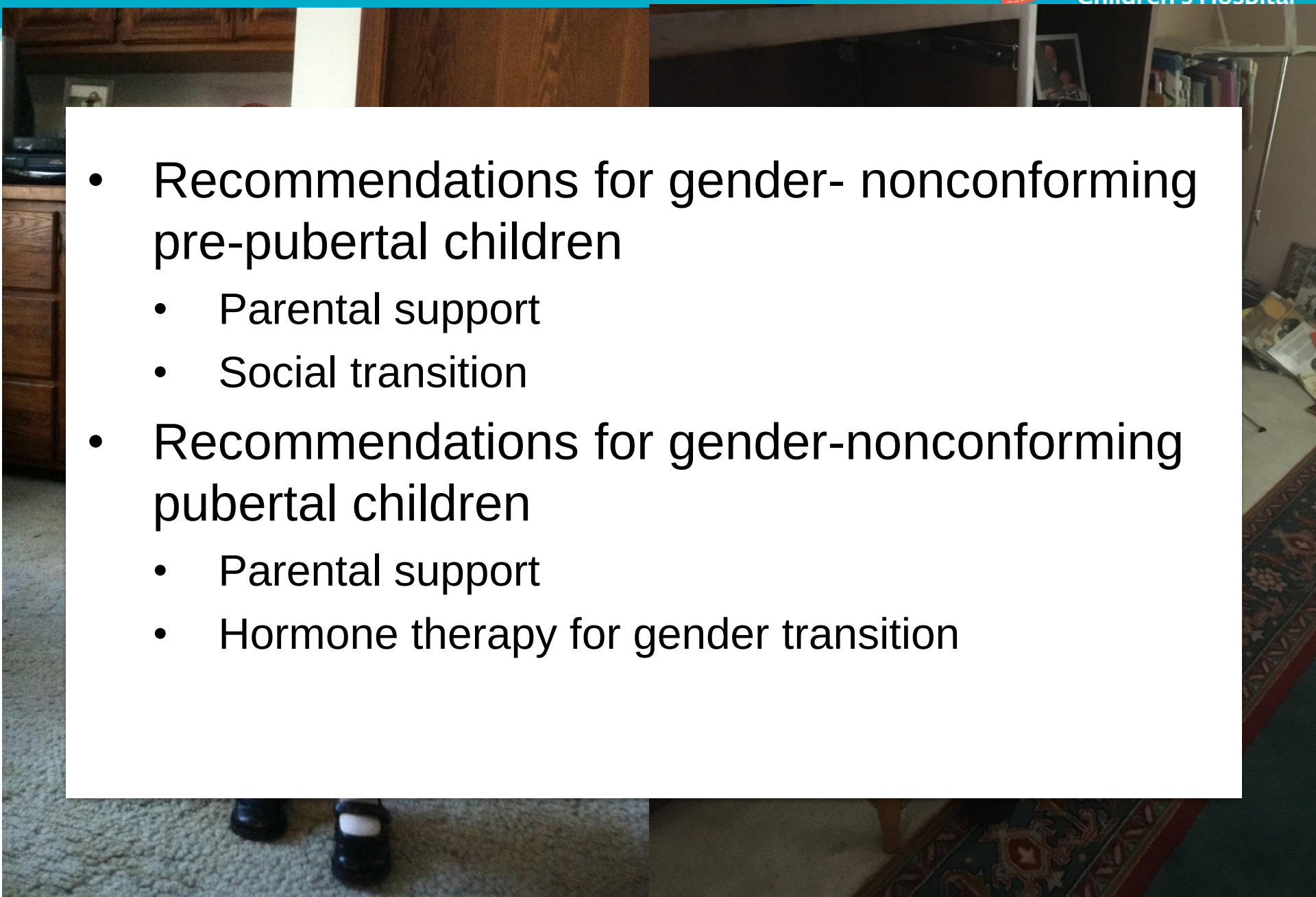
- Surgery is different
  - MTF need less ancillary surgeries
  - But more difficult vaginoplasty

- Fertility
  - GnRH agonists – if started in early puberty (Tanner stage II-III) complete infertility, greater than testosterone/estrogen alone
    - Testosterone induces amenorrhea in postmenarchal transmales, but not complete infertility
    - Estrogen treatment may lead to sterility



- Recommendations for gender- nonconforming pre-pubertal children
  - Parental support
  - Social transition
- Recommendations for gender-nonconforming pubertal children
  - Parental support
  - Hormone therapy for gender transition

Thank you!

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- Questions?

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