

Welcome to UVM Project ECHO: Transgender Care in the Medical Home

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Pubertal Suppression & Gender-Affirming Medical Care for Trans Youth

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Pronouns: *he/him*

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- RECORDING OF SESSION TO BEGIN

Agenda

- Introductions
- Objectives
- Didactic Presentation (20-25 min)
- Case presentation
 - Clarifying questions
 - Participants – then hub
- Discussion
- Recommendations
- Summary
- Closing Announcements
 - Submission of new cases
 - Completion of evaluations



CME Disclosures

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Interest Disclosures:

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Objectives

By the end of this session, participants will be able to:

- Describe the menu of options available for gender-affirming care of transgender youth
- Offer basic guidance to families about how pubertal suppression is performed and its benefits/risks
- Support and assist in the gender-affirming care of youth

Gender-Affirming Care for Trans Youth

Why do we need to be talking about this?

Why can't the kids just 'tough it out' until they're older?

- ▶ High risk condition!
- ▶ Trans youth have higher rates of...
 - Depression
 - Anxiety
 - Self-injury
 - Substance Use
 - Suicide
 - Homelessness
 - Trauma

**30-50% of trans youth report a
past suicide attempt**

(e.g., MA Dept of Ed, 2006; Dean et al., 2000;
Toomey et al., 2018)

Why is this?

Structural Stigma

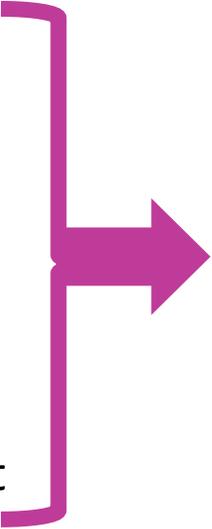
Marginalization & Victimization

Lack of Access to Gender-Affirming Care



Fortunately, we CAN do something about this

- Family support & acceptance
- Using preferred name & pronouns
- Gender affirming medical care
- Policies that protect from discrimination and mistreatment



**Better outcomes for
trans individuals**

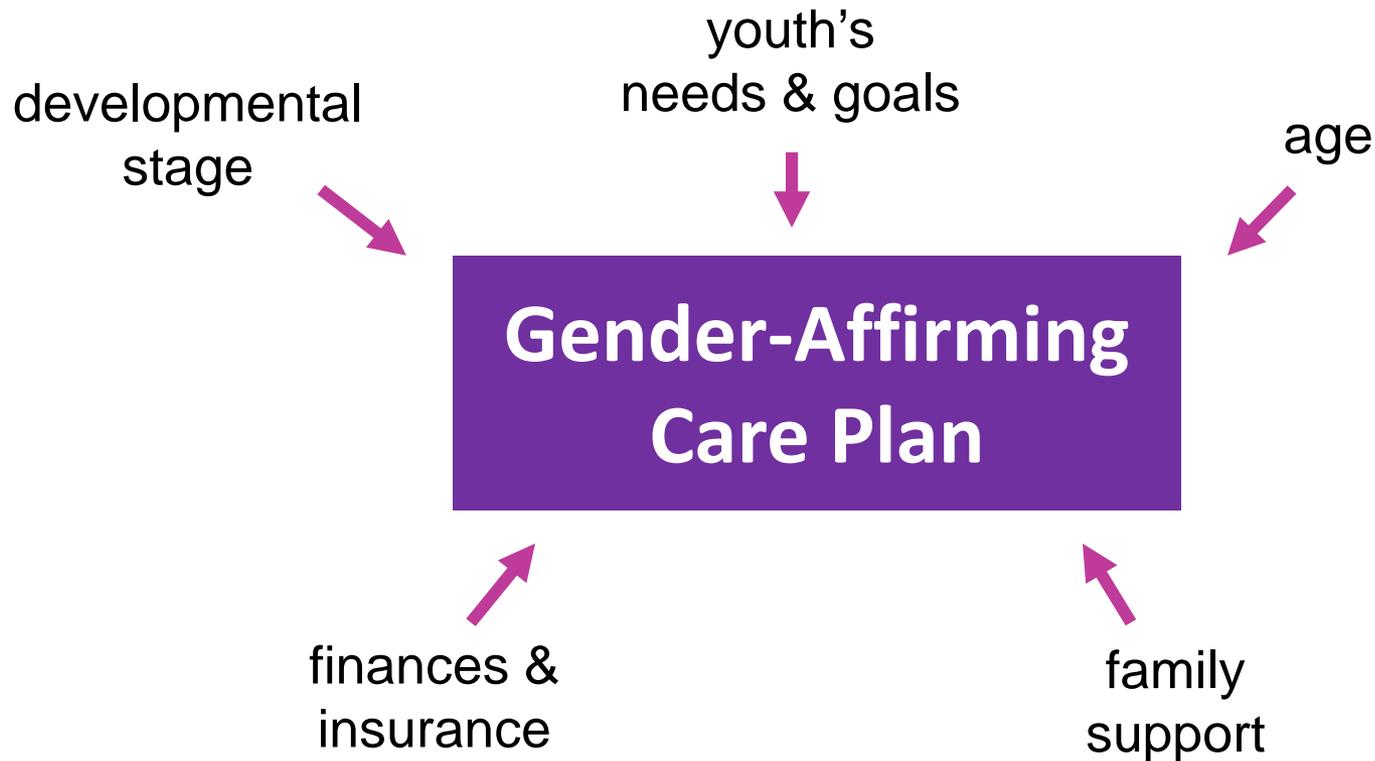
**Love, support, and appropriate care can make the
difference between life and death**

Doing nothing is not a neutral option



Menu of Options for Gender-Affirming Care

The care pathway varies from person to person



Menu of Options for Gender-Affirming Care

Reversible:

Can begin in childhood
or beyond

- social affirmation (social transition)
- puberty blockers
- menstrual suppression
- testosterone blockers

Partially Reversible:

Can begin in adolescence
or beyond

Irreversible:

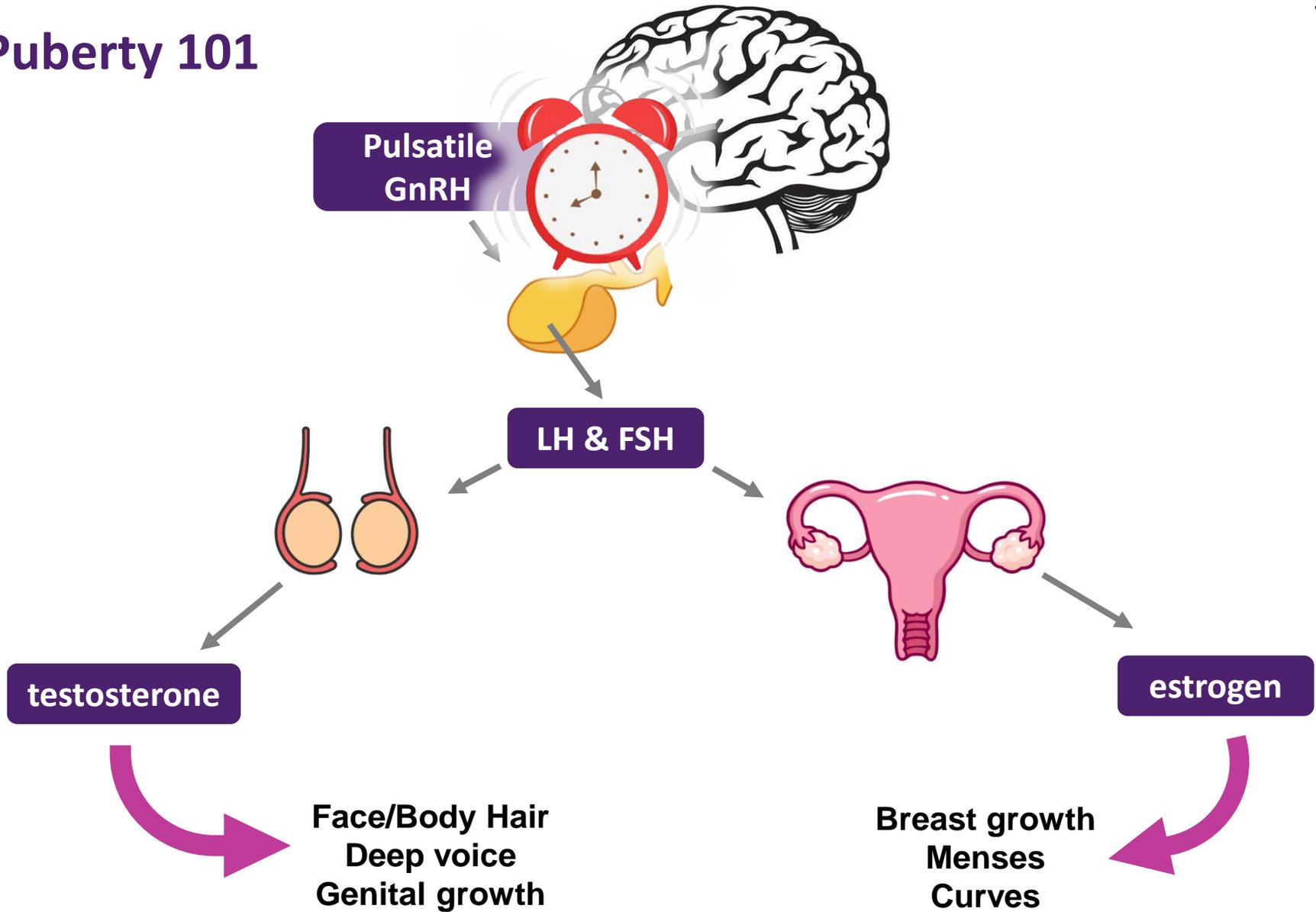
Can begin in adulthood
(occasionally in adolescence)



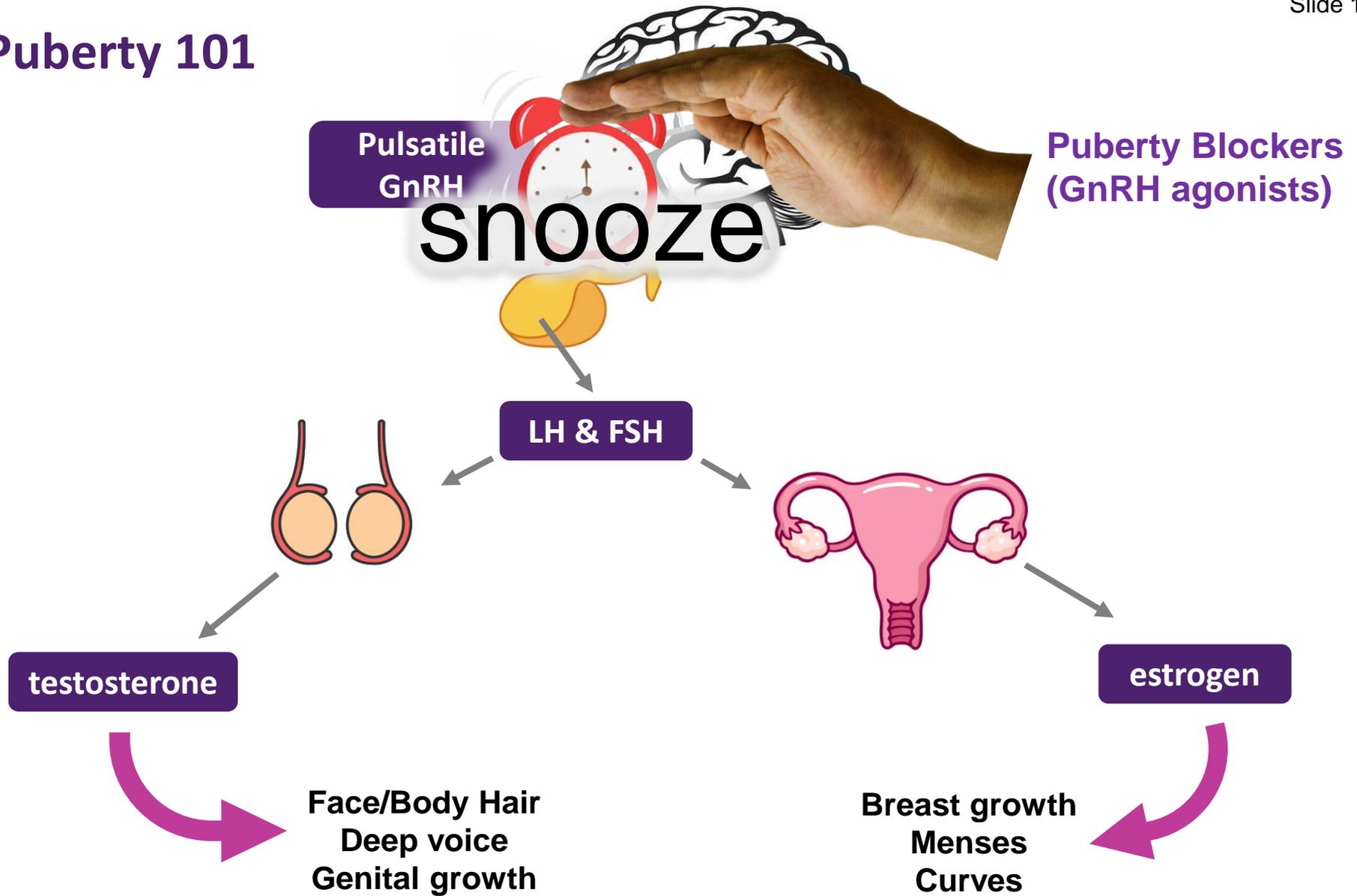
Puberty Blockers

- Gonadotropin Releasing Hormone (GnRH) analogues

Puberty 101



Puberty 101



Puberty Blockers

- Gonadotropin Releasing Hormone (GnRH) analogues
- Pause puberty at whatever stage child is currently in
- Ideally initiate at first signs of puberty (Tanner 2), though still can be started in later pubertal stages

Leuprolide

IM injection Q3 months

(Q1 month also available, no advantage)



Triptorelin

IM injection Q6 months

(We've run into difficulties with injection administration)

Histrelin subdermal implant

officially lasts for 12 months

(anecdotally lasts 2+ yrs, but can be more challenging to remove the longer kept in place)



Puberty Blockers

Benefits:

- Prevent unwanted 2^o sex characteristics
 - ↓ needs for future medical interventions
- Allow more time for...
 - child to explore & make decision
 - parental and social support to develop
- **Improved mental health outcomes**
- **Reversible**
- **Generally safe**

Identical twins, both assigned male at birth



Puberty Blockers

Side Effects:

- Most common:
 - Hot flashes
 - Injection site reaction
 - Decreased libido

(long side effect list on package label, though we haven't encountered in practice)

Puberty Blockers

Limitations:

- Cannot *reverse* puberty, only pause it

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14 yo transmale, having a lot of dysphoria about chest and menses.

Parents not currently on board with testosterone. Family comes in seeking puberty blockers.

Menarche @ age 12.

Tanner 5 chest.

What will puberty blockers do?

- **suppress menses**
- +/- fat redistribution
- prevent further breast tissue growth (though likely already done)

Could also consider:

Hormonal contraceptives for menstrual suppression (though often aren't quite as effective)



Puberty Blockers

Limitations:

- Cannot *reverse* puberty, only pause it

Primary care providers & mental health providers can play a critical role in helping to pick up on gender dysphoria and refer youth early!

16 yo transfemale, having a lot of dysphoria about deepening voice, facial hair, body hair, adam's apple, height, hand size, and angular jaw line. Shaving face daily.

Currently 5'11"

What will puberty blockers do?

- Prevent *further* spread of facial & body hair (will still need to shave)
- Prevent *further* masculinization

What WON'T puberty blockers do?

- Eliminate body/facial hair in places where it already is
- Stop her linear growth
- Change bone structure of face
- Undo voice deepening
- Shrink adam's apple

Alternative option:

Spironolactone (generally less effective)



Puberty Blockers

Limitations:

- Cannot *reverse* puberty, only pause it
- Time-limited use due to bone effects (unless also on hormones)

Bones need hormones!

In general...

BMD Z-scores ↓ after starting blockers

Z-scores ↑ after starting hormones, but often still lower than they were pre-blockers

(See Vlot et al. *Bone* 95 (2017) 11–19)

We monitor DEXA and Vit D

Counsel on Calcium & Vit D intake, supplement if needed

Encourage weight-bearing activity



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Counsel on Calcium & Vit D intake, supplement if needed
Encourage weight-bearing activity

15 yo non-binary youth (natal female), has been on blockers for 5 years, since Tanner 4.

Overall doing pretty well. Not interested in starting testosterone, likes their alto singing voice. Has a LOT of chest dysphoria, will not leave house without binding chest. Gets very distressed thinking about possibility of further chest growth or return of menses.

Conundrum!

- Unfortunately, blockers alone can't be an indefinite solution
- Check DEXA
- Discussions re: possibility of early top surgery and other options for menstrual suppression

Youth & family support from a knowledgeable mental health provider is vital



Puberty Blockers

Limitations:

- Cannot *reverse* puberty, only pause it
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- Fertility conundrum if blocking from early puberty

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11 yo transfemale. Has been presenting as female at home and school for past 4 years and has been thriving, but mood recently worsening since noticing pubic and axillary hair. She is terrified of voice deepening or developing body and facial hair. Currently Tanner 2-3. She is an only child. Parents are very supportive, but are afraid of her doing anything that might jeopardize her future fertility.

Conundrum!

If we start blockers now...

Wouldn't be able to bank sperm unless she later comes off the blockers and further masculinizes

If we delay blockers until she is physically mature enough to bank sperm...

Irreversible unwanted masculinization will occur

Puberty Blockers

Limitations:

- Cannot *reverse* puberty, only pause it
- Time-limited use due to bone effects (unless also on hormones)
- Fertility conundrum if blocking from early puberty
- Expensive \$\$\$

leuprolide ~\$500 - \$2,000 per injection

implant ~\$4,000 - \$35,000 <https://www.pharmacychecker.com>

Most insurers in VT/NY will cover at least one of these options

Menstrual Suppression with Hormonal Contraceptives

- Menses may be very distressing for some individuals
- Suppression with hormonal contraceptives can often be done in a primary care setting

IM depo-medroxyprogesterone

norethindrone 5-10 mg daily
(*not* a contraceptive)

← NOT the “mini-pill” (norethindrone 0.35mg)
mini-pill *is* a contraceptive, but
generally does *not* help bleeding

extended-cycling combination OCP

52mg levonorgestrel IUD (Mirena/Liletta)



AVOID using Nexplanon for menstrual suppression alone

- Seldom achieves amenorrhea on its own
- Fine to use if effective contraception is needed, but be prepared to use other methods on top of this to suppress menses



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- masculinizing or feminizing hormone therapy

Irreversible:

Can begin in adulthood
(occasionally in adolescence)



Gender-affirming Hormone Therapy

Estradiol (feminizing)

- Usually given orally
(patch or injection also available)
- Induce female 2^o sex characteristics:
 - Breast growth
 - Softening of skin
 - Redistribution of body fat
 - ↓terminal hair growth
 - ↓muscle mass
 - ↓testicular size, ↓sperm production

Testosterone (masculinizing)

- Usually given weekly SubQ injection
(IM, topical gel, subdermal pellets also available)
- Induce male 2^o sex characteristics:
 - Deeper voice
 - ↑ facial/body hair
 - Cessation of menses
 - Redistribution of body fat
 - ↑clitoral size
 - ↑muscle mass



Gender-affirming Hormone Therapy

Estradiol (feminizing)

Testosterone (masculinizing)



21 yo Transfemale

19 yo
Transmale

Barcroft

http://www.huffingtonpost.co.uk/2015/11/23/young-trans-and-looking-for-love-bbc-first-openly-trans-teen-couple-fell-in-love-while-transitioning_n_8626894.html



Gender-affirming Hormone Therapy

Estradiol (feminizing)

Potential Risks:

- ↑ risk of blood clots
- ↑ prolactin
- ? Risk of breast cancer (not beyond natal females)
- Infertility (possibly irreversible)

**Highest risk with
supraphysiologic levels
or synthetic estrogens**

Testosterone (masculinizing)

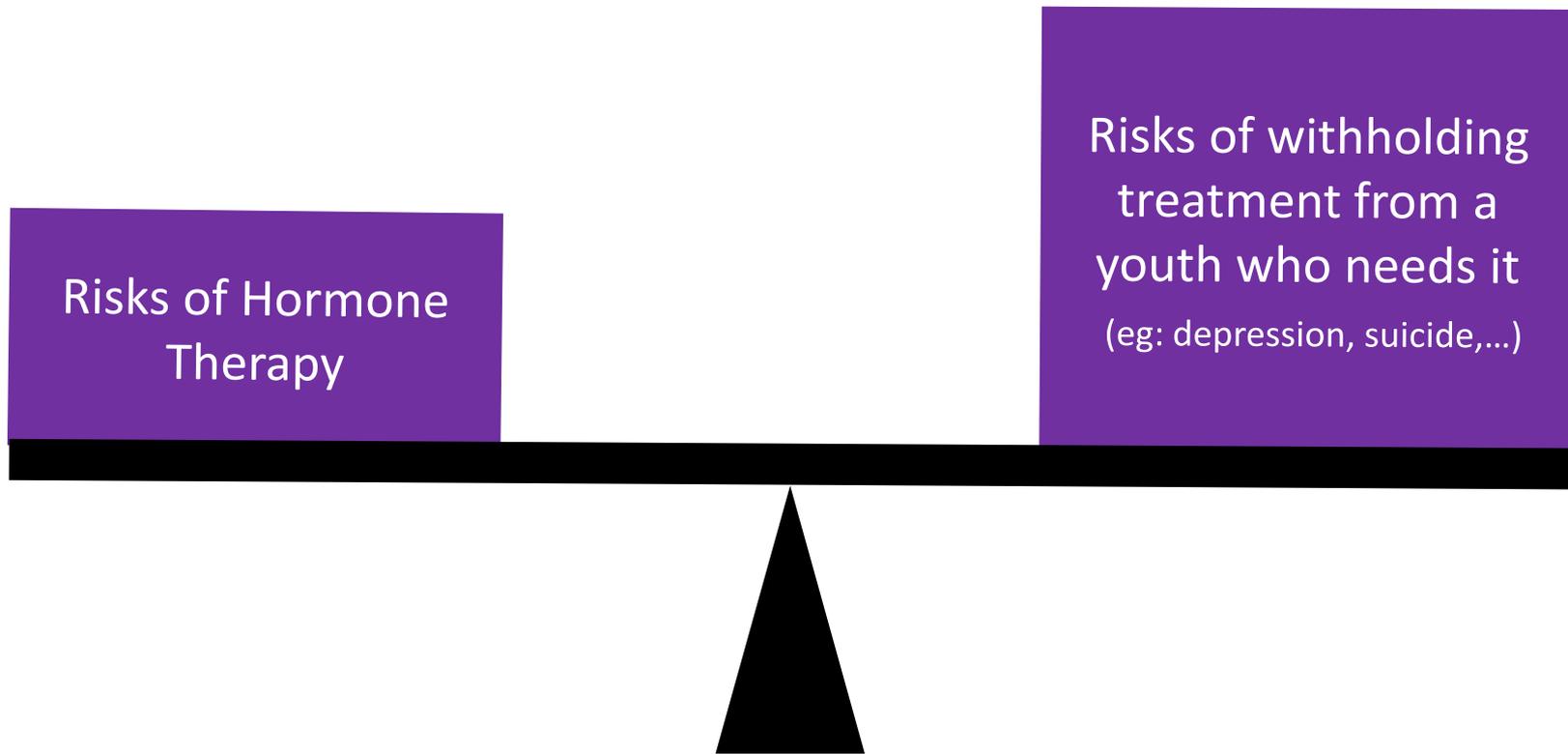
Potential Risks:

- ↑ risk dyslipidemia, HTN, heart disease
- Polycythemia
- Liver dysfunction
- Infertility (possibly irreversible)

**Highest risk with
supraphysiologic levels**



Weighing the risks of gender affirming hormones



Steps to Mitigate Risk

Close lab monitoring
Use lowest effective dose
Avoid synthetic E
Healthy lifestyle counseling

Informed Consent

Risks of Hormone
Therapy

Discuss Fertility
Preservation Options

Risks of withholding
treatment from a youth
who needs it
(eg: depression, suicide,...)

Evaluation and support from an experienced
behavioral health provider



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Partially Reversible:

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Irreversible:

Can begin in adulthood (occasionally in adolescence, especially top surgery)

- gender-affirming surgery



Outcomes of Gender Affirming Medical Care

De Vries 2014:

- No regret to transition
- Complete resolution of gender dysphoria
- The multidisciplinary team and clinical protocol “provide youth the opportunity to develop into well-functioning young adults”



<https://www.herfamily.ie/big-kids/research-finds-calling-trans-youth-preferred-name-can-reduce-suicides-337067>

de Vries AL et al. Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics*. 2014;134(4):696–704pmid:25201798



Take home points

Puberty blockers and gender-affirming hormones are often beneficial in the care of many trans youth.

Gender affirming medical care of youth has some important nuances, especially in the pubertal years, making a multidisciplinary approach ideal.

Strong psychosocial supports for youth and families are critical to providing the best medical care for trans youth.



Cases/HIPAA

- Names
- Address
- DOB
- Phone/Fax #
- Email address
- Social Security #
- Medical Record #



The discussion and materials included in this conference are confidential and privileged pursuant to 26VSA Section 1441-1443. This material is intended for use in improving patient care. It is privileged and strictly confidential and is to be used only for the evaluation and improvement of patient care.



- RECORDING TO BE STOPPED



Conclusion

- Volunteers to present cases (this is key to the Project ECHO model)
 - Use the case template form posted at www.vtahec.org
 - Return completed case forms to Katherine.Mariani@uvmhealth.org
- Please complete evaluation survey after each session
- Claim your CME at www.highmarksce.com/uvmmed
- Please contact us with any questions, concerns, or suggestions
 - ahec@uvm.edu