Fertility Preservation Among TG Youth: Challenges, Controversies, and Counseling Recommendations

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Nationwide Children's
When your child needs a hospital, everything matters.
Objectives

• Infertility risks
• Fertility counseling guidelines
• Fertility preservation (FP) options
• Data on FP utilization

*I have no financial disclosures but will be referencing medications that are “off-label.”*
Risks of infertility

• GnRH analogs (puberty blockers) are not known to impair fertility
  – BUT may pose an issue for those who progress directly to cross-sex hormones
• Estrogen treatment can impair spermatogenesis
• Testosterone treatment can impair oocyte production (?)
Fertility Counseling

Health care professionals – including mental health professionals recommending hormone therapy or surgery, hormone-prescribing physicians, and surgeons – should discuss reproductive options with patients prior to initiation of these medical treatments for gender dysphoria. These discussions should occur even if patients are not interested in these issues at the time of treatment, which may be more common for younger patients (De Sutter, 2009). Early discussions are desirable, but not always possible. If an individual has not had complete sex reassignment surgery, it may be possible to stop hormones long enough for natal hormones to recover.
Fertility preservation: TG females

- Sperm banking is a safe and effective method of FP in pubertal (genetic) males
- Technology has been used for >60 years
- Masturbation, EEJ, TESE → IVF/ICSI

Prepubertal:
Testicular tissue preservation (experimental)
Fertility preservation: TG males

- Post-menarchal (genetic) females
- Transvaginal retrieval of oocytes
- Inject gonadotropins for 8-14 days
- Monitoring transvaginal US, hormones

Prepubertal (premenarchal): Ovarian tissue preservation (experimental)
Why are we talking to kids about having kids?! 

• Reproductive health in pediatrics
  – STI prevention
  – Pregnancy prevention
Fertility in pediatrics

• Male cancer survivors prioritize fertility, and regret missing FP (~20-50% bank sperm)
• 71% of female cancer survivors and 95% of their parents worried about infertility (FP variable)
• Female oncology patients wanted information even if FP wasn’t possible
• 90% of men with Klinefelter Syndrome endorsed a desire to have children and 70% would opt for TESE-ICSI
Guidelines:
AAP, ASCO, ASRM

Efforts to improve counseling:
1. Informational brochures
2. Specialized fertility teams
3. Opt-out referral systems

Results:
1. Higher rates of FP
2. Increased satisfaction among patients and parents
Access to fertility services by transgender persons: an Ethics Committee opinion
Ethics Committee of the American Society for Reproductive Medicine
American Society for Reproductive Medicine, Birmingham, Alabama

KEY POINTS:

- Transgender persons have the same interests as other persons in having children and in accessing fertility services for fertility preservation and reproduction.
- Providers should offer fertility preservation options to individuals before gender transition.
- Programs should ensure that transgender patients who seek fertility services are informed about any distinctive medical risks and the lack of data about long-term outcomes for patients and their offspring.
- Programs should treat all requests for assisted reproduction without regard to gender identity status.

What do the data show?
LGBTQ Parenthood studies

• 2 survey studies in Belgium (TG adults)
  – 51% of transgender females would have considered FP if it had been offered
  – 54% of transgender men reported a desire for children and 37.5% would have considered FP had it been offered

• AYA LGBTQ cancer survivors are more open to raising non-biological children or not becoming a parent than other survivors

De Sutter et al. 2002
Wierkx et al. 2012
Russell et al. 2016
Recent studies

• Parenthood desires: Open-ended survey
  – 32 transgender men and transgender women
  – Desire for biological parenthood
  – Barriers (physical, legal)

• FP experiences: In-depth interviews
  – 15 TG men (19-35yo) underwent oocyte cryo
  – Genital exams, hormonal stim triggered gender dysphoria; coping strategies effective

Tornello et al. 2017
Armuand et al. 2017
• Retrospective study (2014-2016)
• Post-pubertal patients with ICD-9/10 codes for gender dysphoria referred to pediatric endocrinology (n=73)
  – 50 transgender males
  – 23 transgender females
• Median age at first endo visit =15.2 years
FP attempts/outcomes

- 72 (99%) patients had fertility counseling prior to initiation of hormone therapy

- 2 (3%) attempted fertility preservation

- Both were transgender females
  - 1 was azoospermic
  - 1 banked sperm
TG documented responses to fertility counseling

- I am planning to adopt. 40%
- No reason documented 24%
- Fertility preservation is too expensive. 8%
- I never want to have children. 22%
- I will attempt fertility preservation. 3%
- I am unwilling to undergo FP due to potentially delaying treatment. 1%
- Masturbating to produce a semen sample is too uncomfortable. 2%

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105 TG adolescents
- 13 (12.4%) had fertility consults
  - 7 TG men, 6 TG women
  - 14.2- 20.6y
- 5 (<5%) completed FP
  - 4 completed sperm cryopreservation
  - 1 completed oocyte cryopreservation
Questions

Are adolescents just not ready to think about parenthood and/or FP?

*Healthy teen girls report strong desire for future children.*

Will the lack of desire for children change in the future?
Will there be regret about declining FP?

*There is a deficit of data examining attitudes at different ages and developmental stages.*

Are these adolescents and families educated about processes for adoption?

*Adoption is costly and has historically been more difficult for TG individuals – a need for more comprehensive counseling.*

What are the fertility outcomes after hormone therapies?
Ethical Questions

• Is an adolescent capable of making future fertility decisions?
  – Parents’ vs. patients’ role

• OTC
  – Gonadectomy…and then reimplantation

• Is FP equally accessible to all patients and families?
  – Financial considerations
References


Thank you!
- Research team
- THRIVE team

Questions?