Gender Transition in 2021- A brief introduction

Vishal Patel, MD
Assistant Professor of Medicine,
Virginia Tech Carilion School of Medicine,
Carilion Clinic,
Roanoke, Virginia

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Disclaimers – none

Resources

- Transhealth.ucsf.edu
- WPATH.org SOC VII
- Genderwellness.org
- Callen-Lorde
- PubMed
- NEJM

"The first thing I determine is, are they trying to get pregnant?"
— Dr. Robert Slackman

Finding Treatment

At Carilion Clinic, reproductive endocrinologist Robert Slackman, M.D. often sees women with PCOS. "The first thing I determine is, are they trying to get pregnant?" he says. "If so, I will induce ovulation with a medication like Clomid. We are usually very successful at getting women to become pregnant.

"If they're not trying to become pregnant, then I might put them on birth control pills or progesterone 10 days a month to bring on a regular menses."

Symptoms of PCOS include:

- Infertility
- Irregular or infrequent menstrual periods
- Excess hair on the face or body
- Acne that gets worse

Patients may also be prescribed metformin, an oral diabetes medication that lowers insulin levels. This improves ovulation and often leads to regular menstrual cycles.

The general focus of treatment is to manage a woman's obesity, high blood pressure, and high blood cholesterol. Healthy eating habits and regular exercise are key, because obesity makes insulin resistance worse.

A Medical Specialty

Dr. Slackman, who is the region's only full-time reproductive endocrinologist, also treats and manages other women's disorders. These include endometriosis, a condition in which cells from within the uterus grow outside the uterine wall, which can lead to pain and infertility. He also treats uterine fibroids—benign tumors found in the uterus—that can lead to painful menstrual periods, painful intercourse, and infertility.

His success rate is approximately 80 percent when treating women with infertility due to PCOS. "We begin with a thorough evaluation, starting with the partner's semen," he says. "We next evaluate ovulation, the shape of the uterine wall, and so on. Then we know what direction to go in."

But PCOS is expected to remain one of the main conditions that he and other specialists across the country must address. Keeping the hormones in balance is critical to maintaining good health.

For more information, call 540-266-6000 or 800-422-8482.

CarilionClinic.org | Fall 2011 13

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Objectives

- Understand “gender identity” and “gender transition”
- Barriers to access
- Hormone therapy in primary care clinic

Case

24 year old "Aaron" is here to discuss hormone therapy. Sex assigned at birth was male, always felt feminine. Currently lives by self. Patient says they prefer "Erin". Double major in Astrophysics and Biochemistry...

History of "Gender" in Medicine

400-300BC
Aristotle/Hippocrates
"Hermaphroditism"

100-200 AD
Galen
Sexual ambiguity?

19-20th century
Sex=Sexuality
"contrary sexual feeling"

Magnus Hirschfeld – "the human being is not man or woman but man *and* woman."

Early 20th century – Birth of psychoanalysis and psychosexuality

Dr Harry Benjamin(1885-1986) – "Sex is what you see, gender is what you feel".
Dr John Money (1921-2006) – Gender identity/role imprinted/adapted in first 18 months

"Gingerbread person"

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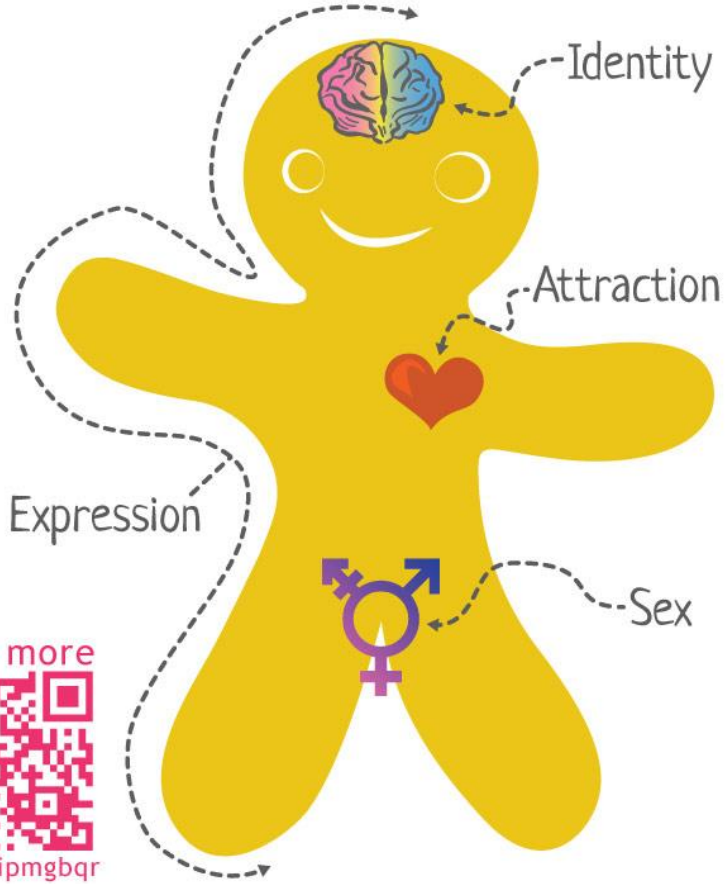
The Genderbread Person v2.0

by it's pronouncedMETROsexual.com

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.



read more
bit.ly/ipmgbqr

Gender Identity

Nongendered
- Woman-ness
- Man-ness

5 (of infinite) possible plot and label combos: "woman" | "man" | "two-spirit" | "genderqueer" | "genderless"

Gender Expression

Agender
- Masculine
- Feminine

5 (of infinite) possible plot and label combos: "butch" | "femme" | "androgynous" | "gender neutral" | "hyper-masculine"

Biological Sex

Asex
- Female-ness
- Male-ness

5 (of infinite) possible plot and label combos: "male" | "female" | "intersex" | "female self ID" | "male self ID"

Attracted to

Nobody
- (Men/Males/Masculinity)
- (Women/Females/Femininity)

5 (of infinite) possible plot and label combos: "straight" | "gay" | "pansexual" | "asexual" | "bisexual"

Itspronouncedmetrosexual.com

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Terminology/Definitions

- Cis gender (non-transgender) vs. Transgender (not transsexual, transvestite) or Gender incongruent / non confirming

- Gender binary Vs. Gender non-binary

- Male to female = Transgender Female
- Female to Male = Transgender Male

- Dysphoria – Strong sense of discomfort

- Ally/Activist

Better to ask preference or use neutral pronouns…

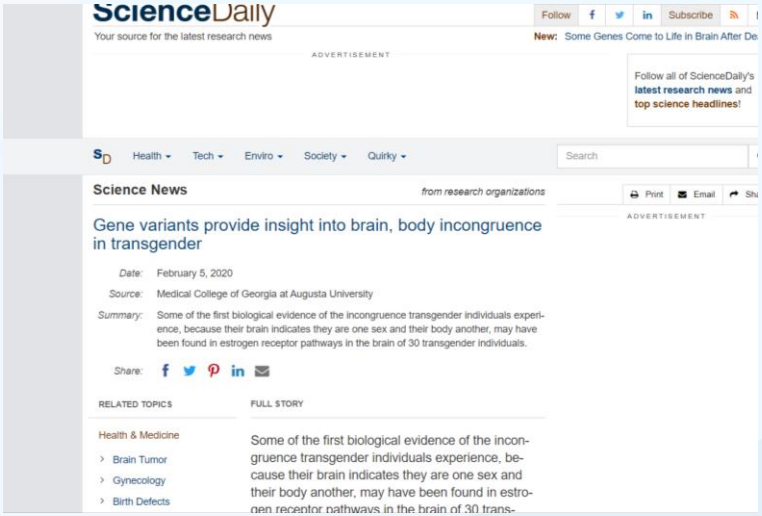
What causes gender dysphoria...

Levels of sexual identity

Level	Events	Timing
Chromosomal /genetic sex	XY=male XX=female	Fertilization
Gonadal sex	Undifferentiated structures becomes testis or ovary	9-16 weeks post fertilization
Phenotypic sex	Internal and external reproductive structures	8 weeks post fertilization to puberty
Gender identity	Strong feelings of being male or female develop	childhood

Gender-Identity Formation

- Typical prenatal differentiation
  - 23 human chromosomes
    - 22 autosomes and 1 sex chromosome
  - Chromosomal sex
    - XX: female XY: male
      - DSS gene on X
      - SRY gene on Y



Androgen insensitivity?
Androgen receptor gene mutation?
Prenatal DES?
Environmental/chemical exposures?
Adrenal hyperplasia?
Klinefelter's syndrome?

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Can "dysphoria" be proven?

- Neuroimaging -

>Regional gray matter variation in male-to-female transsexualism (Neuroimage 2009)

>The microstructure of white matter in male to female transsexuals before cross-sex hormonal treatment. A DTI study (Journal of Psychiatric Research Feb 2011)

>White matter microstructure in female to male transsexuals before cross-sex hormonal treatment. A diffusion tensor imaging study (Journal of Psychiatric Research Feb 2011) FTM

>Structural Connectivity Networks of Transgender People (Cereb Cortex 2015)

- Hormone levels – "10-20% may have out of normal levels"

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Epidemiology

- 0.2-4% in various communities
- ~ 1.4 million in USA
- 2-4K in Roanoke Valley

Trans-survey Virginia 2015

- Unemployment - 15-24% were fired or not hired
- Poverty - 23%
- Education – 51% verbally harassed
  (K-12) 12% physically attacked
  15% drop out (vs ~ 5.5%)
- Homelessness – 9%/year
  26% lifetime
- Restrooms – 50% avoid public restrooms
  23% avoid food or liquids when in public
- Healthcare - 23% reported denial of routine care because they were transgender
  20% did not see a doctor when they needed to

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Most discriminated group…

- 26% unemployment
- 41% were homeless at some point
- 34% with household income less then 10K/yr. – (TG 15%, Blacks 9%, over all 4%)
- 20% with HIV (AA 2%, over all 0.6%)
- 20% get fired from PCP for coming out
- 28% put off seeing their PCP
- Highest risk of Homicide related to hate crime – AA Transgender female

Barriers to care

- Barriers for Providers
- Barriers of Patients

Barriers for Providers

- Care not "important", "it's a choice"
- Lack of training – most common
- Lack of institutional support
- "System inertia" – insurance, coverage, liability, resources
- "regret/De-trans", legal issues
- Religious beliefs

Barriers for Patients

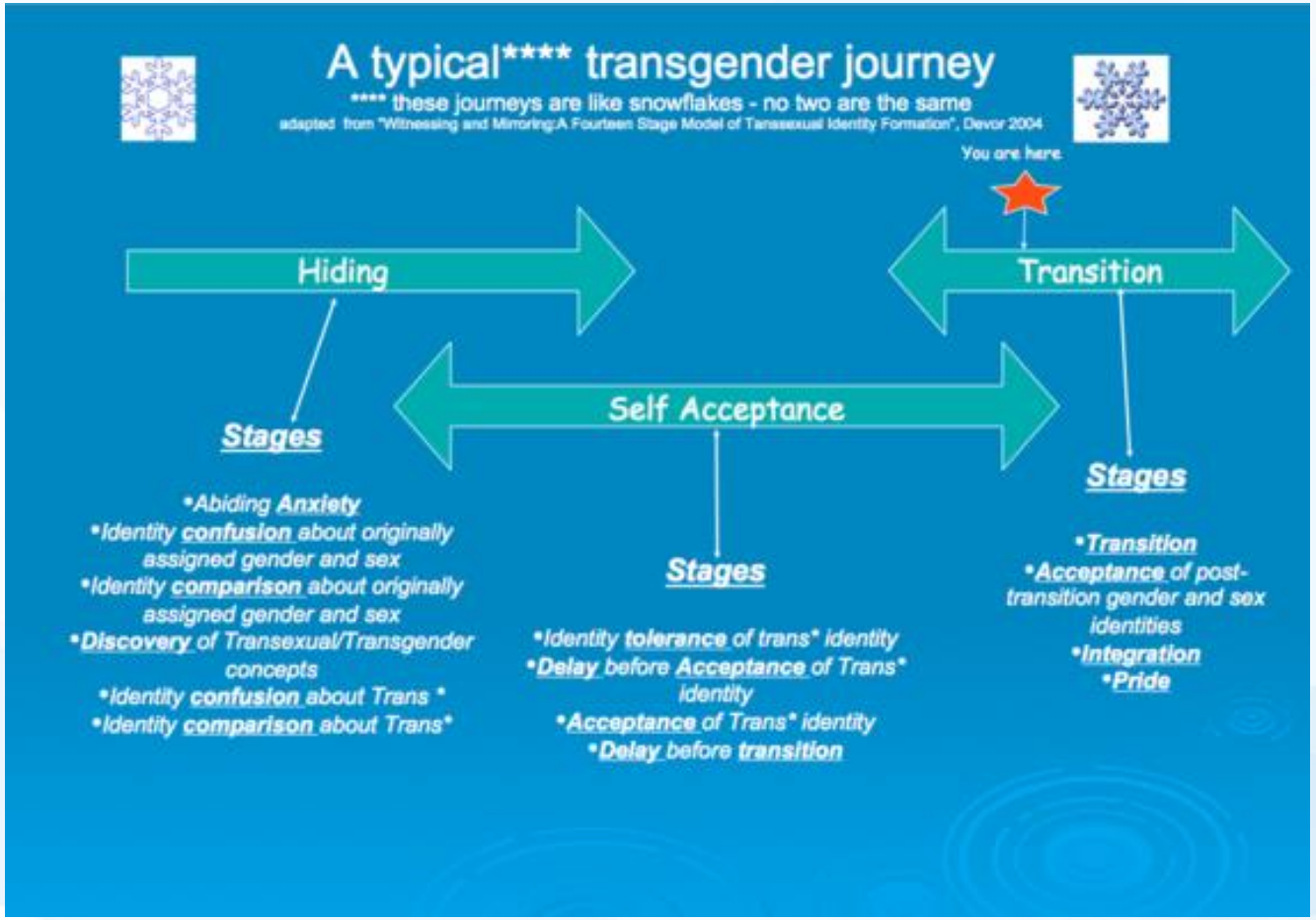
- Marginalization in early life
- Lack of education
- High risk of drug use, physical and sexual abuse, prostitution
- Lack of access to health care
- Poor social support
- Bathrooms

Risks from Medical community

- Gender dysphoria (not Gender identity disorder), self-mutilation
- “Coming out” vs. transitioning
- Patient confidentiality
- Delay in care/suboptimal care

Gender transition

- Changing gender role
- May or may not change physical appearance
- May or may not include hormone therapy or surgery



www.gendervarianceeducation.com

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Case

45 yo "Marla" comes to see your for hormone replacement. "Martin" is a biological male, has lived as a female since 5 years. Now feels they need to go through transition so they can be identified as they feel.

1. How to determine readiness for hormone therapy?
2. What if they have regret later?

Indications for hormone therapy/surgery

- Dysphoria – physical, psychological, psychosocial
- Dysphoria – Persistent, insistent, consistent post puberty
- Diagnosis – " Gender dysphoria in adult"

Examples of patient who did not meet criteria

- Gender non-conforming and did not want physical changes
- Displayed poor handling of therapy
- #detrans...

Overview of treatment

- Surgery – “ mind over body”
  – Most effective in improving dysphoria
- Hormones/pharmacotherapy
  - Improves dysphoria
  - physical transition
- Gender confirming interventions
  - Improves dysphoria

Gender affirming outcomes - Benefits

- Chew, Denise et al. “Hormonal Treatment in Young People With Gender Dysphoria: A Systematic Review.” *Pediatrics* 2017
- Moravek, Molly B. “Gender-Affirming Hormone Therapy for Transgender Men.” *Clinical obstetrics and gynecology*
- Murad, Mohammad Hassan et al. “Hormonal therapy and sex reassignment: a systematic review and meta-analysis of quality of life and psychosocial outcomes.” *Clinical endocrinology* vol. 72,2 (2010)

Hormone Therapy

- Feminization =

  A. Estrogen + Antiandrogens

  \+ B. Progesterone

OR C . Estrogen + Bicalutamide (Casodex)

- Masculinization = Testosterone

Feminizing hormone

Permanent

- Breast growth
- Softening of skin
- Thinning of body hair
- Fat redistribution

Temporary

- Feminizing effect
- Mood swings
- Decreased libido

Does not affect voice or facial features.

Estrogen

- Synthetic Estradiol
- Oral ($), Injection ($$$), Transdermal ($$$$)
- Hepatic metabolism with orals

Effects - Breast growth, feminizing effects, mood swings, skin changes, fat redistribution

Anti-Androgens

- Spironolactone($) – antagonizes Androgen receptor
- Cyproterone Acetate (NA)– Pure androgen receptor blocker
- Bicalutamide($$$$) – Anti Androgen receptor
- GnRH agonists ($$$$$$) - puberty delaying

Masculinizing therapy

Permanent:

- Increased musculature and decreased body fat (semi-permanent)
- The development of facial and body hair
- Deepening of the voice
- Male-pattern baldness (in some individuals) (treatable)
- Clitoromegaly
- Growth spurt and closure of growth plates if given before the end of puberty
- Breast atrophy – possible shrinking and/or softening of breasts

Temporary:

- Increased libido
- Redistribution of body fat
- Cessation of ovulation and menstruation
- Further muscle development (especially upper body)
- Increased sweat and changes in body odor
- Prominence of veins and coarser skin
- Acne (especially in the first few years of therapy if patient converts T to DHT swiftly)
- **Alterations in blood lipids (cholesterol and triglycerides)**
- **Polycythemia**

Testosterone

- Injections ($$$) - *****
- Patches/gel ($$$$)- ****
- Topical cream ($)- **
- Implant ($$$$$)- *****

DHEA/high dose testosterone – Gets aromatized to estrogen.

Side effects

	Estrogen	Testosterone
Likely increased risk	Venous thromboembolic disease Gallstone Elevated liver enzymes Weight gain Hypertriglyceridemia	Polycythemia Weight gain Acne Androgenic alopecia Sleep Apnea
Increased risk with additional risks factors	Cardiovascular disease	
Possible increased risk	Hypertension Diabetes Prolactinoma	Elevated Liver enzymes Hyperlipidemia
No increased risk or inconclusive	Breast Cancer	Osteoporosis Breast, cervical, ovarian, uterine cancer

Gender affirming outcomes- Safety

1. Wierckx, Katrien et al. “Cross-sex hormone therapy in trans persons is safe and effective at short-time follow-up: results from the European network for the investigation of gender incongruence.” *The journal of sexual medicine* vol. 11,8 (2014): 1999-2011. doi:10.1111/jsm.12571

2. Abdala, Rubén et al. “Perfil de seguridad a corto plazo de la terapia hormonal cruzada en trans-varones” [Short-term safety profile of cross-hormonal therapy in trans-male subjects]. *Medicina* vol. 78,6 (2018): 399-402.

3. Connelly, Paul J et al. “Gender-Affirming Hormone Therapy, Vascular Health and Cardiovascular Disease in Transgender Adults.” *Hypertension (Dallas, Tex. : 1979)* vol. 74,6 (2019): 1266-1274. doi:10.1161/HYPERTENSIONAHA.119.13080

Mental illness

- Most frequent co-morbidity
- Higher rate of chemical dependence
- Continue Psychiatric care and counselling
- May have decreased need in with HRT/transition

Primary care issues

- Higher incidence and prevalence of STDs
- Higher rate of long term illnesses
- Decreased rate of cancer screening
- Low health literacy and access

How to be gender non-confirming inclusive practice

- Gender-neutral restrooms
- Rainbow flags/pictures/paintings
- Family pictures of same sex couples/transgender personalities etc.
- Third gender option on intake forms
- "SOGI" adaptation in EMR - "Sexual Orientation Gender Identity"

Insurance coverage

- Virginia Medicaid, major private insurance providers cover most of the services
- Gender reassignment no approved
- Some gender confirming procedures approved
- Cost – GRS (18-30K)

  Mastectomy (4k-8k)

  Injections ~$250/3 months

Carilion Gender Care Clinic

- At Riverside 3 clinic since Oct 2016 (CGCR)
- 200+ patients from South-West VA
- ½ day per week
- No referral required

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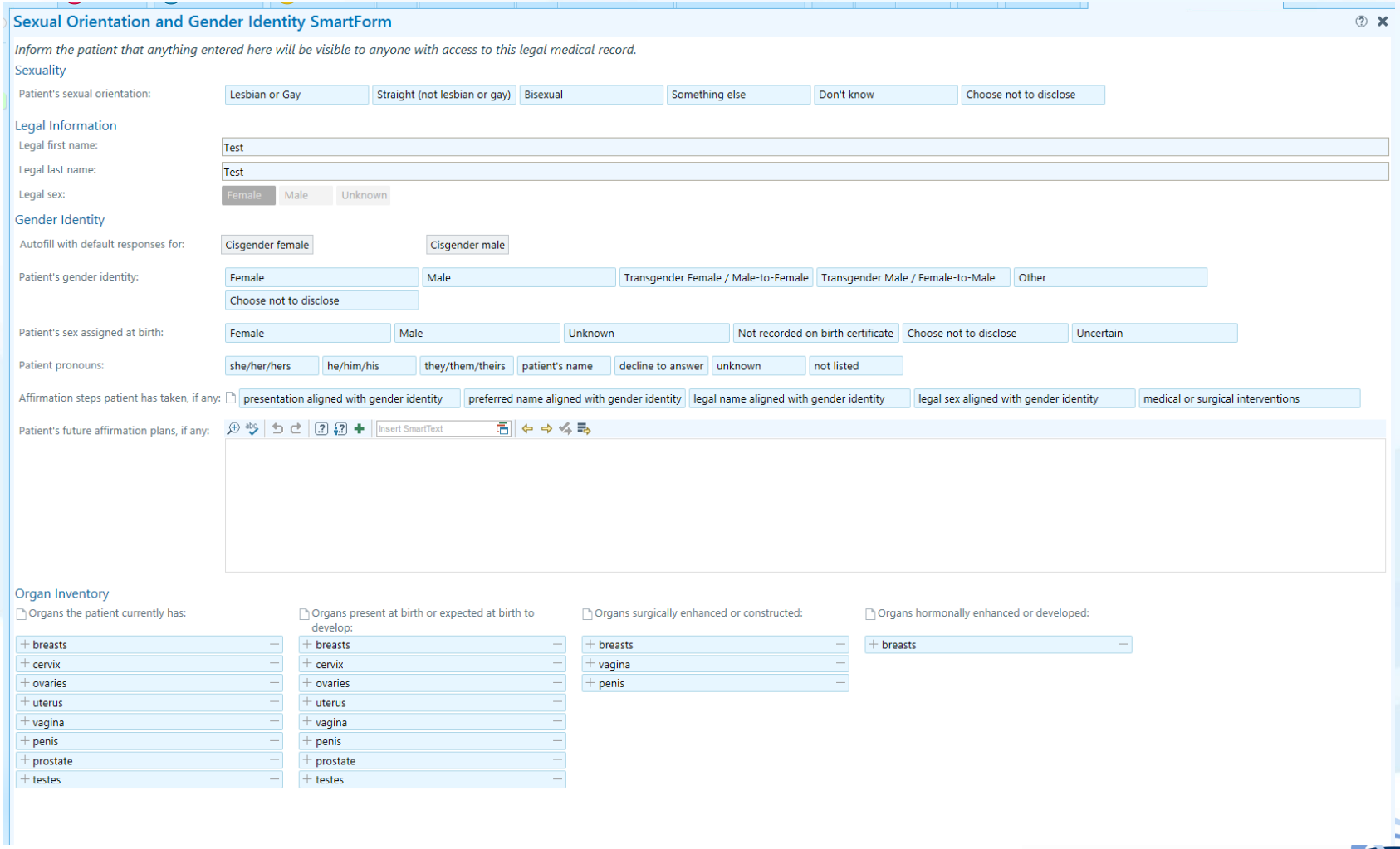
SOGI - EPIC



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Summary

- Transgender patients are most underserved, underrepresented minority
- Persistent, consistent, insistent dysphoria after puberty= very low regret
- Side effects of hormone supplement
- Treatments for transition are effective, but far from “mainstream” medicine
- Resources are improving …

Thank You!

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