Best Practices for Care of the Transgender Patient

Anna K. Person, M.D.
Vanderbilt Comprehensive Care Clinic
November 9, 2016
Objectives

• Be familiar with appropriate terminology.
• Discuss issues related to HIV infection within the transgender community.
• Be acquainted with basic health maintenance issues.
• Basics on hormone therapy and surgical options.
“Call me Caitlyn”
By BUZZ BISSINGER Photos by ANNIE LEIBOVITZ
‘A Whole New Being’

How Kricket Nimmons Seized the Transgender Moment

By DEBORAH SONTAG
Photographs by TODD HEISLER
Video by KASSIE BRACKEN
DEC. 12, 2015
The Quest for Transgender Equality
THE TRANSGENDER TIPPING POINT

America's next civil rights frontier

By Katy Steinmetz

Laverne Cox, a star of Orange is the New Black, is one of an estimated 1.5 million Americans who identify as transgender.
Why is this important?

- Survey of 132 Deans of Medical Education
- Median time dedicated to teaching LGBT-related content in curriculum was 5 hours
- 9 reported 0 hours taught during preclinical years
- 44 reported 0 hours during clinical years
- 128 taught students to ask patients if they “have sex with men, women, or both” when obtaining a sexual history

Implementing Curricular and Institutional Climate Changes to Improve Health Care for Individuals Who are LGBT, Gender Nonconforming, or Born with DSD

A Resource for Medical Educators


Edited for the AAMC by:

Andrew D. Hollenbach, Ph.D.
Kristen L. Eckstrand, Ph.D.
Alice Dreger, Ph.D.
Browse Resources

Cultural Humility with Lesbian, Gay, Bisexual, and Transgender Populations: A Novel Curriculum in LGBT Health for Clinical Medical Students

Lesbian, gay, bisexual and transgender (LGBT) individuals encounter documented health disparities in the United States, perpetuated in part by limited LGBT-related content in medical education curricula. Myriad national medical associations acknowledge these curricular deficits and call for LGBT-related curricular content inclusion in undergraduate medical education. Furthermore, recognition of the effects of discriminatory...
Concepts

• Natal sex or assigned sex at birth- sex that a person was assigned at birth.

• Transgender- umbrella term for all people whose internal sense of their gender is different from the sex they were assigned at birth.

• Some transgender people who do not identify as either male or female, but rather identify outside of a gender binary.
Concepts

• Transgender people choose different terms to describe themselves.

• A transgender woman is someone assigned male at birth who identifies as female.
  – “Transwoman”, “MtF”, “M2F” or “Female”

• Someone assigned female at birth who identifies as male is a transgender man.
  – “Transman”, “FtM”, “F2M” or “Male”
Concepts

• Transition- the process that transgender people undergo to express their gender identity.

• “The process of bringing the body and mind into alignment.”
  – Physical (hormones, surgery), social, psychological, linguistic, intellectual, and spiritual aspects of self.

Policy brief: Transgender people and HIV
WHO July 2015
Basic Concepts

• Biologic gender may differ from gender identity.

• Gender identity is distinct from sexual orientation.

• Sexual behaviors may differ from sexual orientation.

Gender Dysphoria

- People whose gender at birth is contrary to the one they identify with.
- Must be a marked difference between the individual’s expressed/experienced gender and the gender others would assign him or her.
- Must continue for at least six months.
- In children, the desire to be of the other gender must be present and verbalized.
- This condition causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

How many individuals identify as transgender?

- Numbers are difficult to define, as definitions and gender identity are fluid.
- 1 per 11,900 men, 1 per 30,400 women in the Netherlands identify as transgender.
- For approximately 66%, gender dysphoria begins in childhood.

Gooren, NEJM 364;13, 2011.
HIV and Transgender: A Global View

• Data are lacking!

• HIV prevalence data are less robust for transgender people than for the general population
  – Sampling challenges, lack of population size estimates, stigma

• Transgender people remain severely underserved in the response to HIV

• Only 39% of countries reporting in the National Commitment and Policy Instrument 2014 that their national AIDS strategies address transgender people.
A Global View

- Pooled HIV prevalence of 19% in transwomen in 15 countries.

- Transwomen had odds of HIV infection 49x greater than the general population.

- Meta-analysis of HIV in transwomen sex workers→ pooled HIV prevalence of 27%, vs. 15% transwomen not sex workers.


“All human beings are born free and equal in dignity and rights.”
- Article 1 of the Universal Declaration of Human Rights
A Global View- Transmen

• The only published studies on HIV prevalence among transgender men are from North America.
• The most recently published meta-analysis found only two studies with laboratory-confirmed HIV status among transgender men.
  – One of the studies found no infections among participants
  – The other found a prevalence of 2% (one HIV-positive participant)
A Local View: U.S.

• 11-28% of trans-women were HIV positive.
• In 2010, the highest % of new HIV positive test results was in transgender individuals (2.1%).
  – Highest in African Americans.
• More than half (52%) of testing events with transgender persons occurred in non-clinical settings.
• 3x higher community viral load than in non-trans individuals.

A Local View: U.S.

- Transwomen in NYC newly HIV +
  - 50% had history of substance use, sex work, homelessness, incarceration, sexual abuse
  - Vs 31% HIV + women who were not transgender

http://www.cdc.gov/hiv/transgender/index.htm?source=govdelivery
Transwomen Sex Workers

- Survey of 573 MTF sex workers.
- African Americans most likely to report transphobia.
- Half reported being physically assaulted.
- 38% reported being raped or sexually assaulted before age 18.

• In an effort to learn more about the health status of transgender individuals, the CDC is currently revising the national system for reporting HIV cases to capture sex assigned at birth and current gender identity.

http://www.cdc.gov/hiv/transgender/index.htm?source=govdelivery
NATIONAL HIV/AIDS STRATEGY for the UNITED STATES:

UPDATED TO 2020

JULY 2015
Goal 1: Reducing New HIV Infections

- Gay, bisexual, and other men who have sex with men of all races and ethnicities (noting the particularly high burden of HIV among Black gay and bisexual men)
- Black women and men
- Latino men and women
- People who inject drugs
- Youth aged 13 to 24 years (noting the particularly high burden of HIV among young Black gay and bisexual men)
- People in the Southern United States
- Transgender women (noting the particularly high burden of HIV among Black transgender women)
Health Maintenance and Basic Healthcare
• Transhealth.ucsf.edu
• Primary Care Protocol for Transgender Patient Care
Basic Care: Psychosocial Assessment

“As part of the routine management of HIV-infected patients, clinicians should perform a psychosocial assessment at baseline and at least annually in HIV-infected transgender patients.”

Psychosocial Assessment

• Support network
  – Family and partner contacts, including level of knowledge and support of patient’s gender identity
  – Stability in relationships
• Transgender-related discrimination or violence
• Housing status*
• Employment and insurance
  – If employed, are the patient’s employer and coworkers accepting of the patient’s gender identity?
  – If insured, can the patient be reimbursed for transgender-related care?
• Educational level
• Legal issues
  – Living will and healthcare proxy
  – Permanency planning for dependents
  – Potential obstacles to legal gender change and name change

Harm Reduction

Clinicians should assess for the following behaviors in HIV-infected transgender patients:

- Silicone use
- Hormones obtained without prescription, including specific hormones used
- Needle-sharing among those who inject hormones, silicone, and/or drugs
- Sexual risk behaviors
- Genital taping

Basic Care: Physical Exam

• May be traumatic for the patient
  – Explain each step of exam
  – Use smallest speculum
  – Consider psych referral
  – Defer if patient not comfortable

• However, every effort should be made to provide the appropriate care

• Ensure patient understands risks of deferral

Basic Care: Pap Smears

• Clinicians should perform routine cervical Pap tests in any HIV-infected FTM patient with cervical tissue.

• Testosterone-related atrophy of the cervix can mimic cervical dysplasia.
  – When submitting a Pap from an FTM patient who is receiving testosterone tell pathology.

• Pap not indicated for MTF who have undergone surgery.

Cancer Screening- Breast Cancer

• Mammogram according to established guidelines for natal female
  – FTM with any breast tissue
  – MTF with breast tissue who have received hormone Rx for 5 years or more
  – MTF on hormone Rx likely at higher risk for breast CA than natal males

Hormonal Therapy
Overview of transgender health care issues

Goals of treatment:
1. Safely reduce endogenous sex hormones

Slide courtesy of Meghan Hayes, NP
Overview of transgender health care issues

Goals of treatment:

2. Safely administer exogenous cross-gender hormones

Slide courtesy of Meghan Hayes, NP
Overview of transgender health care issues

hormones

Goals of treatment:

3. Achieve desired secondary sex characteristics

**TABLE 14.** Feminizing effects in MTF transsexual persons

<table>
<thead>
<tr>
<th>Effect</th>
<th>Onseta</th>
<th>Maximuma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redistribution of body fat</td>
<td>3–6 months</td>
<td>2–3 yr</td>
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<td>Decrease in muscle mass and strength</td>
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<td>1–2 yr</td>
</tr>
<tr>
<td>Softening of skin/decreased oiliness</td>
<td>3–6 months</td>
<td>Unknown</td>
</tr>
<tr>
<td>Decreased libido</td>
<td>1–3 months</td>
<td>3–6 months</td>
</tr>
<tr>
<td>Decreased spontaneous erections</td>
<td>1–3 months</td>
<td>3–6 months</td>
</tr>
<tr>
<td>Male sexual dysfunction</td>
<td>Variable</td>
<td>Variable</td>
</tr>
<tr>
<td>Breast growth</td>
<td>3–6 months</td>
<td>2–3 yr</td>
</tr>
<tr>
<td>Decreased testicular volume</td>
<td>3–6 months</td>
<td>2–3 yr</td>
</tr>
<tr>
<td>Decreased sperm production</td>
<td>Unknown</td>
<td>&gt;3 yr</td>
</tr>
<tr>
<td>Decreased terminal hair growth</td>
<td>6–12 months</td>
<td>&gt;3 yr</td>
</tr>
<tr>
<td>Scalp hair</td>
<td>No regrowth</td>
<td>None</td>
</tr>
<tr>
<td>Voice changes</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

(Hembree et al., 2009, p. 3145)
To date, no controlled clinical trials of any feminizing/masculinizing hormone regimen have been conducted to evaluate safety or efficacy in producing physical transition” (WPATH, 2012, p. 47)
Hormone Therapy

• Analysis of 28 studies; 1093 MTF, 801 FTM
• 80% reported significant improvement in gender dysphoria
• 78% reported significant improvement in psychological symptoms
• 80% reported significant improvement in quality of life
• 72% reported improvement in sexual function

Murad Clin Endocrinol 2010
Standards for Hormone Therapy

• World Professional Association for Transgender Health (WPATH) 2012
• Endocrine Society Clinical Practice Guidelines 2009
• NEJM Review 2011
• Tom Waddell Health Center Protocols
• Fenway Community Health Clinic
# Overview of transgender health care issues assessment and counseling

<table>
<thead>
<tr>
<th>Diagnosis/mental health evaluation</th>
<th>WPATH</th>
<th>Endocrine Society</th>
<th>Fenway Community Health</th>
<th>Tom Waddell Health Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation by mental health professional competent in treatment of gender dysphoria</td>
<td>Diagnosis of GID made by mental health professional</td>
<td>Evaluation by licensed mental health professional</td>
<td>Psychosocial intake</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reproductive counseling</th>
<th>WPATH</th>
<th>Endocrine Society</th>
<th>Fenway Community Health</th>
<th>Tom Waddell Health Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required, and should be noted in the chart as part of informed consent d/t potential irreversibility</td>
<td>Specifically in the case of adolescents</td>
<td>Required</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mental health treatment</th>
<th>WPATH</th>
<th>Endocrine Society</th>
<th>Fenway Community Health</th>
<th>Tom Waddell Health Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not a requirement, but can be helpful for supporting transition</td>
<td>Recommended throughout transition</td>
<td>Recommended at minimum for the initial transition period</td>
<td>Referral for services</td>
<td></td>
</tr>
</tbody>
</table>

*Slide courtesy of Meghan Hayes, NP*
Hormone Therapy

• Can be initiated after psychosocial assessment and informed consent obtained
• Live 1 year in desired gender role prior to initiation of hormone Rx
• Criteria are:
  – Persistent gender dysphoria
  – Capacity to make informed decision
  – Age of majority in a given country
  – If significant medical or mental health concerns, must be reasonably well-controlled

Informed Consent

• Hormone therapy may lead to irreversible physical changes

• Document in medical record that all information about risks/benefits have been explained, including impact on reproductive capacity

Hormone Therapy FTM- Testosterone

- Increased muscle mass
- Decreased fat mass
- Increased facial hair and acne, male pattern baldness, and increased libido
- Clitoromegaly, temporary or permanent decreased fertility, deepening of the voice
- Cessation of menses may occur within a few months with testosterone treatment

Hembree, J Clin Endocrinol Metab, September 2009, 94(9):3132–3154
Hormone Therapy- Feminizing Rx

• Body fat redistribution, decreased muscle mass, softening of skin
• Enlarged breasts
• Decreased libido/spontaneous erections
• Male sexual dysfunction, decreased sperm production/testicular volume
• Thinning of body and facial hair
• *Hormones will not effect pitch of voice.
• *Breast size generally not reversible.
## Table 14. Feminizing effects in MTF transsexual persons

<table>
<thead>
<tr>
<th>Effect</th>
<th>Onset (^a)</th>
<th>Maximum (^b)</th>
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<tr>
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<td>None</td>
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</tr>
</tbody>
</table>

\(^a\) Onset of effect

\(^b\) Maximum effect
<table>
<thead>
<tr>
<th>Route</th>
<th>Endocrine Society</th>
<th>Tom Waddell</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testosterone undecanoate</td>
<td>Dose</td>
<td></td>
</tr>
<tr>
<td></td>
<td>160-240 mg/d</td>
<td></td>
</tr>
<tr>
<td><strong>Parenteral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testosterone cypionate</td>
<td>Dose</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100-200 mg IM q 2 wk</td>
<td>100-400 mg IM q2-4 wk</td>
</tr>
<tr>
<td>Testosterone undecanoate</td>
<td>Dose</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1000 mg IM q12 wks</td>
<td></td>
</tr>
<tr>
<td><strong>Transdermal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testosterone gel 1%</td>
<td>Dose</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5-10 g/d</td>
<td></td>
</tr>
<tr>
<td>Testosterone patch</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.5-7.5 mg/d</td>
<td></td>
</tr>
</tbody>
</table>

Hembree J Endocrin Metab, 2009
http://www.sfdph.org/dph/comupg/oservices/medSvs/hlthCtrs/TransGendprotocols122006.pdf
MTF Hormone Therapy

- Anti-androgen therapy + estrogen
- Anti-androgens reduce endogenous testosterone levels down to levels found in biologic females
- Anti-androgens:
  - Spironolactone/Finasteride
  - GnRH Agonists (goserelin acetate)
  - Bilateral orchiectomy

Hembree J Endocrin Metab, 2009
http://www.sfdph.org/dph/comupg/oservices/medSvs/hlthCtrs/TransGendprotocols122006.pdf
Estrogen Therapy

- Black market, inquire about illicit use
- Response is variable
- Stop estrogens prior to major surgery, resume 1 week after
- Consider adding ASA for smokers, >40, obese, cardiac risk factors

http://www.sfdph.org/dph/comupg/oservices/medSvs/hlthCtrs/TransGendprotocols122006.pdf
## MTF- Estrogen

<table>
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<tr>
<th></th>
<th>Endocrine Society</th>
<th>Tom Waddell</th>
</tr>
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<tbody>
<tr>
<td><strong>Oral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estradiol</td>
<td>2.0-6.0mg/d</td>
<td>Starting: 2-3mg/d</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Typical: 4mg/d</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Max: 8mg/d</td>
</tr>
<tr>
<td><strong>Parenteral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estradiol valerate</td>
<td>2-10mg IM q week</td>
<td>Starting: 20-40mg IM q2wks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Typical: 40mg IM q2 wks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Max: 40-80mg IM q 2 wks</td>
</tr>
<tr>
<td><strong>Transdermal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estradiol patch</td>
<td>0.1-0.4 mg twice weekly</td>
<td>Starting: 0.1-0.2mg/d</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Typical: 0.2-0.3mg/d</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Max: 0.3mg/d</td>
</tr>
</tbody>
</table>

Hembree J Endocrin Metab, 2009
http://www.sfdph.org/dph/comupg/oservices/medSvs/hlthCtrs/TransGendprotocols122006.pdf
<table>
<thead>
<tr>
<th>Table 16. Monitoring of FTM transsexual persons on cross-hormone therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Evaluate patient every 2–3 months in the first year and then 1–2 times per year to monitor for appropriate signs of virilization and for development of adverse reactions.</td>
</tr>
<tr>
<td>2. Measure serum testosterone every 2–3 months until levels are in the normal physiological male range:*</td>
</tr>
<tr>
<td>a. For testosterone enanthate/cypionate injections, the testosterone level should be measured midway between injections. If the level is &gt;700 ng/dl or &lt;350 ng/dl, adjust dose accordingly.</td>
</tr>
<tr>
<td>b. For parenteral testosterone undecanoate, testosterone should be measured just before the next injection.</td>
</tr>
<tr>
<td>c. For transdermal testosterone, the testosterone level can be measured at any time after 1 wk.</td>
</tr>
<tr>
<td>d. For oral testosterone undecanoate, the testosterone level should be measured 3–5 h after ingestion.</td>
</tr>
<tr>
<td>e. Note: During the first 3–9 months of testosterone treatment, total testosterone levels may be high, although free testosterone levels are normal, due to high SHBG levels in some biological women.</td>
</tr>
<tr>
<td>3. Measure estradiol levels during the first 6 months of testosterone treatment or until there has been no uterine bleeding for 6 months. Estradiol levels should be &lt;50 pg/ml.</td>
</tr>
<tr>
<td>4. Measure complete blood count and liver function tests at baseline and every 3 months for the first year and then 1–2 times a year. Monitor weight, blood pressure, lipids, fasting blood sugar (if family history of diabetes), and hemoglobin A1c (if diabetic) at regular visits.</td>
</tr>
<tr>
<td>5. Consider BMD testing at baseline if risk factors for osteoporotic fracture are present (e.g. previous fracture, family history, gluocorticoid use, prolonged hypogonadism). In individuals at low risk, screening for osteoporosis should be conducted at age 60 and in those who are not compliant with hormone therapy.</td>
</tr>
<tr>
<td>6. If cervical tissue is present, an annual pap smear is recommended by the American College of Obstetricians and Gynecologists.</td>
</tr>
<tr>
<td>7. If mastectomy is not performed, then consider mammograms as recommended by the American Cancer Society.</td>
</tr>
</tbody>
</table>
TABLE 15. Monitoring of MTF transsexual persons on cross-hormone therapy

1. Evaluate patient every 2–3 months in the first year and then 1–2 times per year afterward to monitor for appropriate signs of feminization and for development of adverse reactions.
2. Measure serum testosterone and estradiol every 3 months.
   a. Serum testosterone levels should be <55 ng/dl.
   b. Serum estradiol should not exceed the peak physiological range for young healthy females, with ideal levels <200 pg/ml.
   c. Doses of estrogen should be adjusted according to the serum levels of estradiol.
3. For individuals on spironolactone, serum electrolytes (particularly potassium) should be monitored every 2–3 months initially in the first year.
4. Routine cancer screening is recommended in nontranssexual individuals (breasts, colon, prostate).
5. Consider BMD testing at baseline if risk factors for osteoporotic fracture are present (e.g. previous fracture, family history, glucocorticoid use, prolonged hypogonadism). In individuals at low risk, screening for osteoporosis should be conducted at age 60 and in those who are not compliant with hormone therapy.
Estrogen Therapy- Prolactin

• Increases growth of pituitary lactotroph cells
• 20% of MTF treated with estrogens may have elevations in prolactin
• Often, decreasing estrogen doses will normalize prolactin
• Obtain at baseline, 2x a year

Hembree J Endocrin Metab, 2009
Estrogen Therapy- Prolactin

• Beware- some psychotropic medications also increase prolactin levels

• Overall risk of prolactinoma thought to be rare
  – Sx of hypogonadism/gynecomastia not often evident
  – If persistently high prolactin levels may need imaging

Hembree J Endocrin Metab, 2009
| Hormonal Contraceptives (oral) | ATV (unboosted) | ethinyl estradiol AUC ↑ 48%  
norethindrone AUC ↑ 110% | Prescribe oral contraceptive that contains no more than 30 mcg of ethinyl estradiol or recommend alternative contraceptive method.  
Oral contraceptives containing less than 25 mcg of ethinyl estradiol or progestins other than norethindrone or norgestimate have not been studied. |
| ATV/r | ethinyl estradiol AUC ↓ 19% and  
C_{min} ↓ 37%  
norgestimate ↑ 85% | Oral contraceptive should contain at least 35 mcg of ethinyl estradiol.  
Oral contraceptives containing progestins other than norethindrone or norgestimate have not been studied. |
| ATV/c, DRV/c | Effects unknown | Recommend alternative or additional contraceptive method or alternative ARV drug. |
| DRV/r, FPV/r, LPV/r, SQV/r, TPV/r | ethinyl estradiol AUC ↓ 37% to 48%  
norethindrone AUC ↓ 14% to 34%  
With TPV/r: norethindrone AUC ↔ | Recommend alternative or additional contraceptive method or alternative ARV drug. |
| FPV | With APV: ↑ ethinyl estradiol and  
↑ norethindrone C_{min}; APV C_{min} ↓ 20% | Recommend alternative contraceptive method or alternative ARV drug. |
| Etonogestrel-releasing subdermal implant | LPV/r | etonogestrel AUC ↑ 52% and C_{min} ↑ 34% | Use standard dose. |
| All other PIs | No data | Recommend alternative or additional contraceptive method or alternative ARV drug. |
Drug Interactions

• Most interactions between PI and estrogens decrease estrogen level
• If estrogen is continued but PI’s are stopped, can lead to sudden increase in estrogen levels and increased risk of adverse events
Risks of Hormone Rx- Mortality

- 966 MTF and 365 FTM individuals
- Median f/u 18.5 years
- MTF received estrogens + cyproterone acetate
- FTM parenteral/oral testosterone or testosterone gel

Asscheman, European Journal of Endocrinology (2011) 164 635–642
Risks of Hormone Rx- Mortality

• MTF group had 51% higher mortality than general population
  – Suicide, HIV/AIDS, cardiovascular disease, drug abuse
  – No increase in total cancer mortality
    • Lung and hematological cancer mortality rates were elevated
  – Current ethinyl estradiol use 3x higher rate CV death
• FTM group no difference in mortality from general population

Asscheman, European Journal of Endocrinology (2011) 164 635–642
Risks- Feminizing Therapy

• VTE- 20 fold increase in one cohort
  – Ethinyl estradiol (OCP’s)

• Higher with oral estrogens, *lowest with transdermal*
  – Age, *smoking status* increase risk

• Androgen deprivation + estrogen therapy→ increased triglyceride levels, insulin resistance, blood pressure

Gooren NEJM 2011
Risks- Masculinizing Therapy

• Benefits/Observations
  – Virilization of clitoris, skin
  – Ovaries appeared polycystic
  – Bone mass preserved
  – Spatial ability improved

• Risks
  – Verbal fluency diminished
  – Hct increased
  – Weight, visceral fat increased
  – Lipid profile changes

712 FTM from 1975 to 2004
Average dose 250mg IM q 2-3 weeks

Gooren, J Sex Med 2008;5:765–776
Surgery
Surgery

• Should not be done until:
  - Patient is of legal age
  - Patient has lived continuously for at least 12 months in gender role
• Chest surgery for FTM can be done earlier
• After surgery, hormonal therapy must continue

Surgery

- Letter required from mental health professional
- 1 referral for breast/chest surgery
- 2 referrals for TAH/BSO, orchiectomy, genital reconstructive surgeries
- Criteria for letter laid out in WPATH guidelines
- Most can not afford surgery

MTF SRS

- Penectomy
- Orchiectomy
- Construction of neovagina
- Penile skin/colon for vaginal lining
- Scrotal skin for labia

Gooren, NEJM 364;13, 2011
FTM SRS

- TAH/BSO
- Mastectomy
- Metoidioplasty or Phalloplasty
- Vaginectomy
- Scrotoplasty

Gooren, NEJM 364;13, 2011
Sexual Reassignment Surgery

• Most studies say SRS improves gender dysphoria
  – 1-2% regret SRS
  – Most of these with “late transsexualism”
• Cohort study in Sweden 1973-2003
• 324 who underwent SRS
• 10:1 with aged and sex-matched controls (final sex)

PLOS One 2011 Dhejne
NEJM 2011 Gooren
## Long-Term F/u of SRS

<table>
<thead>
<tr>
<th></th>
<th>Adjusted Hazard Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Mortality</td>
<td>2.8 (1.8–4.3)</td>
</tr>
<tr>
<td>Death from Suicide</td>
<td>19.1 (5.8–62.9)</td>
</tr>
<tr>
<td>Risk for Suicide Attempts</td>
<td>4.9 (2.9–8.5)</td>
</tr>
<tr>
<td>Psychiatric Inpatient Care</td>
<td>2.8 (2.0–3.9)</td>
</tr>
</tbody>
</table>

PLOS One 2011 Dhejne
SRS

- Medicare as of May 2014 will cover SRS
- 9 state Medicaid programs cover transgender-related health care to some extent
- No more than 10 surgeons nationwide perform vaginoplasties, and that fewer than six perform both male-to-female and female-to-male genital surgery

Sontag Nytimes.com Dec 17, 2015
Improving Care

- Use preferred name and pronoun
- Utilize language such as “partner” or “significant other” when initially gathering information
- Use the same language the patient uses to describe themselves and their relationship

Courtesy of Amy Doyle
Improving Care

• Acknowledge transition challenges:
  – Loss of family, community, friends
  – Passing or “getting clocked”
  – Dating
  – Safety issues
  – Self-esteem and confidence

Poteat, aidsetc.org, Medical Care for Transgender Women
Improving Care

• Do not make assumptions about sexual activity or preference based on appearance
• Inquire about experience with hormones and gender confirmation surgeries, if any
• Questions about specific sexual practices and behaviors are more important than those regarding orientation
Harm Reduction- Silicone

• Used for cosmetic purposes/breast augmentation

• Risk of silicone emboli/silicone syndrome
  – ARDS-like
  – Fever, dyspnea, hemoptysis
  – Fatal

• Disseminated S. aureus infections

Conclusion

• Gender identity is separate from biologic gender
• Physical exams may be traumatic but appropriate health maintenance should be goal
• Hormone therapy has risks and benefits, informed consent a must, risk reduction important
• We can always strive to do better and provide compassionate care
Popeye! No!

I yam what I yam!
<table>
<thead>
<tr>
<th>Table 1. Diagnostic Criteria for Gender Identity Disorder. *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong and persistent cross-sex identification (not merely a desire for any perceived cultural advantages of being the other sex)</td>
</tr>
<tr>
<td>Children (at least four criteria must be met)</td>
</tr>
<tr>
<td>Repeatedly stated desire to be a member of the other sex or insistence on actually being a member of the other sex</td>
</tr>
<tr>
<td>In boys, preference for cross-dressing or simulating female attire; in girls, insistence on wearing only stereotypically masculine clothing</td>
</tr>
<tr>
<td>Strong and persistent preferences for cross-sex roles in make-believe play or persistent fantasies of being a member of the other sex</td>
</tr>
<tr>
<td>Intense desire to participate in the stereotypical games and pastimes of the other sex</td>
</tr>
<tr>
<td>Strong preference for playmates of the other sex</td>
</tr>
<tr>
<td>Adolescents and adults (at least one criterion must be met)</td>
</tr>
<tr>
<td>Stated desire to be of the other sex</td>
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<tr>
<td>Frequent attempts to pass as the other sex</td>
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<tr>
<td>Desire to live or be treated as the other sex lives or is treated</td>
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<tr>
<td>Conviction of having the typical feelings and reactions of the other sex</td>
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<tr>
<td>Discomfort with original sex or sense of inappropriateness in the role of that sex</td>
</tr>
<tr>
<td>Children (at least one criterion must be met)</td>
</tr>
<tr>
<td>In boys, assertion that penis or testes are disgusting or will disappear, assertion that it would be better not to have a penis, or aversion to rough-and-tumble play and rejection of male stereotypical toys, games, and activities; in girls, rejection of urinating in a sitting position, assertion that she has or will have a penis, assertion that she does not want to have breasts or menstruate, or marked aversion to normative feminine clothing</td>
</tr>
<tr>
<td>Adolescents and adults (at least one criterion must be met)</td>
</tr>
<tr>
<td>Preoccupation with getting rid of primary and secondary sex characteristics (e.g., request for hormones, surgery, or other procedures to physically alter sexual characteristics and simulate the other sex) or belief in having been born with the wrong sex</td>
</tr>
<tr>
<td>No concurrent physical intersex condition</td>
</tr>
<tr>
<td>Clinically significant distress or impairment in social, occupational, or other important areas of functioning</td>
</tr>
</tbody>
</table>

* These criteria were adapted from the Diagnostic and Statistical Manual of Mental Disorders (DSM) (fourth edition, text revision). 4