



ADVANCING EXCELLENCE IN TRANSGENDER HEALTH

Primary Care and Preventive Health Needs of Transgender Patients

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Continuing Medical Education Disclosure

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- Current Position: Physician Assistant, Fenway Health
- Disclosure: No relevant financial relationships. All hormone therapy for transgender people is off-label.

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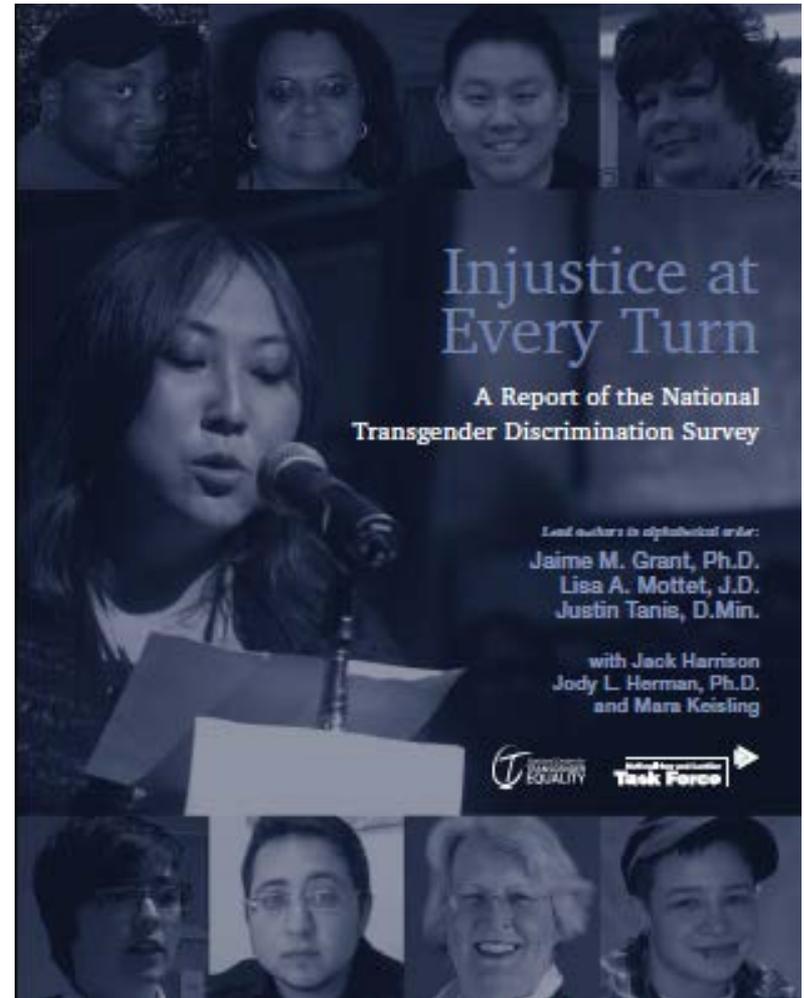


Objectives

1. Morbidity and Mortality
 - Transphobia/gender abuse
 - Marginalization
2. Primary Care — Integrated approach to trans health
 - Access to care
3. Primary Preventive Screening Recommendations

Barriers to Medical Care for Transgender Patients

- Economically disadvantaged
- Geographic and social isolation
- Lack of insurance coverage
- Lack of clinical research and limited medical literature
- Provider ignorance
- Stigma of Gender Clinics



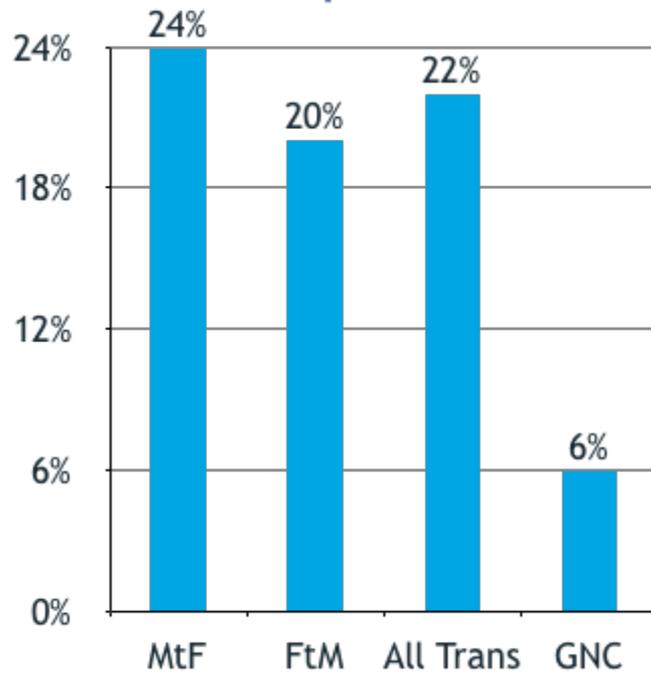
Morbidity and Mortality in the Transgender Community

- Significant increase in mortality is seen amongst transgender individuals compared to the general population
- Most of the increase in mortality was due to higher rates of **AIDS, suicide, drug-related deaths**
- Asschermann's 2011 review of Dutch patient cohort: 50% higher mortality rate in **MTF** patients

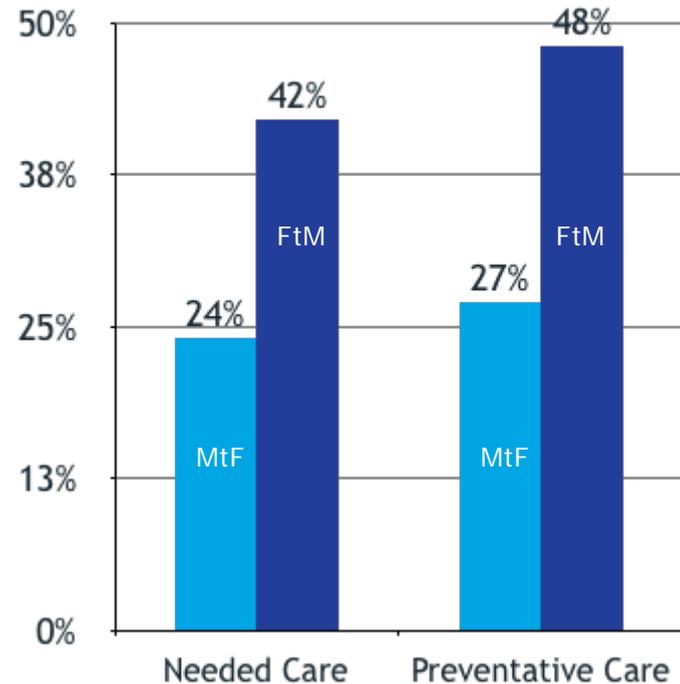
Barriers to Medical Care for Transgender Patients

- Discrimination, abuse, and lack of access to care

Refusal to Provide Care by Gender Identity/Expression



Postponement Due to Discrimination by Providers



HIV Infection

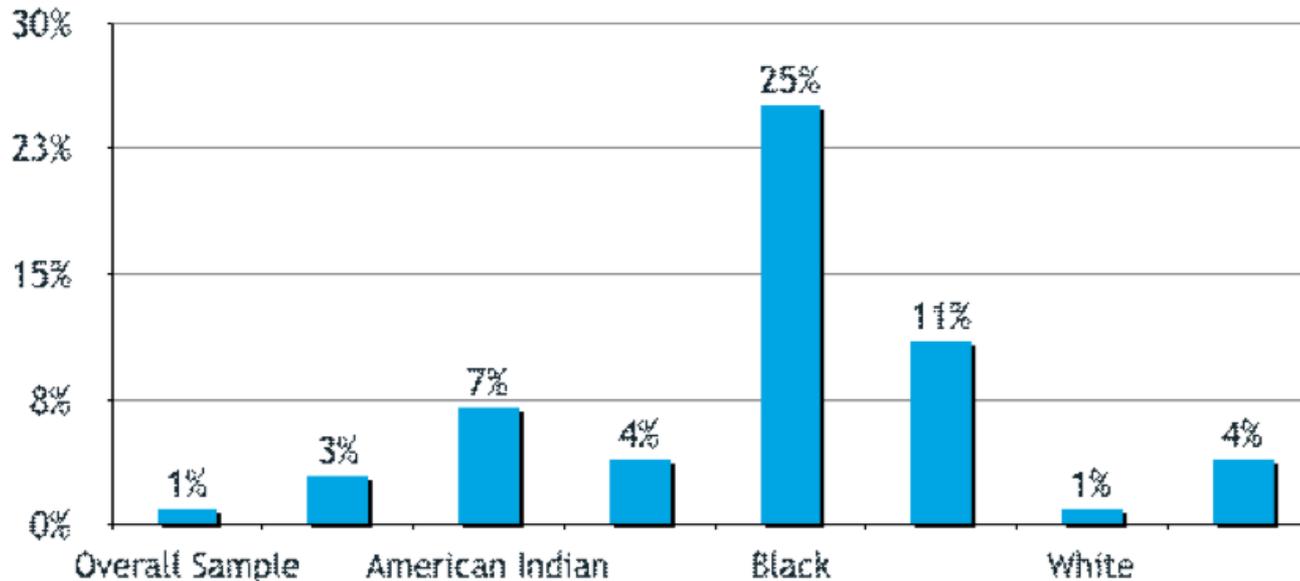
- NTDS – Over 4 times the national average of HIV infection
- Self reported incidence of HIV infection was 2.64% overall, 4.28% in MTF, and 15.3% in self-identified sex workers
 - Rate of 0.6% in the general population
- HIV infection: Average rate about 27% in studies done on MTF (mostly urban) populations
- Rates in FTM are not well-documented, seem to be low (only 0.51% in the NTDS)
 - BUT, FTM report relatively high rates of high-risk sexual behavior

Death rates due to AIDS is 30 times higher for trans individuals



HIV Infection

HIV Infection by Race, Compared to US General Population



- Increased health disparities for trans women of color
 - In NTDS, 24.9% of black trans women and 10.9% of Latina trans women were HIV infected



Depression and Suicide

- Suicidal ideation rates as high as 64%
- In some surveys, up to **40%** of transgender/gender variant individuals report having **attempted suicide**
- Suicide deaths 6 times higher than in general population in Dutch cohort

Depression and Suicide

- A 2009 study of 515 transgender individuals in San Francisco found that depression approaches 62% in trans women and 55% in trans men
- NYC metropolitan area survey found that 52–54% of trans women have a lifetime history of major depression

Trauma and Abuse

- In a study looking at 571 trans women in the NYC Metro area, lifetime prevalence of psychological and physical abuse are 78% and 50%, respectively
- Previous and ongoing trauma stands out as significant risk factor and clinically challenging
 - 38-60% past experiences of physical violence
 - 27-46% victims of sexual assault
 - Most violence attributable to gender identity or expression

Trauma and Abuse

- Persistent abuse was very high during adolescence—most often perpetrated by parents or other family members

Substance Abuse

- Drug-related deaths in MTF were 13 times higher than in the general population in the Dutch cohort.
- NTDS: >1/4 of respondents misused drugs or alcohol to cope with mistreatment due to gender identity or expression

Substance Abuse

- The Transgender Community Health Project sampled 392 trans women and 123 trans men finding that 23% have a history of substance use treatment
 - Lifetime use of cannabis 90%,
 - Cocaine 66%,
 - LSD 52%,
 - Crack cocaine 48%, and
 - Heroin 24%
- One-third of the sample had used injection drugs, not including hormones, in the past
- Various studies have shown 26 to 62% percent prevalence of substance use disorders in transwomen

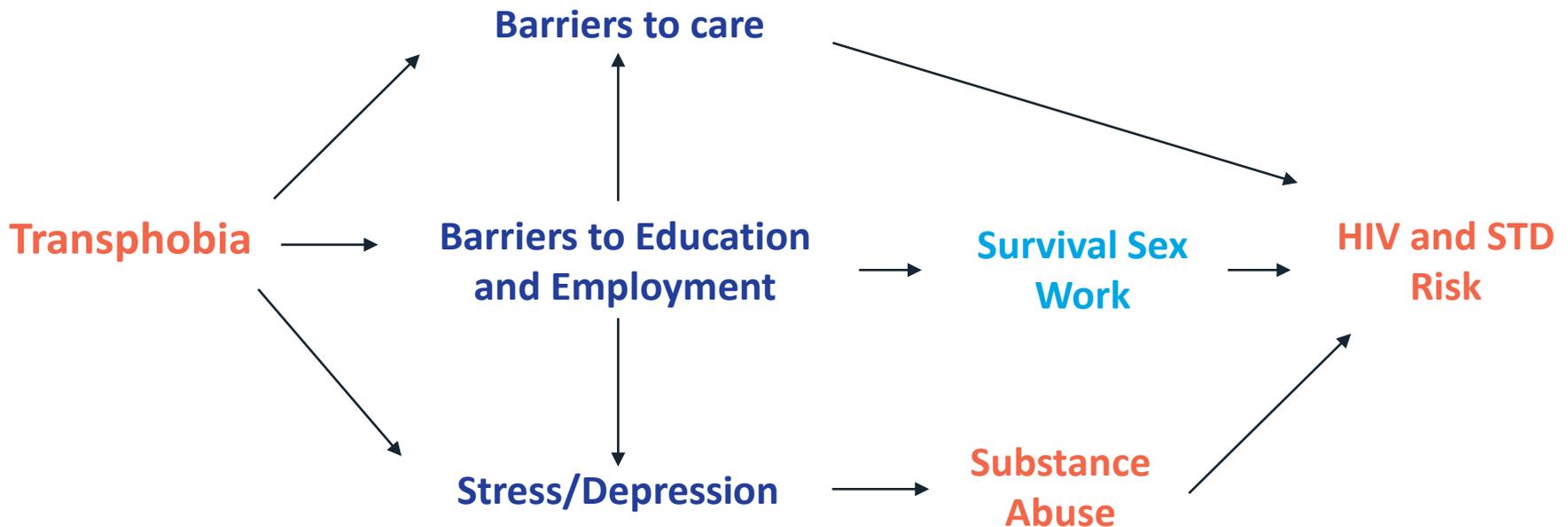
Homelessness

- Rates of homelessness
 - 19% of indiv in NTDS reported being denied a home or apartment and 11% being evicted because they were transgender or gender non-conforming
 - 19% of respondents became homeless at some point because they were transgender or gender non-conforming
 - Those who had experienced homelessness were 2.5 times more likely to have been incarcerated and were more than 4 times more likely to have done sex work for income
 - They were more likely to be HIV-positive (7.12%)
 - They were much more likely to have attempted suicide (69%)

Impact of Homelessness in Regards to Substance Use

Substance	Homeless Youth on the Street	Homeless Youth in Shelters	Non-Homeless
<i>Tobacco</i>	81%	71%	49%
Alcohol	81%	67%	57%
<i>Marijuana</i>	75%	52%	23%
Crack Cocaine	26%	8%	1.4%
<i>Intravenous Drugs</i>	17%	4%	1%
Other Drugs (stimulants, hallucinogens, inhalants)	55%	34%	16%

Negative Impacts of Transphobia



Nuttbrock 2009, Psychiatric Impact of Gender-Related Abuse Across the Life Course of Male-to-Female Transgender Persons. JSexResearch



Depression and Suicide

- Impact of gender affirming care as it relates to health outcomes and impact on quality of life
 - E. Willson, et al 2015, S. Reisner et al 2016, E Gomez-Gil et al 2012, White Hughto et al 2016, T. Ainsworth 2010, S. Colton Meirer et al 2011, J. Sevelius 2013, R. Testa et al 2012, etc...
- * **The ability to access transition-related medical care has an overall positive impact on physical health, mental health, and quality of life**
 - High rates of physical violence due to being “visibly gender non-conforming.” Suicide attempts were significantly related to experiencing physical violence
 - Suicide and engagement in HIV-related risk behaviors explained has coping responses to extreme discrimination
 - **Hormonal therapy assoc w/ higher scores in general and mental health
 - **Hormones, breast augmentation, and genital surgery all assoc w/ lower odds of SI, binge drinking, and drug use
 - African Americans and Latinas were estimated to have the lowest utilization of any transition-related medical care

Primary Care, an Integrated Approach



Primary Care

- Increasing access
 - Caregiver need not be an endocrinologist
- Increasing comprehensive care
 - Goal of care is to facilitate affirmation and alleviate gender dysphoria
 - Two categories
 - General health concerns – promote and ensure physical health and emotional and social well-being
 - Issues specific to transgender people – Varying emotional, behavioral, medical, surgical and ethical issues

Advances in Treating Gender Dysphoria

- “The latest 2011 revisions to the SOC realize that transgender, transsexual, and gender nonconforming people have **unique health care needs to promote their overall health and well-being, and that those needs *extend beyond hormonal treatment and surgical intervention.***”
 - Eli Coleman, PhD, SOC Committee Chair, Professor and Director at Program in Human Sexuality, University of Minnesota
- Increasingly standards of care are focused on *individualized* approaches to alleviate gender dysphoria
- Approaches use various combinations of psychotherapy, hormone therapy, and surgery, AND case work, social work, OB, cardiology, etc. to affirm gender and provide quality health care

Guidelines for Clinicians

Cultural Competency and Cultural Humility

- Familiarize yourself with commonly used terms and the diversity of identities
- **Listen** to how people describe their own identities, partners, and bodies; use the same terms!
 - Refer to patients by their preferred name and pronouns
 - Refer to body parts by their preferred name
- If you are not sure what terms to use, **ask** your patient what they prefer
- Avoid asking questions out of curiosity; ask what you **NEED** to know
- **Listen** to people's experiences
 - Recognize that many have had negative experiences in the past and may perceive "slights," even when not intended
- **Don't forget the basics!**



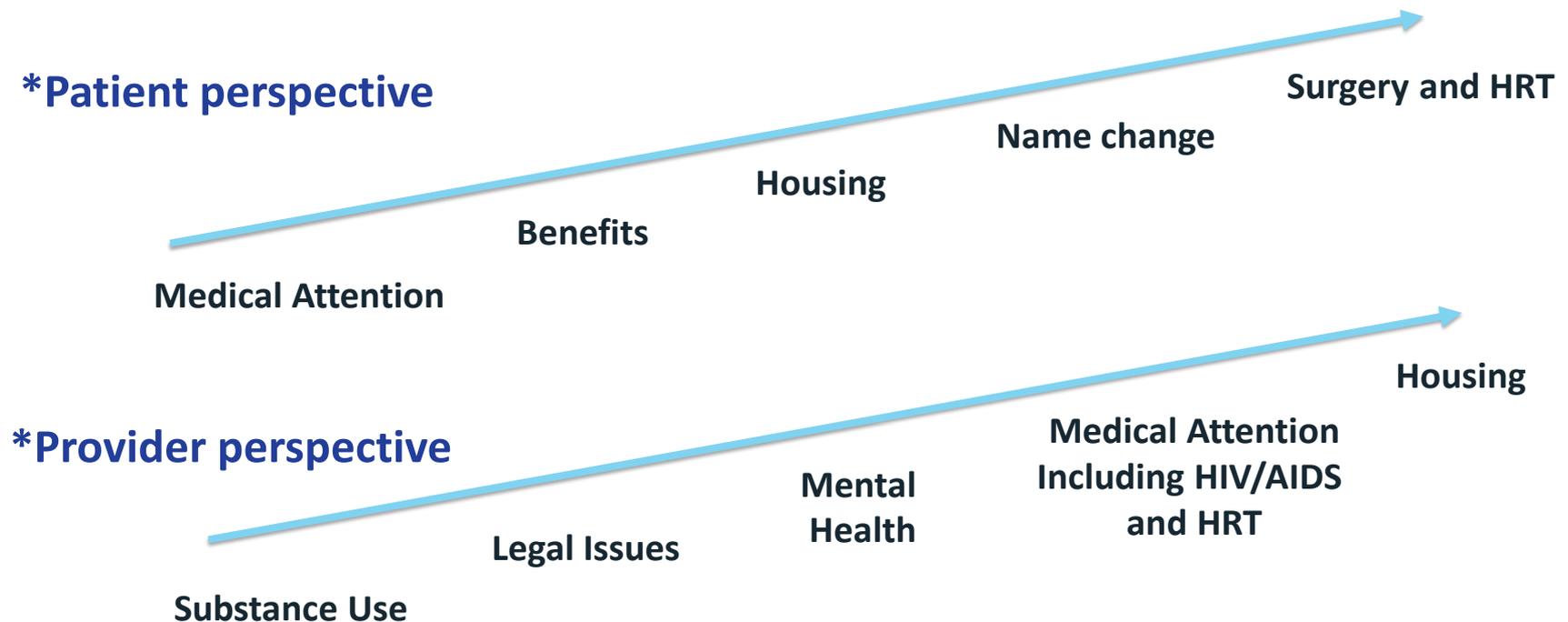
Taking a History

- Same as for all patients, but pay specific attention to health disparities
- Be aware of contexts that increase health risks
 - What are risk factors for smoking, substance use, or engaging in sexual risk behaviors? What is the incidence of trauma/abuse in this population?
- Ask about social support; be aware of possible rejection by family or community of origin, harassment, and discrimination
- Ask about use of cross-sex hormones, gender affirmation surgeries, and use of silicone

Guidelines for Clinicians

- Recognize that the need to affirm one's gender identity can supersede other critical health concerns – Meet the patient where they are at.

Priorities



Preventive Screening Recommendations



Preventive Health and Primary Care

- Treat the anatomy that is present:

If you have it, check it!

- Clinical care should be based on an up-to-date anatomical inventory:

- Breasts
- Cervix
- Ovaries
- Penis
- Prostate
- Testes
- Uterus
- Vagina



If you've never been sexually active (or only anal) and think a cervix, you need regular Paps. Check out our website for more information and tips on how to make getting a Pap easier.

checkitoutguys.ca

Preventive Health for Transmasculine Individuals



Health Maintenance in Transmasculine Individuals

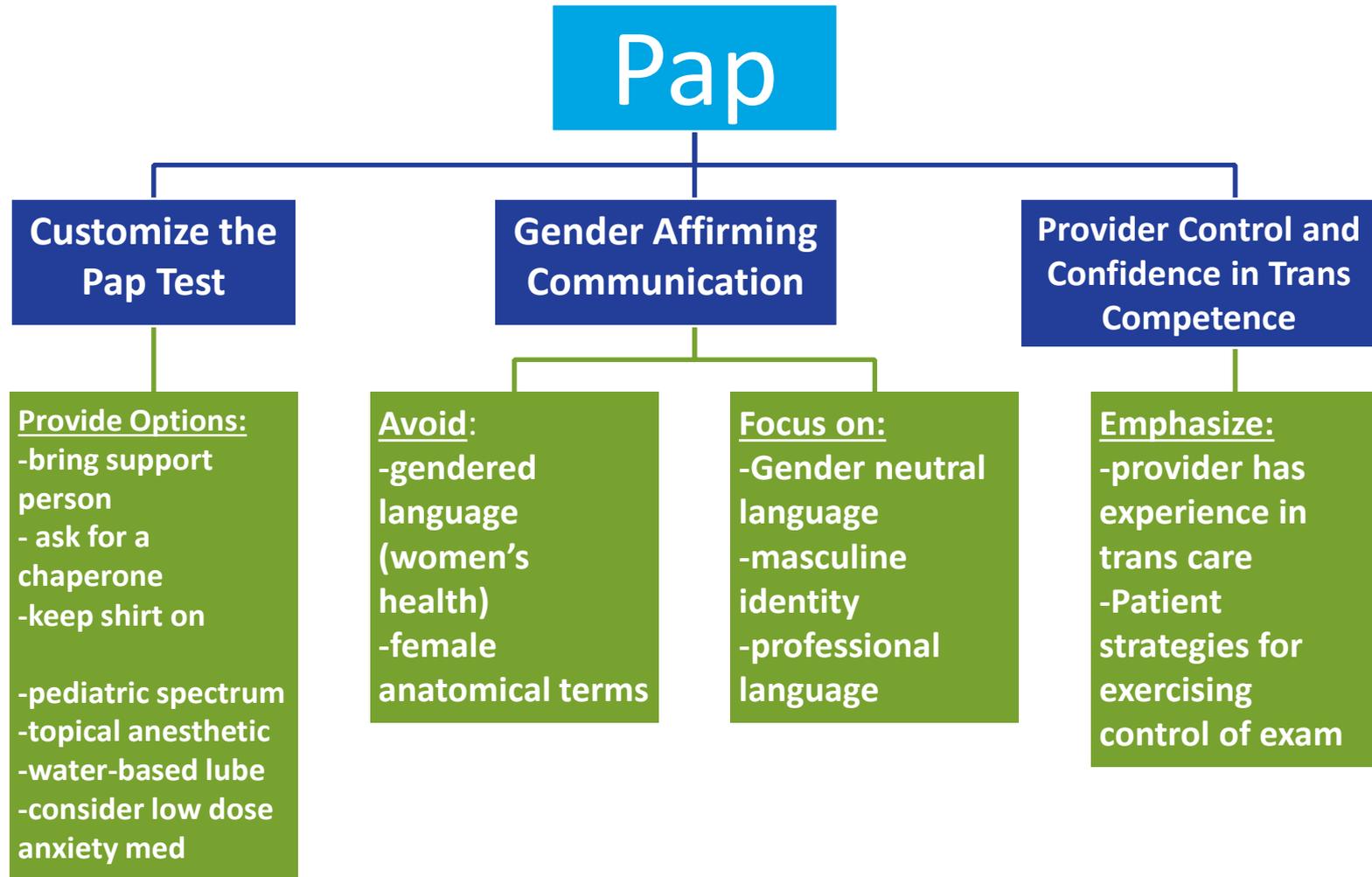
- Pap smears
 - As per natal females
 - Testosterone can cause atrophy of the cervical epithelium mimicking dysplasia
 - Increase in “unsatisfactory” samples seen: 10.8% (10 times higher than in natal women)
 - Longer latency to follow-up testing

Potter, 2014 J Gen Intern Med. FtM Patients Have a High Prevalence of Unsatisfactory Paps Compared to Non-Transgender Females: Implications of Cervical Cancer Screening

Potter, 2014 Am J Prev Med. Pap Test Use is Lower Among FtM Patients than Non-Transgender Women



Health Maintenance in Transmasculine Individuals



Health Maintenance in Transmasculine Individuals

- Endometrial hyperplasia
 - Futterweit, et al (1986): 9/19 FTM patients had proliferative endometrium at the time of hysterectomy; 3/19 had endometrial hyperplasia
 - Perrone, et al (2009): 27 FTM undergoing endometrial bx; all had atrophic endometrium similar to menopausal controls
 - Grynberg, et al (2010): 112 FTM given androgen for at least 6mo prior to THSO – endometrial atrophy in 45%
 - Urban, Teng & Kapp (2010): First case report of endometrial carcinoma in an FTM patient after 7 years on testosterone tx

Health Maintenance in Transmasculine Individuals

Endometrial hyperplasia

- Hysterectomy for 1° prevention of endometrial cancer is not currently recommended
- Routine screening of endometrial cancer in transmen with ultrasound is not supported by evidence and is not realistic
 - Expense
 - Tolerability
- Unexplained bleeding needs to be explored and patients need to inform their providers when this occurs

Health Maintenance in Transmasculine Individuals

Mammograms and CBE

- As per natal females if no chest reconstruction
- If post-op — no reliable evidence exists to guide screening recommendations
 - yearly chest exams?
- 2008 Gooren (Dutch cohort): only 1 reported case of breast cancer in FtM cohort, so 5.9/100,000 incidence
- 2014 Brown (US VA system): 7 cases in transmasculine individuals, but with incidence still less than the non-trans general population data (20.0/100,000 VHA yrs)
- 2009 Grynberg, et al: 100 mastectomies in transmen after average of 3.7 years on T.
 - 93% with decreased glandular tissue and increased fibrous connective tissue

Health Maintenance in Transmasculine Individuals

Bone density screening

- T appears to be overall protective: Larger trabecular bone size after just 1yr, and most studies show preservation of cortical bone_(G T'Sjoen 2015)
 - Increased muscle mass / mechanical loading
 - Role of aromatization of T to estrogen
- Insufficient evidence to guide recommendations. *Consider >65 yrs old, or post-gonadectomy and off hormone therapy >5yrs*
- Measuring LH levels: LH is inversely proportional to bone density measures — may be a marker for adequate levels of testosterone to preserve bone mass

Health Maintenance in Transmasculine Individuals

- Contraception
 - Testosterone does not reliably prevent ovulation
- Consider LARCs without estrogen
 - Mirena IUD
 - Depo-Provera
 - Nexplanon
- Pregnancy
 - Important to discuss an individual's desires and opening door to conversation about what is possible and options available

Health Maintenance in Transmasculine Individuals

- Cardiovascular Disease
 - No increased risk of cardiovascular events in short and medium-term follow ups
 - Testosterone can increase blood pressure
 - Increased LDL and decreased HDL
- In Asscheman's 2011 series, only 1 MI in FTM at age 72 after 42 years of testosterone tx

Health Maintenance in Transmasculine Individuals

- What we do know is that trans men have an increase in obesity compared to their natal male counterparts (though not natal female), poor lipid profile, and potential increase in hematocrit
- Trans men have increased smoking rates compared to the general public
- **ALL of these factors together lead to concern for possible future cardiovascular events

Health Maintenance in Transmasculine Individuals

- Diabetes
 - Slightly higher prevalence of Diabetes type 2 than control, BUT almost all diagnoses made BEFORE starting testosterone therapy
 - Increased endocrine screening prior to initiation of hormone therapy
 - Higher incidence of PCOS-like changes of the ovaries after exposure to testosterone, BUT...
 - Insulin sensitivity with PCOS, but this NOT seen in indiv treated with T (Cupisti 2010)

Preventive Health for Transfeminine Individuals



Health Maintenance in Transfeminine Individuals

- Pelvic exam/PAP smear
 - Pelvic exam to assess surgical site, and then follow ups for general genital issues or concerns
 - Pap only if the penis has been used to create a neo-cervix

Health Maintenance in Transfeminine Individuals

- The pH and microflora of the neo-vagina
 - Differs significantly from a natal female vagina
 - Lack of lactobacilli
 - Alkaline environment – lower estrogen in vaginal tissue → no up-regulation of proton pumps and lack of protective mucus production
 - Mixed microflora of aerobe and anaerobe species – typically found on the skin, intestine, or bacterial vaginosis
 - ** We know more complex BV – specifically presence of anaerobes – are difficult to treat
 - Consider treatment with clindamycin or amoxicillin
 - NO candida seen
 - No proper recommendation on optimal vaginal hygiene, but some speculate best to douche with warm water alone, if anything at all

Health Maintenance in Transfeminine Individuals

■ Prolactinoma

- 5 cases of prolactinomas have been found in MTF patients – 10mo, 14, 18, 20, and 30 years after initiation of hormone tx
 - So, unclear when and how long to monitor, since this is quite rare
- Some suggestion that an excessive first year increase in serum prolactin concentration may identify patients at risk for autonomous prolactin secretion later in life, n=3
 - Increased estrogen sensitivity in these patients
 - Leading to higher risk of developing autonomous prolactin secretion later in life (downregulation of dopamine receptors by estrogen leading to decreased inhibition of prolactin) (Bunck 2009, Cunha 2015)

Health Maintenance in Transfeminine Individuals

- Mammography and CBE
 - 1 (2 probable) reported cases of breast cancer in MTF individuals according to Dutch cohort (Gooren 2013)
 - 3 cases documented through the VHA in the US (Brown 2014)
 - Degree and duration of estrogen exposure
 - WHI: Progestin, with estrogen, increases risk of breast cancer
 - NO increase in incidence of malignancy over the general population, BUT the VHA study showed the detection was late and outcomes poorer for MtF
- *Recommendations: Patients over age 50 who have been on feminizing endocrine agents over 5 years; 2yr intervals

Health Maintenance in Transfeminine Individuals

- Prostate exam
 - As per natal men
 - Androgen antagonists may falsely decrease serum PSA levels
 - Feminizing hormonal therapy appears to decrease prostate volume and the risk of prostate cancer but to an unknown degree – effectively receiving androgen deprivation therapy!
 - In natal men, orchiectomy before age 40 appears to prevent prostate CA
 - 3 reported cases of prostate cancer in the Dutch cohort (2011). All three had orchiectomies and started hormone therapy AFTER age 40.

Health Maintenance in Transfeminine Individuals

- Bone Density Screening
 - Somewhat mixed results – Increase in osteopenia and osteoporosis compared to natal men, but generally preserved compared to natal women
 - Observed lower BMD in MTFs PRIOR to start of estrogen therapy
 - Start of androgen-blockers for ~1yr, before prescribing estrogen therapy
 - Decreased levels of bone turnover markers in setting of hormone therapy
- **Recommendations: Consider if over age 65 and/or off estrogen therapy for longer than 5 years**
 - Not routinely indicated prior to orchiectomy

Health Maintenance in Transfeminine Individuals

- Cardiovascular Disease
 - Higher cardiovascular mortality rate in trans women than the general population
 - Maj Factors – Estrogen types (ethinyl estradiol), cyproterone acetate, serum hormone levels, smoking status, obesity, baseline CV health
 - Exogenous estrogen can increase blood pressure
 - Spironolactone can lower BP
 - Increased HDL and decreased LDL cholesterol, but increased triglycerides

Health Maintenance in Transfeminine Individuals

- Cardiovascular Risk – Gooren, et al (2011), 966 MTF patients
 - Longer follow up than previously, revealing increased mortality rate of CVD
 - Increased weight, visceral fat, impaired glucose sensitivity, small increase in BP; increased HDL, decreased LDL
 - Ethinyl estradiol assoc w/3-fold increased risk of CV death
- Recommendations:
 - Avoid prescribing ethinyl estradiol at any point
 - Consider transdermal or low-dose oral estradiol in patients >40yrs old
 - Lifestyle behaviors – healthy diet, smoking cessation, exercise – can reduce cardiovascular risk!

Health Maintenance in Transfeminine Individuals

- Venous thromboembolism
 - In the Dutch cohorts, rates of 2.6% annually in first year, falling to 0.4% thereafter, with 1-2% risk of death from PE
 - BUT all but 1 of these patients was using oral ethinyl estradiol
 - Similar to CVD rates seen on controlled natal females using OCPs with high dose (50mcg) ethinyl estradiol
 - Belgian cohorts also showed increased incidence of VT (6-8%), but ONLY in patients treated with ethinyl estradiol

Health Maintenance in Transfeminine Individuals

- Diabetes
 - Higher prevalence of DM, but almost all diagnoses made BEFORE starting estrogen therapy in trans female

Health Maintenance: Health Care Measures

- Sex-based health calculators — Which way do I go?!
Natal sex vs affirmed gender
 - Exposure to endogenous vs exogenous hormones
 - Age of initiating gender-affirming hormones
 - Guidance may change as individuals begin to access puberty blocking medications and cross-sex hormones therapy

Questions?



Resources

- **UCSF Center of Excellence for Transgender Health Guidelines**
 - <http://transhealth.ucsf.edu/trans?page=lib-00-00>
- **Tom Waddell Health Center**
 - <https://www.sfdph.org/dph/comupg/oservices/medSvs/hlthCtrs/TransGendprotocols122006.pdf>
 - Vancouver Coastal Health Guidelines
 - <http://transhealth.vch.ca/resources/careguidelines.html>
- **The Endocrine Society Guidelines (First published September, 2009)**
 - <http://www.endo-society.org/guidelines/final/upload/Endocrine-Treatment-of-Transsexual-Persons.pdf>
- **Transline**
 - <http://project-health.org/transline/>
- **Surgical options:**
 - <http://www.surgery.ubc.ca/presentarch/SRS.pdf>
 - <http://ai.eecs.umich.edu/people/conway/TS/SRS.html#anchor66325>
 - <http://ai.eecs.umich.edu/~mirror/FFS/LynnsFFS.html>
 - <http://ai.eecs.umich.edu/people/conway/TSsuccesses/TSsuccesses.html>
 - <http://www.thetransitionalmale.com/>

