Cardiovascular Health and Transgender Patients: Considerations for Primary Care Practitioners

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Learning Objectives

At the conclusion of this activity, participants will be able to:

1. Outline culturally competent terminology for transgender patients to increase compassionate care.

2. Discuss the prevalence and legislation in support of integrating health care services for the transgender community into the Veterans Health Administration (VHA) system of care.

3. Illustrate cardiovascular and other physiological consequences and risks of hormone treatment for the transgender patient.

4. Identify the scientific evidence supporting current treatment options available to improve cardiovascular outcomes in transgender patients.

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0.4-0.5% of the adults in the United States are transgender (Zhang et al., 2020).

Transgender individuals face significant difficulties in obtaining high quality and compassionate medical care. The main reason: lack of knowledge by the primary care physicians.

- Sex assignment: at birth, based on external appearance of genitalia.
- Gender Identity: Person’s internal sense of self and how they fit in the world.
- Sexual Orientation: only describes sexual attraction.
- Gender Nonconformity: refers to the extent to which a person’s gender identity, role or expression differs from the cultural norms.
- Gender Dysphoria: distress experienced by individual when one’s gender identity and sex are not completely congruent.
Introduction

- Transgender: a person whose gender identity differs from the sex that was assigned at birth
  - Transgender man or transman or Female-to-Male (FTM)
  - Transgender woman, transwoman, Male-to-Female (MTF)
- Transsexual: a medical term for an individual who sought medical interventions to transition
- Non-binary or Genderqueer: a spectrum of gender identities, outside the gender binary
- Gender-neutral pronouns: singular usage of “they, their, them” is most common. ASK YOUR PATIENT.
Introduction

- Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline
- Guidelines for the Primary and Gender-Affirming Care of Transgender and Gender Nonbinary People
- The Standards of Care for the Health of Transsexual, Transgender, and Gender Nonconforming People, (WPATH-SOC7)
**Introduction: ICD-10 criteria**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The desire to live and be accepted as a member of the opposite sex, usually accompanied by the wish to make his and her body as congruent as possible with the preferred sex through surgery and hormone treatment</td>
</tr>
<tr>
<td>2.</td>
<td>The transsexual identity has been present persistently for at least 2 years</td>
</tr>
<tr>
<td>3.</td>
<td>The disorder is not a symptom of another mental disorder, genetic, disorder of sex development or chromosomal abnormality</td>
</tr>
</tbody>
</table>

ICD-10 Criteria for Transsexualism, 2016
VHA and Transgender

- In 2011, VHA established a national policy on “Trans Vets”
  - Care without discrimination, consistent with self-identified gender
- In 2013, VHA re-issued a directive, “Healthcare Equity and Health Disparities” → high priority research by Health Services Research and Development Service (HSR &D) 2017
- Pharmacy Benefit Management (PBM) established treatment guideline in 2012
- John Blosnich and colleagues identified 5,135 veterans with International Classification of Disorders (ICD) codes for Gender Disorder (GD)
- Again in 2017, 7,944 veterans with GD diagnosis in VA
Treatments

- Cross-Sex Hormone Therapy (CSHT)
  - MTF: estrogen and anti-androgen, gonadotropin-releasing hormone (GNRH) agonist
  - FTM: Testosterone
- Surgery
  - Castration
  - Masculinization or feminization surgery
Consequences of CSHT

- There is not a lot of good evidence out there.
- Inferences are made mostly based on either observational studies with small subjects or hormone studies in menopausal women or hypogonadal male/testosterone studies.
- What is the evidence on CSHT and cardiovascular health (CV health)?
  - Increased in mortality transmale
  - No change transfemale
- Where does the evidence come from? Anything from Northern America?
## Possible Cardiovascular Effect of Hormones

<table>
<thead>
<tr>
<th>Event</th>
<th>Transwoman</th>
<th>Transman</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI (Myocardial Infarction)</td>
<td>increased?</td>
<td>not known</td>
</tr>
<tr>
<td>CVA (Cerebrovascular Accident)</td>
<td>increased?</td>
<td>no increase</td>
</tr>
<tr>
<td>DVT (Deep vein thrombosis)</td>
<td>increased</td>
<td>no increase</td>
</tr>
</tbody>
</table>

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### Possible Cardiovascular Effect of Hormones

<table>
<thead>
<tr>
<th></th>
<th>Transwoman</th>
<th>Transman</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SBP</strong> (systolic blood pressure)</td>
<td>increase</td>
<td>increase</td>
</tr>
<tr>
<td><strong>DBP</strong> (Diastolic Blood Pressure)</td>
<td>no change</td>
<td>increase</td>
</tr>
<tr>
<td><strong>HCT/Hg</strong> (Hematocrit/Hemoglobin)</td>
<td>?</td>
<td>increased</td>
</tr>
<tr>
<td><strong>Total Cholesterol</strong></td>
<td>?</td>
<td>No change</td>
</tr>
<tr>
<td><strong>LDL</strong> (Low-density Lipoproteins)</td>
<td>?</td>
<td>increase</td>
</tr>
<tr>
<td><strong>HDL</strong> (High Density Lipoproteins)</td>
<td>?</td>
<td>decrease</td>
</tr>
<tr>
<td><strong>TG</strong> (Triglyceride)</td>
<td>no change</td>
<td>increase</td>
</tr>
</tbody>
</table>

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Evidence

Cross-sex Hormones and Acute Cardiovascular Events in Transgender Persons A Cohort Study (Getahun and colleagues)

- Published summer of 2018 in the Annals of Internal Medicine
- A Retrospective cohort of electronic medical records (EMR) from two Kaiser facilities
- 2,842 transfeminine and 2,118 transmasculine (four vs 3.6 years f/u) matched to cisgender (1:10)
- Incidence of ischemic stroke was significantly increased in patients with more than six years of hormone therapy (HT). The overall incidence of myocardial infarction (MI) was the same in the transgender cohort compared to the cis-gender cohort.
Evidence

Cardiovascular Disease Risk Factors and Myocardial Infarction in the Transgender Population.

- *Circulation Cardiovascular Quality and Outcomes*. April 2019

- Alzahrani and Colleagues

- They looked at the behavioral risk factor surveillance system data from 2014-2017

- They found that the rate of MI increased in trans-male compared to both cisgender men and women, while trans-female had higher risk of MI compared to cis-female but no difference with cis-male.

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What to do Then?

- Life style modification is the key as per American College of Cardiology (ACC)/ American Heart Association (AHA) recommendations
- Identifying the risk factors and aggressively treating them according to the guidelines
- How to use the Atherosclerotic Cardiovascular Disease (ASCVD) risk calculator?
Key Takeaways

- Increasing number of transgender patients seeking mainstay health care
- Improved competency in terminology
- Familiarity with treatment options
- Level of evidence is available for the recommendations
- Review of VA policy


https://doi.org/10.1210/jc.2017-01658


https://safe.menlosecurity.com/doc/docview/viewer/docN70E75C223D090e3cf428b41568e0135adca336ce1f18012b86ed52d5692a7d9ebc81cb811414
References


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   b. If you have not previously used the CEPO CMS click register to create a new account.
3. Follow the onscreen prompts to complete the post-activity assessments:
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   b. Complete the Evaluation
   c. Take the Posttest
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