Editorial

# Cardiovascular Care and Research in Transgender: Time to Transform

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Cardiovascular disease (CVD) affects everyone, including the transgender. Unfortunately, a significant disparity exists in the care of transgender compared to the cisgender population. Similar lacunae exist in medical research too. The majority of the published data on the transgender population focuses on their sexual and mental health, with hardly any data being published on their cardiovascular health, resulting in a lack of evidence to guide prevention and treatment of CVD in the transgender. One of the major causes of this disparity is the societal paradigm where gender is viewed as a binary variable. Of late, there has been a transformation in the societal understanding of gender, where gender is being acknowledged as a spectrum.

Multiple barriers prevent the transgender population (trans people) to have better access to the portals of health care. Many trans people avoid seeking medical care because of the lack of health insurance or prior negative health encounters where they were ill-treated. Transgender people are also reluctant to reveal their bodies, as they are unable to find a culturally competent health care provider, especially if they have not fully transitioned with hormone or surgical treatments. Other barriers include – affordability issues, denial of insurance coverage for transgender-specific treatments (e.g. – transition-related surgery and hormonal therapy), etc.

Medical care and research are plagued with many challenges that prevent the provision of appropriate medical care to the transgender. All the CVD risk calculators have gendered (male/female) algorithms and are not patient affirming. The effect of genital surgery on CVD risk is also not included in these algorithms. The laboratory reference ranges are also gendered (e.g. – lipid level cut-offs). The management of interactions of hormones in a transgender milieu and

their impact on CVD risk is also not outlined in the guidelines/algorithms. These factors make it harder for the physician to practice evidence-based medicine in trans people. Another major issue is the lack of formal education and communication on transgender health care issues in medical schools and residency programs. As far as medical research is concerned, much of the available data on the transgender population is based on smaller studies, over the short term, conducted on the younger transgender population and the reported results have questionable clinical significance **(**1**)**. The larger studies conducted in the past were mostly retrospective and did not adjust for numerous coexisting risk factors in trans people **(**1**)**. The recently published study by Alzahrani et al is novel in this regard, as it has categorized transgender as a separate gender group **(**2**)**. More such studies need to be conducted across the globe at a larger scale.

What does the available literature say about the present scenario of the cardiovascular health and disease of the transgender? The data from previous studies have revealed that the major social determinants of CVD risk are highly prevalent in the transgender population. Higher rates of unemployment, homelessness, low socio-economic status, psychosocial stress, depression, and suicidal tendencies portend a higher CVD risk among the transgender population **(**1, 2**)**.

The novel study conducted by Alzahrani et al **(**2**)** using Behavioral Risk Factor Surveillance System data categorizing transgender as a separate gender group, has found that transgender males and females have higher rates of prior myocardial infarction than cisgender individuals (except when comparing transgender women versus cisgender men). This relationship was particularly striking (≈5-fold higher odds) when transgender men and cisgender women were compared. Another study by Streed et al that cross-sex hormone therapy in transgender men have been associated with the potential of elevated blood pressure, insulin resistance, and dyslipidemia, and with an increased risk for thromboembolism and MI for transgender women **(**3**)**.

Although gender-affirming medical interventions have been associated with variable CVD risk, they do confer some benefits for the transgender **(**1**)**. They decrease the rates of depression and anxiety along with an improvement in overall psychological function. It decreases the high suicidal tendency present before gender transition. Stopping long term hormone therapy after gonadectomy or long-term use can result in loss of bone density and decreased sense of wellbeing. Any analysis of the possible negative effects of hormone therapy on CVD should take into consideration the significant (confounding) benefits of hormone therapy on psychosocial determinants of health resulting in healthier lifestyle choices.

There are many ways forward to ensure better access to trans people to cardiovascular care and promote their inclusion in medical research to generate a better evidence base for appropriate medical care. Medical care practitioners should encourage the usage of *patient affirming* rather than *gender-affirming* medical records in their medical care facility. Adequate information needs to be provided to the transgender people of any age with or without existing CVD, to make informed decisions about the long-term usage and implications of gender-affirming hormones.

Inclusion of transgender health topics as part of the medical school curriculum to improve student competency in transgender care can go a long way in ensuring better transgender care in the years to come. Educational reforms at the university/institutional level for faculty development in transgender health and the creation of gender-affirming, multidisciplinary clinics for transgender patients will ensure better outreach and redressal of various health issues and associated risk factors prevalent among the trans people. Devising of nonbinary gender-based calculators (inclusive of trans people) for calculation of the risk of CVD will ensure better treatment and cardiovascular outcomes among the trans people. Special issues need to be released periodically by the major health associations/organizations stating the guidelines for the management of various cardiovascular diseases in the trans people (akin to pregnancy and geriatric guidelines). As a clinician, each one of us should recognize these neglected strata of our society, by acknowledging that gender is non-binary and conduct medical research accordingly, to ensure health equity and a better tomorrow for the transgender health.

## References

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