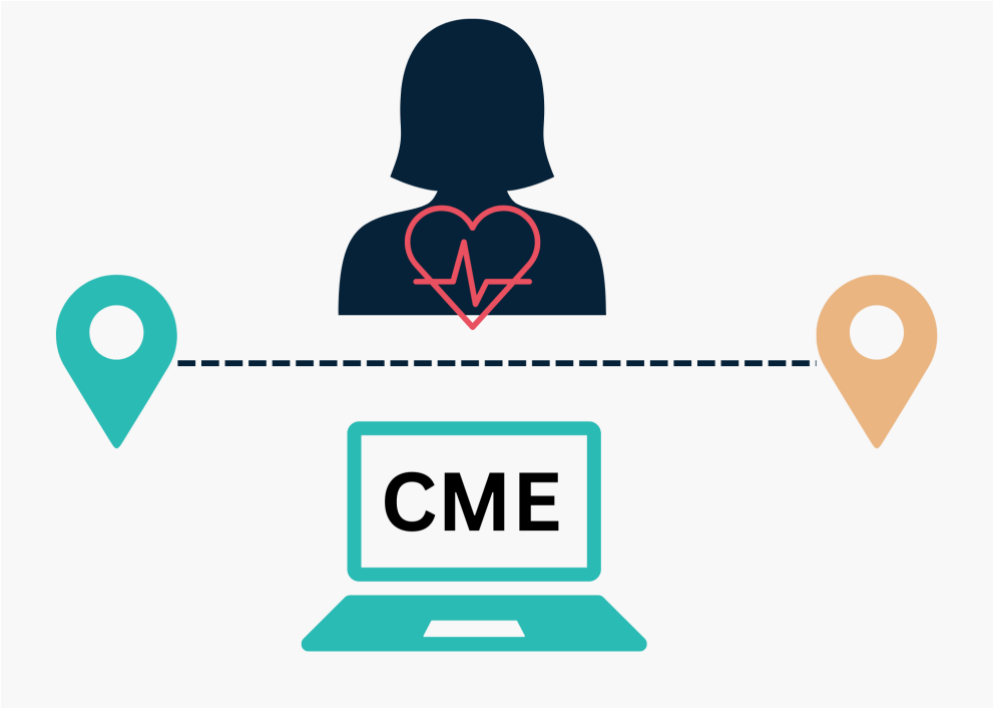
Bridging Gender Gaps in Cardiovascular Care through Online CME



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Addressing the disparities in cardiovascular health between men and women requires a multifaceted approach, encompassing research, updated clinical guidelines, and policy changes. Among these, online continuing medical education (CME) is uniquely positioned to provide widespread access to updated information that could influence clinical practices and improve patient outcomes. This white paper assesses an online CME activity focused on the diagnosis and treatment of heart failure in women as a case study. The outcomes illustrate how online CME can enhance the knowledge and competence of healthcare providers, leading to better patient outcomes and more equitable care for women with cardiovascular disease.

1. Introduction

Disparities in the diagnosis, treatment, and outcomes of cardiovascular disease between men and women have persisted despite increasing recognition and awareness.[1,2] These inequalities span all stages of science and health, from basic research and clinical trial participation to clinical practice and patient care.[2] Across various cardiovascular diseases and conditions, women tend to receive diagnoses later, have their symptoms more often confused with other diseases, face higher chances of being undertreated and receiving incorrect treatments, and experience worse short- and long-term outcomes regarding morbidity, hospitalization, and mortality.[1–3]

This multifactorial problem requires solutions from different stakeholders, including researchers, policymakers, and advocacy groups.[2] Among these, healthcare professionals who treat cardiovascular patients daily can play a key role in bridging the gaps in knowledge and care, leading to better outcomes.[4] By offering diverse activities that cater to different learning styles, online CME is uniquely positioned to provide the education healthcare providers need to understand the factors contributing to these disparities and effectively address them.[1] This paper explores the benefits of online CME through a real-life case study focused on the diagnosis and treatment of heart failure in women.

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2. The Urgent Need to Bridge Gender Gaps in Cardiovascular Disease Management

Cardiovascular disease is the leading cause of death in the United States, accounting for approximately one in every four deaths, and it remains one of the leading causes of death globally.[5] It encompasses a range of conditions, including coronary artery disease, hypertension, stroke, and heart failure, which altogether affect over 100 million American adults[5]. Even though cardiovascular disease affects both men and women, the incidence and impact of these conditions are increasingly more pronounced in women.[6] For instance, nearly 44% of women over the age of 20 in the United States have some form of cardiovascular disease.[5]

Differences in risk factors, presentation, and outcomes exist between men and women[5,7]. Women often exhibit different symptoms than men, which increases the chances of misdiagnosis and delayed treatment because most clinical guidelines are based on male symptomatology.[2,3,6,8] For instance, women are 50% more likely than men to be initially misdiagnosed following a heart attack. They are also less likely to receive timely and appropriate interventions and evidence-based treatments.[2,9]

The problem affects all areas of science and health, with most basic research conducted on male models and women being underrepresented in cardiovascular clinical trials, where they comprise

less than 30% of participants. [2,10–12] These disparities result in worse outcomes for women, including higher morbidity, increased hospitalizations, and greater mortality rates.[2,6,9] Addressing these gaps is critical to improving the quality of life and health outcomes for women with cardiovascular disease.

> *Women are often misdiagnosed and more likely to receive suboptimal treatment, resulting in worse outcomes than men.*

3. Uncovering the Layers of Gender Disparities in Cardiovascular Care

Many factors contribute to the disparities in the quality of cardiovascular care between men and women, including the following:

- Biological and physiological differences, such as hormonal influences, heart structure differences, and symptom variations, lead to different presentations of cardiovascular disease between men and women.[2]
- Most basic research has relied on male models, meaning critical data on female's cardiovascular health are often overlooked.[13]
- Women are underrepresented in cardiac disease clinical trials, which widens the knowledge gap between male- and female-specific cardiovascular health data.[2,3,11]
- Clinical guidelines often do not represent the specific needs of female patients, as they are based on male-predominant research.[2]
- Lack of awareness and education among healthcare providers regarding gender differences in cardiovascular disease.[14]
- Differences in healthcare access and utilization, with women potentially having less access to or less frequent use of healthcare services.[15]
- Implicit gender biases in healthcare that affect treatment decisions and quality of care.[2]

Even though the problem is recognized, and efforts have been made to ensure women receive more personalized care, disparities remain. The consistently worse outcomes experienced by women with cardiovascular disease underscore the importance of interventions to equalize care.[3] While increasing female representation in research and clinical trials, developing sex-specific guidelines, and implementing policy changes are essential, comprehensive education of healthcare professionals is pivotal to turn these efforts into better patient outcomes.[2,4]

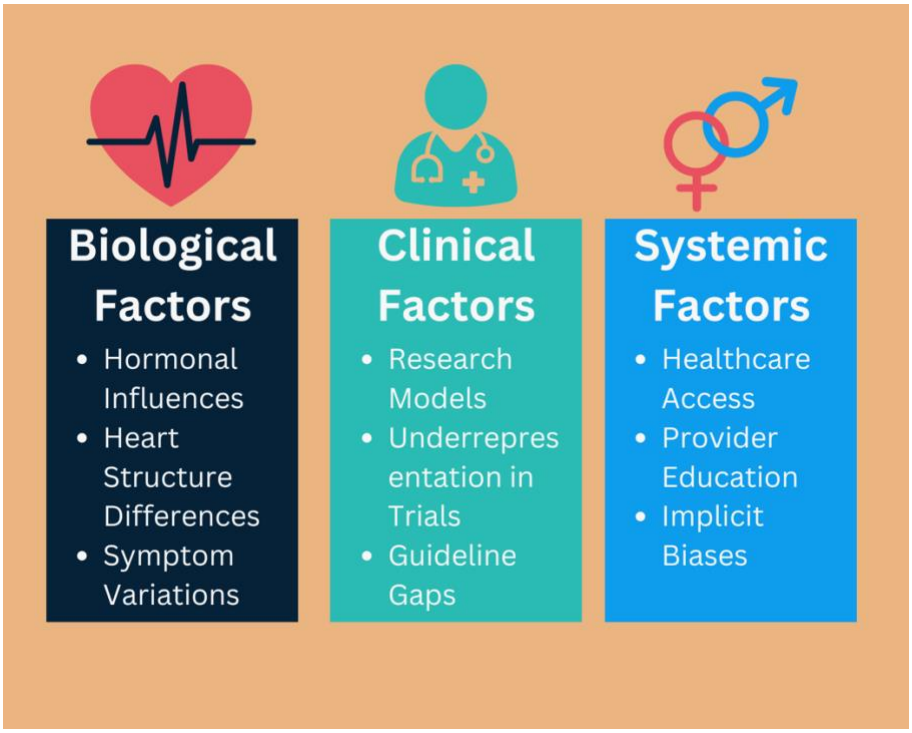

Figure 1: Factors Contributing to Gender Disparities in Cardiovascular Healthcare

4. The Ceiling of Conventional Medical Education

Various initiatives to educate healthcare professionals on gender and sex disparities in cardiovascular health have emerged in recent years.[4,16] These include modules within medical school and residency curricula, specialized fellowships, and in-person training programs.[4,16,17]

These comprehensive approaches offer in-depth knowledge and hands-on experience but can be time-consuming, requiring significant time commitments, and often fall short in rapidly translating relevant research into effective and applicable education.[18] They also lack accessibility for professionals at different career stages, locations, and lifestyles, all of whom could benefit from education on reducing the cardiovascular care gap between men and women.[4,18]

Online CME activities are well-positioned to address these shortfalls by providing flexible, accessible, and time-efficient learning options.[18,19] This flexibility is crucial for clinicians in remote areas or those with time and lifestyle constraints that prevent easy access to in-person training. Additionally, online CME can be updated regularly to reflect the latest research and guidelines, ensuring that clinicians receive the most current information.[18,20]

5. Paving the Way to Improved Outcomes with Online CME

The role of online CME in helping healthcare professionals incorporate evidence-based medicine into clinical practice is well-established.[18–21] However, data on the impact that online CME activities can have in closing disparity gaps, such as those in cardiovascular health, are lacking.

To explore this impact, PlatformQ Health, LLC analyzed the outcomes of an online CME activity aimed at addressing disparities between men and women in heart failure care.[1] The results of the analysis are presented as a case study.

The activity, called Heart Failure: Exploring Gender Differences in its Presentation and Management was developed in collaboration with the American Society of Preventative Cardiology (ASPC) and Global Education Group, and was available between October 2020 and October 2021.The target audience were health care professionals in cardiology, nephrology, primary care, and internal medicine.[1]

Participants in this activity had access to two 1-hour CME sessions that were initially broadcast live and remained available for 12 months to accommodate schedule flexibility. To support self-paced learning and different learning styles, participants had access to downloadable educational slides, panel discussions, live polling, and live Q&A sessions.[1]

The researchers hypothesized that this online activity would effectively engage healthcare providers and enhance their ability to recognize and manage heart failure in women, correctly prescribe recently approved treatment, and understand recent clinical trial efficacy and safety data. Consequently, this would help improve outcomes for female patients and diminish the disparity gap in heart failure care.[1]

Online CME programs can provide flexible, accessible, and up-to-date education to healthcare providers, addressing learning style preferences and improving competence.

6. Online CME Effectively Engages and Closes Care Gaps

Within the first year of the program, 1,482 healthcare professionals participated, earning a total of 730.75 continuing education (CE) credits. Participants showed active engagement by downloading slides 234 times and responding to 235 polling questions.[1] These data showed that the activity was far reaching and actively engaged participants.

The program outcomes suggest that engaging in the activities was beneficial in reducing knowledge and competency gaps. Specifically, 65% of learners reported that the activities positively impacted patient experiences and outcomes, while 68% indicated that it positively influenced their clinical practice.[1]

Specific changes in knowledge and competence after participating in the program:

- **Improved Competence in Treatment Options:**
    - There was a 31% increase in competence regarding treatment options for comorbid Heart Failure with Preserved Ejection Fraction (HFpEF), obesity, and diabetes immediately after the program, with a 28% increase sustained after two months.

- **Enhanced Knowledge of Female Risk Factors:**
    - Knowledge of female risk factors for HFpEF increased by 39% post-test and remained 17% higher than the pre-test level after two months.
- **Increased Understanding of Key Clinical Trial Results:**
    - Knowledge of the VICTORIA trial results saw a 40% increase immediately after the program and a 9% increase after two months.[1]

The high engagement and positive feedback from participants underscore the accessibility of online CME activities, and the improvements in knowledge and practice gaps highlight its effectiveness. Altogether these results suggest that online CME activities are engaging and effective, making them suitable alternative for healthcare professionals dedicated to delivering more equitable and effective treatment for all patients.[1]

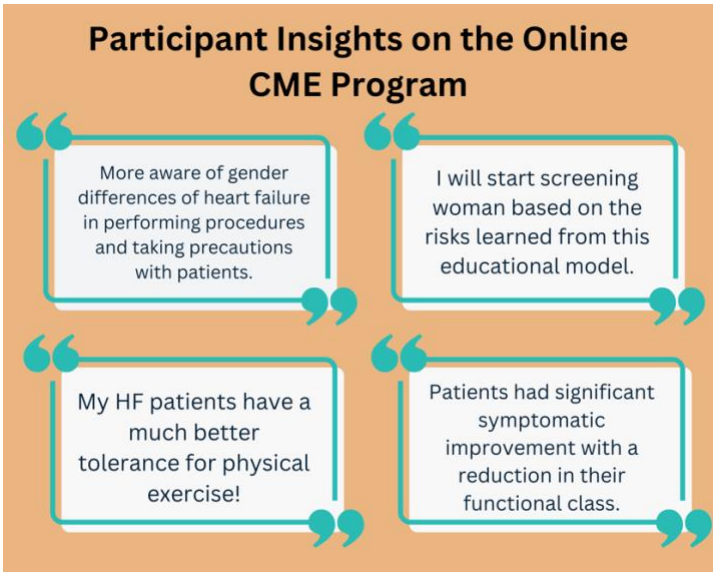

Figure 2: Participant Feedback on the Benefits of Online CME for Women's Cardiovascular Care[1]

7. Conclusion

Despite the recognition of sex and gender disparities in cardiovascular health, significant gaps still exist. Women are more frequently misdiagnosed, receive suboptimal treatment, and face worse outcomes. This white paper highlights the crucial role of online CME activities in providing accessible, up-to-date education on gender-specific cardiovascular care. Healthcare professionals treating women at risk of or with cardiovascular disease would benefit from these activities, leading to increased knowledge and improved patient outcomes. Future efforts should focus on increasing female participation in cardiovascular clinical trials, refining clinical guidelines, and enhancing educational initiatives to ensure equitable care for women.

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