

Addressing Racial and Gender Disparities in Ventricular Arrhythmia Management

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INTRODUCTION

We present a focused commentary on the recent study by Yoder M. et al. groundbreaking investigation into racial and gender disparities in Ventricular Arrhythmia (VA) management. Cardiovascular diseases remain a global health concern and Yoder M. et al.'s study highlights concerning disparities in the management of ventricular fibrillation and ventricular tachycardia, particularly among black individuals and women. This commentary aims to underscore key findings and their broader implications in the context of the existing literature [1].

DESCRIPTION

Black and female are more likely to be the victims of the socio-ecological risk factors of heart diseases, cardiovascular diseases overall, ventricular arrhythmia, Delayed Prescription for Antiarrhythmics Drugs (ADD), delayed Implantable Cardiac Defibrillator (ICD)/Cardiac Resynchronization Therapy (CRT-D) implantations, ICD re-implantations, periprocedural complications (for ICD/CRT implants, EPS, Catheter ablations, LAOO), out of hospital mortality. A very recent study showed that blacks, ethnic and hispanic group are more likely to have a low "risk-stratified survival rate" for out of hospital cardiac arrest, after adjusting for EMS-related variables, underscoring persistent racial and ethnic disparities in cardiac arrest outcomes and highlighting the need for further investigation [2].

Historically, clinical investigations in arrhythmia have predominantly centered on ethnic groups of Western European descent, with a significant focus on Atrial Fibrillation (AF) research which has extensively detailed racial and ethnic differences in cardiac arrhythmia managements. Most recent studies focusing on ventricular arrhythmia have revealed a complex interplay of genetics, environmental, socio-cultural and socio-economic factors. The identified disparities transcend conventional risk factors, urging an intricate understanding of cardiovascular health inequities. The study provides a unique perspective to the extensive literature AF, emphasizing the need

for nuanced insights into genetic, environmental and socio-economic factors impacting VA managements.

The "AF racial paradox" was described in a landmark AF trial MESA, the findings are echoed in ventricular arrhythmias, necessitating us as healthcare unit to employ a global perspective as we consider diverse patient populations to mitigate these disparities. The understandings from MESA can be leveraged to delve more into the hidden predictors of ventricular arrhythmias, the intricate relationship between genetics, socio-economic factors and geo-political can be further explored to curb these unacceptable rates on inequities [3].

Additionally, Sudden Cardiac Arrest (SCA) is a feared outcome of malignant ventricular arrhythmias; ICDs and CRT-D are well known primary and secondary prevention strategies if accessible, indicated and no obvious contraindication. However, studies which investigated the utilization of ICDs across all racial, ethnic and gender group showed that these groups to have significantly worse ICD-utilization outcomes. This group was also less likely to receive an ICD at all, at the appropriate timing despite comparable overall mortality benefit across all groups. Not surprisingly, patient who are black and identifies as female are even at a higher risk compared to their white and male counterparts. The study's findings on delayed ICD implantation, peri-procedural complications and poorer clinical outcomes among black and female patients reinforce the urgency for targeted interventions. Action plans involving key stakeholders, from health leaders to research institutions, are pivotal. Inclusivity across racial, gender and ethnic groups should be integral to these strategies. It is also important to highlight the economic implications of the prevalence of these inequities. The exorbitant trillions of dollars lost and death attributed to racial and ethnic disparities underscores the urgent need for intentional, innovative and collaborative strategies. Beyond clinical outcomes, the economic burden emphasizes the imperative of addressing disparities in ventricular arrhythmia management [4].

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Received: 30-Nov-2023, Manuscript No. JCEC-23-28258; **Editor assigned:** 04-Dec-2023, PreQC No. JCEC-23-28258 (PQ); **Reviewed:** 19-Dec-2023, QC No. JCEC-23-28258; **Revised:** 01-Jul-2025, Manuscript No. JCEC-23-28258 (R); **Published:** 07-Jul-2025, DOI: 10.35248/2155-9880.25.16.944

Citation: Alaka A, Liang JJ (2025) Addressing Racial and Gender Disparities in Ventricular Arrhythmia Management. J Clin Exp Cardiol. 16:944.

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We all as healthcare provider must embody our roles as equity scholars and advocates for our patients. We must embrace cultural humility, acknowledging the multiethnic and multiracial landscape of patient populations. To bridge this gap in health inequities, action plans involving key stake holders must continue to be formulated [5]. The solutions will require combining efforts with key community leaders, members and organizations. Beyond that individuals who are more proximal to key decision making like cardiology related profession organization (e.g., ACC: American College of Cardiology; AHA: American Heart Association; HRS: Heart Rhythm Society; AMA: American Medical Association; NMA: National Medical Association; GLOBE: Globalization and Health Equity (HRS), ACGME, ACGME stands for the Accreditation Council for Graduate Medical Education). Academic and research institutions should continue to leverage the power of collaborations, advocacy, scholarship and creating healthcare leadership programs that will be inclusive and encourage policies to 1. Increase representation and participation of these inequitably affected groups in medicine, cardiology and most so importantly (cardiac Electrophysiology (EP) careers). Blacks and females are most the underrepresented in EP, strategic effort is need, a pipeline program/initiative could be birthed with idea to collaborate and get direct mentorship from GLOBE (HRS) leaders and faculties severely lacking in representations from these group) 2. Create and promote initiatives that supports and inclusive to individuals from the groups most at risk, interested in health equity, research and pharmaco-equity. All effort must also encourage and include community level initiative extending to (worship and meditation centers, athletic and sports organizations), athletes, first responders, research institutions, medical education accreditation bodies (like ACGME), medical device companies, medical societies (ACP: American College of Physicians) and others stake holders should re-consider more strongly the racial, ethnic gender cultural and socioeconomic factors driving these inequities in VA management and cardiac arrhythmia at large [6].

Despite having the most advanced and sophisticated health care system, clinical outcomes of various diseases, including all facets of cardiovascular diseases, differ across various racial, ethnic and gender groups in the US. Despite the luxury of access to the rarities of medical resources and an exceptional cutting-edge

healthcare infrastructure and the most advanced preventive/treatment modalities there is glaring and outrageous race and gender related health and healthcare inequity at play in our healthcare systems, these findings are not new and warrants intentional dedication and efforts to immediately mitigate and their resulting economic burdens [7].

CONCLUSION

In conclusion, this contribution serves as a clarion call for heightened awareness and targeted interventions in ventricular arrhythmia management. Acknowledging and addressing racial and gender disparities are imperative steps towards achieving equitable healthcare outcomes. This commentary seeks to amplify the significance of these findings and inspire further research and inform us as healthcare professionals encourage action in the pursuit of eliminating health inequity.

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