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REVIEW

Addressing Health Disparities in Violence

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Abstract

Purpose of Review Healthcare disparities exist throughout the medical field and are highly pronounced concerning violence in the Black community. Addressing it involves not just an understanding of the problem, but the ability to enact widespread interventions at multiple levels, particularly the systemic level.

Recent Findings Historically, investigations into the drivers of firearm violence have been largely at the individual or interpersonal level, but recent research has centered social determinants of health and structural racism as potential drivers of disparities in firearm violence. Understanding these potential contributors of these disparities allows for targeted solutions to combat violence and promote health equity.

Summary A full investigation into the drivers of disparities is the key to successful implementation of public health strategies that promote health equity.

Keywords Healthcare disparities · Social determinants of health · Structural racism · Social ecological model · Violence prevention

Health disparities are driven by a number of factors including limited access to quality healthcare or poorer treatment of health issues that leads to increased risk, morbidity, or mortality in one group compared to others due to preventable and unjust causes. Disparities in health outcomes can be seen based on a number of categories including race, age, gender, preferred spoken language, country of origin, physical ability, sexual orientation, economic status, environmental exposures, and religion. Unfortunately, in the United States, violence-related health disparities are some of the largest and most persistent with young Black males from disadvantaged neighborhoods disproportionately suffering [1, 2••, 3•].

Violence, in all its forms, remains a public health crisis. Gun violence, in particular, continues to claim lives and impact the mind, body, and spirit of communities across the United States. According to the Centers for Disease Control and Prevention (CDC), the annual incidence of firearm deaths has exponentially increased over the past several years with over 48,000 fatalities in 2021 [4•]. Moreover, approximately 120,000 individuals are victims of non-fatal injuries. The sheer volume alone is alarming but when you consider that firearm homicide is 22.5 times higher among Black, non-Hispanic men and 3.6 times higher among Hispanic men compared to White men, the disparities are frightening [2••]. Males are also more than 6 times likely to die from gun violence than females [5]. Further, firearm fatalities are concentrated in metropolitan areas with a disproportionate burden in Southern states, which are often under-resourced and ill-equipped to adequately interrupt the cycle of violence [2••]. These highlighted racial, gender, and geographic disparities underscore the need to approach firearm violence reduction strategies with a public health and health equity lens [1].

Addressing violence as a public health problem requires a stepwise approach that starts with full understanding of the magnitude of the issue followed by understanding of (1) risk and protective factors that influence violence, (2)

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effective strategies that reduce the incidence of violence, and (3) widespread implementation of successful strategies to effect change on a large scale [6•]. Adding a health equity framework emphasizes the importance of identifying and addressing unjust barriers to health and wellbeing among those suffering from disparities.

Unfortunately, our understanding of violence, particularly firearm violence, is limited. Data on firearm violence was previously restricted, perhaps due to a misunderstanding of what has become known as the Dickey Amendment. Starting in 1992, the CDC's violence prevention division began researching and publishing data on how to decrease deaths from violence. The landmark 1993 Kellerman study published that the presence of a gun in the house increased risk of homicide [7]. This led to backlash against the CDC accusing them of being biased against guns. In 1997, US House Representative Jay Dickey lobbied for a federal ban restricting the CDC from allocating funds for research that advocated or promoted gun control which was named The Dickey Amendment. This amendment was supported by the National Rifle Association (NRA) and until recently, virtually no funding was allocated to research on the epidemiology of gun violence, nor its root causes. Not surprisingly, this public health issue has persisted with few evidence-based solutions. During this time, there was a strong reliance on surveillance systems like the National Violence Death Reporting System which by design only reports on deaths. Since non-fatal injuries outnumber deaths on an order of 3:1, a critical piece of the problem was left underexamined and thus not understood. Further, all too often, law enforcement data is relied upon to track trends and inform policies. This data is also incomplete. In a study by Mercer Kollar (2020), a significant proportion of violent injuries that were treated in a busy urban trauma center were not known to local law enforcement and vice versa [8]. This level of data missingness leads to inaccuracies and creates a misinformed narrative about what is truly happening. Unfortunately, this is the current foundation of data-sharing and collection practices. The Cardiff Model was developed in the United Kingdom (UK) to increase information sharing to local authorities about assaults seen in the hospital. It has since been validated and utilized in trauma systems in the United States [9]. Utilization of the Cardiff Model provides a framework for integrating information on violence occurrence trends in the community to help aid in resource allocation and the development and implementation of prevention strategies [10••] and is a promising practice to address the problem of missing data and an incomplete understanding of the problem.

There are now emerging funding opportunities to study violence and dive deeper into the drivers of disparities. Social determinants of health (i.e., access to material needs such as food and shelter, community context, social opportunities, and educational access and quality) [11], those non-medical variables that impact health, wellbeing, and growth of individuals, are increasingly evaluated as potentially modifiable risk factors of violence [12]. Racism, discrimination, isolation, community disenfranchisement, and socioeconomic distress are additional critical contributors to firearm violence that must be addressed for the promotion of health equity. Emerging research documents the impact of structural racism in the form of residential segregation, concentrated poverty, and limited access to education and employment opportunities on firearm violence disparities [13, 14]. For example, Black families are 12 times as likely to live in concentrated poverty compared to White families [15] and multi-generational poverty is over 16 times higher among Black adults compared to White adults [16]. These stark disparities in the experience of poverty are associated with disparities in violence. Disparities in family and youth violence disappear, are significantly attenuated, or even reversed after accounting for income and material factors [17, 18]. Further, the risk of experiencing youth violence is increased in areas of concentrated poverty, and the longer a family experiences financial insecurity, the greater the risk of youth violence [19].

There is also evidence suggesting that the historical racializing of spaces, through practices such as redlining, contributes to current increased rates of firearm violence by compounding multiple risk factors of firearm violence such as lack of home-ownership, limited green space, high crime rates, and high levels of police presence in one place [20••, 21–23]. Further, it may be that risk for violent injury increases with the experience of childhood adversity. In a mixed methods study of Black male firearm violence survivors, it was reported that victims experienced adversities such as youth incarceration, housing transition, and family separation and loss in childhood [24].

Along the causal pathway from incidence to outcomes, one must consider the impact of poor quality of care on health disparities after firearm injury. The literature is riddled with examples of poor care bestowed to violently injured patients, particularly individuals from racial minority groups or those without insurance or with low socioeconomic status, that results in worse clinical outcomes, shortened survival, and poor quality of life. Adequate treatment of pain is an illustrative example. A systematic review and meta-analysis by Lee et al. (25) revealed Black and Hispanic patients are less likely to receive analgesia for the management of acute pain in the emergency department [25]. Numerous studies corroborated this finding but did not unveil the etiology of this discriminatory and unjust practice. Aronowitz and colleagues offered insight through a mixed methods evaluation of factors that influence decision-making and pain medication administration by providers caring for injured Black patients [26]. They proposed three major influences of racial disparities in pain management of Black

patients: (1) healthcare provider characteristics; (2) racial myths about pain tolerance; and (3) assumed criminality of the patient [26]. Overcoming these biases truly requires individual, organizational, and systemic cultural shifts and trauma-informed care education.

Understanding the drivers of disparities allows for targeted solutions to combat violence. Following the social ecological model, a model that underscores the interplay between individual, interpersonal, community, institutional (e.g., hospitals, schools, criminal justice system), and societal factors, multilevel violence prevention strategies provide the most effective approach for mitigating violence [27••] (see Figs. 1 and 2). Risks at multiple levels are disproportionately experienced among communities of color; therefore, intervening at each level helps to promote health equity by reducing the unjust impact of racism on communities of color and thereby reduces the likelihood of negative outcomes such as violence

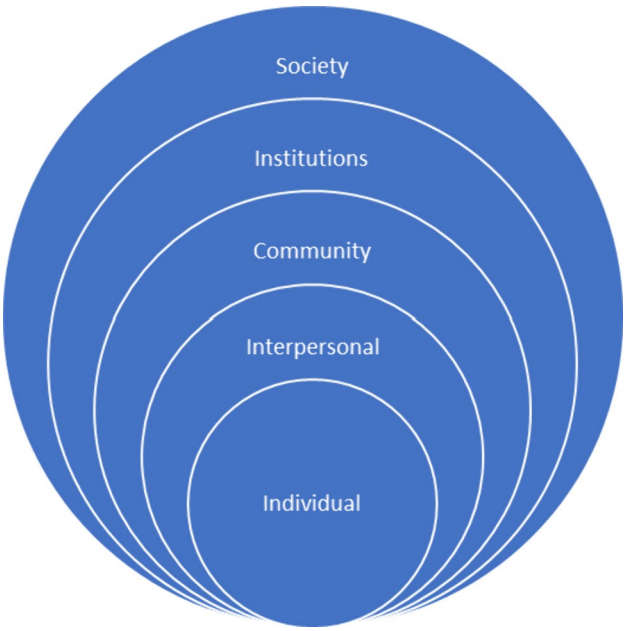

Fig. 1 Social ecological model of disparities

[28, 29]. Creating and expanding legislative policies that invest in communities and address structural barriers will help ensure resource allocation that reduces the likelihood violence disparities [30]. Developing culturally responsive and equitable organizational structures, policies, and procedures at every point across the continuum of care may help ensure individuals have the support they need that reduces the likelihood of revictimization. For example, individuals may be provided connection to mental health support, connection to community resources, access to aid in filling out relevant paperwork, and support in receiving appropriate medications prior to discharge after a firearm-related injury [31]. Widespread trauma-informed education and training for medical professionals working in the acute care setting may ensure that patients feel validated and supported in their experience [32]. Similarly, addressing implicit bias including increasing workforce diversity may help victims of violence feel more connection to their care providers [33]. Community-engagement, relationship building, and preventive-intervention programs that reduce risk factors for violence are also critical [34]. Finally, hospital-based violence intervention programs that address adverse childhood experiences while simultaneously leveraging protective childhood experiences and social supports may prove efficacious to improve mental health [35] and prevent violence [36].

Societal changes and public policy should prioritize addressing social determinants of health (SDOH) because these have been shown to be the root cause of disparities in trauma care [37]. SDOH are one of three priority areas for the Center for Disease Control's (CDC) "Healthy People 2030" [38]. This plan addresses five key domains of SDOH which encompass many things like safe housing and transportation, access to nutritious foods and clean water, access to care, quality of education, job opportunities, racism and violence, and neighborhood safety [39]. In addition, public policy needs to incorporate trauma-informed care. The six core principles of trauma-informed care are safety, trustworthiness and transparency, collaboration, empowerment, choice, and intersectionality, taking trauma-informed care into consideration helps with the recognition that trauma and

Multilevel Violence Prevention Strategies

1. Legislative Policies that invest in communities and address structural barriers
2. Culturally responsive organizational structures, policies and procedures at every point across the continuum of care
3. Trauma-informed training
4. Addressing implicit bias via workforce diversity
5. Community-engagement
6. Hospital-based violence intervention programs
7. Addressing Adverse Childhood Experiences and Leveraging Protective Childhood Experiences and social supports

Fig. 2 Multilevel violence prevention strategies for mitigating violence

its sequelae are not evenly distributed. Policy needs to be aimed at addressing these resultant disparities [40••]. Along with CDC initiatives, the United States National Prevention Strategy (NPS) includes a trauma-informed approach to addressing trauma. Initiatives in the NPS include local, state, and federal efforts [40••, 41]. The Institute on Trauma and Trauma-Informed Care has been researching and reporting on trauma-informed care since 2012 [42, 43]. It utilizes the Campaign for Trauma-Informed Policy and Practice's (CTIPP) network to advocate for policy that addresses injustices that lead to healthcare disparities [44]. Its 2022 report on "Trauma Informed Legislative Proposals" showed a very successful advocacy year and can be used to guide future policy endeavors such as those outlined in the Trauma Informed Proposals 2023 [43, 45].

In conclusion, as eloquently stated by Formica (1), "To minimize deaths and injuries due to firearms and their cascading health consequences and to ultimately achieve health equity, prevention efforts will need to address the social determinants of health including racism" [1]. Taking a multilevel approach to these social determinants will ensure that we are enacting change on all of the systems that contribute to the public health disparity of firearm violence and its negative impact on communities of color.

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Data Availability No datasets were generated or analyzed during the current study.

Declarations

Conflict of Interest The authors declare no competing interests.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

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- • Of importance
- •• Of major importance

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