The Violence Epidemic in the African American Community: A Call by the National Medical Association for Comprehensive Reform

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Abstract: While much progress has occurred since the civil rights act of 1964, minorities have continued to suffer disparate and discriminatory access to economic opportunities, education, housing, health care and criminal justice. The latest challenge faced by the physicians and public health providers who serve the African American community is the detrimental, and seemingly insurmountable, causes and effects of violence in impoverished communities of color. According to statistics from the Centers for Disease Control (CDC), the number one killer of black males ages 10-35 is homicide, indicating a higher rate of violence than any other group. Black females are four times more likely to be murdered by a boyfriend or girlfriend than their white counterparts, and although intimate partner violence has declined for both black and white females, black women are still disproportionately killed. In addition, anxiety and depression that can lead to suicide is on the rise among African American adolescents and adults. Through an examination of the role of racism in the perpetuation of the violent environment and an exploration of the effects of gang violence, intimate partner violence/child maltreatment and police use of excessive force, this work attempts to highlight the repercussions of violence in the African American community. The members of the National Medical Association have served the African American community since 1895 and have been advocates for the patients they serve for more than a century. This paper, while not intended to be a comprehensive literature review, has been written to reinforce the need to treat violence as a public health issue, to emphasize the effect of particular forms of violence in the African American community and to advocate for comprehensive policy reforms that can lead to the eradication of this epidemic. The community of African American physicians must play a vital role in the treatment and prevention of violence as well as advocating for our patients, family members and neighbors who suffer from the preventable effects of violence

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INTRODUCTION

ver the last 122 years, the NMA has advocated for health equity across all disciplines by promoting health policy positions on issues such as Women and Minorities in Clinical Trials, the Paris Climate Agreement and equity in the Affordable Health Care Act. Most recently, the NMA has taken a position against Police Use of Excessive and Unnecessary Force. 1 At the NMA 2015 Annual Convention & Scientific Assembly, in response to the killings of unarmed African American men, in particular, Eric Garner, Michael Brown and Freddie Gray, a resolution was passed by the House of Delegates regarding lethal and sublethal injury resulting from law enforcement altercations. This resolution called for law enforcement agents to end the police practice of subjecting unarmed suspects to physical force that includes a 'chokehold' or placing the knees or body weight on a person's chest, neck or head, which can result in debilitating or deadly injury. In July 2016, the NMA Statement on Police Use of Force² was released in recognition of the continuing and growing number of killings of unarmed African Americans by police officers. The NMA further established the Working Group on Gun Violence and Police Use of Force, which was charged with advocating for a public health approach in addressing the broad topic of gun violence as well as confronting the ongoing problem of excessive and unnecessary use of force by police officers within communities of color. To facilitate these efforts, the NMA joined the Movement towards Violence as a Health Issue and endorses their recently released Framework for Action.³

Of equal importance is the continuing work to eradicate policies and social norms that create barriers for African Americans to achieve health equity in the United States. The paradigm, defined as the 'Social Determinants of Health', makes clear that understanding where one lives, works, plays and builds relationships will affect an individual's ability to achieve healthy outcomes. This paradigm has enormous consequences for the health and wellbeing of our patients.

It is impossible for medical and public health communities to have a conversation about health equity without speaking about violence. Overall rates of homicide have decreased in the United States since 1999. Despite this decline, a significant increase in the homicide rate continues to be observed in the African American community and is a major concern for the NMA. The July 2016 U.S. Census data reports that white Americans are 61.3% of the population while African Americans represent 13.3% of the U.S. population.⁵ In 2016, 15,070 homicides were recorded in the United States of which 7881 were African American victims and 6576 were white victims. 6 In many communities of color, homicidal violence is one of the leading manners of death. This type of violence has a 'ripple effect', adversely affecting a community's ability to gain equitable access to education, economics, housing and health care. Whether it takes the form of youth/gang, intimate partner/domestic, child abuse/maltreatment or police use of excessive force/legal intervention, violence can cause deadly and debilitating injuries for the individual as well as long lasting adverse effects on the community.

The purpose of this paper is to reinforce the need to treat violence as a public health issue, to highlight the effect of particular forms of violence in the African American Community and to advocate for comprehensive policy reforms that can lead to the eradication of this epidemic.

HISTORY OF THE NATIONAL MEDICAL **ASSOCIATION**

"The National Medical Association (NMA) is the nation's oldest and largest organization representing African American physicians and health professionals in the United States. Established in 1895, the NMA is the collective voice of more than 30,000 African American physicians and the patients they serve.

The NMA was founded in 1895, during an era in US history when the majority of African Americans were disenfranchised. The segregated policy of "separate but equal" dictated virtually every aspect of society. Racially exclusive "Jim Crow" laws dominated employment, housing, transportation, recreation, education, and medicine. Black Americans were subjected to all of the injustices inherent in a dual medical care system.

Under the backdrop of racial exclusivity, membership in America's professional organizations, including the American Medical Association (AMA), was restricted to whites only. The AMA determined medical policy for the country and played an influential role in broadening the expertise of physicians. When a group of black doctors sought membership into the AMA, they were repeatedly denied admission. Subsequently, the NMA was created for black doctors and health professionals who found it necessary to establish their own medical societies and hospitals.

"Conceived in no spirit of racial exclusiveness, fostering no ethnic antagonisms, but born out of the exigency of the American environment ..." the NMA extended equal rights and privileges to all physicians. Although the NMA has led the fight for better medical care and opportunities for all Americans, its primary focus targets health issues related to minority populations and the medically underserved. The NMA remains committed to improving the health status and outcomes of African Americans and the disadvantaged."⁵³

VIOLENCE AS A PUBLIC HEALTH ISSUE

The World Health Organization (WHO) defines violence as the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, which either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation. ⁷ In 1986, US Surgeon General C. Everett Koop presented findings from the Workshop on Violence and Public Health which highlighted the need for cooperative and collaborative efforts among health and health-related professions and institutions to address violence.⁸ This mandate was further developed by US Surgeon General David Satcher in the article, "Violence as a Public Health Issue" presented during the Annual Meeting of the Institute of Medicine in October 1994. Dr. Satcher, in his 1994 report, stated "we have identified violence as an important threat to the public's health and we have developed a program in violence prevention that applies a problem-solving approach to the issue."9

According to the Centers for Disease Control (CDC), homicide is the leading manner of death for African American males ages 10-35 and the second leading manner of death for Hispanic males of this same age group.

A review of data from 2012 to 2014, regarding fatal gun deaths, reports that guns are the third leading cause of deaths for children under the age of 17. Nearly 80% of all homicides are due to firearm related injury. There are approximately 30,000 hospitalizations for gunshot wounds (GSW) each year in the United States. Nearly 6000 African American men die due to gun violence each year. Men are nine times more likely to be hospitalized for GSW when compared to women; and African American men are twice as likely as whites to require life-saving measures. Moreover, African American men make up only six percent of the population but make up greater than 50% of firearm related deaths. 11 Cook et al. reviewed epidemiological data from the National Inpatient Sample (NIS) 2004-2013 and found that the majority of GSW hospitalizations resulted from assaults on young African American males and suicides among older white males. They also identified that these injuries were associated with elevating health care costs. It was determined that the costs of hospital treatment and admissions for GSW from 2006 to 2010 were approximately \$88.6 billion and that single year productivity losses due to GSW approaches \$35 billion dollars.¹² The annual cost of gun violence is projected to be \$229 billion dollars or \$700 per American citizen.

The costs of violence in our communities and its effect on our patients exceed what can be measured in dollars and cents. The epidemic of violence affects not only the individual victim of violence or perpetrator of violence but impacts the entire community. Psychological trauma from exposure to violence, defined as post-traumatic stress disorder (PTSD), increases a person's risk of adopting violent behavior. This informs our understanding of the disease quality of violence. Violent behavior has the ability to transmit, spread and cluster based on exposure — consistent with an epidemic disease.³ Thus, the presence of violence in a community increases not only the potential number of victims of violence but also increases the likely number of perpetrators of violence, fostering an ongoing cycle of violence in the communities afflicted by this public health disease.

The disease quality of violence is also exemplified by its ability to affect different systems. Researchers in the Jackson Heart Study measured the impact of neighborhood social conditions, including social cohesion and violence, documenting that poor neighborhood economic and social conditions may contribute to an increased risk of cardio-vascular disease among African American women. More recently, The Washington Post reports that, "In four separate studies, researchers found that conditions that affect blacks disproportionately compared with other groups — such as poor living conditions and stressful events such as the loss of a sibling, the divorce of one's parents or chronic unemployment — have severe consequences for brain health."

These risk factors have been identified as being correlated with an increased risk for Alzheimer's Disease among African Americans. Furthermore, violence has the potential to not only affect the health of women in a community but also their gestating offspring. In an article published this year in the American Journal of Obstetrics and Gynecology, researchers identified an association between a high rate of youth violence and preterm births. 15 The mechanism through which community violence and other environmental factors influence prenatal health is not well understood but it is proposed that increased stress of the mother as well as logistical barriers to receiving prenatal care (i.e. transportation, employment, childcare for other children) may play a significant role in this finding. In addition to birth outcomes and an increased risk of cardiovascular disease and Alzheimer's disease, violence in a community has a deleterious effect on how individuals gain access to food; in turn, household food insecurity is linked to an increased risk for intimate partner violence and adverse childhood experiences. 16,26

Current research documents that violence not only erodes the health of community members but also the physical environment of a community. The place where a person lives, eats, sleeps and breathes, can foster and perpetuate individual violent behavior. A well-publicized example is the overwhelming evidence that documents the devastating impact of lead toxicity on individual behavior. Excessive lead exposure has been shown to limit an individual's learning potential and increases the risk for impulsive and aggressive behavior. 17,18 Communities most impacted by lead exposure often have other confounding risk related variables such as poverty and public school systems where older buildings in disrepair increase the risk for exposure to lead paint and lead contaminated water sources. 18 In contrast, community neighborhoods that promote health provide easy access to physical activity, healthy nutrition, education and jobs as well as ensuring environments free from exposure to toxins, such as lead. These healthy communities become resilient-to and protectiveagainst violence.

The decrease or absolute removal of poverty, crime, environmental toxins and food deserts inoculates against the presence and persistence of violence in the community. When violence does occur, the implementation of a violence interruption protocol, to break the cycle of violence, is an important tool to ensure that the spread of violence in a community is controlled. All of these factors have the potential to eliminate the cycle of violence and subsequently improve the health outcomes of the individual patient and the entire community. The African American physician, representing minority communities that are disproportionately impacted by violence, must effectively articulate violence as a public health issue and

take a leadership role not only in the intervention, treatment and prevention of violence but also in advocating for a comprehensive public policy in addressing violence.

IMPACT OF VIOLENCE IN THE AFRICAN AMERICAN COMMUNITY

In order to appreciate the fundamental role and impact violence has on the African American community, it is imperative that we review in greater depth patterns of violence that cluster in communities of color. Gang Violence, Intimate Partner Violence (IPV) and Child Maltreatment as well as Police Use of Excessive Force are major subsets of violence that disparately and disproportionately affect communities of color. In the following sections, we will give a brief overview to highlight how these forms of violence adversely affect our communities.

Gang violence

Violence in the African American community is often associated with youth or gang violence. This limited context identifies the perpetrator and the victims of violence as "thugs, predators or monsters" - individuals engaged in immoral behavior that will inevitably lead to the death, injury, or imprisonment of all involved. 19 Newspaper headlines in urban centers like Chicago, Detroit, Newark and Washington, D.C. often highlight the scourge of gun violence and its destructive role within these communities. However, to understand violence in America's cities one must be cognizant of the influence of structural racism and racial discrimination on the health outcomes of an entire people. In the review paper entitled, "Racial Discrimination: A Continuum of Violence Exposure for Children of Color", K. Sanders-Phillips defines the major theoretical models that establish racism as a risk factor toward violent behavior. Sanders-Phillips asserts that racial discrimination (1) causes trauma by creating isolation, alienation, marginalization, psychological harm and perceived danger; (2) limits the ability of the community and parents to protect children and promote resiliency; and (3) creates a level of psychological distress affecting a child's ability to cope with external stress.²⁰ The impact of racism on access to education, economics, housing and healthcare is complex and multifaceted. Racism is baked into the foundation of the American experience and therefore requires a separate analysis to comprehend its complete influence on violence in the African American community. Nonetheless, the effects of structural racism are integral to the causative risk factors that lead to individual, family and societal violence. Therefore, the physician who advocates against violence in the African American community must also take into

account the effects of institutional/structural racism, its significance in communities of color and its effect on health equity.²¹

One can argue that the social environment that leads to a lack of equity in America also lends itself to a propensity for young people to seek gang membership. The National Gang Center has defined a gang as a "group {that} has three or more members generally 12-24. Members share an identity typically linked to a name, and often other symbols. Members view themselves as a gang and are often involved in an elevated level of criminal activity". 22 According to the National Crime Prevention Council, young people join gangs for a myriad of reasons. Risk factors for gang involvement include but are not limited to poverty, a perceived need for protection, truancy, peer pressure and poor community conditions. Compared to similar at-risk youth, gang members are twenty times more likely to commit a drive-by shooting, ten times more likely to commit homicide and four times more likely to commit assault.²² Because gang membership tends to occur during adolescence, members are exposed to violence during a critical period of psychological and biological maturation. Gang members are reported to have higher levels of anxiety and psychosis and are more likely to attempt suicide. 22 These facts reinforce the postulate that exposure to violence is profoundly detrimental to normal development and mental health. Research performed by Wood and Dennard found that gang affiliated prisoners had a greater exposure to violence, increased levels of anxiety, PTSD and paranoia when compared to the non-gang affiliated prisoners.²²

It is of critical importance that effort be directed towards diversion of young people away from gang affiliation and membership. In the recent report by the National Institute of Justice (NIJ) Changing Course: Preventing Youth from Joining Gangs, experts call for a comprehensive integrated public health and public safety approach. Strong and resilient family and community structures were identified as protective against gang membership and its violent outcomes. Gang membership and its associated violence is preventable and requires the unique tools of the public health sector with its ability to leverage multiple agency partners, community organizations and faith-based community resources. The public health approach is inherently capable of developing the definitions, data elements and data systems required to elucidate the enormity of gangs and gang-related violence in communities of color.²³

In addition, the public health model is structured to help communities develop, fund, implement and evaluate a comprehensive strategy. The physician practitioner can play an integral role in facilitating these efforts and

representing the interests of patients who may be gang members and/or the victims of gang violence. Physicians must be willing to ask their youth and young adult patients about their involvement in crew, gang, or violent behavior and their sense of safety at home and school. The healthcare provider must be willing and able to connect their patients to the resources needed to make responsible life choices. Physicians dedicated to serving at risk youth must maximize opportunities to be mentors in their communities and neighborhood schools and to advocate for investments in out-of-school time, community-based workforce development programs that target 12-24 year olds. Physicians will also need to advocate for restorative justice practices which divert youth, who are low level offenders, from the criminal justice system and instead utilize community service activities to promote career based opportunities.

Intimate partner violence & childhood maltreatment

The gang culture is also associated with high-risk sexual activity and a culture that reinforces the stereotypes of black boys as "sexually insatiable" and black girls as "objects of sexual availability". It is important to note that African American woman, regardless of gang affiliation, bear a disproportionately high burden of violence including intimate partner violence (IPV).²⁴ The CDC's 2010 National Intimate Partner and Sexual Violence Survey reported that more than one in three women have been the victims of IPV.²⁵ It is estimated that IPV costs exceed \$5.8 billion each year and child maltreatment ultimately costs the nation \$134.6 billion annually in medical and other costs.^{25,26} Exposure to violence also results in psychological sequelae which can include chronic stress, depression and symptoms consistent with PTSD, affecting children and adults. For children, violence can induce high levels of stress "which manifests itself in children's compromised cognitive functioning, as well as in their academic performance, emotional responses and social interactions."²⁷ Exposure to violence during childhood is also associated with a higher risk of deliberate self-harm in adolescence and later suicide attempts. More importantly, intervention into the cycle of childhood maltreatment may decrease the potential negative impact on the subsequent well-being of victims of abuse and reduce the potential mental health outcomes of such maltreatment.²⁸

Research into the physical and psychological effects of IPV and child maltreatment documents a variety of short and long-term ramifications. ^{29,50} A study of children living in a high crime neighborhood conducted by Theall et al. found that neighborhood level violence resulted in biological changes and changes at the cellular level, which

included shortening of telomere length and blunted recovery of cortisol levels with steeper diurnal rhythms. These findings suggest that violence may be a significant factor in changes associated with the physiological and cellular markers of stress in children and may have implications for long-term health outcomes. 30 Recent studies have suggested that IPV exposed African American women are more likely to engage in deliberate self-harm (DSH) in an effort to escape or avoid symptoms of PTSD.²⁴ In addition, food insecurity has been shown to particularly increase the risk for IPV, child abuse and neglect. 16,26 In a study of predominately African American women, researchers found that women who are victims of IPV and suffer PTSD were nearly 15 times more likely to have daily co-occurrence of drug and alcohol use when compared with the control group.³¹ These, along with other examples, reinforce the complex co-morbidities that are integral to understanding violence in the African American community and the risks associated with adverse childhood experiences.

Individual physicians serving at risk communities must ask patients questions regarding safety in the home and make referrals to appropriate service providers, advocates and/or legal authorities; refer patients to early childhood development and parenting skills programs that are designed to reduce the risk of child maltreatment; and counsel teens, adolescents and young adults regarding healthy relationships. Physicians may also establish his/her practice as a "Safe Haven" for victims of IPV.

Police use of excessive force

Compounding the presence of violence within communities of color is the fear of the potential for unjustified use of force by police officers. The use of excessive and unnecessary force by law enforcement is both disproportionately and disparately directed towards the African American community. According to the Bureau of Justice Statistics (BJS), African Americans are more likely to have face-to-face contact with law enforcement and are 2.5 times more likely to experience threat or use of non-fatal force by police. 32 The BJS reports that African Americans are also more likely to experience excessive force. 32,33 A Harvard study examining patterns of law enforcement injuries in America demonstrated that policerelated firearm injuries requiring hospitalization were more likely to be suffered by Black and Hispanic males between the ages of 18 and 39 years old. 33 Police officers, who are tasked with protecting and serving the community, frequently engage in intrusive policing practices in high crime neighborhoods, where the subjects of their policing are young men who are often experiencing barriers to equity. Researchers have shown that young men who

experience these intrusive police practices display higher levels of stress, anxiety and trauma associated with these police interactions.34,35 The reality is that the fear and anxiety that accompanies law enforcement interactions is justified. This fear is justified by the documented practice of racially biased use of unnecessary, excessive and, on occasion, fatal force by police. 36,51

Law enforcement's use of excessive and/or unnecessary force adds to the disenfranchisement and oppression felt by many living in communities of color. There must be an end to unwarranted violence by the police against the communities they are duty bound to protect and serve. We reject the notion that communities of color must be policed in a way that results in the increased injury, death and unjustified incarceration of any of our patients. A survey conducted by DeVylder et al. to determine the prevalence and magnitude of police victimization within an affected community found that up to 6.1% of civilian participants public-police interactions experienced physical violence; an additional 2.8% reported sexual violence and 3.3% physical violence with a weapon. Of equal significance, 18.6% reported psychological violence. 34 A history of negative interactions with police was also associated with psychological distress and depression. More importantly, DeVylder et al. found disparity in the treatment of particular cultural groups reporting, "Police victimization was more frequently reported by racial/ethnic minorities, males, transgender respondents and younger adults."34 In a subsequent study, DeVylder et al. reported an increased incidence of suicidal attempts by the victims of police violence.³⁵ The psychological harm resulting from adverse police interactions is as important as the physical injury.

While psychological injuries may be more difficult to ascertain, the physical injuries that result from excessive police use of force are apparent and extensively documented. Physical injuries that occur due to excessive police use of force may include, but are not limited to, gunshot wounds, blunt force injuries that can result in multiple bone fractures as well as closed head injury. Many of these injuries can cause permanent disability and even death. 36,37 When an arrest is indicated, it is imperative that police officers have been properly trained in techniques designed to safely restrain individuals with the goal of safe transport of the individual to the police station or area hospital. Life threatening techniques, such as the 'choke hold' and the practice of one or more officers placing their body weight on top of the restrained person must be banned. These techniques were the direct cause of fatality in the widely publicized deaths of both Eric Garner and John Hernandez. Furthermore, de-escalation techniques, which are similar to those employed in hostage negotiation, should be utilized whenever safely possible and uniformly used on all suspects

regardless of race, mental health status, ethnicity or gender. The Salt Lake City Police Department, which embraced deescalation tactics following a series of questionable officer involved fatal shootings, has had no fatal shootings in over 20 months as a result of de-escalation training. 38,39 Appropriate and safe restraint techniques should be the standard and in the event a person in custody is injured, the individual must receive prompt and appropriate medical attention.

One of the most daunting limitations in understanding police use of excessive force is the paucity of data. The reporting that occurs from each of the 18,000 jurisdictions is completely voluntary. The legislation that provides federal funding for agencies to warehouse and analyze this data must be renewed by Congress. The Death in Custody Reporting Program (DICRP) of the Bureau of Justice Statistics which reports on all deaths that occur in local jails or state prisons, was authorized in 2000 but expired in 2006. Although the BJS continued the program it was not reauthorized by legislation until 2013. The Arrest Related Deaths Report which is a part of the DICRP, reports on deaths that occur during an arrest. The legislation guidelines, which authorized the program, excluded death reports from categories such as: (1) Deaths of bystanders, hostages, or law enforcement personnel (2) Deaths perpetuated by Federal Law Enforcement Agents (3) Deaths of wanted criminal suspects before police contact and (4) Deaths of vehicular pursuits without any direct police action.

As a result, legislatively mandated reporting of arrestrelated deaths still does not accurately reveal the complete toll that police use of excessive force has on our communities. The NMA can be an advocate for legislation that accurately measures the impact of police use of excessive force, particularly in communities of color. Appropriate parameters should include a medical examiner system dedicated to the proper investigation, examination, certification and reporting of arrest related deaths in custody to ensure an objective and accurate assessment of these fatalities.

The public health community can no longer be silent regarding the impact of police violence on the mental and physical health of our patients. As described by Cooper and Fullilove, there must be a coordinated multifaceted approach that develops viable solutions in the "life-cycle" that leads to excessive police use of force. This approach will require prevention and intervention strategies that focus on poverty, crime, policies of mass incarceration, police review and oversight, police culture and unions, as well as implicit bias to name a few. 40,51 The public health practitioner must advocate for community policing. A community policing policy that requires officers walk or ride in the neighborhoods they patrol and includes culturally competent training will afford officers an opportunity to develop the relationships necessary to reduce crime and have a positive impact on the communities they serve.

GUN RELATED RESEARCH IN THE UNITED STATES

Reports confirm that there are nearly 33,000 firearm related deaths in the United States annually.⁵⁴ Whether fatalities are due to homicides or suicides, the weapon of choice is the gun. Research performed by Kalesan and Galea found that gun safe counties in the United States were primarily white, less poor, with higher household income, lower unemployment and more likely to be urban. The counties more likely to be violent due to firearms had higher rates of minority population, greater poverty, higher unemployment and were mostly rural. The study reported a direct relationship with gun ownership and homicide rates. 41 During the March 2016 Health Policy Colloquium convened by the NMA, Violence and Its Impact on Health panelist Dr. Steven Weinberger gave an overview of the ongoing effort to reduce gun violence in the United States. The USA is the global leader in firearm related deaths by almost three times the next highest country which is Finland. 42 Dr. Weinberger noted that there are approximately 90 firearm fatalities per day, the majority of which are suicides. 43

Research into gun related injury and death has a sordid history. In order to understand the current state of gun related injury research it is important to be aware of this narrative. A CDC funded research study by Kellerman et al. published in the New England Journal of Medicine in 1993, reported that keeping a gun in the home increased the risk for homicide, most often suicide, independent of any other factor. 44 In retaliation, the National Rifle Association (NRA) successfully lobbied Congress to ban research into the association of firearms with fatal and nonfatal violence. This effort by the NRA resulted in the Dickey Amendment to the Consolidated Appropriations Act of 1997. The Dickey Amendment is a provision first inserted as a rider into the 1996 federal government omnibus spending bill which mandated that "none of the funds made available for injury prevention and control at the Centers for Disease Control and Prevention may be used to advocate or promote gun control."45

Following the 2012 Newton, CT School shooting, President Obama ordered the CDC to resume research into gun violence. Despite this mandate, Congress provided zero funding to the CDC for gun violence research. The medical community has subsequently united, demanding an end to this restriction on the legitimate effort to understand and reduce gun violence in America. In 2014, the American College of Physicians (ACP) presented position papers on gun violence. Subsequently, in 2015, the ACP proceeded with a "Call to Action" that combined the collaborative efforts of seven medical professional associations in conjunction with the American Public Health Association and the American Bar Association.⁵² This "Call to Action" was endorsed by 52 organizations, including the National Medical Association (NMA).

Clear recommendations to reduce gun violence are outlined as follows:

- Universal background checks of gun purchasers
- Elimination of physician 'gag laws', which prevent physicians from asking about or documenting a patient's possession of firearms in the home
- Restricting the manufacture and sale of military-style assault weapons and large capacity magazines for civilian use
- Research to support strategies for reducing firearmrelated injuries and deaths
- Improved access to mental health services
- Waiting periods to reduce impulsive suicides
- Guns should be subject to consumer product regulations regarding access, safety and design
- Guns should be subject to law enforcement measures to aid in the identification of weapons used in crimes⁴⁵

* It should be noted that none of these recommendations violates the 2nd amendment or prior Supreme Court Decisions.

RECOMMENDATIONS FOR VIOLENCE **PREVENTION**

The effort to treat and prevent violence in our communities is both difficult and complex. Historically, physicians have never been discouraged by challenge and are now called upon to treat violence as a public health epidemic and apply the same tenacity that has been necessary in the fight against AIDS, tuberculosis, cancer and other diseases. If meaningful and sustainable change is to occur in ameliorating violence, it will require a systemic, well-coordinated public health approach on both the local and national level that should include:

PUBLIC HEALTH SURVEILLANCE

• Establish local Violence Fatality Review Boards and the development of local systems that interface with

- at risk youth who are the victims or perpetrators of violence.
- Establish the *National Violent Death Reporting System* of the CDC (NVDS—CDC) which will identify, qualify and quantify the problem.

RESEARCH CONDUCTED WITH UNIVERSITY PARTNERSHIPS

- National Gun Violence Research Studies to be funded by the Centers For Disease Control.
- Establish best practices in violence prevention, that can be evaluated and reproduced, with testable methods and solutions to treat and prevent violence.

PROGRAMMING

- Multidisciplinary Services/Access utilizing Community Partnerships, Community Building Strategies
 (**Interrupter Model) and Community Stabilization
 Programs with an acute and sustained approach to
 Wrap Around Services
 - Promote Equitable Access to Economics, Education, Housing, Healthcare, Mental Health, Social Services & Criminal Justice
 - **Interrupter's Model which integrates workers who are community based and trained to identify persons or situations that pose a risk for violence in the community and act to utilize systems in place to break the cycle of violence.
- Promotion of 'healthy community' initiatives, i.e. community gardens, safe spaces to exercise, community education programs, safe affordable childcare and senior care options. Aggressive screening for lead toxicity with early intervention in high-risk communities.

PARTNERSHIPS/COLLABORATION

 Establish an extensive network with coordination across disciplines, comprised of community based organizations, faith-based organizations and public institutions such as law enforcement departments, public health departments, academic institutions, hospitals and public schools.

DETERRENCE/INVESTIGATION

- Police Departments to train officers in, and promote, community policing.
- Uniform Standards requiring police officers to receive implicit bias training, mental health assessment and deescalation response training.
- Officer re-certification requirements
- Establish sites for Safe Fugitive Surrender.

COMMUNICATION

• Technical and Strategic Communication Assistance for Community based initiatives

INVESTMENT

In addition to investment in the above listed recommendations, grant and local/federal funds will be needed for programming aimed at public education on the risk factors for violence and violence prevention strategies.

SUSTAINABILITY

- Review of Efficacy & Data Outcomes that will drive legislation including Health Care cost savings derived from decreased ER/Trauma visits
- Reduced societal costs that result from reductions in lost human potential and crime rates.

ADVOCACY

"Public Health Approach Towards Violence Prevention" - development of a policy statement with quarterly reviews of ongoing practice guidelines and actionable recommendations

In addition to the above criteria, Excessive Police Use of Force will require the following at the federal, state and local levels:

ACCOUNTABILITY

- Transparency: Endorse and support the use of both body cams and dashboard cams.
- Oversight: Police and citizen review boards to address police officer misconduct and complaints

- against officers. Establish a Police Registry, which lists law enforcement agents that are fired from any police department due to misconduct, insubordination or knowingly falsifying an application to a police department. This registry is designed to prevent unqualified officers from moving from one department to another.
- Impartiality: Support and advocate for local municipalities, state and federal mandates that require special prosecutors be assigned to review and prosecute, if indicated, all officer involved misconduct and fatal shootings.
- Documentation: Physicians to routinely screen patients for any history of interactions with police, the nature of these interactions and any physical or mental symptoms that are a result of these interactions. These histories and any physical exam findings to be documented in the patient's record.
- Establish a Police Registry, which lists law enforcement agents that are fired from any police department due to misconduct, insubordination or knowingly falsifying an application to a police department and is designed to prevent disqualified officers from moving from one department to another.

REBUILD COMMUNITY TRUST AND ENGAGEMENT

- Community Initiatives: Training in community policing with 'top down' leadership. Listening sessions for open and civil dialogue lead by community leaders. Involvement of police officers in local community activities. Encourage officers to live in communities they police. Work with and organize neighborhood watch groups. Maintain anonymous tip lines.
- Youth Initiatives: Create mentoring programs designed to expose youth to police officers as positive role models and inform youth on opportunities in police and community work. Work with local community leaders to engage youth in strategies to prevent gang membership.

RESEARCH AND TRAINING

• Review and assess current state, local and federal law enforcement hiring practices, criteria for selection and required training protocols.

- The immediate and universal ban on police use of dangerous takedown techniques such as, but not limited to, the 'chokehold' or the placing of knees or body weight on a person's chest, neck or head which has the potential for severe consequences.
- Recommend research into appropriate techniques for restraining suspects that will not carry a high potential risk for permanent or life threatening injury to an individual in circumstances of no immediate danger.
- The immediate implementation of De-Escalation Training for all officers
- Training in bias mitigation modalities such as computer simulation training designed to reduce racial bias in shooting unarmed suspects.⁴⁶

LAW ENFORCEMENT OFFICER SUPPORT **MODALITIES**

- Review and assess current state, local and federal law enforcement training criteria, continuing education requirements and mental health risk assessment.
- Further development of psychological support services, bias mitigation, de-escalation techniques, conflict resolution protocols and ongoing training in community policing.

REPORTING STANDARDS FOR DEATHS IN **CUSTODY**

- Establish a uniform practice to capture all relevant details regarding cause and manner of deaths in custody to include the pre-custody period (interval during commission of a crime, during a fight, chase and apprehension, during a siege or hostage situation or during restraint or submission); in custody period (interval soon after being admitted to jail, during interrogation, during incarceration or legal execution); and post custody period (interval after re-entry into the community when at risk for revenge by rival criminals or by police).
- Require mandatory state, local and federal adherence to H.R. 1447- Death in Custody Reporting Act of 2013 amended to require the inclusion of Independent Medical Examiner reports and the US Standard Death Certificate.

CONCLUSION

The case for Violence as a Public Health Issue has been studied and clearly documented by healthcare leaders for more than two decades. Workshops like the 2013 Contagion of Violence, organized by the Institute of Medicine, National Research Council and the Movement towards Violence as a Public Health Issue Framework for Action have outlined treatment programs and strategies that successfully interrupt patterns of community violence. ^{3,47,48,50} The comprehensive Framework for Action gives a detailed breakdown of the role that systems, institutions and physician leaders will have to play in the effort to reduce violence in our communities and in the lives of our patients. Any violence intervention strategy must take into account the complex multifactorial aspects of violence, incorporating racism and issues related to police use of excessive and unnecessary force, in order to achieve a successful outcome. There is evidence that formal police-public health partnerships can play a key role in reducing violence in impacted communities. These partnerships can augment the effort to reduce violence and garner greater community support. Examples of such partnerships were reviewed by Shepherd and Sumner in a March 2017 editorial published in JAMA. 49 By recognizing violence as a public health disorder and implementing key intervention and prevention strategies we can and will reduce the ramifications of this devastating disease in our communities. Communities of color and other marginalized communities are disproportionately impacted by violence and thus it is imperative that the NMA, currently representing over 50,000 predominately African American physicians nationally, take a leadership role and partner with other physician organizations in the effort to eliminate violence in our communities.

REFERENCES

- 1. http://www.nmanet.org/page/Health_Policy_Ltrs.
- 2. http://blackdoctor.org/495036/national-medical-associationstatement-on-police-use-of-force/.
- 3. Creating and Mobilizing Health and Public Health/Community Systems to Reduce Violence – a Framework for Action, https:// gallery.mailchimp.com/81fb14b93304e4321b17f3a10/files/3 0c7ca0a-82a3-4b46-b1f2-2b932f277c33/Violence as a Health Issue_Framework_FINAL.pdf.
- 4. Hu, G., Webster, D., & Baker, S. (2008). Hidden homicide increases in the USA, 1999-2005. J Urban Health Bull N Y Acad Med, 85(4), 597-606.
- 5. https://www.census.gov/quickfacts/fact/table/US/PST045216.
- 6. https://ucr.fbi.gov/gov/crime-in-the-u.s./2016/crime-in-the-u.s.-2016/ tables/expanded-homicide-data-table-1.xls.

- 7. World Health Organization. (2002). World Report on Violence and Health. http://apps.who.int/iris/bitstream/10665/42495/1/ 9241545615_eng.pdf.
- 8. Koop, Everett (1986). Surgeon General's Workshop on Violence and Public Health. U.S. Department of Health and Human Services, DHHS Publication. No. HRS-D-MC.
- 9. Satcher, David (1995). Bull N Y Acad Med, 72(1), 46-56.
- 10. Fowler, K. A., Dahlberg, L. L., Haileyesus, T., Guiterrez, C., & Bacon, S. (2017). Childhood firearm injuries in the United States. Pediatrics. http://dx.doi.org/10.1542/peds.2016-3486.
- 11. Santilli, A., O'Connor-Duffany, K., Carroll-Scott, A., et al. (2017). Bridging the response to mass shootings and urban violence: exposure to violence in New Haven, Connecticut. Am J Public Health, 107(3), 374-379.
- 12. Cook, A., Osler, T., Hosmer, D., et al. (2017). Gunshot wounds resulting in hospitalization in the United States: 2004–2013. Int J Inj, 48, 621-627.
- 13. Barber, S., Hickson, D. A., Wang, X., Sims, M., Nelson, C., & Diez-Roux, A. V. (2016). Neighborhood disadvantage, poor social conditions, and cardiovascular disease incidence among african american adults in the Jackson Heart study. Am J Public Health, 106, 2219-2226.
- 14. https://www.washingtonpost.com/local/social-issues/stress-ofpoverty-and-racism-raise-risk-of-alzheimers-for-african-americansnew-research-suggests/2017/07/15/4a16e918-68c9-11e7-a1 d7-9a32c91c6f40_story.html?utm_term=.ac530c517939.
- 15. Masho, S. W., Cha, S., Chapman, D. A., & Chelmow, D. (2017). Understanding the role of violence as a social determinant of preterm birth. Am J Obstetr Gynecol, 216(183), e1-e7.
- 16. Chilton, M., Knowles, M., & Bloom, S. L. (2017). The intergenerational circumstances of household food insecurity and adversity. J Hunger Environ Nutr, 12(2), 269-297.
- 17. Cecil, K. M., Brubaker, C. J., Adler, C. M., et al. (May 2008). Decreased brain volume in adults with childhood lead exposure. Plos Med, 5(5), 0741-0750.
- 18. Evens, A., Hryhorczuk, D., Lanphear, B. P., et al. (2015). The impact of low-level lead toxicity on school performance among children in the Chicago Public Schools: a populationbased retrospective cohort study. Environ Health, 14(21), 1–9.
- 19. Smiley, & Fakunle. (2016). From "brute" to "thug:" the demonization and criminalization of unarmed Black male victims in America. J Hum Behav Soc Environ, 26(3-4), 350-366. http:// dx.doi.org/10.1080/10911359.2015.1129256.
- 20. Saunders-Phillips, K. (2009). Racial discrimination: a Continuum of violence exposure for children of color. Clin Child Fam Psycohol Rev, 12, 174-195.
- 21. Bailey, Z. D., Krieger, N., Agenor, M., Graves, J., Linos, N., & Bassett, M. T. (2017). Structural racism and health inequities in the USA; evidence and interventions. Lancet, 3899, 1453–1463.

- 22. Wood, J., & Dennard, S. (2017). Gang membership: links to violence exposure, paranoia, PTSD, anxiety, and forced control of behavior in prison. *Psychiatry*, 80(1), 30–41.
- 23. National Institute of Justice (NIJ) Changing Course: Preventing Youth from Joining Gangs. https://nij.gov/publications/changing-course/Pages/welcome.aspx.
- 24. Weiss, N. M., Dixon-Gordon, K. L., Duke, A. A., & Sullivan, T. P. (2015). The underlying role of posttraumatic stress disorder symptoms in the association between intimate partner violence and deliberate self-harm among African American women. Compr Psychiatr, 59, 8–16.
- Dutton, M. A., James, L., Langhome, A., & Kelley, M. (2015).
 Coordinated public health initiatives to address violence against women and adolescents. J Women's Health, 24(1), 80–85.
- 26. Nguyen, Loc (November 2014). A public health response to data interoperability to prevent child maltreatment. Am J Public Health, 104(11), 2043–2048.
- Sharkey, P. T., Tirado-Strayer, N., Papchristos, A. V., & Raver, C. C. (December 2012). The effect of local violence on Children's attention and impulse control. Am J Public Health, 102(12), 2287–2293.
- 28. Jonson-Reid, M., Kohl, P. L., & Drake, B. (May 2012). Child and adult outcomes of chronic child maltreatment. *Pediatrics*, 129(5), 839–845. http://dx.doi.org/10.1542/peds 2011-2529.
- 29. Noll, & Shenk. (March 2010). Introduction to the special issue: the physical health consequences of childhood maltreatment-implications for public health. *J Pediatr Psychol*, 35(5), 447–449.
- Theall, K. P., Shirtcliff, E. A., Dismukes, A. R., Wallace, M., & Drury,
 S. (January 2017). Association between neighborhood violence and biological stress in children. JAMA Pediatr, 171(1), 53–60. http://dx.doi.org/10.1001/jamapediatrics.2016.2321.
- 31. Nicolaidis, C., Wahab, S., Trimble, J., et al. (2012). The interconnections project: development and evaluation of a community-based depression program for african american violence survivors. *J Gen Intern Med*, 28(4), 530–538.
- 32. Bureau of Justice Statistics. (November 2015). Summary. Police Use of Nonfatal Force, 2002–11. NCJ 249216 https://www.bjs.gov/content/pub/pdf/punf0211.pdf.
- Chang, D. C., Williams, M., Sangji, N. F., Britt, L. D., & Rogers, S. O., Jr. (2016). Pattern of law enforcement-related injuries in the United States. J Trauma Acute Care Surg, 80(6), 870–876.
- DeVylder, J. E., Oh, H. Y., Nam, B., Sharpe, T. L., Lehmann, M., & Link, B. G. (2016). Prevalence, demographic variation and psychological correlates of exposure to police victimisation in four US cities. *Epidemiol Psychiatr Sci1*–12. http://dx.doi.org/10.1017/S2045796016000810.

- DeVylder, J. E., Frey, J. J., Cogburn, C. D., et al. (May 2017).
 Elevated prevalence of suicide attempts among victims of police violence in the USA. J Urban Health. http://dx.doi.org/10. 1007/s11524-017-0160-3.
- 36. Buehler, James W. (February 2017). Racial/ethnic disparities in the use of lethal force by US police, 2010–2014. AJPH, 107(2), 295–297.
- 37. Miller, T. R., Lawrence, B. A., Carlson, N., et al. (May 2017). Perils of police action: a cautionary tale from US data sets. *Inj Prev*, 23, 27–32. doi:10.1136.
- **38.** http://www.huffingtonpost.com/entry/salt-lake-city-police-deescalation_us_591c9070e4b03b485cae1129.
- https://www.dailykos.com/story/2017/5/29/1665600/-Salt-Lake-City-police-invested-in-training-and-haven-t-had-an-officerinvolved-shooting-in-two-years.
- 40. Cooper, H. L., & Fullilove, M. (2016). Editorial: excessive police violence as a public health issue. *J Urban Health Bull N Y Acad Med*, 93(1), 51–56.
- 41. Kalesan, B., & Galea, S. (2017). Patterns of gun deaths across US counties 1999 2013. Ann Epidemiol, 27, 302–307.
- 42. http://www.dailymail.co.uk/news/article-2879650.
- 43. National Center for Health Statistics. (2017). Accidents or Intentional Injury. https://www.cdc.gov/nchs/fastfacts/injury.htm.
- 44. Kellerman, A. L., Rivara, F. P., Rushforth, N. B., et al. (1993 Oct 7). Gun Ownership as A Risk factor for homicide in the home. *N Engl J Med*, 329(k), 1084–1091.
- 45. Rubin, R. (2016). Tale of 2 agencies: CDC avoids gun violence research but NIH funds it. *J Am Med Assoc, 315*(16), 1689–1691.
- 46. Plant, E. A., & Peruche, B. M. (March 2005). The consequences of race for police officers' responses to criminal suspects. *Psychol Sci*, 16(3), 180–183.
- 47. Prothrow-Stith. (1995). The epidemic of youth violence in America: using public health prevention strategies to prevent violence. J Healthc Poor Underserved, 6(2), 95–101.
- Forum on Global Violence Prevention; Board on Global Health Institute of Medicine; National Research Council. Contagion of Violence: Workshop Summary (2013 Feb 6). Wash, D.C.: National Academic Press. 45.
- 49. Shepherd, & Sumner. (2017 Apr 18). Policing and public health-strategies for collaboration. JAMA, 317(15), 1525–1526. http://dx.doi.org/10.1001/jama 2017.1854.
- Sumner, S. A., Mercy, J. A., Dahlberg, L. L., Hillis, S. D., Klevens, J., & Houry, D. (2015 August 4). Violence in the United States: status, challenges, and opportunities. JAMA, 314(5), 478–488. http://dx.doi.org/10.1001/jama.2015.8371.

- 51. Cooper, H., Moore, L., Gruskin, S., & Krieger, N. (July 2004). Characterizing perceived police violence: implications for public health. Am J Public Health, 94(7), 1109-1118.
- 52. Weinberger, S. E., Hoyt, D. B., Lawrence, H. C., 3rd, et al. (2015 Apr 7). Firearm-related injury and death in the United States: a call to action from 8 health professional organizations and the American Bar Association. Ann Intern Med, 162(7), 513–516.
- http://dx.doi.org/10.7326/M15-0337. https://www.ncbi.nlm.nih. gov/pubmed/25706470.
- 53. National Medical Association (2017) http://www.nmanet.org/ page/History.
- 54. http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_02.pdf.