

Gun Violence - A Call For Physician Activism: Lessons From The Struggle to Ban Weapons of Mass Destruction

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The proliferation of firearms in the United States, including handguns and semiautomatic weapons, has contributed to a steep increase in gun-related homicides, suicides, accidental deaths, and injuries. The campaigns organized by physicians starting in the 1960s to educate the public about the nature and consequences of nuclear weapons and other weapons of mass destruction provide a model for those concerned today with the epidemic of gun violence. A new physicians campaign would call for the elimination of the most lethal weapons from civilian hands; a ban on the most lethal forms of ammunition; and stricter governmental regulation of the ownership and use of all firearms. [M&GS 1994;1:67-73]

Guns, Guns, Guns

n February 9,1993, a lone gunman carrying an arsenal of concealed weapons severely wounded three physicians in the walk-in emergency area of the County-University of Southern California (USC) Medical Center. The sudden, inexplicable ferocity of such a crime would have shocked the U.S. public sensibility 30 years ago. Now it is merely a footnote in the swelling tide of communal violence

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that increasingly engulfs U.S. society. While there are multiple factors that contribute to this level of violence, one factor seems to us foremost; the unrestricted proliferation of firearms. Left unchecked, this proliferation has created conditions that lead to mass destruction.

The extent of the proliferation is evident in the wrenching details of every evening newscast. At present, there are approximately 200 million firearms in the United States, of which more than 60 million are handguns [1,2]. The precipitous rise in handgun availability became evident in the mid-1960s when the number available for sale increased by 50% in just one year [1]. As the number of firearms has risen (Fig 1), so has the associated carnage. Between 1950 and 1980, the number of annual firearm-related deaths per base population in the U.S. increased by nearly 250% [3]. By 1980, nearly 60% of all homicides and suicides were caused by firearms [3].

Homicide

The paroxysm of violence in our society continues unabated. The number of murders in America increased from below 20,000 in 1987 to more than 23,000 in 1990 [2]. Homicide is the fourth leading cause of premature mortality in the U.S., the third leading cause of death among all youth aged 15 to 24 years, and the leading cause of death among African American men aged 15 to 34 years [4]. The evidence that firearms are a major factor is substantial. The incidence of murders by means other than firearms increased substantially between 1960 and 1980; however, this rate of increase was only half of that associated with firearms [5]. Most disturbing has been the recent substantial rise in firearm homicide victims among children five to nine years of age [6]. An even greater impact of gun violence on total mortality has been noted among older children. Between 1985 and 1990, firearm-related homicide increased by 141% among teenagers 15 to 19 years of age [7]. By 1990, 82% of homicides among teenagers 15 to 19 years of age were associated with firearms [8]. Six hundred fifty thousand times a year, handguns are used in attempted rapes, robberies, and assaults, resulting in 90,000 injuries [2]. In Los Angeles County alone, in the year before the riots (1991), more than 8,000 people were either killed or wounded by firearms [1].

Suicide

The link between firearms and suicide is well established. More people kill themselves by firearms than all other methods combined [3]. The key factor appears to be the finality that pulling a trigger conveys. Few recover from a firearm-related attempt (Fig 2) [9,10]. The presence of firearms in the home, irrespective of type or method of storage, is the most strongly associated factor in successful suicide attempts among adults as well as emotionally disturbed adolescents [10,11].

Injury Related to Access

The accessibility of firearms appears to be a key factor in the likelihood of an injurious encounter. Even though the incidence of assault is comparable for Denmark and the communities of northeastern Ohio, the homicide rate in Denmark is one-fifth that of northern Ohio [12]. In Denmark, private ownership of firearms is permitted only for hunting, and handguns are rigidly restricted. Sloan et al. compared two demographically similar communities (Seattle and Vancouver) with differing prevalences of hand gun availability [5]. Seattle, the city with the greater prevalence of handguns, experienced a nearly five times greater rate of handgun homi-

U.S. HANDGUN MURDERS

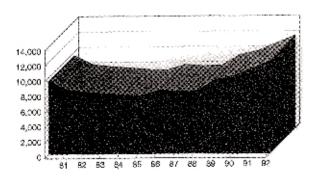
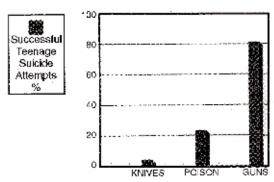


Figure 1. For most of the 1980s, annual handgun murders were fewer than 9,000 per year. Since 1989, however, U.S. handgun murders have risen substantially.

cide even though the rates of assault in Seattle and Vancouver were similar [5]. Several additional studies have suggested that firearm-related deaths are high in regions where firearms are readily available [13,14].

More recent studies have focused specifically on the relationship between firearms and the perpetration of homicide within the home. When assaults occur between family members and intimate acquaintances, the victim is 12 times more likely to die if the assailant utilizes a gun [15]. The presence of a gun in the home is an independent risk factor for familial homicide and a powerful predictor when coupled to prior histories of drug abuse or physical assault, or both [16].

Although there are data to suggest that a gun may provide protection in self-defense when reached and used in time, the strength of such data is grossly overstated [17,18]. Anecdotes of successful self-defense must be weighed against examples of egregious misuse, such as the slaying of Yoshiro Hattori, a camera carrying Japanese exchange student, fatally shot when mistaken for an armed



YOUTH SUICIDE AND GUNS

Figure 2. More than 80% of gun-related suicide attempts in adolescents result in death.

intruder [19]. When guns are viewed as a risk factor for violent death and injury, it is clear that gun tragedies far outweigh the benefit of self-protection.

The Link to Arms Control

Much has been written about violence as a public health problem and about the responsibility of physicians to work for gun control. But these analyses have failed to examine an analogous effort of physicians in the arena of arms control. Indeed, the role that physicians might play in the containment and elimination of firearm-related communal violence is suggested by the vital role assumed by physicians in reducing the threat of global devastation by weapons of mass destruction. In 1962, a series of sentinel articles described in rigorous detail the virtually unimaginable medical and public health consequences of thermonuclear war [20-23]. An accompanying editorial clearly stated the rationale for physician activism: "No single group is as deeply involved in and committed to the survival of mankind. No group is as accustomed to the labor of applying the practical solutions to life-threatening difficulties" [24].

The authors of the articles were leaders in the founding of Physicians for Social Responsibility (PSR). At that time, the demonstration of iodine-131 (a potential sequestrant in juvenile thyroid glands) in the food chain and of strontium-90 in the deciduous teeth of children was potent evidence of the hazards of above ground nuclear testing. The intellectual and moral arguments of physicians coupled to these data helped to galvanize public support for the Limited Test Ban Treaty signed by President Kennedy and Premier Khrushchev in 1963, which banned nuclear tests in the atmosphere, in space, and underwater.

The Antinuclear Campaign

The years that followed were characterized by a widening and deepening of physician commitment. In 1966, the concern over the nuclear threat expanded to encompass the dangers of chemical and biological weapons [25]. During this period, the ethical imperative for physician opposition to weapons of mass destruction continued to crystallize [26]. The principle that "prevention is the only way to reduce mortality where treatment is ineffective" was specifically examined in relation to the prevention of nuclear war [27]. An analysis recalled the wisdom and courage of the 19th century English anesthesiologist John Snow, who, in the 1850s, linked the spread of cholera to contaminated water supplies [27]. Dr. Snow

worked successfully to have the pump handle removed from a communal well and opposed the practices of a private water company, at the time decidedly political acts [28].

The late 1970s and early 1980s saw the development of new and massively destructive multiwarhead missiles, their widespread deployment, and increasingly belligerent positions on both sides of the cold war. The physician movement responded with a new sense of urgency [29-33]. With less sympathetic political leadership in power, physicians took their case for the containment of weaponry directly to the public, in the U.S. and abroad [29-33]. These efforts were effective in creating a climate for political dialogue, which in turn led to unilateral actions to reduce the threat and to multilateral actions through diplomatic compromise. The Nobel Committee recognized this contribution by awarding the 1985 Peace Prize to the International Physicians for the Prevention of Nuclear War (IPPNW), an organization with affiliates in 80 nations largely modeled after PSR. Both physician organizations have played important roles in support of international treaties banning biological weapons (the Biological Weapons Convention, 1972) and chemical weapons (the Chemical Weapons Convention, 1992).

Elements of Symmetry

The analogy between an established role for physicians in the struggle for a global ban on weapons of mass destruction and a potential role for physicians in containing the ever growing threat of firearm related violence is striking (Fig 3). Both problems have been characterized by technological innovations of grotesque lethality. With regard to the global threat, we have observed the development of multiwarhead land- and sea-based strategic nuclear weapons, the cruise missile, and devastating conventional weapons such as fuelair explosives [34]. With regard to the communal threat, we have seen the development of semi-automatic assault pistols such as the MAC-11 (9mm, 12.5 inches, 32 rounds), the UZI (9mm, 9.5 inches, 25 rounds), the TEC-9 (9mm, 12.5 inches, 36 rounds), and the Calico MIOOP (9mm, 17 inches, 100 rounds) (Fig 4) [35]. A horrifying "innovation" has been the Street Sweeper, a 12 gauge shotgun with a revolving cylinder capable of firing 12 rounds [29]. The foreign version, previously used by South African security personnel, failed to meet the sporting-use test and was banned for importation [35]. However, domestically produced versions of the firearms mentioned above are not subject to this standard.

Each problem is also characterized by

massive deployments. During the 1980s, the United States added to its arsenal: 100 B-IB bombers; 1,600 air launched cruise missiles; nine Trident submarines, each carrying 16 missiles with 12 warheads on each missile; and 50 MX missiles carrying more than 400 warheads; as well as other weapons [36]. By 1990, the United States and the Soviet Union had more than 12,000 and 11,000 strategic nuclear warheads, respectively. The world's nuclear arsenals contain the equivalent of three tons of TNT equivalent for every human being on the planet.

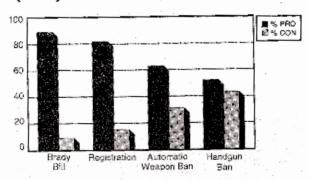
In America, firearms are characterized by a similar proliferation. At present, there are nearly a quarter of a million federally licensed firearm dealers operating in the United States under limited supervision [1]. Despite ordinances to the contrary, guns frequently find their way into the hands of children and adolescents. A survey of teenagers revealed that 41% of boys and 21% of girls claimed they could easily obtain a handgun if they so desired [1]. Nearly 2 million guns are sold each year. Most disturbing is the proliferation of highly lethal and concealable and potentially alterable semi-automatic and assault weapons. The number of such weapons in civilian hands is conservatively estimated to be in the hundreds of thousands [35].

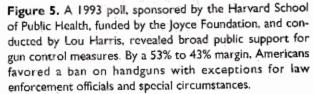
Finally, adequate solutions to each problem have been blocked by the existence of rigidly ideological positions, which have served vested economic interests, possessing inordinate political influence [36,37]. Both problems have also been maintained by misguided and dangerous beliefs that security, whether personal or national, lies in the possession of devastating weaponry. In America, this latter consideration appears to be based on the seemingly visceral fear that the government would devolve into tyranny were it not held in check by an armed citizenry. This notion parallels sentiments upholding the rights of sovereign nations to possess and control weapons of mass destruction in opposition to international authority.

The Physician Role

The idea of the physician's role in a ban on firearms is not a new one [2,6,38-43]. Coincident with the emotional upheaval surrounding the King and Kennedy assassinations of 1968, an insightful editorial asked, "Can the voice of the medical profession not be heard above that of the lobbyists representing gun clubs and other groups, and usually blamed for congressional activity in this area?" [38] The editorial further insisted that "the sale and traffic of firearms must be controlled..." Medical associations such as the American Academy of Pediatrics, the

HARVARD-JOYCE-HARRIS POLL (6/93)





American Public Health Association, and the American Psychiatric Association have formally endorsed a proposed ban on handguns, and others such as the American Medical Association and the National Medical Association have highlighted the need for greater physician action [2,6,39,41,44]. The proliferation of firearms is clearly a major public health and medical problem [45,46]. Where do we go from here?

Reshaping Public Debate

1

Although the nuclear threat remains, the work of PSR and IPPNW has raised the moral conscience of the world against the use and proliferation of weapons of mass destruction. Just as physicians have helped to change public perceptions of the global arms race, so must we now help to reshape the public debate regarding firearms to reflect their growing lethality (Fig 5). Our profession must take the lead in challenging erroneous interpretations of rights granted under the Second Amendment, the legalistic justification for today's carnage. We must vigorously point out that the Supreme Court has upheld a collective, not a personal, right to bear arms; and that the Amendment's key qualifying phrase granting such rights to "a wellregulated militia" has been conveniently ignored (Fig 6) [47-49]. We must remind our citizenry that the Supreme Court has allowed to stand the ruling of a lower court upholding a 1981 ban on handgun sale and possession in Morton Grove, Illinois [44]. Physicians must influence the societal view of guns and gun violence, as we are doing in similar campaigns against cigarette smoking and drunk driving.

In America, guns, unlike consumer products, are not subjected to federal safety standards. Guns must be treated like all other products that can maim and kill. Let us never minimize that maiming and killing are the results of their use. Again as before, the overriding principle of prevention must prevail. The production of guns must be curtailed; their lethality reduced; and their possession strictly and assiduously regulated. The force of the medical profession through endorsements of all its constituent bodies must be placed behind these general principles. Endorsements alone are not enough. If there is one clear lesson that can be gained from the struggle for global arms control, it is that there is no substitute for direct education and mobilization of the public. It is indeed the mandate that echoes to us from 25 years ago: "Such pronunciamentos satisfy many but persuade few. It is the individual physician who as a citizen must take the time to act" [38].

Initial Goals of a Physician Campaign

What then should be the initial aims of a physician led campaign?

1. We propose the immediate and complete elimination from civilian hands of the most lethal weapons confronting society: a ban on further sales combined with confiscation of automatic and semi automatic assault rifles and pistols in addition to maintenance of the current bans on importation and future production. Such a proposal would be parallel to international efforts to control the most lethal nuclear weapon delivery systems; i.e., multi-warhead missiles. Legislation passed by the U.S. House in May, prohibiting the manufacture and sale of certain types of semiautomatic assault weapons, is a step in the right direction. The political margin of victory for this bill was so narrow, however, that stronger measures may be difficult to pass unless the public is better educated and more vocal in its support of gun control. Moreover, the bill does not retroactively ban assault weapons that were purchased legally before its passage, or that will continue to be purchased legally before it is signed by the President.

2. We further advocate a total ban on the most lethal types of ammunition and the tools of assassins: silencers and kits for silencer assembly.

3. While the goal at present may seem elusive, no solution is adequate without the rigid restriction of handguns. We must exact on ourselves the demonstrated standards of more tranquil societies. All weapons must be registered and competency in safety standards demonstrated as a condition of ownership. Concealment of weapons cannot be tolerated. Long guns for legitimate, law-abiding purposes may remain in private hands. However, handguns should not. Those who enjoy target shooting may sequester handguns in secure, public firing ranges. But the targeting of human beings must stop.

Conclusion -- A Call for Action

Let us not be deterred by opposition, nor deluded that such goals will be easily attained. Many will proclaim an infringement of sovereignty. Again there are lessons from the global struggle. Has not a proliferation in firearms fueled the internecine conflict in Somalia, resulting in famine and societal dissolution? While the rights of sovereignty might support their possession, no enlightened nation would find desirable or wise the unbridled proliferation of weapons of mass destruction. Is not the common good promoted by their restriction?

In the past, the call went forth for science regarding the nature of firearm injuries [43]. The present contributions of the medical literature have more than exceeded such exhortation. By all scientific and social measures, the damage to our society has exceeded "the killing threshold," i.e., any conceivable standard for a civilized society [2]. Now is the time for action.

This action must not preclude or substitute for other actions to reduce communal violence. Until the injustices of our society begin to be effectively addressed, until effective remedies to eliminate poverty are enacted, until the models for violence on television and motion pictures are reduced, until all of us begin to deal with the root causes of violence in our families and in our communities, gun control alone cannot solve the problem. But, as in the prevention of catastrophe by weapons of mass destruction, the elimination of the firearms is a good place to begin.

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References

1. Larson E. The story of a gun. The Atlantic Monthly, January 1993;48-78.

2. Kassirer JP. Firearms and the killing threshold. N Engl J Med 1991;325:1648-1649.

3. Wintemute GJ. Firearms as a cause of death in the United States, 1920-1982. J Trauma 1987;27:532-536.

4. Rosenberg M, Mercy JA. Assaultive violence. In: Last JM, Wallace RB, eds. Public health and preventive medicine. 13th ed. Norwalk, CT: Appleton and Lange, 1992:1035-1039.

5. Sloan JH, Kellermann AL, Reay DT, et al. Handgun regulations, crime, assaults, and homicides: a tale of two cities. N Engl J Med 1988;319:1256-1262. 6. Christoffel KK, Christoffel T. Handguns: risks versus benefits. Pediatrics 1986;77:781-782.

7. US Department of Justice, Federal Bureau of Investigation Uniform Crime Reports. Crime in the United States 1991. Washington, DC: US Government Printing Office, 1992.

8. Fingerhut LA. Firearm mortality among children, youth and young adults 1-34 years of age, trends and current status: United States, 1985-90. Advance data from vital and health statistics; No. 231. Hyattsville, Maryland: National Center for Health Statistics, 1993.

9. Boyd JH. The increasing rate of suicide by firearms. N Engl J Med 1982;308:872-874.

10. Kellerman AL, Rivara FP, Somes G, et al. Suicide in the home in relation to gun ownership. N Engl J Med 1992;327:467-472.

11. Brent DA, Perper JA, Allman CJ, et al. The presence and accessibility of firearms in the homes of adolescent suicides - a case study. JAMA 1991;266:2989-2995.

12. Hedeboe J, Charles AV, Nielsen J, et al. Interpersonal violence: patterns in a Danish community. Am J Public Health 1985;75:651 -653.

13. Alexander GR, Massey RM, Gibbs T, et al. Firearm-related fatalities: an epidemiologic assessment of violent death. Am J Public Health 1985;75:165-168. 14. Copeland AR. The right to keep and bear arms - a study of civilian homicides committed against those involved in criminal acts in metropolitan Dade County from 1957 to 1982. J Forensic Sci 1984;29:584-590.

15. Saltzman LE, Mercy JA, O'Carroll PW, Rosenberg ML, Rhodes PH. Weapon involvement and injury outcome in family and intimate assaults. JAMA 1992;267:3043-3047.

16. Kellerman AL, Rivara FP, Rushforth NB, et al. Gun ownership as a risk factor for homicide in the home. N Engl J Med 1993;329:1084-1091.17. Kleck G. Point blank: guns and violence in America. New York: Aldine deGruyter, 1991.

18. Cook PJ. The technology of personal violence. In: Tonry M, ed: Crime and justice: an annual review of research, Volume 14. Chicago: University of Chicago Press, 1991.

19. Hattori's killer acquitted: Louisiana jury accepts Peairs' claim of self-defense. The Daily Yomiuri [Tokyo]; May 23, 1993.

20. Ervin FR, Glazier JB, Aronow S, et al. Human and ecologic effects in Massachusetts of an assumed thermonuclear attack on the United States. N Engl J Med 1962;266:1127-1137.

21. Sidel VW, Geiger HJ, Lown B. The physician's role in the post attack period. N Engl J Med 1962;266:1137-1145.

22. Aronow S. A glossary of radiation terminology. N Engl J Med 1962;266:1145-1149. 23. Leiderman PH, Mendelson JH. Some psychiatric and social aspects of the defense-shelter program. N Engl J Med 1962;266:1149-1155.

24. Garland J. The medical consequences of thermonuclear war. N Engl J Med 1962;266:1126-1127.

25. Sidel VW, Goldwyn RM. Chemical and biologic weapons a primer. N Engl J Med 1966;274:21-27.

26. Jonsen AR, Jameton A. Social and political responsibilities of physicians. Journal of Medical Philosophy 1977;2:376-400.

27. Cassel C, Jameton A. Medical responsibility and thermonuclear war. Ann Int Med 1982;97:426-432.

28. Snow J. On the mode of communication of cholera. In: Rapport S, Wright H, eds. Great adventures in medicine. New York: Dial Press, 1956:214-220.

29. Caldicott HM. Nuclear madness. New York: Bantam Press, 1981.

30. Abrams HL, Von Kaenel WE. Medical problems of survivors of nuclear war: infection and communicable disease. N Engl J Med 1981;305:1230-1231.

31. Leaning J. Physicians, Triage, and nuclear war. Lancet 1988;2:269-270.

32. Sidel VW. Weapons of mass destruction: the greatest threat to public health. JAMA 1989;262:680-682.

33. Leaf A. New perspectives on the medical consequences of nuclear war. N Engl J Med 1986;315:905-912.

34. Center for Defense Information. Preparation for nuclear war: still more than \$1 billion a week. The Defense Monitor 1990;19(7):1-8.

35. Sugarmann J. Assault weapons and accessories in America. Firearms Policy Project of Violence Policy Center. Washington, DC: Violence Policy Center, September 1988.

36. Sugarmann J. National Rifle Association: money-firepower fear. Washington, DC: National Press Books, 1992.

37. Caldicott H. Missile envy: the arms race and nuclear war. New York: Bantam Books, 1984.

38. Ingelfinger FJ. Therapeutic action for a national ill. N Engl J Med 1968;278:1399-1400.

39. Browning CH. Handguns and homicide: a public health problem. JAMA 1976;236:2198-2200.

40. Jagger J, Dietz P. Death and injury by firearms: who cares? JAMA 1986;255:3143-3144.41. Schneider D, Greenberg MR, Choi D.

Violence as a public health priority for black Americans. J Natl Med Assoc 1992;84:843-848.

42. Relman AS. More than sutures and transfusions. N Engl J Med 1977;297:552-553.

43. Mercy JÅ, Houk VN. Firearm injuries: a call for science. N Engl J Med 1988;319:1283-1285.

44. Sugarmann J. The NRA is right but we still need to ban handguns. The Washington Monthly, June 1987;11-15.

45. Cotton P. Gun-associated violence increasingly viewed as public health challenge. JAMA 1992;267:1171-1174.

46. Marwich C. Guns, drugs threaten to raise public health problem of violence to epidemic. JAMA 1992;267:2993.

47. Presser v Illinois. 116 US 252 (1886).

48. United State v Miller. 307 US 174 (1939).

49. Perpich v Department of Defense. 496 US 334 (1990).