

# Guns in the Medical Literature — A Failure of Peer Review

Edgar A. Suter, MD

## Introduction

It is philosophic bias, rather than scientific objectivity, that characterizes the debate on gun control.<sup>1</sup> Despite a pretense of scientific objectivity and method, the medical literature is no exception. As an example of the naked bias, consider the stated no-data-are-needed policy<sup>2</sup> of the *New England Journal of Medicine*. Consider the illogic and prejudice of its editor's recent proposal that if a little gun control does not work, then certainly more gun control is needed.<sup>3</sup> As this paper will document, errors of fact, design, and interpretation abound in the medical literature on guns and violence. Many have credulously restated the opinions of partisan CDC researchers, but given short shrift to the refuting data and criticisms. For matters of "fact," it is not unusual to find third-hand citations of editorials rather than citations of primary data.

Though it has become quite fashionable to speak of an "epidemic of violence," analysis of recent homicide and accident rates for which demographics are available show a *relatively stable to slightly declining* trend for every segment of American society *except inner city teenagers and young adults primarily involved in illicit drug trafficking* (Graph 1: US Homicide Rates 1977-1988" & Graph 2: "Selected Homicide Rates Comparisons"). Federal law makes gun purchase by teenagers illegal throughout the US. The teenagers and young adults most at risk for violence live in urban jurisdictions with the most stringent gun controls. The areas with the

## Abstract

**Errors of fact, design, and interpretation abound in the medical literature on guns and violence. The peer review process has failed to prevent publication of the errors of politicized, results-oriented research. Most of the data on guns and violence are available in the criminologic, legal, and social sciences literature, yet such data escape acknowledgment or analysis of the medical literature. Lobbyists and other partisans continue to promulgate the fallacies that cloud the public debate and impede the development of effective strategies to reduce violence in our society. This article examines a representative sample of politicized and incompetent research.**

most severe gun restrictions have the worst violence and areas with the most permissive gun policies have the least violence.

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**The benefits of guns are the lives saved, the injuries prevented, the medical costs saved, and the property protected — not the burglar or rapist body count.**

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Long-term study shows that homicide and suicide rates wax and wane independent of gun controls and gun ownership (Graph 3: 20th Century US Homicide and Suicide Rates). The gun accident rate has fallen steadily for decades and now hovers at an all time low<sup>4</sup> (Graph 4: 20th Century US Firearms Accident Rates). Though guns and ammunition meet none of Koch's

Postulates of Pathogenicity, certain physician advocates of gun prohibition have played deceptively with the imagery of "the bullet as pathogen."<sup>5</sup> Using incompetent research or contrived and emotive imagery to promote a political agenda only obscures the real problems and impedes real solutions. The prohibitionists' undeserved pose of moral superiority is a

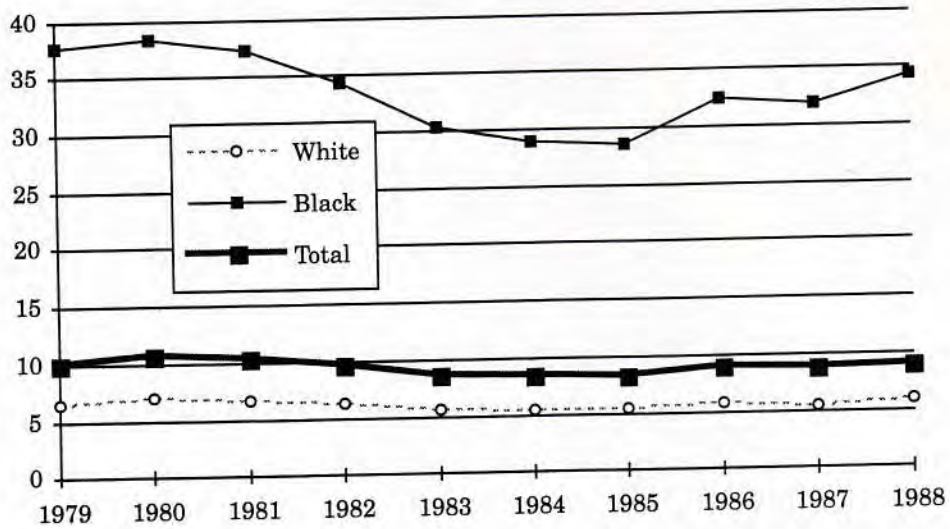
distraction from objective analysis and is, therefore, an impediment to rational solutions.

Webster et al.<sup>6,7</sup> use powerful images of children in carefully crafted comparisons to mislead us. Mentioning "Gun-shot wounds are the third most common cause of injury deaths among children aged 10 to 14 years . . ." assiduously avoids noting that only the first leading cause of death amongst children, motor vehicle accidents, is horrific (Graph 5: Children's Accidental Deaths).

Politicization of research cannot coexist with the scientific objectivity necessary for sound design and analysis of studies. Errors of fact, design, and interpretation abound in the medical literature on guns and violence. The medical literature is a relative newcomer to the public debate on guns and violence, yet the medical literature has virtually ignored all of the comprehensive scholarly evaluations of guns, violence, and gun control, such as the National Institute of Justice studies,<sup>8,9</sup> the monumental review by gun control advocate Kleck (that in 1993 won the American Society of Criminology's Hindelang Award as "the most important contribution to criminology in 3

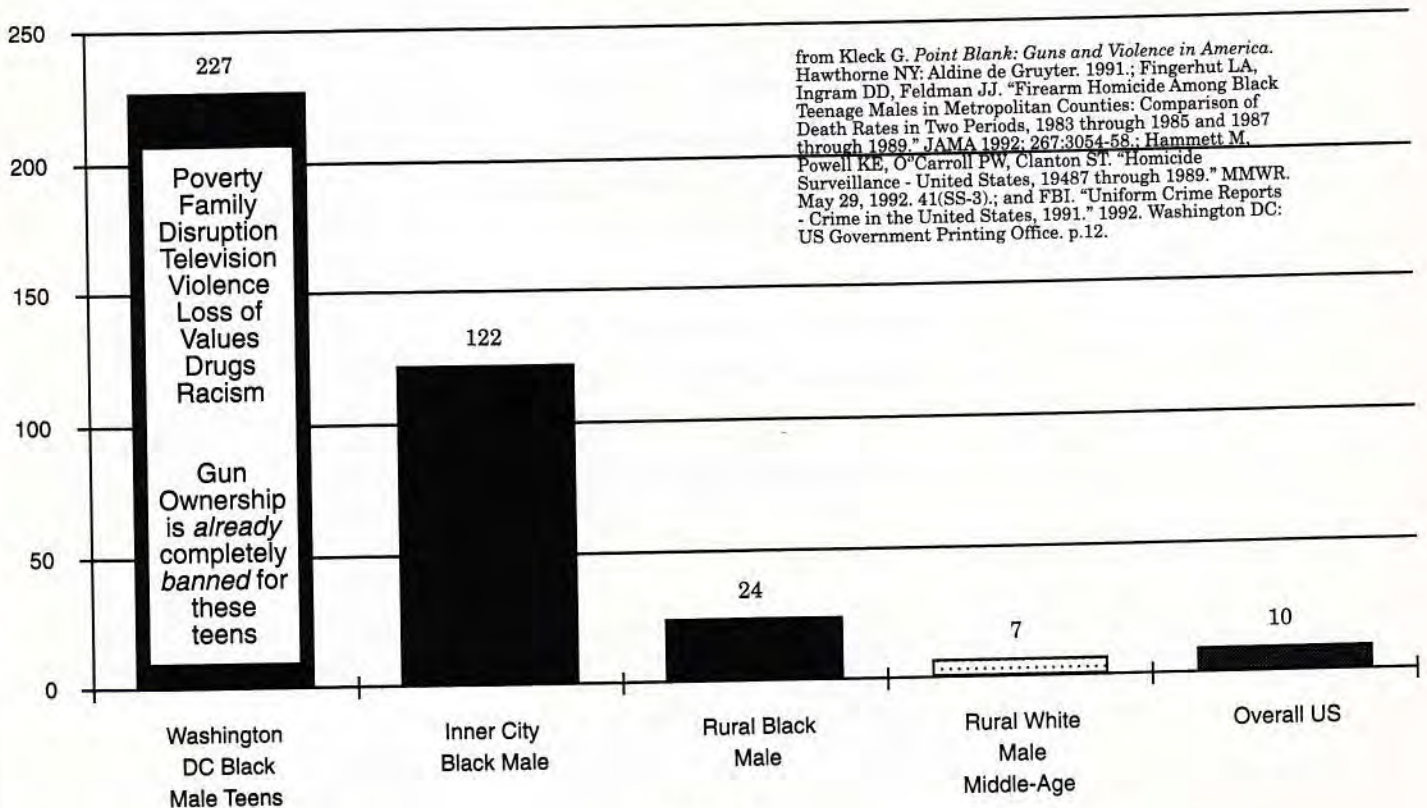
### Homicide Rates 1979-1988 per 100,00 population

from Centers for Disease Control.  
"Homicide Surveillance, 1979-1988."  
Morbidity and Mortality Weekly Report.  
May 29, 1992; 41(SS-3):1-35.



Graph 1

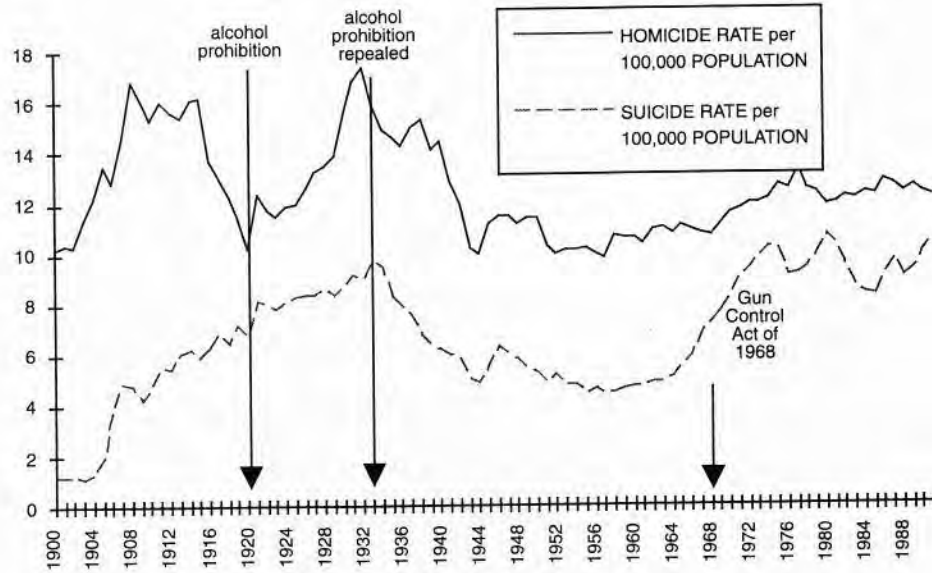
### Selected Homicide Rates Comparison per 100,00 population



Graph 2

## 20th. Century US Homicide and Suicide Rates per 100,00 population

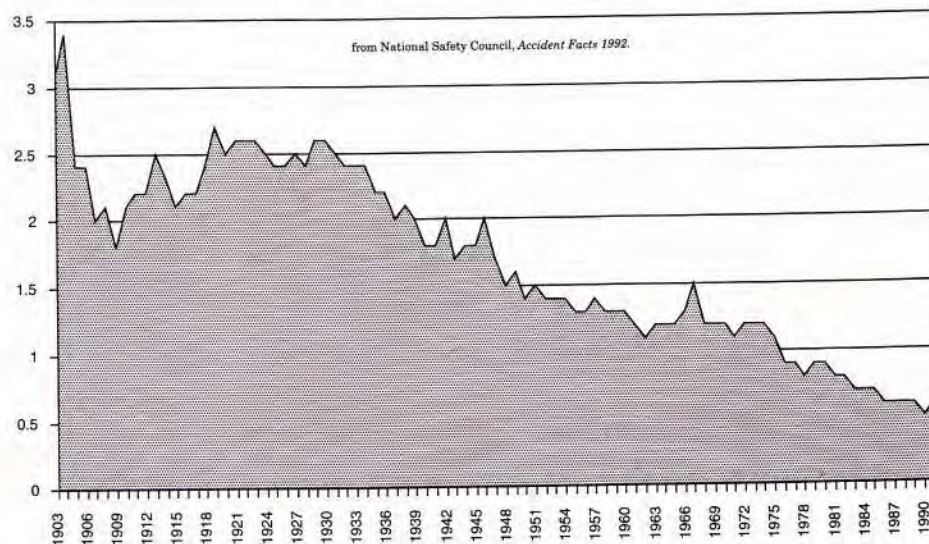
from Grove RD, Hetzel AM. *Vital Statistics Rates in the United States 1900-1960*. Washington DC: National Center for Health Statistics. 1968. and *Vital Statistics of the United States*. Hyattsville MD: National Center for Health Statistics. Individual volumes for 1961 through 1991.



**Graph 3**

## 20th. Century US Firearm Accident Rates per 100,00 population

from National Safety Council, *Accident Facts 1992*.



**Graph 4**

years"),<sup>10</sup> the cross cultural or other analyses by Kopel,<sup>11,12,13</sup> or Kates,<sup>14</sup> Fackler's criticisms of voodoo wound ballistics,<sup>15,16,17</sup> and refutation<sup>18</sup> of the American Medical Association's gross distortions<sup>19</sup> on "assault weapons."

Those readers familiar only with the medical literature on guns should review the extensive criticisms of methodology and conclusions,<sup>20</sup> documentation of false citations, fabrication of data, and other "overt mendacity" in the medical literature on guns,<sup>21</sup> "sagecraft,"<sup>22</sup> and thorough reviews of Centers for Disease Control and Prevention (CDC) bias.<sup>23,24</sup> The medical literature's inbred selectivity demonstrates half-hearted, if any, effort at objectivity. Rather than balance the merits and demerits of gun prohibition, it is the purpose of this paper to expose representative samples of biased and incompetent research and to spur greater skepticism of "politically correct," results-oriented polemics. The taxpayer funding of such politicized research merits debate. For a discussion of the merits and demerits of gun registration, licensing, waiting periods, and bans, the reader is guided to the scholarly reviews cited above.

### The "43 Times" Fallacy

**Kellermann AL, Reay DT. Protection or peril? An analysis of firearms-related deaths in the home. *N Engl J Med* 1986. 314: 1557-60.**

Methodologic and Conceptual Errors:

- Prejudicially truncated data
- *Non-sequitur* logic
- Correct methodology *described, but not used*, by the authors
- Repeated the harshly criticized methodology of Rushforth from a decade earlier
- Deceptively understated the protective benefits of guns.

To suggest that science has proven that defending oneself or one's family with a gun is dangerous, gun prohibitionists often claim: "a gun owner is 43 times more likely to kill a family member than an intruder." This is Kellermann and Reay's flawed risk-benefit ratio for gun ownership,<sup>25</sup> heavily criti-

cized for its deceptive approach and its non-sequitur logic.<sup>10,26,27</sup> Clouding the public debate, this fallacy is one of the most misused slogans of the anti-self-defense lobby.

The true measure of the protective benefits of guns are the lives saved, the injuries prevented, the medical costs saved, and the property protected — not the burglar or rapist body count. Since only 0.1% to 0.2% of defensive gun usage involves the death of the criminal,<sup>10</sup> any study, such as this, that counts criminal deaths as the only measure of the protective benefits of guns will expectedly underestimate the benefits of firearms by a factor of 500 to 1,000.

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## **The medical literature is a relative newcomer to the public debate on guns and violence yet has virtually ignored all of the comprehensive scholarly evaluations of this subject, such as studies by the National Institute of Justice, Kleck, Kopel, Kates, or Fackler.**

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Interestingly, *the authors themselves described, but did not use, the correct methodology.* They acknowledged that a true risk-benefit consideration of guns in the home *should* (but did not in their "calculations") include "cases in which burglars or intruders are wounded or frightened away by the use or display of a firearm [and] cases in which would-be intruders may have purposely avoided a house known to be armed. . . ."<sup>125</sup>

Kellermann and Reay had repeated the harshly criticized folly of Rushforth<sup>28</sup> from a decade earlier. In 1976,

Bruce-Biggs criticized Rushforth noting that the protective benefits of guns are the lives saved and the property protected, not the burglar body count.<sup>29</sup> Kellermann and Reay would have done well to heed that simple *caveat*. Objective analysis, even by their own standards, shows the "more likely to kill a family member than intruder" comparison to be deceptively appealing, though only a specious contrivance.

*Caveats* about earlier estimates of 1 million protective uses of guns each year<sup>10</sup> have led Kleck to perform the largest scale, national, and methodologically sound study of the protective uses of guns suggesting between 800,000 and 2.4 million protective uses of guns each year<sup>30</sup> — not quite as "intangible" as Kassirer claimed<sup>31</sup> — *as many as 75 lives protected by a gun for every life lost to a gun, as many as 5 lives protected per minute.* Guns not only repel crime, guns deter crime as is shown by repeated National Institute of Justice surveys of criminals.<sup>9</sup> These are the benefits of guns overlooked by scientists whose politics overshadow their objectivity.

At his presentation to the October 17, 1993, Handgun Epidemic Lowering Program conference, Kellermann emotionally admitted his anti-gun bias, a bias evident in the pattern of Kellermann's "research."

### The "43 Times" Fallacy Becomes the "2.7 Times" Fallacy

Kellermann and his co-authors have persisted in their discredited methodology. In a 1993 *New England Journal of Medicine* article,<sup>32</sup> Kellermann et al. once again attempted to prove that guns in the home are a significant risk.

Both the case studies and control groups in this study were socially and demographically unrepresentative of the areas studied or of the nation as a whole. The groups had exceptionally high incidence of social dysfunction and instability. For example, 52.7% of case subjects had a history of a household member being arrested, 24.8% had alcohol-related problems, 31.3% had a household history of illicit drug abuse, 31.8% had a household member hit or hurt in a family fight, 17.3% had

**Kellermann AL, Rivara FP, Rushforth NB, et al. Gun ownership as a risk factor for homicide in the home. N Engl J Med 1993;329(15):1084-91.**

Methodologic and Conceptual Errors:

- Used only one logistic regression model to describe multiple socially distinct populations
- Psychosocially, economically, and ethnically unrepresentative study-populations
- Study populations, compared to general population, over-represented serious social dysfunction and financial instability, factors that would expectedly increase risks of homicide
- Unrepresentative nature of dysfunctional study populations prevents generalizing results to population at large
- When *properly* used, an "odds ratio" only estimates *relative* risk of study and control populations — misleading because the ratio gives no estimate of actual or baseline risk
- One week after publication of this article, during his presentation to a gun prohibition advocacy group, H.E.L.P. Conference (Chicago, October 18, 1993), the lead author emotionally admitted his anti-gun bias, and similar to

**Kellermann AL, Reay DT. Protection or Peril? An Analysis of Firearms-Related Deaths in the Home." N Engl J Med 1986;314:1557-60:**

- Ignored criticisms of 1986 methodology, so, for the second time, repeated the harshly criticized methodology of Rushforth from 1976
- *Non-sequitur* logic
- In 1986, correct methodology described, but never used, by the lead author
- Failed to consider the protective benefits of guns.

a family member hurt so severely in a family fight that medical attention was required. Both the case studies and control groups in this study had very high incidence of financial instability. For example, both case subject and control heads of household had a me-

dian Hollingshead socioeconomic score of 4 (on a scale of 1 to 5 with 1 being the highest level of socioeconomic status). These are factors that would expectedly be associated with higher rates of violence, including homicide. The subjects and controls did not even reflect the racial profile of the studied counties; 62% of the subjects were black compared with 25% of the overall population of the three studied counties.

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### **Aberrant data, illogical analysis, weak analogies, and gross exaggerations should not be a basis for public policy.**

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The unrepresentative nature of the case and control groups undercut the authors' attempts to generalize from this study to the nation at large. The results cannot even be generalized to the counties studied because both the case and control groups did not even represent the ethnic or socioeconomic diversity of the counties studied. With so many complex variables, the authors should have used multiple logistic regression models, but with their *a priori* bias, they used only one logistic regression model.

Interestingly, according to the authors' own data, guns were *next to last* in importance of the "risk factors" studied. Alcohol, living alone, family violence, and renting one's home held more risk than guns according to the authors' calculations, yet the most important risks were barely mentioned in the publicity or the authors' discussion.

#### **"Proving" A Foregone Conclusion**

In another effort to prove that guns in the home are a significant risk, Kellermann and his co-authors purported to examine certain correlates of suicide.<sup>33</sup> Though the authors' own data

**Kellermann AL, Rivara FP, Somes G, et al. Suicide in the home in relationship to gun ownership. N Engl J Med 1992;327:467-72.**

Methodologic and Conceptual Errors:

- An "adjustment" to eliminate suicide outside the home for the stated purpose of exaggerating the focus on guns
- Ignored the vast body of data on suicide method substitution
- The authors virtually ignored their own data showing that factors, such as psychotropic medications, drug abuse, living alone, and hospitalization for alcoholism, have much higher correlations with suicide than guns
- Failed to address the important social and ethical dilemma — how to reduce *overall* suicide rates
- Ignored the role of failing health in the suicide of the elderly

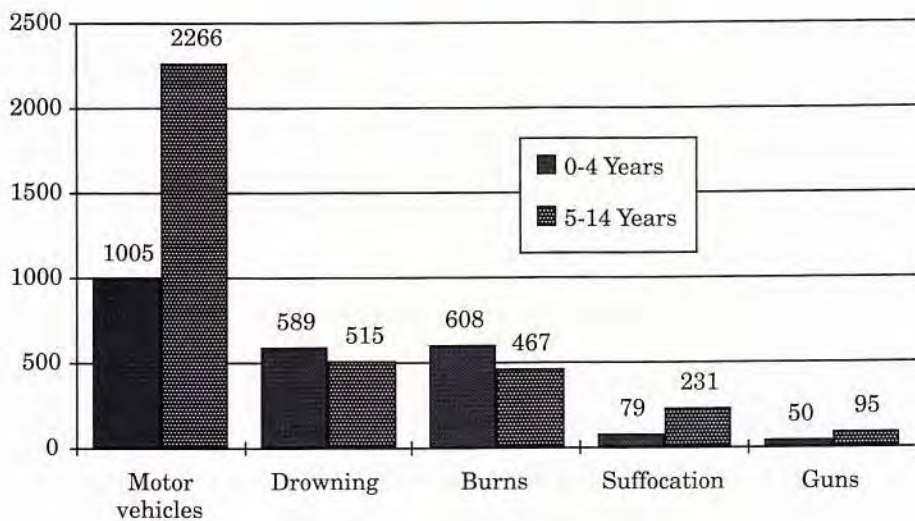
showed higher correlations between suicide and psychotropic medications, drug abuse, living alone, and hospitalization for alcoholism, the article focused on guns.

The authors' "adjustment" — their word — that eliminated the 30% of suicides outside the victim's home intentionally skewed the data towards their foregone conclusion. The authors candidly acknowledged their bias, "Our study was restricted to suicides in the victim's home *because* a previous study has indicated that most suicides committed *with guns* occur there." [emphasis added].

As Kleck's review<sup>10</sup> of the broad expanse of American and cross-cultural suicide literature shows, even if guns instantly evaporated from the U.S., universal access to nearly equally effective and accessible means of suicide — hanging, auto exhaust, drowning, and leaping — would likely interfere with an overall reduction in suicide. Evidence of such "method substitution" is extensive. Many cultures that have severe gun restrictions — Japan, China, USSR, Germany, Luxembourg, Denmark, Belgium, Surinam, Trinidad, Tobago, Hungary, Rumania, Czechoslovakia, Yugoslavia, Finland, and Sweden — have total suicide rates far ex-

## Children's Accidental Deaths, 1991

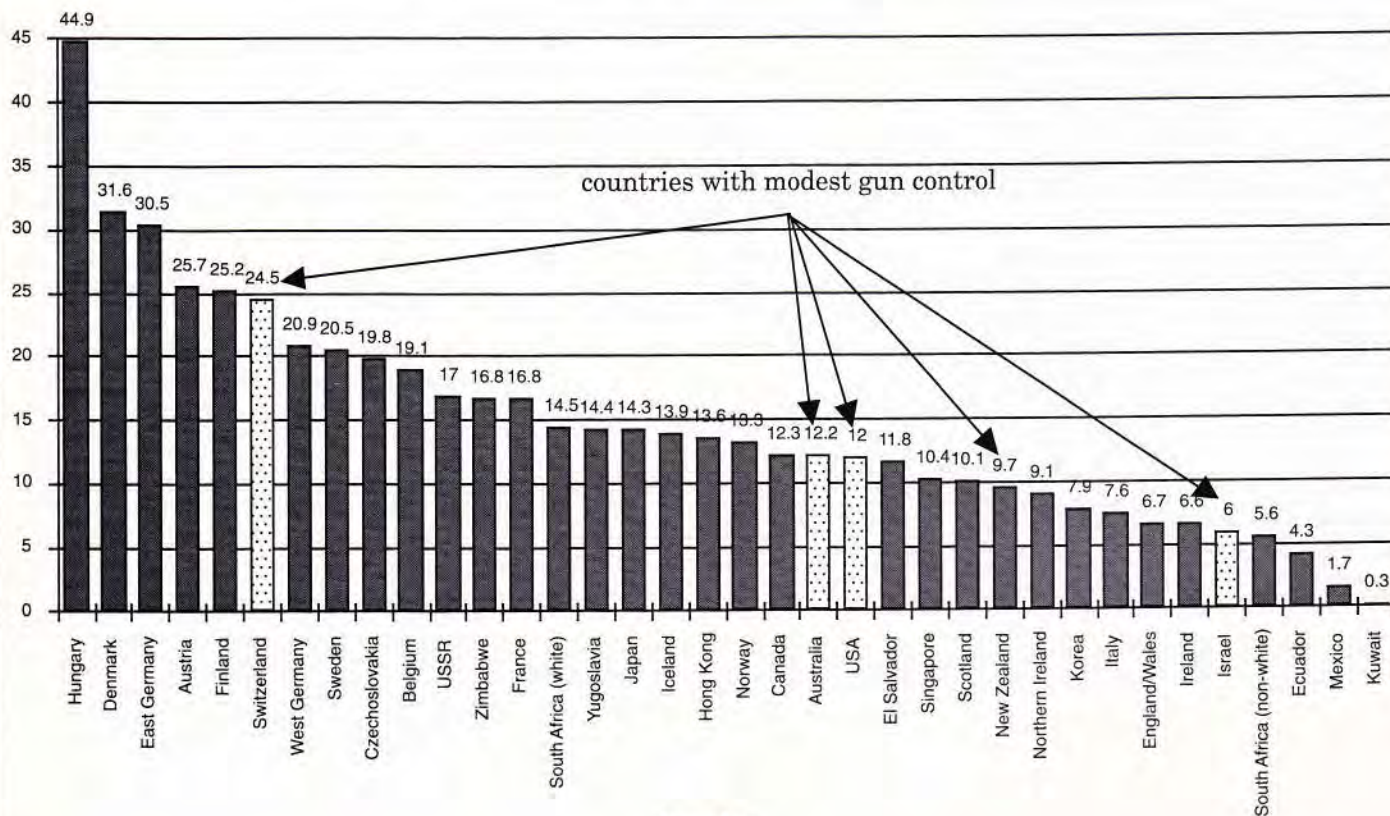
from National Safety Council. *Accident Facts 1991, 1992.*



Graph 5

## International Suicide Rates Comparison

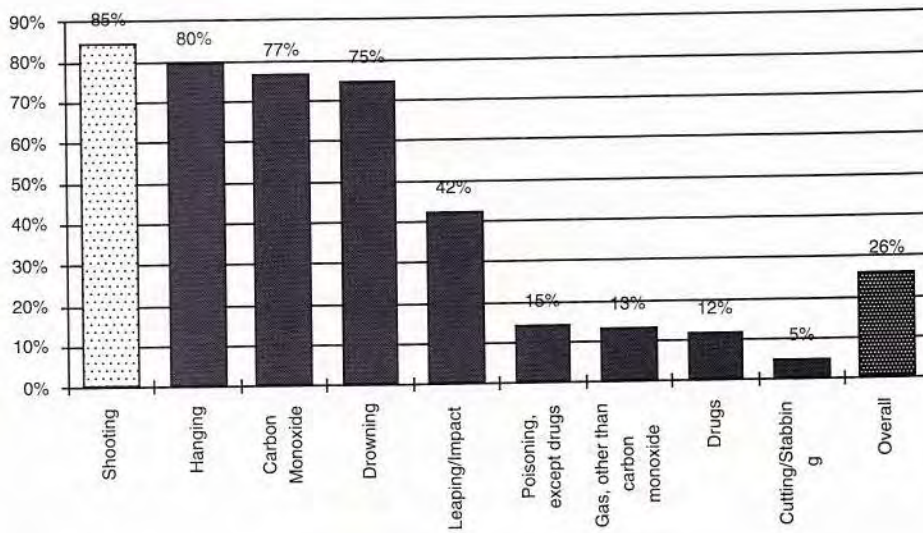
from World Health Organization, 1989



Graph 6

## Suicide Method Lethality

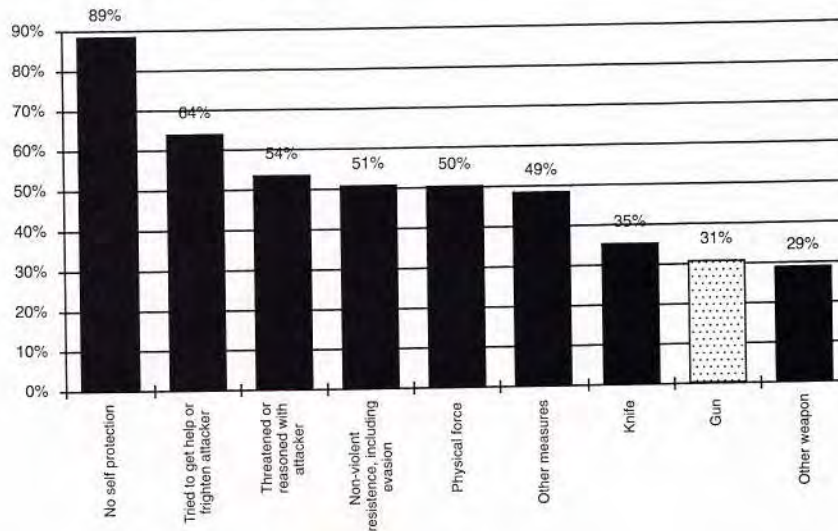
from Kleck G. *Point Blank: Guns and Violence in America*. Hawthorne, NY: Aldine de Gruyter. 1993. Table 6.2.



Graph 7

## Rates of Crime Completion by Victim's Method of Protection

from Kleck G. *Point Blank: Guns and Violence in America*. Hawthorne, NY: Aldine de Gruyter. 1993. Table 4.4.



Graph 8

ceeding the USA suicide rate. Many others — Canada, Iceland, Bulgaria, Norway, and Australia — exceed the USA suicide rate though not quite so dramatically<sup>34</sup> (**Graph 6: International Suicide Rates Comparisons**).

Guns are often portrayed as uniquely lethal as tools of suicide, yet, amongst tools of suicide, guns are neither uniquely available, uniquely lethal, nor causal of suicide<sup>10</sup> (**Graph 7: Suicide Method Lethality**). The authors' preoccupation with guns bypasses the real social dilemma, reducing the total suicide rate. Changing merely the method of death is an inadequate response to a grave social prob-

#### Where Is Lawful Self-defense "Murder"?

**Kellermann AL, Mercy JA. Men, women, and murder: gender-specific differences in rates of fatal violence and victimization. J Trauma 1992;33:1-5.**

Methodologic and Conceptual Errors:

- Most women kill in defense of themselves and their children. In these common circumstances, lawful self-defense by women against their attackers is not "murder" in any jurisdiction
- The authors' discussion focused almost entirely on guns though the data on knives and other weapons are virtually identical
- The authors failed to note that during the study period the domestic homicide rate nearly halved
- Provided no primary research, instead provides largely faulty analysis of FBI Uniform Crime Reports data
- Though purporting to assess an aspect of risk, the authors failed to analyze the protective uses of guns — lives saved, injuries prevented, medical costs saved, and property protected — no true risk benefit analysis
- Ignored data that suggest guns are actually the safest and most efficacious means of resisting assault, rape, and even non-violent crime
- Offered no new insights or solutions to the problem of domestic abuse.

lem. Is suicide from hanging or auto exhaust so much more "politically correct" that research, particularly in these times of financial austerity, should focus on one instrumentality rather than on the common roots and prevention strategies?

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### **The prohibitionists' undeserved pose of moral superiority is a distraction from objective analysis and is, therefore, an impediment to rational solutions to violence in society.**

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Though recognizing the risk and physical disadvantage of women, Kellermann and Mercy attempted to draw us to their conclusion that "the wisdom of promoting firearms to women for self-protection should be seriously questioned."<sup>35</sup> No effort was made by the authors to assess the protective uses of guns by women. In fact, the authors attempted to portray legitimate self-defense as "murder." Women are abused 2 million to 4 million times per year.<sup>36</sup> Their children are similarly abused, even fatally.<sup>37</sup> Almost all the "spouses and domestic partners" killed by women each year are the very same men, well known to the police, often with substance abuse histories, who have been brutalizing their wives, girlfriends and children.<sup>10,14</sup>

Defense with a gun results in fewer injuries to the defender (17.4%) than resisting with less powerful means (knives, 40.3%; other weapon, 22%; physical force, 50.8%; evasion, 34.9%; etc.) and in fewer injuries than not resisting at all (24.7%).<sup>10</sup> Guns are the safest and most effective means of protection. This is particularly important to women, children, the elderly, the handicapped, the weak, and the infirm, those who are most vulnerable to vi-

olent male predators (**Graph 8: Rates of Crime Completion by Victim's Method of Protection, & Graph 9: Rates of Victim Injury by Victim's Method of Protection**).

Would it be more "politically correct" if women or children were killed by their attackers — the common outcome when women do not defend themselves and their children with guns?

The article's title notwithstanding, lawful self-defense is not "murder" in any jurisdiction. It has been estimated that as many as 20% of homicides are self-defense or justifiable in the final analysis.<sup>38</sup> Since the FBI Uniform Crime Reports records "justifiable homicide" based on the *preliminary* determination of the reporting officer, rather than upon the *final* determination, the FBI data dramatically under-report "justifiable homicide." Knowing one another is sufficient to meet the FBI's definition of "acquaintance," so "acquaintance" includes the maniac in one's apartment building and dueling drug dealers.

At unconscionable expense this article recapitulated FBI Uniform Crime Reports data that were already available "off the shelf" for \$20 from the U.S. Government Printing Office. The data only bolster what we already knew about women's risk at home, but Kellermann and Mercy — unjustified by the data — singled out guns for special treatment. "When women killed with a gun, their victim was five times more likely to be their spouse."<sup>35</sup> Kellermann and Mercy failed to acknowledge, however, that the FBI data they recounted showed that when women killed with a knife, their victim was *also* five times more likely to be their spouse — and when women killed with other means, their victim was over four times more likely to be their spouse.

The most meaningful conclusion from this study, the conclusion *missed* by Kellermann and Mercy, is the tremendous restraint shown by women, that they kill so few of their contemptible abusers. Interestingly, during the study period of this article, 1976-87, the domestic homicide rate fell from 2.4 to 1.4 per 100,000,<sup>39,40</sup> and the number of teen and child gun accident fatal-



ities fell from 530 to 280<sup>41</sup> — all this while increasing *numbers* of guns were in the hands of US citizens. It is also worth noting that the highly touted “proliferation of guns” has *not* been associated with an increase in *rates* of gun ownership.<sup>10</sup>

The male authors’ patronizing suggestions about gun ownership by women are *not* justified by available data. Partisan “scientists” who struggle to sculpt their data to fit their *a priori* conclusions should be ignored or censured. Statistical legerdemain cannot hide what the authors failed to recognize: a woman’s or child’s life lost because a gun was absent is *at least* as valuable as a violent predator’s life lost because a gun was present. Women *are* justified in concluding that guns are the most effective and safest tools of self-defense. Catchy ratios and contrived comparisons detract from the public debate and are little consolation to the brutalized victims or their grieving survivors.

#### Why Are the Black and Hispanic Homicide Rates So High in Seattle?

Sloan JH, Kellermann AL, Reay DT, et al. Handgun regulations, crime, assaults, and homicide: a tale of two cities. *N Engl J Med* 1988;319:1256-62.

Methodologic and Conceptual Errors:

- Attempted a simplistic single-cause interpretation of differences observed in demographically dissimilar cities and cultures
- Purported to evaluate the efficacy of Canadian gun control without evaluating the situation before the law
- The Vancouver homicide rate increased 25% after the institution of the 1977 Canadian law
- Failed to acknowledge that, except for Blacks and Hispanics, homicide rates were lower in the US than in Canada.

Sloan, Kellermann, and their co-authors attempted to prove that Canada’s gun laws caused low rates of violence.<sup>42</sup> In their study of Vancouver,

the authors failed to compare homicide rates before and after the law. As Blackman noted,<sup>43</sup> they had ignored or overlooked that *Vancouver had 26% more homicides after the Canadian gun ban*, an observation that should warrant scientific exploration and generate a healthy skepticism of the authors’ foregone conclusions. Blackman’s critique and analogy were so “on target” as to be amusing:

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**Readers familiar only with the medical literature on guns should review the extensive criticisms of methodology and conclusions, documentation of false citations, fabrication of data, and other “overt mendacity.”**

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*The Vancouver-Seattle “study” is the equivalent of testing an experimental drug to control hypertension by finding two ordinary-looking, middle class white men, one 25 years old and the other 40, and without first taking their vital signs, administering the experimental drug to the 25-year-old while giving the 40-year-old a placebo, then taking their blood pressure and, on finding the younger man to have a lower blood pressure, announcing in a “special article” a new medical breakthrough. It would be nice to think that such a study would neither be funded by the taxpayers nor published in the [New England Journal of Medicine].<sup>43</sup>*

Since its publication, this article on gun control is among those most frequently cited, though this small scale (two cities) study has been thoroughly

debunked by three large-scale (national and multi-national) studies.<sup>44,45,46</sup> Kellermann and Sloan’s biased interpretation of their data, asserting that guns are to blame for crime, assaults, and homicide, is even refuted by their own statistics.

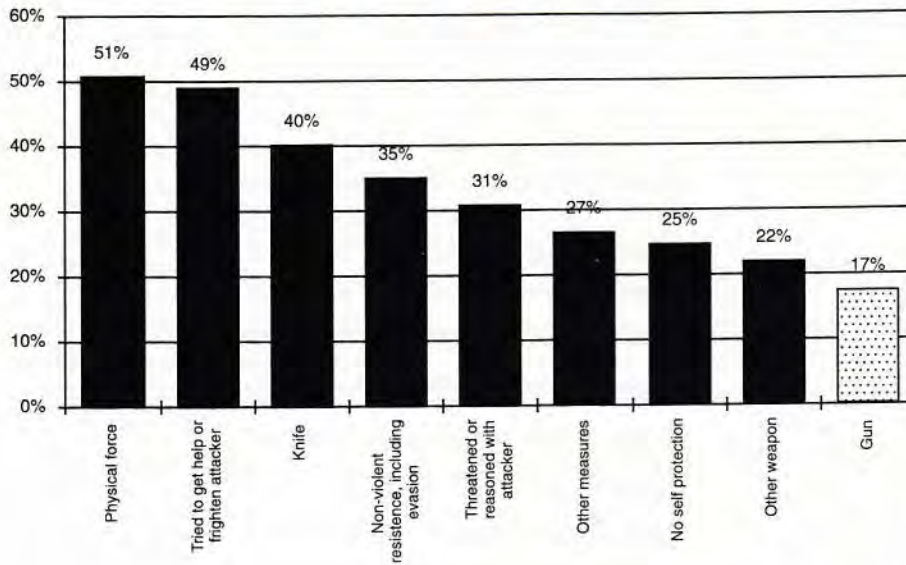
Kellermann and Sloan glossed over the disparate ethnic compositions of Seattle (12.1% black and Hispanic; 7.4% Asian) and Vancouver (0.8% black and Hispanic; 22.1% Asian). The importance? Despite typically higher prevalence of legal gun ownership amongst non-Hispanic-Caucasians in the US,<sup>10</sup> the homicide rate was lower for non-Hispanic-Caucasian Seattle residents (6.2 per 100,000) than for those in adjacent Vancouver, Canada (6.4). Only because the Seattle Black (36.6) and Hispanic (26.9) homicide rates were astronomic could the authors make their claim.

Could guns have some special evil influence over blacks and Hispanics, but not others? Hardly! The authors failed to identify the inescapable truth. The roots of inner-city violence lie in the disruption of the family, the breakdown of society, desperate and demoralized poverty, promotion of violence by the media,<sup>47,48</sup> the profit of the drug trade, the pathology of substance abuse, child abuse, disrespect for authority, and racism — *not* in gun ownership.

For an even-handed and scholarly cross-cultural comparison of guns, violence, and gun control, the reader is referred to Kopel’s compendium.<sup>11</sup> If one reviews homicide and suicide data, despite high levels of gun ownership and high levels of gun control, the U.S. fares well in comparison with many countries, even those supposedly “non-violent” nations whose gun controls the U.S. is invited to emulate, such as Japan. How do US homicide, suicide, and intentional fatality (combined homicide and suicide) rates compare with other nations? (**Graph 6: International Suicide Rates Comparisons; Graph 10: International Homicide Rates Comparisons; & Graph 11: International Intentional Fatality (Homicide+Suicide) Rates Comparisons**). Certainly the determinants of the levels of violence in a society are many and complex.

## Rates of Injury by Victim's Method of Protection

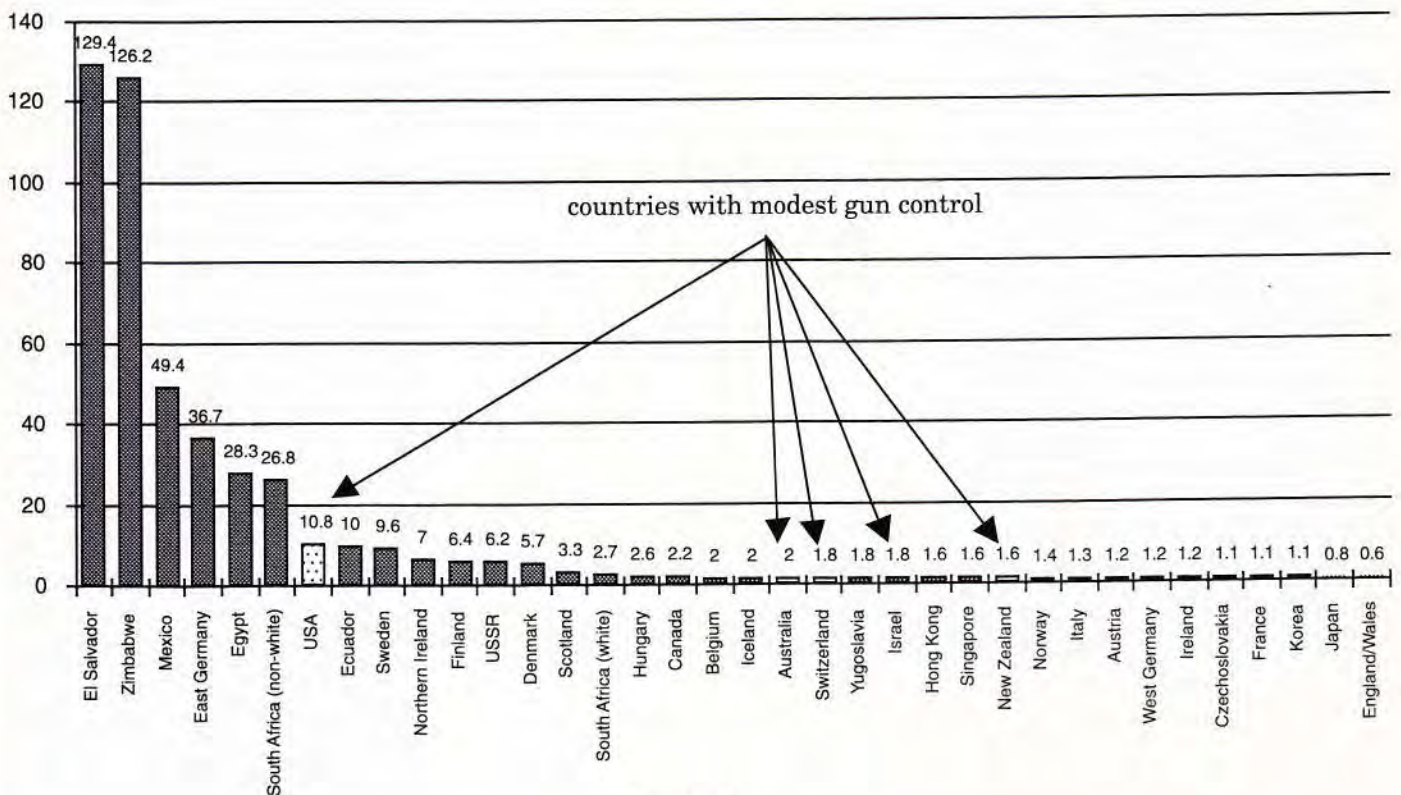
from Kleck G. *Point Blank: Guns and Violence in America*. Hawthorne, NY: Aldine de Gruyter. 1993. Table 4.4.



Graph 9

## International Homicide Rates Comparison

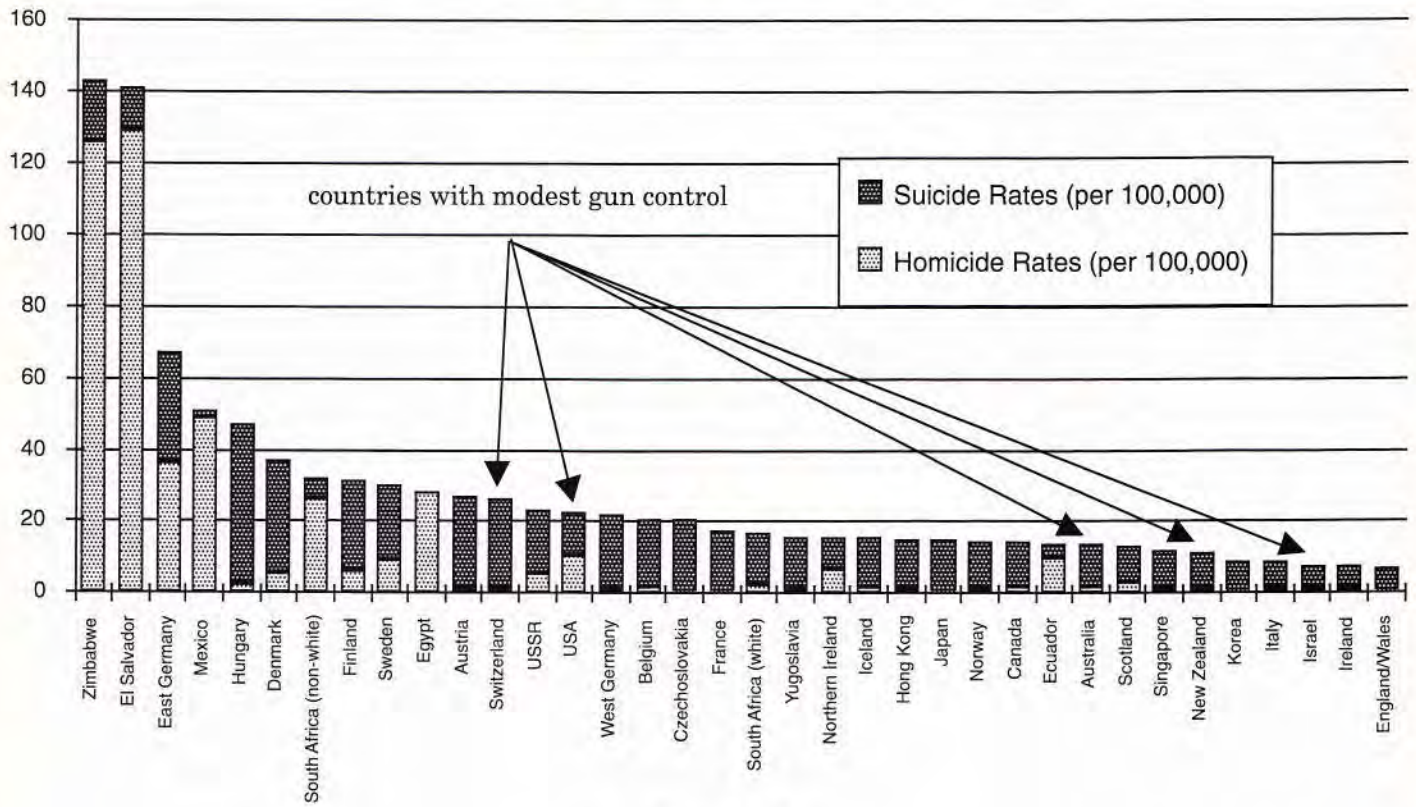
from World Health Organization, 1989



Graph 10

## International Intentional Fatality (Homicide + Suicide) Rates Comparison

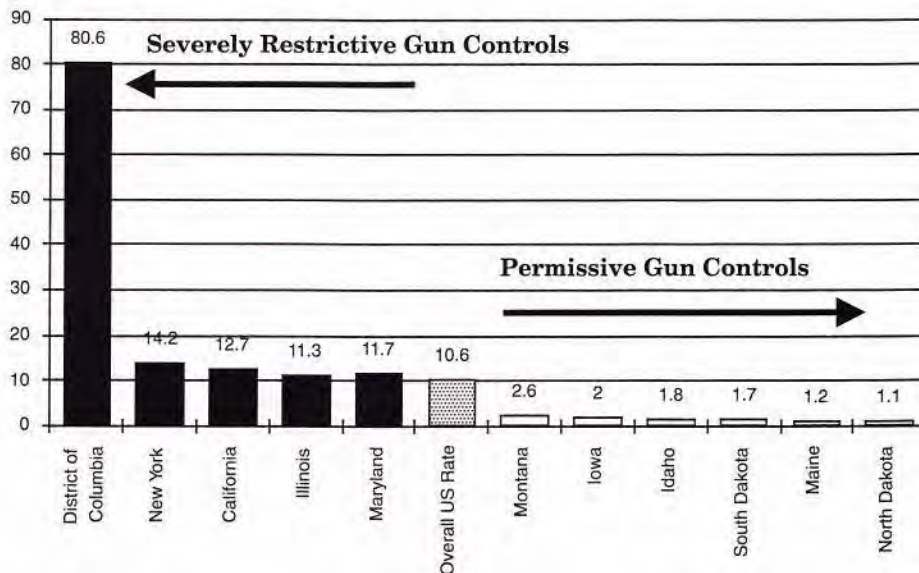
from World Health Organization, 1989



Graph 11

## Representative State Homicide Rates

from FBI Uniform Crime Reports



Graph 12

## Foretelling the Future — Gun Prohibitionists and Criminals Share a Crystal Ball

Loftin C, McDowall D, Wiersema B, Cottey TJ. Effects of restrictive licensing of handguns on homicide and suicide in the District of Columbia. *N Engl J Med* 1991; 325:1615-20.

### Methodologic and Conceptual Errors:

- The apparent, temporary, and minuscule homicide drop occurred 2 years before the Washington, DC, law took effect
- The "interrupted time series" methodology as used by Loftin et al. has been invalidated
- The study used raw numbers rather than population-corrected rates — not correcting for the 20% population decrease in Washington, DC, during the study period or for the 25% increase in the control population — exaggerating the authors' misinterpretations
- The study conveniently stopped as Washington, DC, overall homicide rate skyrocketed to 8 times the national average and the black, male, teen homicide rate skyrocketed to 22 times the national average
- Used a drastically dissimilar demographic group as control
- The authors virtually failed to discuss the role of complicating factors such as the crack cocaine trade and criminal justice operations during the study period.

Loftin et al. attempted to show that Washington, DC, 1976 ban on new gun sales decreased murder.<sup>49</sup> Loftin and his co-authors, using tax money, produced "research" with several negating flaws that were ignored or overlooked by "peer review" and the editorial board of the *New England Journal of Medicine* — perhaps a corollary of the editor's no-data-are-needed<sup>2</sup> policy.

Not only has the "interrupted time series" methodology as used by Loftin et al. been invalidated,<sup>50</sup> but the temporary and minuscule homicide drop began during 1974, 2 years before the gun law — How could the law, even before its proposal, be responsible for the drop?

The study conveniently stopped as the Washington, DC, homicide rate skyrocketed. If the gun freeze law, which has not changed, were responsible for the homicide drop, we would expect the "drop" to continue. If the "guns-cause-murder" theory is valid and if the gun freeze were effective, as "grandfathered" guns leave circulation (owner moves, dies, guns become unserviceable, etc.), the homicide rate should drop steadily. Quite the opposite is observed. *The 1976 Washington, DC, homicide rate before the law was 26.9 (derived from population<sup>51</sup> and homicide<sup>39</sup> statistics) and then tripled to 80.6 by 1991<sup>52</sup> — despite or due to the law?*

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**As many as 75 lives are protected by a gun for every life lost to a gun, as many as 5 lives are protected per minute.**

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Justifiable and excusable homicides, including those by police officers, were treated the same as murders and were not excluded from the study. The study used raw numbers rather than population-corrected rates. This did not correct for the 20% population decrease in Washington, DC, during the study period or for the 25% increase in the control population — exaggerating the authors' misinterpretation. The study used the adjacent suburbs as a control group, an area with demographics drastically different from the study group.

The authors examined and allowed only a single cause interpretation — guns are to blame. They offhandedly discarded any other possible explanation. They specifically ignored the role of the crack cocaine trade, FBI stolen property and Bureau of Alcohol, Tobacco and Firearms illegal weapon sting operations in progress during the study, and measures instituted during the study period that improved the ef-

iciency of the Washington, DC, court system. They generally ignored the role of poverty and myriad other factors related to criminal violence.

Homicide has declined for every segment of American society except for inner city teenagers and young adults involved in illicit drug trafficking. The black teenage male homicide rate in Washington, DC, is 227 per 100,000,<sup>53</sup> yet less than 7 per 100,000 for rural, middle-aged white men,<sup>54</sup> the U.S. group for whom gun ownership has the highest prevalence.<sup>10</sup> If the "guns-cause-violence" theory is correct why does Virginia, the alleged "easy purchase" source of all those illegal Washington, DC, guns, not have a murder rate comparable to DC? The "guns-cause-violence" theory founders (**See Graph 2: Selected Homicide Rates Comparisons**).

Even in their responses to criticism,<sup>55</sup> the authors intransigent bias is evident. Their position? If a drop in murder is discovered (or statistically contrived), gun control must receive the credit, but when attention was drawn to the failures of gun control and their study design, the skyrocketing murder rate must be credited to "other causes." Shall we examine gun control as science or religion? It appears that the faith of true believers is unshakable heedless of data and the scientific method.

### Aberrant and Sculpted Data

An editorial by Koop and Lundberg<sup>56</sup> promoting the guns and autos analogy demonstrated deceptions common amongst prohibitionists — the inflammatory use of aberrant and sculpted data to reach illogical conclusions in the promotion of harmful and unconstitutional policy. The authors attempted to draw a comparison between motor vehicle *accidental* deaths with *all* gun deaths.

"One million U.S. inhabitants die prematurely each year as the result of intentional homicide or suicide" is a 35-fold exaggeration.<sup>57</sup> Whether carelessness or prevarication, such a gross distortion evokes, at best, questions regarding competence in this field.

It is doubtful that the authors would lump deaths from surgery, knife at-

**Koop CE, Lundberg GD. Violence in America: a public health emergency. JAMA 1992;267:3075-76.**

Methodologic and Conceptual Errors:

- Claimed 1 million US gun homicides per year — a 35-fold exaggeration
- Lumped gun accidents, homicides, and suicide in a comparison with automobile accidents alone
- Used data from 2 exceptional states, rather than data from the 48 states where gun deaths were falling faster than auto deaths
- The authors' weak analogy concluded that registration and licensing of guns would decrease deaths, though offering no data to show that registration and licensing of automobiles resulted in such a decrease
- Postulated that controls appropriate to a privilege (driving) are also appropriate to an inalienable human right to self-preservation (gun ownership).
- Dismissed — without analysis or authority — the constitutional and natural rights to gun ownership
- Though the authors promote a public health model of gun ownership, the "bullet as pathogen" vogue, guns meet none of Koch's Postulates of Pathogenicity.

tacks, and *hara kiri* to contrive some inference about knives, but to claim that Louisiana and Texas firearms deaths exceed motor vehicle accidents,<sup>58</sup> it was necessary to total firearm accidents, homicides, and suicides. Koop and Lundberg, as promoters of the fashionable "public health model" of gun violence, should know that the root causes and, hence, prevention strategies are very different for accidents, homicides, and suicides. Also, it is not that firearms deaths rose, but that, *in just those two states*, they fell less rapidly than accidental auto deaths.<sup>58</sup>

In the 48 other states, the converse is noted, firearms accidents (and most other accidents) fell 50% faster than motor vehicle accidents — between 1980 and 1990, a 33% rate drop nationally for guns compared to a 21% drop for motor vehicles.<sup>59</sup> Should we base

public policy on contrivances and exceptions?

### Illogical Conclusions

Koop and Lundberg referenced a Morbidity and Mortality Weekly Report<sup>58</sup> that claimed seven reasons for the fall in motor vehicle accidents — better cars, better roads, passive safety devices, children's car seats, aggressive drunk driving enforcement, lower speed limits, and motorcycle helmets — but did not claim licensing or registration of cars was responsible for the fall. It is by a fervent act of faith, rather than one of science or logic, that Koop and Lundberg proposed their scheme.

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**If pacifists who deny we have a right to self-defense wish to eschew the safest and most effective tools of self-protection, so be it. But their harmful philosophy must not be imposed upon an entire society.**

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The selectivity of the analogy is further apparent when we recognize that licensing and registration of automobiles is necessary only on *public* roads. No license or registration is required to own and operate a motor vehicle of any kind on *private* property. The advocates of the automobile model of gun ownership would be forced by their own logic to accept use of any kind of firearm on private property without license or registration. Since any state's automobile and driver license is valid in every state, further extension of the analogy suggests that the licensing of guns and gun owners would allow citizens to "own and oper-

ate" firearms in every U.S. jurisdiction. A national concealed firearms license valid throughout this nation would be a significant enhancement of self-protection, a deterrent to violent crime, and a compromise quite enticing to many gun owners.

### Harmful and Unconstitutional Nostrums

Crime and homicide rates are highest in jurisdictions, such as Washington, DC, New York City, Chicago, and California, where the most restrictive gun licensing, registration, and prohibition schemes exist. Why are homicide rates lowest in states with loose gun control (North Dakota 1.1, Maine 1.2, South Dakota 1.7, Idaho 1.8, Iowa 2.0, Montana 2.6) and highest in states and the district with draconian gun controls and bans (District of Columbia 80.6, New York 14.2, California 12.7, Illinois 11.3, Maryland 11.7)?<sup>49,52</sup> (Graph 12: Representative State Homicide Rates).

Precisely where victims are unarmed and defenseless is where predators are most bold. Gun prohibitionists argue a "need" for national controls, yet similar national prohibitions have not stemmed the flow of heroin, cocaine, and bales of marijuana across our national borders. What mystical incantation will cause homicidal drug criminals to respect new gun laws when they flaunt current gun laws and ignore the most basic law of human morality, "thou shalt not murder"? The proponents of adding to the 20,000 gun laws on the books have yet to explain how "passing a law" will disarm violent, sociopathic predators who already ignore laws against murder and drug trafficking.

### The New Prohibition — Enforceability and Constitutionality

The deceptions in the medical literature are not restricted to scientific issues. The insurmountable practical and constitutional impediments to gun bans are either offhandedly or deceptively<sup>60</sup> discounted. Neither practical matters, such as the massive expense and civil rights violations necessary to enforce gun bans,<sup>61</sup> nor historic mat-

ters, such as the racist and oppressive roots of gun control,<sup>62-66</sup> are discussed by medical politicians who advocate gun bans.

Besides unenforceability, the Right to Keep and Bear Arms is an insurmountable impediment to gun bans. Gun prohibitionists mistakenly predicate that controls appropriate to a privilege, driving, are appropriate to an inherent, *irrevocable*, and constitutionally protected right. While certain state and federal gun *controls* may be constitutional, gun *prohibitions* are clearly unconstitutional. *Gun and ammunition controls* may not be so onerous as to regulate the right into meaningless, virtual nonexistence.

Failure to recognize that the National Guard is a component of the U.S. Army and not equivalent to the Second Amendment's "militia"<sup>67</sup> has allowed prohibition advocates to misconstrue the protections guaranteed to individual citizens by the Second Amendment. Considerable legal scholarship also finds protection of gun civil rights in "unenumerated rights" protected by the Ninth Amendment,<sup>68</sup> the natural right to self-protection,<sup>69</sup> and in the "privileges, immunities, equal protection" and "due process" guarantees of the Fourteenth Amendment.<sup>70,71</sup>

Despite plausible misinterpretations by physicians<sup>72</sup> and Handgun Control Inc.<sup>73</sup> and other prohibitionist<sup>60</sup> attorneys about the function and definition of "militia,"

*"The militia of the United States consists of all able-bodied males at least 17 years of age . . . and under 45 years of age."<sup>74</sup>*

Notwithstanding prohibitionists' convoluted distortions about "the people" and constitutional case precedents, the U.S. Supreme Court has explicitly protected an *individual* right to keep and bear arms,<sup>75-78</sup> *especially and explicitly protecting military-style weapons*, "part of the ordinary military equipment."<sup>78</sup> To claim that "the people" who have the Right to Keep and Bear Arms are actually the States and not the same "the people" who have First, Fourth, Ninth, and Tenth Amendment protections requires some rather unlikely assumptions. Did the authors of the Bill of Rights use the term "the people" in the First Amendment to re-

fer to individuals, then, 28 words later, use the term "the people" in the Second Amendment to refer to "the government," then, 44 words later, use the term "the people" in the Fourth Amendment and four and five articles later, in the Ninth and Tenth Amendments, to refer to the individual?

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## **Defense with a gun results in fewer injuries to the defender than resisting with less powerful means and in fewer injuries than not resisting at all.**

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The U.S. Supreme Court has rejected such convoluted logic. In *U.S. v. Verdugo-Urquidez*,<sup>79</sup> a Fourth Amendment case holding that the warrant requirement is inapplicable to the search of a home in a foreign country, the Supreme Court noted that "the people" who have the right to free speech, to peaceably assemble, and to be secure in their papers and effects are one and the same as "the people" who have the right to keep and bear arms.

The U.S. Supreme Court has yet to use the Fourteenth Amendment to incorporate many Bill of Rights protections against the states, the Second Amendment protections among them.<sup>70,71</sup> Using a "states' rights" prohibitionist argument that the Bill of Rights fails to protect the right to keep and bear arms from infringement by states,<sup>60,73</sup> however, uses logic that, if similarly applied, would fail to protect freedom of speech, freedom of religion, freedom of the press, freedom from unreasonable searches and seizures, the right to trial by a jury of peers, and other rights from state infringement. Prohibitionists take hypocritical refuge in a "guns only" theory of collective states' rights. The supportive authorities referenced above are quite convincing of the inherent

and irrevocable right to self-protection against criminals, crazies, and tyrants. The right to keep and bear arms and ammunition is essential to that self-protection and has little, if anything, to do with duck hunting or other subjective "legitimate sporting uses" of guns.

### **Conclusions**

Utopia is not one of the available solutions to violence in our society. Only incremental improvements are attainable through repeal of victim disarmament laws and through implementation of effectual, affordable measures. Objective assessment of the risks and benefits of various proposals will assist development of rational and effectual public policy. Hysterical, ineffectual, unconstitutional, and merely symbolic measures only squander time, money, and energy that are better devoted to effectual solutions and realistic goals.

The author hopes that sufficient data and analysis have been provided so that the reader questions common, but erroneous, assumptions about guns and gun bans and to generate deserved skepticism of the medical literature on guns and violence.

The responsible use and safe storage of any kind of firearm causes no social ill and leaves no victims. In fact, guns offer positive social benefit in protecting good citizens from vicious predators. The overwhelming preponderance of data we have examined shows that between 25 to 75 lives may be saved by a gun for every life lost to a gun. Guns also prevent injuries to good people, prevent medical costs from such injuries, and protect billions of dollars of property every year. In view of the overwhelming benefits, it is ludicrous to punitively tax gun or ammunition ownership. Guns save far more lives than they cost.

The peer review process has failed in the medical literature. In the field of guns, crime, and violence, the medical literature — and medical politicians — have much to learn conceptually and methodologically from the criminologic, legal, and social science literature. Gross politicization of research will only increase the present disre-

spect in which medical journals and peer-review are held by physicians.<sup>80</sup>

To further an honest public debate, organized medicine and CDC researchers should adopt scientific objectivity and integrity and improve the peer review process. Since it has demonstrated it is unable to police itself, stringent oversight must be placed over the CDC's grant award process. Taxpayers must demand meaningful oversight of scientific integrity and competence.

If devotees of the "true faith" of gun prohibition and pacifists who deny we have a right to self defense wish to eschew the safest and most effective tools of self-protection, they are welcome to do so. In this imperfect world their harmful philosophy must not be imposed upon an entire society. In essence, society should adopt a "Pro-Choice" approach to self-defense and gun ownership. ♦

Dr. Suter specializes in family practice and aviation medicine. He is also the Chair of Doctors for Integrity in Research & Public Policy, 5201 Norris Canyon Rd., Suite 140, San Ramon, CA 94583. PH: 510-277-0333; FAX:510-277-1283.

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