Report by Daniel W. Webster, ScD, MPH on the Justification for Chicago’s Limit of One Operable Firearm in the Home.

I. Qualifications

I began my career in public safety research in 1985 as a Research Associate at the University of Michigan and have focused most of my research on gun-related injuries and violence during the past 22 years. I have a Masters of Public Health degree from the University of Michigan and a doctorate in Health Policy and Management from the Johns Hopkins School of Public Health. This graduate training included many advanced courses in epidemiology, research methods, and statistical analysis.

Immediately prior to joining the faculty at Johns Hopkins, I directed a program on violence research at the Washington (DC) Hospital Center. I joined the faculty of the Johns Hopkins School of Public Health in 1992, and I am a tenured Professor of Health Policy and Management with a joint appointment in the School of Education’s Division of Public Safety Leadership. For the past 10 years, I have served as Co-Director of the Johns Hopkins Center for Gun Policy. I also have served as Associate Director for Research for the Johns Hopkins Center for the Prevention of Youth Violence since 2005. I teach graduate courses on violence prevention and research and evaluation methods at Johns Hopkins, direct a certificate program in injury control, and serve on the steering committee of a National Institutes of Health funded pre- and post-doctoral training program in violence prevention research.

I have directed numerous studies related to gun violence and its prevention. I have published 62 articles in scientific, peer-reviewed journals. These articles are listed on my curriculum vitae, attached as Exhibit 1.

I am being compensated at a rate of $250/hour for my time in rendering my opinion and testimony in this matter. I have testified as an expert in one other case, City of New York v. A-I Jewelry & Pawn, Adventure Outdoors, Inc., et al., 06-CV-2233 (E.D.N.Y. May 15, 2006).

II. Chicago’s limitation to a single operable firearm in the home

This report and my expert testimony will focus on section 8-20-040 of Chicago’s firearms ordinance, a provision pertaining to firearms kept or maintained in a home. That section reads:

Subject to section 8-20-050, every person who keeps or possesses a firearm in his home shall keep no more than one firearm in his home assembled and operable. If more than one person in the home has a valid CFP and registration certificate, each person with a valid CFP and registration certificate is entitled to have one such firearm assembled and operable in the home. All other firearms kept or possessed by that person in his home shall be broken down in a nonfunctioning state or shall have a trigger lock or other mechanism, other than the firearm safety mechanism, designed to render the firearm temporarily inoperable.
This section of Chicago’s gun ordinance limits the harms from the availability of operable firearms in the home, while still allowing qualified citizens to legally keep an operable firearm in their home for self-defense. This report summarizes the research relevant to the risks of keeping firearms in the home and provides my expert opinions on the degree to which the research supports Chicago’s limit to one operable firearm within the home for every person with a valid Chicago Firearm Permit and registration certificate. Because there has been no study of this particular requirement of Chicago’s ordinance, the research that I summarize focuses on what is known about the relationships between the accessibility of firearms in the home and risks of suicide, homicide, and accidental shootings. In addition, I discuss what is known about gun ownership and burglaries and how criminals gain access to firearms through theft. The material below is organized based on the conclusions that I have drawn pertinent to the single operable firearm in the home restriction and the research that supports these conclusions.

III. Materials reviewed

The opinions that I articulate in this report are based on my review of numerous studies published in scientific peer-reviewed journals and in books, the Chicago firearms ordinance and discovery materials from Illinois Association of Firearms Retailers, et al., v. City of Chicago, et al., 10-CV-4184 (N.D. Ill.), made available to me. The material I used to form my opinions is listed in the attached Exhibit 2. I reserve the right to amend my report, opinion, and testimony as additional material becomes available.

IV. Summary of expert opinions

1. The availability of firearms in homes increases the risks of suicide, homicide, and deaths from unintentional shootings.
2. These risks increase as the number of firearms kept in the home increases.
3. The safe storage of firearms reduces the risks associated with keeping firearms in the home.
4. Lower levels of firearm availability decrease burglaries and the number of guns reaching criminals through theft.
5. There is no research that supports the notion that increasing the number of operable firearms in the home makes occupants safer.
6. The Chicago gun ordinance, by limiting firearm possession within the home to one operable firearm for each Chicago Firearm Permit holder in a household and requiring any other guns to be in an inoperable state, is likely to lead to a public safety benefit by reducing violent deaths within the home and reducing the number of operable guns obtained by criminals through theft.

V. Research support for my opinion that the availability of firearms in the home increases the risks of suicide, homicide, and deaths from unintentional shootings

A. Gun Availability and Suicides

Debates about gun policy tend to focus solely on violent crime, but policies and personal decisions about keeping firearms in the home should take into consideration that the majority of
firearm-related deaths that occur within U.S. homes are suicides. Even within the most urban counties in the U.S., suicides account for more than one third of all firearm-related deaths (3,620 of 10,267 in 2007). The research evidence presented below shows that the availability of firearms within homes increases the risk of suicide to the home’s occupants. Data from 2005 in Chicago—when the city’s handgun ban was in force—indicate that 32 percent of the 188 suicides recorded were committed with a firearm. This is significantly lower than the percentage of suicides in 2005 that were committed with a firearm for the entire U.S. (52%, 17,002 of 32,559) and for all large central metropolitan counties in the U.S. (44%, 3,610 of 8,271).

Chicago’s suicide rate of 6.6 per 100,000 residents for 2005 is notably lower than that of the U.S. as a whole (11.0) and lower than that of the most urban counties in the U.S. (9.4). Chicago has an interest in saving the lives of its citizens by keeping its suicide rate low by reducing the availability of firearms within homes to children, adolescents, and unauthorized individuals.

I reviewed several types of studies to arrive at my conclusions about the relationship between firearm availability within the home and the risk of suicide, homicide, and unintentional firearm deaths. The studies use different designs, study samples or populations, and analytic methods, but the findings are strikingly consistent in showing a positive association between keeping firearms in the home and the risk of suicide.

**Household Studies**

There have been many case-control studies of households that measure the association between the presence of firearms in the home and being a “case” (being in a household where someone dies as a result of a suicide, homicide, or unintentional shooting death) versus a control (household that has not experienced a suicide, homicide, or unintentional shooting death). In essence, case-control studies determine whether cases had greater exposure to a factor of interest, in this case being in a home with a firearm, than did controls. As a study design, case-control studies have limitations, perhaps most importantly the difficulty in discerning the direction of cause (e.g., firearm ownership) and effect (e.g., suicide), because suicidal intentions can cause someone to bring a gun into their home as well as having a gun in the home contributing to a suicide. However, case-control study designs are often the only practical method for examining risks for relatively rare outcomes such as suicides, homicides, and deaths resulting from unintentional shootings. Furthermore, some studies examined the amount of time between a firearm acquisition and a suicide within the home as well as whether the person acquiring the firearm was the person who committed suicide.

Nearly all of the case-control studies have shown a positive relationship between gun ownership and suicides, with firearm ownership being associated with large increases in the risk of suicide to household members. In a study of 803 suicides, 565 of which occurred within residences in two metropolitan counties, Kellermann and colleagues reported that firearm ownership was associated with a 4.7-fold increase in suicide after controlling for any differences between cases and controls with respect to age, sex, race, failure to graduate from high school, living alone, alcohol consumption, prior alcohol-related hospitalization, current use of prescription medication for depression or mental illness, and use of illicit drugs. Elevated suicide risks were observed only for suicides committed with a firearm. Individuals who committed suicide by other means were no more or less likely to have had a firearm in their
home. The association between being in a home with a firearm and suicide was stronger for males (aOR = 6.4) who would be much more likely to have acquired the firearm(s) kept in the home, than for females (aOR = 3.3). Thus, the data indicate that the risk of suicide was three times higher for women living in homes with a firearm even though females are far less likely than are males to purchase and own firearms. This substantial increase in suicide risk for females makes it hard to attribute the firearms-suicide association as being solely attributable to suicidal intent prompting firearm ownership. The guns-suicide association was also much stronger in situations where there was no prior history of mental illness (aOR = 32.8) than when there was mental illness (aOR = 3.0). The positive association between firearm ownership and suicides in the home was highest for those ages 24 and younger. These differences in the importance of the availability of firearms in the home for determining suicide risks are consistent with the notion that many suicidal acts are impulsive rather than highly planned acts and that the presence of a very highly lethal means of suicide such as a firearm greatly determines the lethality of these impulsive suicidal acts.

Cummings and colleagues conducted a case-control study to examine the association between legal purchases of handguns and suicide and homicide using data from a large population of individuals enrolled in a health maintenance organization in metropolitan Seattle, Washington, over a 13-year period. One advantage to this study over the one by Kellermann and colleagues is that it does not rely upon data from proxy respondents for the cases but uses preexisting administrative data to measure risk factors including handgun purchases. The cases were 353 suicide victims and 117 homicide victims who were members of the HMO. Each case was matched with five control subjects from the same HMO membership of the same age, sex, and ZIP code of residence. After controlling for the individual’s age, sex, the number of family members in the home, and neighborhood affluence and education levels, the risk of suicide was 1.9 times higher for members of households where a family member had legally purchased a handgun from a licensed gun dealer. Elevated risks for suicide within homes with handgun purchases were exclusive to suicides committed with a firearm (RR = 3.1); however, there was no association between handgun purchase and suicide by other means. The association between handgun purchases and suicide risks was slightly higher for the person who purchased the handgun (RR = 2.0, CI = 1.4 to 2.8) than for other family members (RR = 1.5, CI = 0.9 to 2.5), and risks were greatest when a handgun had been purchased less than a year before death. Nevertheless, the median interval between the most recent handgun purchase by a household member and a suicide was 10.7 years, indicating that, in most instances, the suicide victim did not purchase a gun in order to complete a plan to commit suicide but rather used a firearm that had been purchased years ago, sometimes by individuals other than the one who committed suicide. There was a positive association between handgun purchase and suicide when handguns were purchased five years or more before the suicide occurred.

In a nationally representative study, based on data from the National Mortality Follow-Back Survey and the National Health Interview Study, firearm ownership was associated with a threefold increase in the risk of suicide for household members. The increased risk of suicide connected to guns in the home was exclusive to suicides committed with a firearm. Risks for suicide by means other than firearms were slightly lower among those living in a home with a gun, but a much stronger association between guns and firearm suicide led to a net increase in suicide by any means. Suicide risk increases connected to household firearm ownership were
greatest for young adults ages 18–24, increasing the odds of suicide in this age group to four times higher than in similar households where there were no firearms.

The increased risk of suicide from guns in the home may be greatest for adolescents for whom suicides are often impulsive acts and ready availability of the most lethal means of self-harm determines whether a teen lives or dies from his or her impulses.\(^5\) Suicide is the third leading cause of death for teens ages 15 to 19 years, and 43 percent are committed with firearms.\(^6\) Local studies have found that about two-thirds of adolescents who commit suicide with a firearm obtained the gun from within their own homes or the home of a relative or friend\(^7\) and where the gun was typically left unlocked.\(^8\)

A series of studies of adolescent suicides in Western Pennsylvania have shown that adolescents who died from suicides there were much more likely to have lived in homes with firearms than adolescents in the following comparison groups: adolescents who had been hospitalized for nonfatal suicide attempts and had psychiatric disorders,\(^9\) adolescents with psychiatric disorders who had never attempted suicide,\(^10\) adolescents with a lifetime history of affective disorders who were living at home with their families,\(^11\) adolescents in a demographically-matched group of community controls without psychiatric conditions,\(^12\) and a general survey of adolescents drawn from the same area as the suicides.\(^13\)

**Cohort Studies**

Cohort studies measure exposures (e.g., having firearms in the home) within a population and how those exposures are associated with subsequent outcomes (e.g., suicides). Wintemute and colleagues conducted a population-based cohort study to compare mortality among 238,292 persons who purchased a handgun in California in 1991 with that in the general adult population of the state. Mortality was examined for a period from the time of handgun purchase through the end of 1996. Sex-specific standardized mortality ratios (SMR – the ratio of the number of deaths among handgun purchasers to the number expected on the basis of age- and sex-specific rates among adults in California) were calculated for several age groups. During the first year after the purchase of a handgun, suicide was the leading cause of death among handgun purchasers. Handgun purchasers experienced suicide rates more than four times that of all Californians. The increased risk was attributable entirely to the excess risk of suicide with a firearm (SMR = 7.1). Handgun purchasers remained at increased risk for suicide by firearm throughout the six year study period, especially among women (SMR = 15.5 compared with 3.2 for men).\(^14\)

**Ecological Studies**

The case-control and cohort studies referenced above measure the exposure and outcome at the level of individuals or households. In contrast, ecological studies measure relationships that are measured in the aggregate, whether at the city, county, state, or national level. Several ecological (mostly U.S. state-level) studies have shown that populations with higher rates of firearm ownership tend to have significantly higher risks for suicide after controlling for common causes and correlates of those outcomes.\(^15\) For example, Miller and his colleagues from Harvard University analyzed data on suicide rates across the 50 U.S. states and controlled for differences in rates of poverty, urbanization, unemployment, mental illness, and drug and alcohol
dependence and abuse. As would be expected, if access to firearms in the home increased the risk for suicide, the prevalence of household firearm ownership was positively associated with suicides committed with firearms, but was unrelated to the risk for suicide by other means. This positive relationship between the prevalence of firearm ownership and higher population suicide rates was also observed in a study comparing different regions of the United States.16

Most ecological studies which examine the association between firearm ownership and suicide have been cross-sectional, comparing suicide rates with gun ownership for a selected time period. Studies based on longitudinal studies, which compare changes in firearm ownership in relation to changes in suicide rates are less vulnerable to potential threats to validity. Miller and colleagues conducted such a study by examining annual changes in suicides in relation to annual changes in a validated, surrogate measure of firearm ownership17 over the period 1980 through 2002. After statistically controlling for changes in age, unemployment, per capita alcohol consumption, and poverty, for every 10 percent reduction in firearm ownership, there was a 4.2 percent reduction in the rate of suicides with firearms and a 2.5 percent reduction in suicides by any means. There was no relationship between changes in firearm ownership and changes in non-firearm suicides.18

Some have speculated that the consistently positive association between firearm ownership and heightened risk of suicide might be due to unmeasured confounders—factors that are correlated with firearm ownership that are causally related to suicide risks. However, there do not appear to be higher rates of mental illness in homes with firearms compared with homes with no firearms.19,20

Discretionary permit-to-purchase licensing laws allow law enforcement agencies issuing permits to purchase firearms to use their discretion in issuing these permits. That is, even if a person does not meet one of the explicit categories of disqualification, he or she could be denied a permit to purchase a firearm by law enforcement officials. Decisions about whether to issue such a permit can be based on evidence of special need for protection, good moral character, and presumably what is in the best interest of public safety. Massachusetts, New Jersey, and New York are the only three states that have and use discretionary permit-to-purchase laws. These states also have some of the most stringent nondiscretionary requirements for issuing permits to purchase firearms. These three states have among the lowest rates of household gun ownership. The data in the table below contrast these three states’ firearm ownership and age-adjusted suicide rates among non-Hispanic whites. Thus, the data presented control for three demographic factors associated with suicide rates – age, race, and ethnicity. The data indicate that the prevalence of firearms within homes in these states is less than half as high as the national average and suicide rates are 37% to 45% lower than the national average. Although these data alone do not prove that policies that reduce the prevalence of firearms in homes lead to fewer suicides, it is consistent with that thesis.
Table 1. Prevalence of household firearm ownership (2001) and age-adjusted suicide rates (2001-2003) for the three states with the most restrictive laws pertaining to permits to purchase a handgun by allowing local law enforcement discretion in issuing permits in comparison to U.S. totals.

<table>
<thead>
<tr>
<th></th>
<th>household gun prevalence (%), 2002</th>
<th>age-adjusted suicide rates – non-Hispanic whites, 2001–2003¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>18.0</td>
<td>7.73</td>
</tr>
<tr>
<td>New Jersey</td>
<td>12.3</td>
<td>8.35</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>12.6</td>
<td>7.30</td>
</tr>
<tr>
<td>United States</td>
<td>31.7</td>
<td>13.15</td>
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</tbody>
</table>

¹per 100,000 population per year

B. Gun Availability and Homicides

Twelve percent of all violent crimes and 22.6 percent of all violent crimes committed against females are committed by the victims' intimate partners (e.g., spouses, boyfriends),²¹ often living in the same household with the victim. One third of all female homicide victims were killed by an intimate partner.²² For the years 1999–2010, 1,053 of Chicago's 6,430 (16.4%) homicides occurred within residences.²³

Household Studies

Kellermann and colleagues used a case-control study design to examine the relationship between firearm ownership and the risk of homicide in the home.²⁴ The cases were homicide incidents which occurred within residences in three metropolitan counties, and controls were matched with cases by sex, race, age group, and neighborhood of residence. Of the 347 homicide victims in this study for which the offender-victim relationship was known, 52 percent were killed by a spouse or other intimate partner, first-degree relative, or roommate and only 4 percent were killed by strangers. After statistically controlling for differences due to home rental versus ownership, living alone, household members' involvements in fights within the home, history of arrest, and illicit drug use, firearm ownership was associated with a risk of homicide that was 2.7 times higher than in homes without firearms. The firearm-homicide relationship was greatest for homicides committed by the victim’s intimate partner or family member.

A subsequent study drawing upon the same data in the Kellermann study focused on a subset of the cases in which the person killed was a woman. In this study, there was a nearly fivefold increased risk of a woman being the victim of a homicide associated with living in a home with firearms.²⁵ In the majority of these cases, the victim was killed by an intimate partner or other family member. I was a co-investigator of a subsequent case-control study of women from 11 cities who had been in physically abusive intimate relationships that found a near
identical association (OR = 5.3) between the abuser’s ownership of a firearm and the woman being murdered by her intimate partner.\textsuperscript{26}

In addition to examining the association between handgun purchases and suicide risks to household members, the study of the HMO population cited above (Cummings, et al. 1997) also reported that the risk of homicide was more than twice as high (RR = 2.2) within households where there had been one or more handguns purchased. The elevated risk for homicide was similar among the handgun purchaser and his or her family members. A concern about case-control studies is that the risk of being a homicide victim could prompt gun acquisition and confound the estimated causal effect of gun ownership on homicide risks. However, in Cummings’ study of the HMO population, the median interval between first family handgun purchase and any homicide death was 11.3 years, and the risk of homicide was unrelated to how recently a handgun was purchased. Thus, it seems unlikely that the association measured is due to homicide risks prompting gun ownership.

Wiebe’s nationally representative study of the risk of violent death associated with the presence of guns in the home demonstrated a positive association between living in a home with at least one firearm and homicide victimization.\textsuperscript{27} Overall, the odds of gun ownership were 41 percent higher among victims of homicide compared with demographically matched controls. The positive association between firearm ownership and homicide risk was greater for females (aOR = 2.72) than for males (aOR = 1.23). Twenty-nine percent of the homicides of male victims and 55 percent of homicides of females occurred outside the home. Thus, while adult males more commonly bring firearms into the home (male:female ratio of gun ownership is about 4 to 1), they are more commonly victimized outside the home. In contrast, females suffer increased risk within their own homes when males bring firearms into the home.

While prior case-control studies examined the association between gun ownership and homicide victimization, criminologists Kleck and Hogan conducted a national case-control study in which the outcome of interest was homicide perpetration. Data from their cases came from the U.S. Census Bureau’s Survey of State Prison Inmates of 1991 who had committed a homicide as an adult between 1980 and 1991. Controls were taken from the General Social Survey of the U.S. population. They found gun ownership was positively associated with homicide perpetration. After statistically controlling for age, sex, race, Hispanic ethnicity, marital status, personal income, education, military veteran status, and having a child less than 18 years of age, the odds that a gun owner would commit a homicide was 1.36 times higher than the odds of a non-gun owner committing a homicide after controlling for confounders.\textsuperscript{28} Although the strength of the association between gun ownership and homicide perpetration risk was lower than was observed in the case-control studies of homicide victimization, the direction of the association was consistent with the other studies.

**Cohort Studies**

Wintemute’s study of the mortality risks for a cohort of legal handgun purchasers in California compared to the general population of Californians with the same age and sex distribution examined risks for homicide as well as for suicide. The risk of being a victim of homicide with a firearm was twice as high among women handgun purchasers relative to
California women of the same age, but was lower among men who legally purchased firearms (SMR = 0.8). I suspect that the elevated risk for women was due to the fact that women are more likely to be killed by an intimate partner or family member who might have access to a firearm kept in the woman’s home, whereas men are more commonly murdered on the street by an acquaintance or a stranger.

Ecological Studies

Cross-sectional Studies

Miller and colleagues conducted a study to assess the cross-sectional association between the prevalence of firearms in the home and homicide rates at the state level. The researchers statistically controlled for differences across states in rates of aggravated assault, robbery, unemployment, urbanization, per capita alcohol consumption, and economic resource deprivation. States with higher rates of household firearm ownership had significantly higher homicide victimization rates for men, women, and children. Differences in the prevalence of household firearm ownership were associated with proportionately similar differences in rates of homicide committed with firearms. Consistent with the hypothesis that the positive association between gun ownership and homicide was due to gun availability and not to differences in the propensity for violence between gun owners and people who do not own guns, non-gun homicide victimization was not associated with firearm ownership. In my opinion, this study might understate the cross-sectional relationship between firearm ownership and homicide rates because the statistical models control for crimes that could themselves be caused by higher levels of gun ownership (aggravated assaults and robberies). These findings were consistent with those of a similar prior study conducted by these same researchers but that relied on a surrogate measure of gun ownership rather than direct survey data and a subsequent study using similar data.

Miller and colleagues also published studies on the association between gun availability and homicide of children ages 5 – 14 years and homicides of women ages 20 and over. In each case, they report statistically significant positive associations between gun availability and firearm homicide rates at the state level, but no gun availability effects on non-firearm homicides. It is worth noting concerning the studies focusing on gun availability effects on risks to children and women that they are rarely the ones who bring a firearm into the home, and therefore, positive associations between gun availability and homicide risks are unlikely to be due to individuals being motivated by their own risk of homicide to acquire a gun.

* Kleck and Patterson analyzed cross-sectional data for 170 U.S. cities with populations of 100,000 or more and report that gun ownership has no impact on homicide. To address the concern that cross-sectional associations between gun ownership and homicide could be due to higher homicide rates prompting increased gun ownership for protection, the researchers used a two-stage least squares regression approach to the analyses, which involves using an instrumental variable in the first stage to estimate gun ownership levels absent any effects from homicide rates. But this analytic approach is contingent upon the instrumental variable being used to measure gun ownership meeting several conditions that are typically difficult to meet. A detailed criticism of Kleck and Patterson’s study correctly points out that Kleck and Patterson failed to provide common statistical tests to confirm that the instrumental variable they used met these conditions. Thus, the validity of Kleck and Patterson’s findings are unclear.
The three states with the most restrictive laws for issuing permits to purchase or possess firearms because they allow police discretion in issuing permits and have broad disqualifications for firearm possession including convictions for many misdemeanor crimes are Massachusetts, New Jersey, and New York. These states also have some of the lowest rates of gun ownership among the 50 states. As was the case for suicides, the data in Table 2 indicate that, with the exception of New Jersey's rates for blacks, these states have much lower homicide rates for large central metropolitan counties, the counties that are most similar to Chicago's population. It is worth noting that the vast majority of guns used in crime in these three states were originally purchased from gun dealers in states with much weaker gun laws.\(^{34}\)

Table 2. Prevalence of household firearm ownership (2001) and age-adjusted homicide rates (1999-2007) among residents of large central metropolitan counties for the three states with the most restrictive laws pertaining to permits to purchase a handgun by allowing local law enforcement discretion in issuing permits in comparison to U.S. totals.

<table>
<thead>
<tr>
<th></th>
<th>household gun prevalence (%) 2001</th>
<th>age-adjusted homicide rates – non-Hispanic whites, 1999–2007 (^{i})</th>
<th>age-adjusted homicide rates – blacks, 1999–2007 (^{i})</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>18.0</td>
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<td>16.0</td>
</tr>
<tr>
<td>New Jersey</td>
<td>12.3</td>
<td>2.5</td>
<td>27.7</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>12.6</td>
<td>1.9</td>
<td>22.0</td>
</tr>
<tr>
<td>United States</td>
<td>31.7</td>
<td>3.3</td>
<td>28.5</td>
</tr>
</tbody>
</table>

\(^{i}\) per 100,000 population per year

**Longitudinal Studies**

Longitudinal study designs are generally preferable to cross-sectional studies because they can ascertain temporal relationships between variables. This is important for studying the relationship between gun ownership and homicide, because gun ownership may affect homicide risks and homicide risks can affect firearm acquisition. McDowall studied changes in two proxy measures for gun ownership—the proportion of suicides committed with a firearm and the proportion of robberies committed with a firearm—to study the temporal relationship between firearm availability and homicide rates in Detroit. Using methods to negate reverse causality and statistically controlling for changes in racial composition of the city, the proportion in the high-risk 15–24 year age group, the homicide clearance rate lagged by one year, and the robbery rate, gun ownership was positively associated with Detroit’s homicide rate. Licenses issued to purchase handguns were also positively associated with homicide rates.\(^{35}\)

In a similar study, Sorenson and Berk examined temporal relationships between handgun sales (lagged one year to avoid concerns of reverse causation) and age-, sex-, and race-specific homicide rates after controlling for racial composition, cohort size, beer sales, unemployment, and migration for the period 1972–1993. Lagged handgun sales were positively associated with
homicide rates for males of every age group and race/ethnicity; however, they found no relationship between handgun sales and homicide victimization of females.\textsuperscript{36}

Magaddino and Medoff examined data for the years 1947–1977 and found that, while new guns, both manufactured and imported, did not predict homicide rates, the cumulative number of handguns available was positively associated with homicide rates.\textsuperscript{37} A weakness of studies of this type is that the studies aggregate data over the entire United States, ignoring considerable variation at state and local levels in gun sales and homicides.

In his book \textit{More Guns, Less Crime}, John Lott, Jr. used state-level data on gun ownership from exit polling data following the 1988 and 1996 presidential elections and reported a negative relationship between gun ownership and homicide rates (suggesting that measured increases in gun ownership led to decreases in homicide rates) over these two time periods.\textsuperscript{38} However, the polling data Lott used only included actual voters who represent a non-random minority of the actual adult population. His findings on changes in gun ownership are inconsistent with rigorous surveys designed to accurately reflect conditions across all households that show gun ownership declining from 1988 to 1996 (\textit{e.g.}, the University of Chicago's General Social Survey).\textsuperscript{39}

In a study examining longitudinal data at the state and county levels, economist Mark Duggan examined the dynamic relationship between gun ownership and crime over the period 1980-1998 using state- and county-level data on a validated proxy for gun ownership. To avoid the potential for reverse causality (higher homicide rates prompting higher rates of gun ownership), Duggan examined the relationship between gun ownership lagged by one year (\(t-1\)) with homicide rates. Data from this study demonstrate that changes in gun ownership were positively related to changes in homicide rates. As with other studies, the gun ownership-homicide relationship is due entirely to gun ownership's effects on homicides committed with firearms. Gun ownership does not predict rates of homicides committed without firearms. This pattern of findings was the same for analyses done at the state level and at the county level. Duggan estimates that a third of the dramatic reductions in firearm homicide rates relative to changes in non-firearm homicide rates that occurred from 1993 to 1998 could be attributed to declines in the fraction of homes with firearms.\textsuperscript{40}

Noted economists and experts on gun policy, Philip Cook and Jens Ludwig, analyzed 20 years of state- and county-level data and also found a significant positive association between gun availability and homicides with the relationship being exclusive to homicides committed with a firearm. They estimate elasticities of +.1 to +.3 between gun ownership and homicides.\textsuperscript{41}

C. Gun availability and Deaths from Unintentional Shootings

\textbf{Household Studies}

To my knowledge, there has been only one household study that has examined the relationship between firearms in the home and the risk of unintentional firearm deaths. In this study, Wiebe (2003) used data from nationally representative data—the 1993 National Mortality Followback Survey and 1994 National Health Interview Study (NHIS)—and a case-control study design to assess the association between the presence of firearms in the home and risks of death
from an unintentional shooting. Cases consisted of 84 persons killed as a result of an unintentional shooting. Each case was matched with up to 20 controls from the NHIS matched by sex, age group, race, and region of residence and the analyses statistically controlled for any differences between the cases and controls with respect to marital status, education level, and annual family income. The risk of an unintentional shooting death was 3.7 times higher within homes with any firearm. Elevated risks were greatest, i.e., there was more than a fivefold increase in risk for unintentional shooting death (RR = 5.3), in homes that kept only handguns, a condition more likely to be the case for gun owners in urban settings such as Chicago.  

Ecological Studies

I found only one ecological study designed to assess the relationship between firearm availability and the risk of death from an unintentional shooting. Miller and colleagues studied the association between a state’s rate of deaths due to unintentional shootings and the prevalence of firearms. They found a very strong positive relationship between measures of firearm availability and the rate of deaths from unintentional shootings which was strongest for young children and teens.  

VI. Research support for my opinion that the risks for suicide, homicide, and deaths from unintentional shootings increase as the number of firearms kept in the home increases.

My opinion that the risks for suicide, homicide, and deaths from unintentional shootings increase as the number of firearms kept in the home increases is based, in part, on the evidence presented above which demonstrates that firearm availability contributes to higher risks for these outcomes; if a variable is associated with an outcome, it is often the case that more of the variable will be associated with more of the outcome. However, there is, in fact, data that supports this conclusion as well; there is evidence of a dose-response relationship between the number of guns in a home and the risk for suicide, homicide, and deaths from unintentional shootings in the only studies that have examined this association. Cummings and colleagues report from their study of a large population of HMO enrollees that the relative risk for suicide, compared with no family purchases of handguns, was 1.6 for one purchase, 1.8 for two purchases, and 2.7 when there were three or more handgun purchases. Although the confidence intervals of these point estimates overlap, the best estimates increase with the number of guns in the home. In this same study, Cummings and colleagues found a dose-response relationship between the number of handguns purchased by a family and the risk of homicide to family members. The risk for homicide increased with the number of handguns purchased with relative risk measures going from 1.1 for one handgun, 2.1 for two handguns, to 6.2 for three or more handgun purchases.

Wiebe reported in his nationally representative case-control study that the increased risk of death from an unintentional shooting was somewhat greater in homes with multiple firearms (RR = 3.9) than in homes with a single firearm (RR = 3.4). The confidence intervals for these point estimates overlap, but the ordered relationship between the point estimates is consistent with the findings from Cummings and colleagues.
VII. Research support for my opinion that the safe storage of firearms reduces the risk of suicide, homicide, and deaths from unintentional shootings.

Data from Kellermann, et al.'s study of risk factors for suicide within the home suggest that safe gun storage practices reduce the risk of suicide within the home. The adjusted odds ratios contrasting risks compared with similar households with no firearms clearly show a progression of increasing risk with increasing ease of access—all guns locked up (aOR = 2.4), all guns stored unloaded (aOR = 3.3), any gun left unlocked (aOR = 5.6), and any gun kept loaded (aOR = 9.2) which would make guns most readily available for misuse.

Safe storage of firearms is likely to be particularly important for protecting teens from killing themselves or others. Groups as diverse as the National Rifle Association and the American Academy of Pediatrics recommend that gun owners store their guns so that they are inaccessible to unauthorized persons including children and teens.44,45

Grossman and colleagues conducted a case-control study to assess the relationship between firearm storage practices and adolescents’ risk of suicide and unintentional shootings. They collected data for cases from households where a youth less than 18 years of age was killed as a result of a suicide or unintentional shooting and examined these deaths in 37 counties in the states of Washington, Oregon, and Missouri, in addition to nonfatal self-inflicted or unintentional shooting victims treated at trauma centers in Seattle, Spokane, and Tacoma, Washington and Kansas City, Missouri. Cases included 82 self-inflicted shootings (95% fatal) and 24 unintentional shootings (50% fatal). Controls were identified through random surveys of the counties where the cases were drawn and consisted of households where at least one firearm was kept in or near (e.g., garage) the home. Data from this study indicate that the risk of self-inflicted and unintentional firearm injuries was about 70 percent lower in gun-owning homes that stored their firearms locked up and unloaded compared with homes where guns were not stored locked up and unloaded. The relationship between gun storage practices and firearm deaths to adolescents was similar for suicide and unintentional shootings.46

Using data from statewide surveys of health and safety practices conducted by the Centers for Disease Control and Prevention that included questions about firearm ownership and storage practices, Miller and colleagues conducted a state-level ecological study to assess the relationship between firearm storage and rates of death from unintentional shootings. Controlling for the prevalence of guns in the home as well as urbanization and poverty levels, states in which it was less common to store firearms unlocked and unloaded had significantly lower rates of unintentional firearm deaths. The researchers contrasted data between the six states with the highest percentage of individuals living in households with loaded firearms with the 10 states where this practice was least common. Although the six states with the highest prevalence of exposure to loaded firearms within the home had less than half as many people and fewer people exposed to firearms than was the case with the 10 states with the lowest percentage of homes with a loaded firearm, there were more than twice as many unintentional shooting deaths to youth under age 18 years than in the 10 states where living in a home with a loaded firearm was least common.47
Recognizing the risks of unsupervised access of firearms to children and teens, 18 states and the District of Columbia have passed laws requiring gun owners to store their firearms in a manner that prevents access to underage youth, typically requiring guns to be stored away locked or with a trigger guard to prevent the gun from firing if handled when locked. In research that I conducted, I found that these so-called child access prevention (CAP) laws are associated with significant reductions in suicides of teens ages 14 – 17 years in the states where they have been adopted. Cummings and colleagues also examined the effects of CAP laws on suicides and found a negative relationship between presence of a CAP law and suicide risks among youth under age 15.

There is also evidence that CAP laws intended to require firearm storage that would make firearms either inaccessible or unable to be fired can reduce unintentional shooting deaths of children and teens. Cummings and colleagues conducted the first evaluation of CAP laws and reported that the laws were associated with significant reductions in deaths due to unintentional shootings of youth under age 15. Subsequent research that I conducted with Marc Starnes, as well as a study conducted by Hepburn and colleagues, showed that the effects of CAP laws on unintentional firearm deaths to youth were uneven across states. Reductions were only statistically significant in Florida and California where the laws were likely to garner significant publicity. Florida’s law received considerable publicity because it was the first state to pass a CAP law, doing so after a series of highly publicized deaths of children killed in unintentional shootings resulting from underage access to firearms in the home. Florida and California are among the few states where CAP law violators can be charged with a felony crime. The ability of prosecutors to charge CAP law violators with a felony may increase the likelihood of prosecution and increased publicity and awareness of CAP laws.

VIII. Research support for my opinion that greater firearm availability within homes increases the risk of home burglaries and of guns entering the illegal market via theft.

John Lott, Jr. and others claim that, if more people owned guns, there would be a greater deterrent to criminals breaking into homes. However, a careful empirical examination of the data proves that the opposite is true. Economists Phillip Cook and Jens Ludwig analyzed longitudinal burglary data from the Uniform Crime Reports at the state and county levels and cross-sectional data from a special restricted-access version of the National Crime Victimization Survey (NCVS) that identified the county in which the survey residents reside. In the longitudinal analyses they found that a one-year lag of a gun availability proxy (ratio of firearm suicides to all suicides) was positively associated with higher burglary rates with the elasticity of burglaries to gun ownership ranging from around +0.4 to +0.5. Estimates of the effects of gun ownership on burglaries were similar when the researchers used an instrumental variable for gun ownership rather than the gun suicide proxy.

A limitation to these analyses is that commercial burglaries are lumped together with residential burglaries in the UCR data. Cook and Ludwig’s cross-sectional analyses of NCVS data reveal a strikingly similar positive association between a county’s prevalence of gun ownership and the probability that a household reported a home burglary after controlling for characteristics of the household and county. They also found that, contrary to the view that gun
ownership reduces the likelihood that a home is burglarized while someone is at home, there was no statistically significant relationship between county-level gun ownership and the probability that someone was at home during a burglary attempt. The authors argue that the presence of firearms in homes represents attractive loot for criminals, thus providing increased incentives for home burglaries which appear to outweigh any deterrent effects resulting from fears of being shot by a home occupant. The average U.S. gun owner owns six or seven guns (mean = 6.6 in 2004 national survey), many of which are not locked up. Furthermore, data from a nationally representative survey conducted in the 1990s suggest that as many as 500,000 firearms are stolen each year from U.S. citizens. A nationally representative survey of inmates at state prisons from 1997 revealed that 10 percent of firearm offenders had obtained the weapon they had used in crime through theft and another eight percent obtained their gun through a fence or black market source, and, presumably, many of these guns had been stolen from homes.

These data and findings suggest that Chicago’s current requirements for keeping firearms in the home will minimize the number of guns available to criminals. Chicago’s law limiting licensed gun owners to one operable firearm should decrease the number of operable guns in the home and the potential value of such guns to would-be thieves by making it more difficult for thieves to steal any firearms kept in the home by requiring additional guns to be stored in an inoperable fashion.

IX. There is no research that supports the notion that increasing the number of operable firearms in homes makes occupants safer.

The notion that citizens use guns in self-defense far more commonly than they are victimized by someone with a gun was supported by data from a national survey directed by criminologist Gary Kleck. Kleck and Gertz conducted a national phone survey of 4,977 adults. Fifty-six (1.1%) respondents reported having used a gun defensively within the past 12 months in situations in which they report being the would-be victim of a crime. The data were used to make a projection that 2.5 million times per year a U.S. citizen used a firearm defensively in situations when someone was committing or attempting to commit a crime. The projections from this survey are discordant with data from other sources of data relevant to crime and violence. Aside from the fact that the number of defensive gun uses from Kleck and Gertz is 22 times higher than what was estimated from the National Crime Victimization Survey (NCVS), Kleck and Gertz’s data fail tests of external validity. For example, Kleck and Gertz data indicate that there are over 200,000 assailants who are wounded by civilians defending themselves with firearms against crime each year, yet a national surveillance system for hospital emergency department visits indicates that fewer than 100,000 people are treated for gunshot wounds annually in the United States. Subsequent surveys conducted by Hemenway and colleagues were designed to measure all civilian uses of guns, hostile or aggressive as well as defensive. Their data indicate that survey respondents admitted to far more aggressive or hostile uses of guns than defensive uses of guns, and many of the so-called defensive uses were of questionable legality due to inadequate justification for using deadly force. This finding is far more consistent with the research showing that greater gun availability tends to be associated with higher rates of homicide.
No prior study of civilian defensive gun use has examined questions most directly relevant to Chicago’s regulations for keeping firearms in the home. For example, I am not aware of studies examining situations in which more than one operable firearm was available or needed for self-defense or whether a gun owner was unable to access his or her gun because it was not kept in the room where he or she was at the time a crime was committed. Put another way, I am not aware of any research indicating that requirements (such as those in the Chicago ordinance) reduce the ability of a person to effectively use a firearm for self-defense in the home.

X. The Chicago gun ordinance, by limiting firearm possession within the home to one operable firearm for each Chicago Firearm Permit holder in a household and requiring any other guns to be stored in an inoperable state, is likely to lead to a public safety benefit by reducing violent deaths within the home and reducing the number of operable guns obtained by criminals through theft.

Prior research demonstrates that reducing the availability of firearms in the home, especially reduced availability for unauthorized users such as children and adolescents, decreases the risk for suicide, homicide, and deaths from unintentional shootings. Not only does gun ownership appear to increase these risks relative to not having a gun in the home, there also appears to be a dose-response relationship in which risks increase with the number of guns kept in the home. Similarly, risks of violent death within the home of gun owners are reduced by safe storage practices such as locking up guns. Although Chicago’s gun ordinance allows each person with a valid Chicago Firearms Permit to keep a single operable firearm in their home, the ordinance should lead to reduced availability of operable firearms to household members when they become distraught, suicidal, angry, or otherwise lose control of their emotions and, thus, lead to fewer tragic deaths. The ordinance does not prevent CFP holders from keeping a single operable firearm in their home. But I expect that it would make firearms less available than would otherwise be the case, because a typical gun owner in the United States owns six firearms that could be operable, and hence available, for misuse. By limiting the availability of operable firearms within the home, the ordinance is also likely to reduce burglaries that might occur if Chicago Firearm Permit holders could own an unlimited number of firearms with no requirements for safe storage.

Daniel Webster
Professor

August 12, 2011

References


23. City of Chicago. Reported Incidents by Offense Type, Location Description, and Year (1999–2010) CITY1377-79.


34 Mayors Against Illegal Guns. Trace the Guns: The Link Between Gun Laws and Interstate Trafficking. September 2010.


EXHIBIT 1
CURRICULUM VITAE

Daniel William Webster

PERSONAL DATA

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Johns Hopkins Bloomberg School of Public Health
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Baltimore, MD 21205
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EDUCATION AND TRAINING

Doctor of Science, 1991, The Johns Hopkins University, School of Hygiene and Public Health,
Department of Health Policy and Management.

Masters of Public Health, 1985, The University of Michigan, School of Public Health,
Department of Health Planning and Administration.

Bachelors of Arts, 1982, The University of Northern Colorado, Psychology.

PROFESSIONAL EXPERIENCE

Professor, 2010 – present; Associate Professor, 2001-2010; Assistant Professor 1995-2001;
Bloomberg School of Public Health, Baltimore, MD.

Selected Duties/Responsibilities:
Teach courses on violence prevention and health policy evaluation methods; direct Injury
Control Certificate program; chair advise students; oversee independent studies.

Professor, 2010 – present, Division of Public Safety Leadership, School of Education, Johns
Hopkins University, Baltimore, MD.

Associate Director for Research, 2005 – present, Core Faculty, 2000 - present. Center for
the Prevention of Youth Violence, Johns Hopkins Bloomberg School of Public Health,
Baltimore, MD.

Selected Duties/Responsibilities:
PI on studies including an evaluation of firearm and alcohol restrictions for youth, an
evaluation of state firearm sales regulations and an evaluation of a community gun
violence prevention program.
Center Co-Director, 2001 – present. Johns Hopkins Center for Gun Policy and Research. Johns Hopkins Bloomberg School of Public Health, Baltimore, MD.

Selected Duties/Responsibilities:
Secure funding to advance the Center’s mission; develop and direct the Center’s research activities; and serve as principal investigator of evaluations of gun policies.

Core Faculty, 1992 - present. Center for Injury Research and Policy, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD.

Selected Duties/Responsibilities:
Serve as co-investigator of study to determine risk factors for homicide and near homicide of women in abusive relationships with intimate partners; study the predictive validity of several risk assessment tools for intimate partner violence.

Director of Violence Research, 1990-1992. Washington Hospital Center, Trauma, Surgical Critical Care, and Emergency Medicine Department, Washington, DC.

Selected Duties/Responsibilities:
Initiated the development of a violence research program; served as technical advisor and evaluator of a youth violence prevention program; directed epidemiologic studies of injuries resulting from interpersonal violence; studied correlates of youth weapon carrying.

Graduate Research/Teaching Assistant, 1987-1990. The Johns Hopkins University, Injury Prevention Center and Department of Pediatrics, Baltimore, MD.

Guest Researcher, 1988. National Institute on Aging; Epidemiology, Demography, and Biometry Program, Bethesda, MD.


Research Associate II, 1985 - 1986. Program for Urban Health Research, Department of Epidemiology, School of Public Health, The University of Michigan, Ann Arbor.


Daniel W. Webster, Sc.D. M.P.H.

PROFESSIONAL ACTIVITIES

Society Membership and Leadership
American Public Health Association, Injury Control and Emergency Health Services Section, Policy Committee, Faculty for training seminar on Design & Evaluation of Violence Prevention Programs.

American Society of Criminology, Firearms Program Chair 2009.

Participation on Advisory Panels and Task Forces
Invited participant to the Baltimore City GunStat project to provide technical assistance to law enforcement officials on gun law enforcement strategies, 2007 to present.


Advisory Council to the California Department of Justice for planning gun violence prevention campaign, 2005 - 2009.

Lethality Assessment Committee, advisory group for the Maryland Network Against Domestic Violence to develop a model lethality assessment protocol for police and providers of services to victims of intimate partner violence, 2003 to present.


Family Violence Task Force, Medical and Chirurgical Faculty of Maryland, 1993-1994.

Committee on School Safety, Committee on School Environment, Baltimore City Pub. Schools 1989.

Grant Review
National Center for Injury Control and Prevention, Centers for Disease Control and Prevention, Youth Violence Prevention Through Community-Level Change, April 2004.

National Center for Injury Control and Prevention, Centers for Disease Control and Prevention, May 2001. (Also selected for NCIPC-CDC review panel, June 1998)


National Institute for Mental Health, Behavioral Science Track Award for Rapid Transition (B/START) Program, April 1998.

Consultations
Mayors Against Illegal Guns, 2006 to present.

California Dept. of Justice, Firearms Division, 2005-2006. Provide advice about how the state should use funds from its litigation against Wal-Mart to advance gun violence prevention.


National Association for the Advancement of Colored People, 1999-2000. Assistance with gun violence victimization survey of NAACP members for use in lawsuit against the gun industry.

Duke University and Georgetown University, 1998-1999. Consultation on project to estimate the economic costs associated with firearm injuries.


Testimony
Maryland Senate and House of Delegates, SB 162 / HB 330, Bill to reduce maximum capacity of detachable ammunition magazines, Feb. – March, 2011.

Maryland Senate and House of Delegates, SB 161 / HB 1043, Bill to provide state police with greater authority to regulate licensed handgun dealers, Feb. – March, 2011.

Maryland Senate and House of Delegates, SB 239 / HB 241, Bill to create a minimum sentence of 18 months for all defendants convicted of illegal possession of a loaded firearm, Feb. – March, 2011.

Maryland Senate and House of Delegates, SB 240 / HB 252, Bill to allow longer sentences for felons illegally possessing firearms and extend prohibitions to include long guns, Feb. – March, 2011.


Chicago City Council, Committee on Police and Fire Departments, Hearing on a new legislation to replace the city’s handgun ban with comprehensive gun regulations. June 29, 2010.


District of Columbia Council, Committee on Public Safety and the Judiciary, Hearing on the revision of the District’s gun laws in response to the Supreme Court’s ruling that the law was unconstitutional. July 2, 2008.
Daniel W. Webster, Sc.D. M.P.H.

_Testimony (cont.)_


Maryland Senate, SB585 Reporting Lost or Stolen Firearms, March 2008.

Baltimore City Council, Law to Establish a Registry for Gun Offenders, August 2007.


Maryland Senate, SB 448, Bodywire Evidence and Illegal Gun Sales, February 22, 2002.


California State Assembly, Committee on Public Safety, hearing on a right-to-carry handgun law, November 18, 1997. (Written)


**EDITORIAL ACTIVITIES**

*Scientific Journal Peer Review*
American Journal of Epidemiology
American Journal of Preventive Medicine
American Journal of Public Health
Annals of Emergency Medicine
Archives of Pediatric and Adolescent Medicine
Guide to Clinical and Preventive Services
Daniel W. Webster, Sc.D. M.P.H.

Scientific Journal Peer Review
Health Education and Behavior (Special Issue Editorial Board Member)
Health Education Research
Injury Prevention (Editorial Board, 2005-2010)
JAMA (Journal of the American Medical Association)
Journal of Crime and Delinquency
Journal of Criminal Justice
Journal of General and Internal Medicine
Journal of Health Politics, Policy, and Law
Journal of Interpersonal Violence
Journal of Policy Analysis & Management
Journal of Quantitative Criminology
Journal of Trauma
Journal of Urban Health
Journal of Women's Health
New England Journal of Medicine
Pediatrics
Politics and Policy
Social Science & Medicine
Western Criminology Review

HONORS AND AWARDS

Delta Omega Honorary Society in Public Health – Alpha Chapter, Johns Hopkins Bloomberg School of Public Health, Faculty induction, 2005.

Education Award from the Maryland Network Against Domestic Violence, 2004.


PUBLICATIONS

Peer Reviewed Journal Articles
Webster DW, Vemick JS, Bulzacchelli MT, Vittes KA. Recent federal gun laws, gun dealer accountability and the diversion of guns to criminals in Milwaukee. Journal of Urban Health, in press.

Daniel Webster, Sc.D., M.P.H.

Peer Reviewed Journal Articles (cont.)


Vernick JS, Hodge J, Webster DW. The ethics of restrictive licensing for handguns:
Peer Reviewed Journal Articles (cont.)

Comparing the United States and Canadian approaches to handgun regulation. *Journal of Law, Medicine, and Ethics* 2007;35:668-678.


Vernick JS, Webster DW, Bulzacchelli MT. Regulating firearms dealers in the United States: an analysis of state law and opportunities for improvement. *Journal of Law, Medicine, and Ethics* 2006;34:765-775.


Webster DW, Vernick JS, Bulzacchelli MT. Effects of a gun dealer’s change in sales practices on the supply of guns to criminals. *Journal of Urban Health* 2006; 83:778-787.


Daniel Webster, Sc.D., M.P.H.

Peer Reviewed Journal Articles (cont.)


Solomon BS, Duggan AK, Webster DW, Serwint JR. Pediatric resident firearm safety counseling during adolescent health maintenance visits. *Archives of Pediatric and Adolescent Medicine* 2002; 156:769-775.


Daniel Webster, Sc.D., M.P.H.

Peer Reviewed Journal Articles (cont.)


Vernick JS, Teret SP, Webster DW. Regulating firearm advertising promising home protection: The legal basis for a public health intervention. *JAMA* 1997;277:1391-1397.


Daniel Webster, Sc.D, M.P.H.

Peer Reviewed Journal Articles (cont.)


Journal Articles Not Peer-Reviewed


Manuscripts Under Review
Webster DW, Vernick JS, Mendel J, Mahoney P. Effects of a community public health program to reduce shootings on young men’s attitudes about gun violence. Injury Prevention.

Abstracts

Other Publications

Vernick JS, Webster DW. Amicus Brief to the U.S. Supreme Court regarding District of Columbia versus Heller for the petitioner. Written on behalf of the American Public Health Assoc., American College of Preventive Medicine, American Trauma Society, and the American Assoc. of Suicidology, January 2008.

Reports


CURRICULUM VITAE

Daniel W. Webster, Sc.D., M.P.H.

PART II

TEACHING

Classroom Instruction
Instructor: Understanding and Preventing Violence, 1993- present.
Graduate Seminar in Injury Research and Policy, 2005 – present.
Lead Instructor: Research and Evaluation Methods for Health Policy, 2011 – present.

Lecturer in the following JHU courses:
Health Policy I: Social & Economic Determinants of Health
Proposal Writing (Health Policy & Management)
Introduction to Health Policy and Management
Problem Solving in Public Health
Public Health Protection and Practice
Adolescence and Adolescent Health
Issues in Injury and Violence Prevention
Methodological Issues in Injury and Violence
Design and Evaluation of Injury Interventions
Graduate Seminar in Health and Public Policy
Suicide as a Public Health Problem
Applications in Program Monitoring and Evaluation
Alcohol, Society, and Health

Advising and Thesis Committees
Primary advisor to:
Kim Ammann Howard, PhD, 1997
Jennifer Manganello, PhD, 2003
Allegra Kim, PhD candidate, PhD 2006
April Zeoli, PhD, 2007
Elizabeth Saylor, PhD candidate, 2003 - 2007
Jennifer Mendel, PhD candidate, 2006 – present
Jillian Fry, PhD candidate, 2007 - present
James Saltzman, MPH, 2007-2008
Summer Venable, MPH, 2008-2010
Jeane Garcia Davis, MPH, 2008-2011
Donald Chalffin, MPH, 2010 -

Co-advisor to:
Leonardo Goe (MHS Health Policy), 1997-98
Rachel Garfield (MHS Health Policy), 1998-
Emma (Beth) McGinty, PhD candidate, 2010-
Daniel Webster, Sc.D., M.P.H.

Thesis committees:
- Kathleen Roche, PhD in MCH, August 1998
- Shannon Frattaroli, PhD in HPM, December 1998
- Li-Hui Chen, PhD in HPM, March 1999
- Marsh Rosenberg, PhD in Mental Hygiene, March 2001
- Lisa Hepburn, PhD in HPM, March 2001
- Swapnil P. Maniar, PhD in PFHS, September 2005
- Maria Bulzacchelli, PhD in HPM, October 2006
- April Zeoli, PhD in HPM, July 2007
- Anne Outwater, PhD in Nursing, December 2007
- Donna Ansara, PhD in PFHS, December 2008
- Vanessa Kuhn, PhD in HPM, July 2010

Preliminary oral exam committees:
- Shannon Frattaroli, Marguerite Roe, Li-Hui Chen, Mary Beth Skupien, Monique Shepard, Beth Hooten, Farifteh Duffy, Mary Garza, Lisa Hepburn, Marc Starnes, Jennifer Manganello, Allegra Kim, Christina Pallitto, Swapnil Maniar, Christine Koth, Maria Bulzacchelli, Margaret Haynes, Frank Franklin, Donna Ansara, Vanessa Kuhn, Susan Ghanbarpoor, Greg Tung, Adam, Milam, Michael Kim.

Post-Doctoral Mentoring
- Lorraine Freed, MD, MPH, RWJ Clinical Scholar 1996-98
- Shannon Frattaroli, Kellogg Community Health Scholar, 1999-2000
- Barry Solomon, MD, Pediatric Fellow, 1999-2002
- Erica Sutton, MD, NIMH Violence Research Fellow, 2003-2005

Program Management / Training Program Involvement
- Interim Program Head, PhD program in Prevention and Public Policy, 2006 – 2007.
- Faculty Director, Certificate Program in Injury Control, 1999- present
- Executive Committee and Core Faculty, Interdisciplinary Research Training Program on Violence (pre- and post-doctoral training program funded by NIMH), 1999-present
- Resource Faculty, Alcohol, Injury and Violence Training Program (pre-doctoral training program funded by NIAAA), 2001-2007.

ACADEMIC COMMITTEES
- 3 Ad Hoc Committees for Appointments and Promotions, 2006 – present.
- Academic Policy and Admissions Committee, HPM, 1997-1999
ACADEMIC COMMITTEES (cont.)
Strategic Planning Committee, HPM, 2003 - present
Ad-Hoc Committee on Statistics Training, HPM, 1997-1998
Research Policy Committee, HPM, 1995-97

RESEARCH GRANT PARTICIPATION

Active Support
Title: Gun Violence Reduction Program
Dates: 1/01/11 – 12/31/13
Principal Investigator: Daniel W. Webster
Sponsoring Agency: Anonymous donor
Funding Level: $500,000
Main Objectives: Conduct research, policy analysis, and technical assistance to inform efforts to reduce the availability of illegal guns and gun violence.
Effort: 40%

Title: Evaluation of Baltimore Policing Strategies to Reduce Gun Violence
Principal Investigator: Daniel W. Webster
Sponsoring Agency: U.S. Dept. of Justice, Bureau of Justice Assistance
Funding Level: $60,000
Main Objectives: Develop unbiased estimates of the impact of 3 strategies being implemented by Baltimore police to reduce violence.
Effort: 15%

Title: Analyzing and Developing Policies to Limit Firearm Access by High-Risk People
Dates: 5/1/09 – 4/30/11
Principal Investigator: Daniel W. Webster
Sponsoring Agency: The Joyce Foundation
Funding Level: $179,971
Main Objectives: Research and describe state laws pertaining to firearm prohibitions for substance abusers and the potential public safety gains for expanding current prohibition categories for firearm purchase and possession.
Effort: 15% year 1, 18% year 2

Title: Impact of Safe Streets’ Outreach Workers on the Lives of Their Clients
Dates: 12/1/09 – 6/30/10
Principal Investigator: Daniel W. Webster
Sponsoring Agency: Baltimore City Health Department
Funding Level: $72,000
Main Objectives: Measure the impact of the Safe Streets program on the clients of the program’s outreach workers and provide analyses of the relationships between program activities and gun violence.
Effort: 25%
Daniel Webster, Sc.D., M.P.H.

RESEARCH GRANT PARTICIPATION

Title: Gun Violence Reduction Program
Dates: 1/01/08 – 12/31/10
Principal Investigator: Daniel W. Webster
Sponsoring Agency: Anonymous donor
Funding Level: $500,000
Main Objectives: Conduct research, policy analysis, and technical assistance to inform efforts to reduce the availability of illegal guns and gun violence.
Effort: 25%

Prior Support

Title: Data for Combating Illegal Guns
Dates: 1/01/08 – 12/31/08
Principal Investigator: Daniel W. Webster
Sponsoring Agency: Maryland Governor’s Office for Crime Control and Prevention
Funding Level: $75,419
Main Objectives: Assist Baltimore City and Maryland State Police to collect and analyze data on crime guns and illegal gun trafficking.
Effort: 10%

Title: Analyzing & Assisting Innovative City-Level Efforts to Prevent Gun Violence
Dates: 5/1/07 – 4/30/09
Principal Investigator: Daniel W. Webster
Sponsoring Agency: The Joyce Foundation
Funding Level: $175,000
Main Objectives: Analyze data on illegal gun trafficking and provide consultation to enhance data to inform efforts to stem gun trafficking in Milwaukee. Case study of Chicago Police Department’s efforts to thwart gun trafficking.
Effort: 20%-25%

Title: Evaluation of the California Firearms Domestic Violence Education and Intervention Project
Dates: 1/15/07 – 1/14/10
Principal Investigator: Garen Wintemute (UC Davis) and Shannon Frattaroli (JHBSPH)
Sponsoring Agency: California Department of Justice
Funding Level: $31,481 subcontract from UC Davis for first year
Main Objectives: Evaluate a program in 2 California counties to enhance implementation of state laws prohibiting certain domestic violence offenders from possessing firearms.
Effort: 10%

Title: Baseline Data for Evaluating a Community Initiative to Reduce Youth Homicides
Dates: 3/01/07 – 2/28/09
Principal Investigator: Daniel W. Webster
RESEARCH GRANT PARTICIPATION

**Prior Support**

**Sponsoring Agency:** Baltimore City Health Department

**Funding Level:** $75,122

**Main Objectives:** Collect and analyze baseline data on violent crime and youths' attitudes relevant to gun violence in intervention and comparison neighborhoods.

**Effort:** 6%

**Title:** Evaluation of a community gun violence prevention initiative in Baltimore.

**Dates:** 9/1/05 – 8/31/10

**Principal Investigator:** Daniel W. Webster

**Sponsoring Agency:** Centers for Disease Control and Prevention

**Funding Level:** $745,352

**Main Objectives:** Estimate the impact of the initiative on youth gun violence victimization and perpetration and attitudes and behaviors of high risk youth.

**Effort:** 25%-30%

**Title:** Effects of a Formal Danger Assessment and Risk Communication Intervention on Actions Taken to Reduce Risks of Intimate Partner Violence

**Dates:** 9/1/04 – 8/31/09

**Principal Investigator:** Daniel W. Webster

**Sponsoring Agency:** Centers for Disease Control and Prevention

**Funding Level:** $485,000

**Main Objectives:** Determine whether a formal, quantitative assessment of danger, and a standard protocol for communicating the assessed risk of future partner violence and scientific support for protection strategies is more effective than current procedures in motivating protective actions and lowers risk for future violence.

**Effort:** 20%-25%

**Title:** Reducing Illegal Gun Trafficking Through Research and Technical Assistance

**Dates:** 5/1/05 – 4/30/08

**Principal Investigator:** Daniel W. Webster

**Sponsoring Agency:** The Joyce Foundation

**Funding Level:** $181,117

**Main Objective:** Disseminate research findings to law enforcement agencies, advocates, and the media on policies and enforcement efforts shown to reduce illegal gun trafficking. Estimate the association between indicators of illegal gun trafficking, gun availability to criminals, and gun violence.

**Effort:** 25%-30%

**Title:** Effects of Police Stings of Gun Dealers on the Illegal Gun Market

**Dates:** 11/1/03 - 10/31/04

**Principal Investigator:** Daniel W. Webster

**Sponsoring Agency:** The Overbrook Foundation

**Funding Level:** $37,000
RESEARCH GRANT PARTICIPATION

Prior Support (cont.)

Main Objectives: Assess the impact of police stings of 12 gun dealers suspected of making illegal gun sales in Chicago on the flow of new guns into the illicit gun market.

Effort: 20%

Title: Evaluating and Developing Policies to Regulate Licensed Gun Dealers
Dates: 4/1/02 - 3/31/04
Principal Investigator: Daniel W. Webster
Sponsoring Agency: The John D. and Catherine T. MacArthur Foundation
Funding Level: $260,000
Main Objectives: 1) Document state policies and enforcement practices relevant to the regulation and oversight of licensed gun dealers; 2) Assess the effect of those measures on gun trafficking; and 3) Develop recommendations for effective strategies for deterring illegal gun sales involving licensed gun dealers.

Effort: 35%

Title: Working with Health Commissioners to Reduce Gun Violence
Dates: 7/01/03 - 6/30/04
Principal Investigator: Jon S. Vernick
Sponsoring Agency: Richard and Rhoda Goldman Fund
Funding Level: $100,000
Main Objective: Identify and provide technical assistance to city or county health commissioners in order to use public health powers to shut down corrupt gun dealers who endanger the public's health.

Effort: 15%

Title: Separating Kids from Guns Program
Dates: 10/01/01 - 9/30/03
Principal Investigator: Shannon Frattaroli
Co-PI: Daniel W. Webster
Sponsoring Agency: The David and Lucille Packard Foundation
Funding Level: $300,000
Main Objective: Conduct research, perform policy analysis, disseminate information relevant to protecting children and adolescents from unsupervised access to guns.
Responsibilities: Plan and monitor progress on project activities, lead research on the effects of child access prevention laws on youth suicides.

Effort: 25%

Title: Johns Hopkins Center for Gun Policy and Research
Dates: 01/01/99 - 4/30/04
Sponsoring Agency: The Joyce Foundation
Co-Prin. Invest.: Daniel W. Webster (2001-present)
Funding Level: 2001-2003: $600,000
Main Objective: Develop and analyze policies to reduce firearm injuries.
RESEARCH GRANT PARTICIPATION

Responsibilities: Co-direct Center, initiate and conduct research and analysis relevant to gun policy; develop and analyze gun policy surveys; assist groups working to reduce gun violence; serve as resource to media and policymakers.

Effort:
15% (05/01/03 - 4/30/04)
35% (05/01/01 - 4/30/03)
25% (01/01/00 - 4/30/01)
35% (01/01/96 - 12/31/99)
20% (01/01/95 - 12/31/96)

Title: Effects of Minimum Age Restrictions on Handgun Purchase and Possession - Center for the Prevention of Youth Violence

Dates: 10/01/00 - 9/30/05

Principal Investigator: Daniel W. Webster

Sponsoring Agency: Centers for Disease Control and Prevention

Funding Level: $306,695

Main Objective: Estimate the effects of minimum age restrictions on handgun purchases and possession on youth homicide offending and suicides

Responsibilities: Design study, oversee data collection, plan and oversee data analysis, interpret data, make presentations at professional meetings, write articles

Effort: 33% - 20%

Title: Evaluation of Instruments to Assess Risk for Intimate Partner Violence

Dates: 08/01/00 - 03/31/04

Principal Investigator: Jacquelyn C. Campbell

Sponsoring Agency: National Institute of Justice

Funding Level: $619,792

Main Objective: Determine the sensitivity, specificity, and predictive value of four instruments designed to assess future risk for violent victimization by an intimate partner.

Responsibilities: Co-Investigator, consult on study design, plan and conduct data analysis, write articles for publication.

Effort: 20%

Title: The Center for Injury Research and Policy:

Dates: 1987-2005

Sponsoring Agency: Centers for Disease Control and Prevention

Principal Investigator: Ellen MacKenzie

Funding Level: 1999-2003: $750,000 per year.

Main Objective: One of the eight regional injury control research centers.

Responsibilities: Evaluate state-level gun policies, direct study of risk factors for serious injuries from intimate partner assaults, develop research proposals, serve as resource to students, media, practitioners, and policy makers.

Effort:
10% (09/03/03 - 8/31/04)
10% (09/01/00 - 8/31/01)
20% (09/01/99 - 8/31/00)
25% (09/01/94 - 08/31/98)
20% (04/01/94 - 08/31/94)
50% (07/01/92 - 03/31/94)
100% (04/01/92 - 06/30/93)
10% (09/01/98 - 08/31/99)
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RESEARCH GRANT PARTICIPATION (cont.)  

Previous Support: (cont.)

Title: Developing and Analyzing Data for Effective Gun Law Enforcement  
Dates: 03/01/01 - 02/28/02  
Principal Investigator: Daniel W. Webster  
Sponsoring Agency: Governor's Office of Crime Control and Prevention  
Funding Level: $102,911  
Main Objective: Develop databases for information about the sources of crime guns and the prosecution of gun crimes  
Effort: 35%

Title: Developing a Dataset of State Gun Laws  
Dates: 12/01/00 - 11/30/01  
Principal Investigator: Jon S. Vernick  
Sponsoring Agency: Annie E. Casey Foundation  
Funding Level: $45,000  
Main Objective: Determine the presence and effective dates of specific types of gun laws in each of the 50 U.S. states and the District of Columbia. Create a dataset with this information and provide the information to interested researchers.  
Responsibilities: Provide input into decisions about what laws to research and dataset format.  
Effort: 10%

Title: Effects of Personalized Guns in Maryland  
Dates: 9/1/99 - 8/31/00  
Sponsoring Agency: The Abell Foundation  
Funding Level: $40,533  
Principal Investigator: Stephen Teret  
Main Objective: Assess likely effects of a law to require personalized guns in Maryland  
Responsibilities: Examine likely consumer reactions to personalized guns, effects on mortality  
Effort: 10%

Title: Risk Factors for Homicide in Violent Intimate Relationships  
Dates: 09/01/96 - 02/28/00  
Sponsoring Agency: NIDA, NIMH, CDC, NIJ, NIA  
Principal Investigator: Jacquelyn Campbell  
Funding Level: $1,267,744  
Main Objective: Determine risk factors for homicide or attempted homicide among women involved in violent intimate relationships and develop predictive screening devices for clinicians, shelter workers, and the courts.  
Responsibilities: Assist in study design, assess data completeness and reliability, construct and evaluate predictive models, and write articles.  
Effort: 10% (09/01/99 - 02/28/00)  
25% (09/01/98 - 08/31/99)  
10% (09/01/97 - 08/31/98)  
15% (09/01/96 - 08/31/97)
RESEARCH GRANT PARTICIPATION (cont.)

Previous Support: (cont.)

Title: Preventing Firearm Suicide and Unintentional Deaths Through Safer Gun Design

Dates: 01/01/00 - 12/31/00

Principal Investigator: Jon S. Vernick

Sponsoring Agency: Funders' Collaborative for Gun Violence Prevention

Funding Level: $176,755

Main Objective: Evaluate potential benefits of safer gun designs

Responsibilities: Co-Investigator, consult on study design and data analysis

Effort: 10%

Title: Public Attitudes About New Law Enforcement Technologies

Dates: 06/01/97 - 05/31/99

Sponsoring Agency: National Institute of Justice

Principal Investigator: Daniel W. Webster

Funding Level: $266,625

Main Objectives: Assess public attitudes relevant to new law enforcement strategies to detect concealed weapons in high-crime areas including the use of new technology and the determinants of those attitudes including concerns about safety, invasion of privacy, and fairness in the way that law enforcement officials apply new technology. Study includes a qualitative study of residents of a high-crime neighborhood in Baltimore and a national phone survey of urban residents.

Responsibilities: Oversee all aspects of the project including managing subcontracts, communicate with funding agency, design the study and data collection instruments, analyze qualitative and quantitative data, writing reports and articles for publication.

Effort: 33%

Title: Evaluation of the California Violence Prevention Initiative

Dates: 07/01/93 - 04/15/96

Sponsoring Agency: The California Wellness Foundation

Principal Investigator: Stephen P. Teret

Co-Prin. Investigator: Daniel W. Webster

Funding Level: $3.1 million

Main Objectives: Conduct process and outcome evaluation of a statewide violence prevention initiative involving advocacy for policies to reduce violence, community mobilization, leadership development for community activists for violence prevention, and research applicable to violence prevention.

Responsibilities: With PI, oversee and manage all aspects of the evaluation of the initiative. Design data collection instruments and protocols for the evaluation of the policy and community action components. Analyze data from periodic statewide surveys to assess changes in public support for violence prevention policy initiatives.

Effort: 50%
RESEARCH GRANT PARTICIPATION (cont.)

Previous Support: (cont.)

Title: Evaluation of Violence Prevention Public Education Campaign
Dates: 04/01/94 - 03/31/95
Sponsoring Agency: The California Wellness Foundation
Principal Investigator: Daniel W. Webster
Funding Level: $40,000
Main Objectives: The describe all facets of the campaign and the political and social context in which the campaign is conducted and evaluate the effects of the campaign on public opinion, opinion leaders, the media, and policy makers.
Responsibilities: Oversee all aspects of the evaluation and coordinate evaluation activities with those conducting the campaign. Analyze data from public opinion polls, policy maker surveys, and newspaper coverage of violence and guns.
Effort: 20%

Title: Planning "The Consortium on Gun Policy and Information"
Dates: 04/01/94 - 10/31/94
Sponsoring Agency: The Joyce Foundation
Principal Investigator: Stephen P. Teret
Funding Level: $40,000
Main Objectives: To assess the need for a "Consortium on Gun Policy and Information" that would provide factual information on firearms and the public's health to various consumers. Examine the feasibility of creating a Consortium, explore the policy role that such an organization might fulfill, and describe the methods by which accurate information could be disseminated.
Responsibilities: Participate in the planning sessions and be involved in crafting gun injury epidemiology materials developed for the media and other consumers.
Effort: 10%

PRESENTATIONS

Scientific Meetings

Webster DW, Mendel JS, Vernick. Evaluating Baltimore’s Safe Streets Program’s effects on violence. Presented at the annual meetings of the American Public Health Association, Denver, November 2010.


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PRESENTATIONS

Scientific Meetings (cont.)


Webster DW, Vernick JS, Bulzacchelli MT. Association Between Regulations and Oversight of Firearm Dealers and Gun Trafficking. Presented at the Annual Meeting of the American Society of Criminology, Atlanta, November 2007.


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PRESENTATIONS  

Presentations at Scientific Meetings (cont.)  


Campbell JC, Webster DW, Chouaf K, et al. "If I can’t have you, no one can": Further exploration of estrangement increasing risk of intimate partner femicide. Presented at the Annual Meetings of the American Society of Criminology, Chicago, November 2002.  


Webster DW, Vernick JS, Hepburn L. The association between licensing, registration, and other gun sales laws and the state-of-origin of crime guns. Presented at the National Association for Injury Control Research Centers meeting, Pittsburgh, May 2001.  

Webster DW, Vernick JS, Hepburn L. The association between licensing, registration, and other complementary gun sales laws and the state-of-origin of crime guns. Presented at the annual meetings of the American Public Health Association, Boston, November 2000.  


Webster DW, Vernick JS, Hepburn L. Can comprehensive gun control and enforcement keep guns from being used in crime? Presented at the annual meetings of the American Society of Criminology, Toronto, Ont., November 1999.
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PRESENTATIONS
Presentations at Scientific Meetings (cont.)


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Presentations at Scientific Meetings (cont.)


Howard KA, **Webster DW.** Beliefs about keeping firearms in the home. Presented at the American Public Health Association Annual Meeting, New York, November 1996.

Flora J, Schooler C, Rogers T, **Webster D.** Support for violence prevention policies: Comparison of high-risk neighborhood residents and middle-class voters. To be presented at the American Public Health Association Annual Meeting, New York, November 1996.


**Webster DW.** Individual vs. community perspective on the study and prevention of youth weapon carrying. Public Health Service Annual Professional Meetings, Baltimore, MD, April 1994.


**Webster DW, Gainer PS, Champion, HR.** Determinants of weapon carrying within a sample of inner city junior high school students. Paper to be presented at the American Public Health Association Annual Meetings, Washington, DC, November 1992.


Champion HR, Oschner MG, **Webster DW.** A retrospective review of over 300 abdominal gunshot wounds at an urban Level I trauma center. International Society of Surgery Conference, Stockholm, Sweden, August 1991.

Wilson MEH, **Webster DW, Duggan AK, Pakula LC.** Firearm injury prevention counseling: are pediatricians and parents ready? American College of Physicians Annual Meetings, April 1991.

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*Invited Presentations / Seminars*


Invited Seminars (cont.)

Expert Panel, Midwest meeting of Mayors Against Illegal Guns, Chicago, October 2006.


Preventing Gun Violence Among Youth. Seminar for the University of Maryland Journalism Fellowship in Child and Family Policy, Washington, DC, November 2002.

Opportunities for Preventing Gun Violence in the U.S. Robert W. Leraas Lecture, St. Olaf College, Northfield MN, October 2002.


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**Invited Seminars (cont.)**


The role of health professionals in the prevention of youth violence. Continuing medical education seminar at Bethesda Memorial Hospital, Boyton Beach, FL, February 1998.


Media advocacy and public health: A case study of a campaign to increase support for handgun restrictions. Johns Hopkins University School of Public Health Seminar, April 1995.


The ability of gun laws to reduce deaths and injuries. Presentation to the Maryland State Office of Strategic Drug Enforcement Coordination, Columbia, MD, January 1994.


The role of public health in violence prevention. JHU Seminar sponsored by the Department of Mental Hygiene and The Injury Prevention Center, December 1993.


Public Health Professionals' Role in Reducing Injuries from Violence. Preventive Medicine in
Invited Seminars (cont.)


ADDITIONAL INFORMATION

Research Objectives
To study the causes and prevention of interpersonal and self-inflicted violence and associated injuries; to study the effectiveness interventions intended to reduce severe forms of violence; to develop and assess instruments designed to assess the risk for future violence.

Keywords
violence, violence prevention, firearm injuries, gun policy, evaluation, domestic violence.

Community Involvement:
Coach, Bethesda-Chevy Chase Baseball Youth League 2001- 2010.

Served as Co-Chair of Social Justice Committee and as a member of the Board of Trustees at Temple Emanuel, Kensington, MD, 2004- 2007.
EXHIBIT 2
MATERIALS REVIEWED

In addition to the materials specifically referenced in the end notes to my report and my own articles referenced in my *curriculum vitae* attached as Exhibit 1, I reviewed and considered the following in forming my opinion:

1. Chicago City Ordinance, Ch. 4-144
2. Chicago City Ordinance, Ch. 8-20
11. CPD Crime Data produced in *Illinois Association of Firearms Retailers, et al. v. City of Chicago*, No. 10-CV-4184 (N.D. Ill.) as CITY1376-470 (Reported Incidents by Offense Type, Location, Description, and Year)
14. CPD Data produced in *Illinois Association of Firearms Retailers, et al. v. City of Chicago*, No. 10-CV-4184 (N.D. Ill.) as CITY1473 (Civilian Registered Firearms)


19. Smith, TW. Public Attitudes Towards the Regulation of Firearms. (Mar. 2007)