Australian gun controls: Should more be done?

Louis E Christie
Emergency Physician & DCT
Orange Base Hospital
02) 6393 3014
Louis.Christie@mwahs.nsw.gov.au

Abstract

Objectives: To examine the basic premises of gun control and the relationship linking legal firearm ownership to homicide and suicide in Australia.

Data sources/
Study selection: Available data from the Australian Bureau of Statistics regarding firearms ownership, suicide and homicide in Australia were reviewed. Medline database searches using key words of “firearms”, homicide, statistics, trends’, suicide, statistics, trends’ and ‘violence, prevention and/or firearms from 1966 to 1996. These papers were manually searched to identify additional references. Internet home pages of The Coalition for Gun Control, The Sporting Shooters Association of Australia, Handgun Control Inc. and The National Rifle Association were reviewed and information that could be independently validated was considered.

Results: Few papers approach the subject of violence with the same focus, limiting the ability to perform meta-analysis or direct comparisons of data.

Conclusions: Current knowledge is inconclusive, but does not provide strong support for some existing Australian firearm control measures. Evidence suggests that further reducing the levels of firearm ownership in Australia will not cause an overall reduction in rates of homicide or suicide.

Key words: firearms, gun control, homicide, suicide.

Introduction

Violence has long been recognized as a public health issue, but it touches most areas of medicine. A number of medical organizations and specialty colleges have written policy statements on gun control and a number are affiliated with the Coalition for Gun Control. The medical profession contains powerful political lobbies that are increasingly called to support various changes to firearm laws and doctors’
representatives regularly make statements regarding gun control in both the general and medical media. Despite this, many clinicians remain ill informed about violence generally and firearm issues in particular.\(^1\)

The relationship between firearm ownership (referring throughout the paper to legal ownership) and violent death is of particular importance to Australia, because 10-15\% of Australians privately own between 4 and 6 million firearms. In comparison, we own 2.7 million domestic cats. The risk posed by an individual firearm is relatively low (0.8-1.3 deaths per 10 000 firearms per annum, compared with 1.9 road deaths per 10 000 motor vehicles; Australian Bureau of Statistics (ABS), unpubl. Data, 1994). Debate continues over the cumulative risk. Relatively little research is available on firearm abuse\(^2,3\) and existing work is largely inconclusive.\(^4\) Research from overseas cannot be applied directly to Australia due to cultural and social differences and differences in demographics of firearm ownership. Nonetheless, overseas research is regularly cited in the Australian debate. In particular, American research is cited to argue that America’s high rate of homicide is solely a result of its firearm laws\(^5\). This simplistic view has been described as the ‘…argument that short-circuited the need for any other explanation’\(^6\). Since 1989, homicide rates of individual American states have ranged from 0.54 to 72.58 deaths per 100 000 per annum. This reflects the heterogeneous nature of interpersonal violence within American society\(^7\), a multifactor problem with origins dating back over 200 years\(^8\). The American situation is vastly different to ours and many North American gun-control advocates seek a system of ownership principles endorsed by the Australian ‘gun lobby’.\(^9\)

Australian firearm controls are broadly based on four assertions about the relationship between firearm ownership and violent death, supported by varying degrees of evidence:

1. There exists a linear relationship between the number of legally held firearms and the rate of shooting deaths in a community (i.e. fewer legal guns = fewer shootings)
2. A decline in shooting deaths will cause an overall reduction in violent death (i.e. method substitution is insignificant).
3. Comprehensive registration will facilitate firearm tracking and make owners more responsible.
4. ‘Cooling off’ periods will prevent purchase of firearms for impulse shootings.

**Premise 1: Fewer legal guns = fewer shooting deaths**

Australia was entirely without means of regulating firearm ownership until fear of communism resulted in the current system of handgun registration and licencing, introduced at a state level between 1920 and 1932.\(^10\) Firearm ownership was widespread. Self-loading rifles and handguns were available on mail order in Australia from 1905 and handguns similar to the current police revolver have been available since the 1890’s.\(^11,12\) During a maritime strike at the turn of the century, police secured 2000 handguns from shopkeepers and pawnbrokers in Sydney and Redfern (NSW, Australia) to prevent their use in riots.\(^13\) Surplus military rifles were sold to the public following World Wars I and II.\(^14\) Licencing for rifle and shotgun users was introduced as recently as 1975. Prior to this, numbers of firearms dealers also rented firearms on a daily or weekly basis.
National homicide rates between 1915 and 1930 were no different to present rates\(^15\) (approximately two per 100 000 per annum) despite unrestricted access to firearms. There were no surges of fatalities associated with influxes of firearms and trained riflemen at the conclusion of World Wars I and II, and spree killings were unknown until the Hoddle Street and Queen Street (Melbourne, Victoria, Australia) killings in 1987. Cantor and Lewin\(^16\) examined suicide in Australia from 1961 to 1985 and found that Queensland had a higher overall suicide rate, a higher rate of firearm suicides and a higher percentage of firearm suicides than the national average. The authors suggested that this may be due to a greater household prevalence of firearms in Queensland and credited Western Australia’s stricter firearm laws for a lower household firearm prevalence (19.5\%) resulting in a lower overall suicide rate (9.91 per 100 000), but did not discuss Victoria (firearm prevalence 27.4\%, overall suicide rate 9.64 per 100 000 or the Australian Capital Territory (ACT; firearm prevalence 25.4\%, overall suicide rate 9.55 per 100 000).

The 1984 ‘Milperra Bikie Massacre’ (NSW, Australia) resulted in a ban on self-loading rifles in New South Wales (NSW), enacted in 1987 and repealed twice prior to 1991, but in force since then. From 1979 to 1995, the homicide rate in NSW remained constant and the suicide rate increased, with a steady decline in rates of firearm homicide and suicide (ABS, unpubl. Data, 1979-1995) all mirrored by contemporary national trends.\(^17\) From 1979 to 1994, shooting homicide and suicide decreased nationally (by 37 and 35\%, respectively), while suicide by hanging and car exhaust fumes increased (by 143 and 114\% respectively), as did homicidal stabbing (66\%).\(^18\) Even among young males (the group most at risk of suicide), shooting suicides declined by 30\%, offset by a 331\% increase in hanging suicide and a moderate increase in death by car exhaust.\(^18\)

New Zealand closely resembles Australia in the demographics of firearm ownership. A case-control study of 197 suicides and 302 suicide attempts from Christchurch found firearm ownership increased the probability that a gun would be chosen for suicide attempt, but was not associated with an increase in the risk of suicide.\(^19\)

There are a number of overseas studies that are regularly cited as providing strong evidence for a linear or casual relationship between ownership and violent death relevant in the Australian context. These studies have become so central to the Australian debate; it is worth briefly reviewing their limitations.

Kellermann \textit{et al.} published a series of studies based on violent deaths in three American counties. The initial study\(^20\) covered the period 1978 to 1983 and demonstrated that most shooting suicides were committed at home. The remainder of this research group’s studies focused on deaths at home, examining fatalities more likely to involve firearms and excluding 30-77\% of the violent deaths occurring during each study period. Two suicide studies,\(^21,22\) found far stronger correlations between ‘at home’ suicide and mental illness, alcoholism, illicit drug use and living alone than between suicide and firearm ownership. In the former study,\(^21\) the risk posed by firearm ownership was of the same magnitude as the risk posed by ‘not graduating from high-school’. Neither study attributed firearm ownership a casual role in suicide.
The 1993 homicide study of Kellermann et al. found rifle or shotgun ownership did not increase homicide risk. Their univariate analysis demonstrated four ‘firearm’ risk factors for ‘home homicide’ (handguns or guns kept unlocked, kept loaded of kept primarily for self-defence). These were dwarfed by 16 ‘non-firearm’ risk factors for homicide at home, which included markers of alcoholism, illicit drug use, domestic violence and poverty. Data on mental illness were not collected. Although drawn from three distinct populations, data were only subject to one logistic regression model. Multivariate analysis demonstrated that living in rented accommodation, living alone, illicit drug use and physical violence were more closely related to homicide than was gun ownership.

The findings of Kellermann et al. are of limited application. Those studies only reviewed deaths ‘at home’, and the evidence suggests that these are not representative of all suicidal or homicidal deaths in the study populations. A similar study examining violent deaths in the State of Washington found the association between handgun purchase and suicide or homicide much weaker than in the studies of Kellermann et al., although still significant. Even disregarding the limitations inherent in study design, the findings of Kellermann et al. are of little relevance to Australia. Two of the countries studied by Kellermann et al. (in Tennessee and the State of Washington) allow ‘non-felons’ to carry concealed handguns on a daily basis without any requirement for safety training or justification of need. The third country studied (in Ohio) also has provision for concealed carriage of handguns and gives far greater access to handguns than is the case in Australia. The concept of ‘concealed carriage’ remains irrelevant to Australia because it is not supported by the Australian shooting lobby and not part of the debate in this country.

Sloan et al. compared homicide rates in Vancouver and Seattle during the period 1980-86 and concluded that Vancouver’s lower rate of homicide was due to Canada’s stricter handgun laws. Their data show that similar ethnic groups in each city have similar homicide rates, with the exception of Blacks and Hispanics who (combined) comprise less than 1% of Vancouver’s population. Two other studies of the same populations found no relationship between handgun prevalence and homicide rates. A 1990 comparative study of suicide in the State of Washington and in Vancouver found the same risk of suicide in both populations.

Loftin et al. concluded that the Firearms Control Regulation Act (1976) caused a reduction in homicide and suicide in Washington DC. Several methodological flaws in the study may have magnified the apparent decline in deaths. The authors’ explanation of an immediate decline in shootings due to decreased firearm availability is hard to accept, because the Act did not remove any firearms from the community.

**Premise 2 Method Substitution is insignificant**

Canadian, American and multi-national studies suggest that the overall suicide rate is unlikely to alter with increasingly stringent firearm laws. Killias studied the correlation between firearm ownership and violent death in 14 countries. He found a correlation between levels of firearm ownership and the percentage of deaths that occurred by shooting. His data demonstrate no correlation between firearm ownership and overall rates of homicide or suicide. However, he interpreted this as evidence against method substitution. In a review of suicide from 16 countries, Lester found
that suicide rates in individual countries are essentially stable, but that methods of suicide can vary over time. Lester considered cultural influences more important than availability of means in determining the prevalence of suicide by a particular method.

Lester and Lenaars\textsuperscript{40} studied suicide in Canada during a tightening of firearm laws. The total suicide rate increased throughout the study period, and then fell suddenly in the final year. The authors demonstrated a decreasing trend in firearm suicide following the new laws, but concluded that ‘…the suggestion that people will switch methods…appears not to be borne out by the data…by 1985 both the firearm suicide rate and the suicide rate by all other methods were at their lowest values since 1977.\textsuperscript{40} This statement is misleading because it implies a decreasing trend in total suicide that was not present.

An examination of firearm ownership in Australia and trends in Australia homicide and suicide (both by firearm and in total) over the past 90 years does not support a close relationship between firearm availability and rates of violent death. Data from the studies by Killias\textsuperscript{38} and Lester\textsuperscript{39} suggest a correlation between levels of firearm ownership and rates of shooting death, but whether this increases the overall rate of death remains unclear. Debate continues over whether American ‘concealed carry’ legislation (causing increased firearm availability) has increased or decreased rates of violent death.\textsuperscript{41}

American data, although inconclusive, suggest the effect of a stable social framework within a community vastly outweighs any effects of firearm availability in determining overall rates of homicide and suicide. The District of Columbia has high rates of poverty, drug trafficking, gang violence and other markers of social disintegration,\textsuperscript{42} coupled with America’s highest state homicide rate (63.5 per 100 000 per annum\textsuperscript{7}) but strictest firearm laws.\textsuperscript{25,26} Stable rural communities in North Dakota, New Hampshire and Vermont have homicide rates comparable to ours (1.78,2.13 and 2.36 per 100 000 per annum, respectively\textsuperscript{7}), despite allowing citizens to carry concealed handguns with little or no restriction.\textsuperscript{25,26} Swiss and Israeli data reflect the overriding influence of social stability within a community. Both these countries conscript all able-bodied males aged 20-45 years as armed forces reserves and encourage (in Switzerland, require) the storage of military small-arms and ammunition in conscripts’ homes. Both countries are characterized by a stable internal social structure and lower rates of homicide (both firearm and in total) than Australia.\textsuperscript{43}

**Premise 3: Registration**

Firearm registration involves a central register of every firearm and the name and address of the licenced owner and differs from licencing, which only records firearm owners and their addresses. All Australian states and territories operated licencing systems prior to 1996. Germany, Canada, New Zealand, Mexico and Victoria and South Australia as well as some states in America have used (or still use) firearm registration systems. Registration was trailed in NSW between 1920 and 1927 (Gun Licence Act, NSW, 1920).

In a 1987 Report to the Victorian Government, the Victorian Registrar of Firearms recommended abolishing registration, as it was ‘…costly, ineffective, and achieves
little. New Zealand abolishing registration in 1983 after an internal review concluded that maintaining the firearm register was beyond the resources of the New Zealand Police Department. An audit of all entries from 1968 was abandoned in 1973. Of audited entries, 66% were so inaccurate as to make them worthless for police work. With increased resources and improved technology, registration systems could function more efficiently. Regardless of this, no registration system has been shown to reduce firearm misuse or rates of homicide or suicide.

Premise 4: ‘Cooling-off’ periods

Snowdon and Harris studied the suicide rate in South Australia following the introduction of a 28-day cooling-off period for the issue of licences in 1980 and found an associated decline in firearm suicides. Martin and Goldney reviewed the results cautiously, noting similar declines in firearm suicide rates of other states without legislative change. Queensland introduced a new licence cooling-off period in January 1992. Cantor and Slater noted a decline in urban firearm suicides by comparing combined 1990-91 and 1992-93 figures. The suicide rate in Queensland increased in 1994 and 1995 to levels higher than during 1990-1991 (ABS, unpl. Data 1994-1995). Thus, the preliminary findings for 1992-93 must be regarded cautiously until data for subsequent years are analysed and the full study presented.

Cooling-off periods have been postulated to reduce intentional deaths by preventing the impulsive purchase of a firearm for a violent act. Cooling-off periods for all first licence applications may be effective in this, but require further evaluation. In each instance studied, the cooling-off period was introduced with a licence safety test. Improved shooter education may be partially responsible for a decline in fatalities. There are no data to support a cooling-off period for subsequent firearm purchases as an effective means of reducing firearm abuse. Brent et al. suggested cooling-off periods would not prevent adolescent firearm suicides in America because suicide usually occurs months or years after the firearm purchase. The authors went on to conclude that firearms have no place in the homes of psychiatrically troubled adolescents.

Another helpful measure?

Debate in Australia continues over psychiatric patients. Lay observers have suggested that a history of involuntary psychiatric admission should be an exclusion to firearm ownership. Currently, it is difficult to verify licence applicants’ self-reporting of mental disorder, substance abuse, and violent behavior in NSW (the only State in which the validity of self-reporting has been studied). Up to 90% of suicide victims have suffered some form of mental illness (usually depression) and up to 75% of perpetrators of murder-suicides are depressed. All the previously cited studies on suicide demonstrate a strong association between suicide and mental illness. The Australian Medical Association is unlikely to support legislation allowing doctors to report patients unfit to hold a firearm. There is little support in the medical community for tracking psychiatric admissions to prevent the mentally ill obtaining firearms because most psychiatric patients are not violent and most perpetrators of homicide do not have a history of involuntary psychiatric admission.
Conclusions

The Nature of violence and firearm abuse in the Australian context and some existing measures of firearm control need further evaluation. Firearm ownership increases the likelihood that a violent death will occur by gunshot, and firearm availability in the setting of widespread social dysfunction will raise overall rates of violent death. However, there is little evidence that further reducing firearm ownership in Australia will reduce our overall homicide or suicide rates. Firearm control is subject to a law of diminishing returns, and can form only a small part of a successful strategy to minimize violent death in Australia. This strategy will also need to address a variety of issues, including a culture of alcohol and drug abuse, the cultural acceptance of ‘entertainment’ violence and issues of poverty and mental illness. To do this properly, we must resist the temptation to short circuit the need for any other explanation.

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References

The British Experience

Following the murder of several children at Dunblane in 1996 the Blair Government implemented handgun bans and a massive buy back of pistols owned by sporting shooters and collectors. The resultant dramatic increase in crime has amazed criminologists.

Reference:

Concentrating on 1996-2003:

1. Total homicide (murder, manslaughter, infanticide) has risen 69% in the 7 years since the handgun confiscations. E & W homicide rate of 1.9/100,000 is now slightly higher than Australia’s. Note that the final year shows some distortions due to 172 poisonings by Dr. Harold Shipman, registered as homicides in that year. Since 1967, E&W rate has more than doubled, up 164%. Table 1.01
2. Total gun homicide rate is up 70% in 7 years, parallel with the general rate. Table 1.03.
3. For 1996-2003, total firearm offences up 73%, gun homicide up 65%, gun attempted murder up 58% gun robbery up 19%, gun burglary up 65%. Table 2.01.
4. Of total gun crime increase 74%, handgun crime rose 66%. In contrast, shotgun crime fell 39%. Shotguns are the easiest firearm to obtain legally. Table 2.03. Fig. 2.4 also shows breakdown of gun types.
5. For 2002/3, the totally illegal handguns comprised 23% of total gun offences, 49% of gun homicides, 49% of gun attempted murders, 70% of gun robberies and 66% of gun burglaries. Table 2.04.
6. For 1996-2003, total gun crimes causing injury rose 130% and handgun crimes causing injury also rose 130%. Shotgun crime injuries showed only minimal change. Table 2.06.
7. For 1996-2003, total gun robbery up 29%. In 1996, handguns were used in 54% of gun robberies: in 2003, 69%. Table 2.08. NOTE: Shortly after the 1996 Cullen Report, the Home Office confirmed that only 10% of UK murders were committed with guns and that only 10% of the murder guns were held legally. Hence it could logically be expected that a total ban on legal guns could not reduce murder by any more than 1%. The 100s of million pounds in confiscations has done enormous damage by removing funds which could have been used for hospitals, schools or to pursuit and arrest of criminals. The money has been spent on getting the police into the scrap metal recycling business.

The Australian Experience

Recent Australian summary in “Australian Crime. Facts and Figures 2003”

Note also “Crime Facts Info No.66”, 20 Jan 04”. This shows that there was already a steady decline in all types of gun deaths in Australia 1991-2001. i.e. starting well before the 1996 confiscations. www.aic.gov.au/publications/cfi/cfi066.pdf

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