

The University of San Francisco
**USF Scholarship: a digital repository @ Gleeson Library |
Geschke Center**

Nursing and Health Professions Faculty Research
and Publications

School of Nursing and Health Professions

3-2016

Violent Death Rates: The United States Compared to other High-Income OECD Countries, 2010

Erin Grinshteyn

University of San Francisco, egrinshteyn@usfca.edu

David Hemenway

Follow this and additional works at: https://repository.usfca.edu/nursing_fac

 Part of the [Public Health Commons](#)

Recommended Citation

Grinshteyn, Erin and Hemenway, David, "Violent Death Rates: The United States Compared to other High-Income OECD Countries, 2010" (2016). *Nursing and Health Professions Faculty Research and Publications*. 127.

https://repository.usfca.edu/nursing_fac/127

This Article is brought to you for free and open access by the School of Nursing and Health Professions at USF Scholarship: a digital repository @ Gleeson Library | Geschke Center. It has been accepted for inclusion in Nursing and Health Professions Faculty Research and Publications by an authorized administrator of USF Scholarship: a digital repository @ Gleeson Library | Geschke Center. For more information, please contact repository@usfca.edu.

ABSTRACT

Background: Violent death is a serious problem in the US. Previous research showing US rates of violent death compared with other high-income countries used data that are more than a decade old.

Methods: We examined 2010 mortality data obtained from the WHO for populous, high-income countries (n=23). Death rates per 100,000 population were calculated for each country and for the aggregation of all non-US countries overall and by age and sex. Tests of significance were performed using Poisson and negative binomial regressions.

Results: US homicide rates were 7.0 times higher than other high-income countries, driven by a gun homicide rate that was 25.2 times higher. For 15-24 year olds, the gun homicide rate in the US was 49.0 times higher. Firearm-related suicide rates were 8.0 times higher in the US but our overall suicide rates were average. Unintentional firearm deaths were 6.2 times higher in the US. The overall firearm death rate in the US from all causes was 10.0 times higher. Ninety percent of women, 91% of children aged 0-14, 92% of youth aged 15-24, and 82% of all people killed by firearms were from the US.

Conclusion: The US has an enormous firearm problem compared to other high-income countries with much higher rates of homicide and firearm-related suicide. Compared to 2003 estimates, the US firearm death rate remains unchanged while firearm death rates in other countries fell. Thus, the already high relative rates of firearm homicide, firearm suicide and unintentional firearm death in the US compared to the other high-income countries rose between 2003 and 2010.

Violent death is a serious public health problem in the United States. Among 15-24 year olds, homicide is the second leading cause of death and suicide is the third leading cause;

for 25-34 year olds, suicide is the second leading cause and homicide the third leading cause of fatality, following unintentional injuries for both groups.¹

The United States is known to have higher levels of violent death, particularly homicide, compared to other developed nations. While the US does not appear to have higher rates of non-lethal crime, our rates of lethal violence and especially gun violence are much higher than other high-income countries.^{2,3} There are many more guns and less strong gun laws in the US than in other developed nations.³

Almost two decades ago, a report from the Centers for Disease Control and Prevention (CDC) used data from the early 1990s to compare the United States to other high-income countries in terms of violent death (i.e., suicide, homicide, firearm accidents) for children aged 5-14 years.⁴ In a previous article, we updated and expanded that comparison to examine all age groups and both sexes using 2003 data. These 2003 data are now more than a dozen years old. In this paper, we again update the data plus we provide country-level data for each high-income nation and contrast the US levels of lethal violence for whites, who traditionally have lower homicide rates than non-whites in the US, with all citizens (i.e., whites and non-whites) of the other high-income nations.

Methods

Data Source: Mortality data were assembled by the World Health Organization (WHO) from national civil registration systems of each individual country. Underlying cause of death

was classified as “the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury,”⁵ with deaths classified in accordance with the rules of the International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10).

Study Population: We examined data for all populous (i.e., greater than one million inhabitants), high-income countries (as defined by the World Bank) that were members of the Organization for Economic Co-Operation and Development (OECD) in 2010.⁶ Data were limited to 2010, the most recent year that had complete data for the greatest number of countries. Of the 27 high-income OECD countries that provided mortality to the WHO [Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Spain, Sweden, Switzerland, United Kingdom (England and Wales, Northern Ireland, Scotland), and the United States], Iceland and Luxembourg were excluded for having very small populations.

Mortality data were categorized into six mutually exclusive categories using the ICD-10 classification system. Countries were included if they reported their mortality data using detailed three or four character ICD-10 codes. These categories were defined as firearm-related homicide (X93, X94, X95, U01.4), firearm-related suicide (X72, X73, X74), non-firearm-related homicide (X85, X86, X87, X88, X89, X90, X91, X92, X96, X97, X98, X99, Y00, Y01, Y02, Y03, Y04, Y05, Y06, Y07, Y08, Y09, U01.0, U01.2, U01.3, U01.5, U01.6, U01.7, U01.8, U01.9, U02), non-firearm-related suicide (X60, X61, X62, X63, X64, X65, X66, X67,

X68, X69, X70, X71, X75, X76, X77, X79, X80, X81, X82, X83, X84, Y87.0, U03), unintentional firearm death (W32, W33, W34), or firearm death of undetermined cause (Y22, Y23, Y24). Cause of death data included both three and four character ICD-10 codes (e.g. X93 included both X93 and X930-X939) except where the four character code was specified as the being important to the definition (i.e., Y87.0, Y87.1, U01.0-U01.3, U01.5-U01.9). All countries used detailed ICD-10 character codes except Korea, which only provided three character ICD-10 codes. Thus, 133 deaths were excluded using “Y87” as it was not possible to determine if those were Y87.0 (non-firearm-related suicide), Y87.1 (non-firearm-related homicide), or Y87.2-Y87.9, which were neither of these. Greece and Switzerland were excluded for not using either detailed three or four character ICD-10 codes, as their method of reporting could not be aggregated with data from the other 23 countries. Thus, the final list of populous, high-income OECD countries included in this analysis was Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Spain, Sweden, United Kingdom (England and Wales, Northern Ireland, Scotland), and the United States.

Statistical Analysis: Data were stratified by age category (0–4 years, 5–14 years, 15–24 years, 25–34 years, 35–64 years, and 65+ years) and by sex. Death rates per 100,000 population were calculated for the United States, for each individual country, and for the aggregation of all non-US countries, by age and sex categories and overall. Overall numbers include small numbers of deaths attributed to those with an unknown age though an “unknown” column is not presented in the tables due to the numbers being so small. Ratios

were calculated comparing the US with all non-US countries. Tests of significance were performed using Poisson and negative binomial regression techniques to assess the statistical significance of fatalities in the US versus non-US countries. Negative binomial models were used if the dispersion parameter showed that the data were overdispersed whereas Poisson models were used when the data were not overdispersed. All analyses were performed using Excel and Stata version 13.1.⁷

This research project was exempt from Institutional Review Board (IRB) approval and exempt from certification of exemption from IRB review based on determination from the University of Nevada Reno IRB.

Results

United States (Table 1): In 2010, there were over 16,000 homicide deaths in the United States, a rate of 5.3 per 100,000 population. Some two-thirds of these were firearm homicides, a rate of 3.6 per 100,000. Firearm homicides were especially high for the 15-24 age group, a rate of 8.2 per 100,000 and the 25-34 age group at rate of 8.9 per 100,000. The rate of suicide (12.4 per 100,000) was twice as high as the homicide rate, and firearm suicides (6.3 per 100,000) were 75% higher than firearm homicides (3.6 per 100,000). Firearm suicide rates increased with age, however non-firearm and total suicide rates peaked among those aged 35-64 years and fell among those aged 65 years and older. Males had over twice the rate of violent death compared to females and over six times the rate of

death from firearms. There were over 31,000 firearm deaths in 2010, or over 86 firearm-related deaths per day (an average of 74 males and 12 females).

Other High Income Countries (Table 2): In 2010, the rate of homicide deaths in non-US high-income countries was 0.8 per 100,000 population and the firearm homicide rate was 0.1 per 100,000. The 25-34 and 35-64 year olds had slightly higher homicide rates than the 15-24 year olds. The total suicide rate among all age groups was 15.0 per 100,000 while the firearm suicide rate was 0.8 per 100,000. The rates of firearm suicide, non-firearm suicide, and total suicide increased with age. Unintentional and undetermined firearm death rates were extremely low. There were over 6,600 firearm deaths in all 22 high-income countries included in these data in 2010, or about 18 per day (with 93% of the victims being male).

US Comparisons to Other High-Income Countries (Table 3): In 2010, the US homicide rate was 7.0 times higher than the other high-income countries, driven by a gun homicide rate that was 25.2 times higher. For 15-24 year olds, the US gun homicide rate was 49.0 times higher. By comparison, the overall US non-firearm homicide rate was 2.7 times higher than these other high-income countries. Results were statistically significant.

The US firearm suicide rate was 8.0 times higher, however the overall suicide rate in the US was lower, 80% of the rate in other high-income countries. Unintentional firearms deaths were 6.2 times higher in the US.

The overall firearm death rate in the US from all causes was 10.0 times higher. The total population for the United States in 2010 was 309 million people; the combined population for the other high-income countries was 664 million; thus, there were more than twice as many people living in these other high-income countries than were living in the US. Yet, among everyone in these high-income countries, 82% of all firearm deaths occurred in the US, 90% of all women killed by firearms were US women, 91% of all children aged 0-14 killed by firearms were US children, and 92% of youth aged 15-24 killed by firearms were US youth.

US Comparisons with Specific Countries (Table 4): The US firearm homicide rate was seven times higher than that of the second highest country, Canada (3.6 versus 0.50 deaths per 100,000 population). The US firearm homicide rate was 600 times higher than the rate of the lowest country, Korea (3.6 versus 0.006 deaths per 100,000 population). The US total homicide rate (5.3 homicides per 100,000 population) was twice the second highest country, Czech Republic (which had 2.57 homicides per 100,000 population) and 18 times higher than the rate of the lowest country, United Kingdom (0.30 homicides per 100,000 population).

The US firearm suicide rate was almost twice the rate of the second highest country, Finland. However, the total suicide rate in the US was 9th highest among all 23 high-income OECD countries. The highest total suicide rate was found in Korea.

White US Mortality Comparisons with Everyone in Other High-Income Countries. Non-white homicide rates in the US are far higher than white homicide victimization rates. Yet, even US whites have rates of homicide victimization far in excess of all people (including both whites and non-whites) in other high-income countries. For example, our white firearm homicide rate was over 13 times higher than rates for all races in the other countries, and our white overall homicide rate was over 4 times higher (not shown). Overall white firearm death rates (including firearm suicide, firearm homicide and unintentional firearm deaths) in the US were 9.0 times higher than the overall firearm death rates in the other high-income countries. Our Black overall firearm death rate was 16.6 times higher than the overall firearm death rate in these other countries (not shown).

Discussion

The US has an enormous firearm problem compared to other high-income countries. Americans are ten times more likely to die a firearm death compared to residents of these other high-income countries. Our firearm homicide rate is 25 times higher, our firearm suicide rate is 8 times higher, and our unintentional gun death rate is over 6 times higher. Of all firearm deaths in all these countries, more than 80% occur in the US.

The United States has a very serious homicide problem. Our overall homicide rate is seven times higher than these other countries. Males in the US are almost nine times more likely to be a homicide victim than their male counterparts in these other high-income countries and females are four times more likely to be a homicide victim than females in these other countries. Our homicide rate is fueled by our firearm homicide rate. Over two thirds of our

homicides are firearm homicides; by contrast, firearm homicide accounts for less than 20% of homicides in the other high-income countries.

The age groups with the highest rates of firearm homicide in the US (15-24 and 25-34 years) are also the age groups where the relative risk for the US compared to these other high-income countries is also largest. Our 15-24 year olds are 49 times more likely and our 25-34 year olds are 32 times more likely to die from firearm homicide than similarly aged young people in these other high-income countries.

Between 2003-2010 our relative rate of overall homicide has changed little. In 2003, the ratio of US homicide death rates to the rates of the other high-income countries was 6.9;⁸ in 2010 it was 7.0.

Non-whites in the US have far greater rates of homicide victimization than whites, but even our white homicide rate is much greater than the total homicide rate of any of the other countries in our study. The white homicide victimization rate in the US is four times higher than the average rate in the other high-income countries, driven in part by a white firearm homicide victimization rate that is 13 times higher.

These data cannot tell us why the US homicide rate is so exceptional compared to these other high-income countries. Maybe we are a more violent country. We do have the highest incarceration rates in the world and our non-firearm homicide rates are higher than all these other countries with the exception of the Czech Republic. Conversely, our non-lethal

crime rates are similar to these other countries.⁹ We have more firearms and weaker gun laws than these countries and it is our firearm homicide rate that is so much higher than any of these high-income nations. Studies have suggested that our non-gun homicide rate may be high because our gun homicide rate is high.¹⁰ For example, offenders take into account the threat posed by their adversaries. Individuals are more likely to have lethal intent if they anticipate that their adversaries will be armed. Under dangerous circumstances offenders are more likely to kill adversaries to eliminate the risk of retaliation. Research suggests that, during assaults, offenders are more likely to kill adversaries who pose a greater threat.^{11, 12}

Evidence indicates that gun availability increases the incidence of homicide.^{10, 13, 14} International studies of high-income countries typically find that firearm availability is positively correlated with firearm homicide and usually overall homicide.^{15, 16, 17}

The U.S. firearm suicide rate is eight times higher than the average of these other nations. However, our overall suicide rate is slightly below average, with eight countries having higher rates than ours. While 50% of our suicides are firearm suicides, only 5% of suicides in these other nations are firearm suicides.

The fact that our overall rate of suicide is similar to other high-income countries is used as evidence that firearms do not affect suicide rates, only the method.¹⁸ In other words, there is an assumption of close to complete substitution. However, the empirical literature concerning suicide in the US is consistent and strong, showing that substitution is far from

complete. Some two dozen case-control and ecological studies find that in homes and areas with more guns, there are more firearm suicides--and more total suicides.^{19, 13, 14, 20} The effect-size is large; differences in overall suicide rates across cities, states and regions in the US are best explained not by differences in mental health, suicide ideation, or even attempts, but by availability of firearms.²¹

Studies show that many suicides are impulsive and the urge to die fades away.^{22, 23} Firearms are a swift and lethal method of suicide with a very high case-fatality rate.²⁴ There is consensus among international suicide experts that restricting access to lethal means reduces suicide.²⁵ A major objective of the new U.S. National Strategy for Suicide Prevention is to “promote efforts to reduce access to lethal means of suicide among individuals with identified suicide risk.”²⁶

Strengths and Limitations: Strengths include the fact that the WHO data are a complete reporting of all the violent death occurring in these high-income countries in 2010. Data were coded using the same international classification system. In addition, high-income countries have the most accurate data systems. These countries are comparable to each other in terms of economic development, political stability, and democratic institutions. While other cross-national studies have included middle-income or developing countries in comparisons,^{27, 28, 29, 30, 12} it does not seem reasonable to compare the US with Brazil, Mexico, Russia, South Africa, Turkey or Uganda.

One limitation is that two countries were excluded for not using either detailed three or four character ICD-10 codes. Yet, lacking comparable data from relatively small nations should not materially affect results. In addition, our study is cross-sectional in nature, but data from 2003³ allow for an examination of changes across seven years.

Conclusions: Overall, our results show that the United States, which has the most firearms per capita in the world³¹ suffers disproportionately from firearms compared to these other high-income countries. These results are consistent with the hypothesis that our firearms are killing us rather than protecting us.

References

1. WISQARS. Weapon-related Injury Surveillance Centers for Disease Control and Prevention. August 2015. Available at: <http://www.cdc.gov/injury/wisqars>. Accessed August 1, 2015.
2. Zimring FE, Hawkins G. *Crime is Not the Problem: Lethal Violence in America*. New York: Oxford University Press; 1997.
3. Hemenway D. *Private Guns Public Health*. Ann Arbor, MI: University of Michigan Press; 2006.
4. Centers for Disease Control and Prevention (CDC). Rates of homicide, suicide and firearm-related death among children: twenty-six industrialized countries. *MMWR Morbidity and Mortality Weekly Report*. 1997;46:101-105.
5. World Health Organization Department of Health Statistics and Information Systems. WHO Mortality Data Base Documentation
6. The Organisation for Economic Co-operation and Development (OECD). OECD Country Classifications 2010. 2010. Available at: <http://www.oecd.org/tad/xcred/43407491.pdf>. Accessed May 28, 2015.
7. StataCorp. Stata Statistical Software: Release 13
8. Richardson EG, Hemenway D. Homicide, suicide and unintentional firearm fatality: comparing the United States with other high-income countries. *Journal of Trauma*. 2011;70(1):238-243.
9. ICVS International Working Group. ICPSR ICVS Series. *International Crime Victimization Surveys Series*. Available at: <http://www.icpsr.umich.edu/icpsrweb/ICPSR/series/175>. Accessed August 2015.
10. Hepburn LM, Hemenway D. Firearm availability and homicide: a review of the literature. *Aggression and Violent Behavior*. 2004;9:417-440.
11. Felson RB, Messner SF. To kill or not to kill? Lethal outcomes in injurious attacks. *Criminology*. 1996;34:201-227.
12. Felson RB, Berg MT, Rogers ML. Bring a gun to a gun fight: armed adversaries and violence across nations. *Social Science Research*. 2014;47:79-90.
13. Stroebe W. Firearm possession and violent death. *Aggression and Violent Behavior*. 2013;18:709-21.
14. Anglemeyer A, Horvath T, Rutherford G. The accessibility of firearms and risk of suicide and homicide victimization among household members. *Annals of Internal Medicine*. 2014;160:101-110.
15. Killias M. Gun ownership, suicide, and homicide: an international perspective. *Understanding Crime: Experiences of Crime and Crime Control*. Rome: UNICRI; 1993.
16. Hemenway D, Miller M. Firearm availability and homicide rates across 26 high income countries. *Journal of Trauma*. 2000;49:985-988.

17. Hemenway D, Shinoda-Tagawa T, Miller M. Firearm availability and female homicide victimization rates across 25 populaous high income countries. *Journal of the American Medical Women's Association*. 2002;57:100-104.
18. National Research Council. *Firearms and Violence: A Critical Review*. Washington, DC 2004.
19. Miller M, Hemenway D. The relationship between firearms and suicide: A review of the literature. *Aggression and Violent Behavior*. 1999;4(1):59-75.
20. Millier M, Barber C, White RA, Azrael D. Firearms and suicide in the United States: Is risk independent of underlying suicidal behavior?. *American Journal of Epidemiology*. 2013;178:940-955.
21. Miller M, Azrael D, Barber C. Suicide mortality in the United States: The importance of attending to method in understanding population-level disparities in the burden of suicide. *Annual Review of Public Health*. 2012;33:393-408.
22. Seiden R. Suicide Prevention: A Public Health/Public Policy Approach. *Omega Journal of Death and Dying*. 1977;8(3):267-276.
23. Simon OR, Swann AC, Powell KE, Potter LB, Kresnow MJ, O'Carroll PW. Characteristics of impulsive suicide attempts and attempters. *Suicide Life Threat Behav*. 2001;32(1(Suppl)):49-59.
24. Miller M, Azrael D, Hemenway D. The epidemiology of case fatality rates for suicide in the northeast. *Annals of Emergency Medicine*. 2004;43:723-730.
25. Mann JJ, Alper A, Berolote J, et al. Suicide Prevention Strategies: A Systematic Review. *Journal of the American Medical Associations*. 2005;294:2064-2074.
26. U.S. Department of Health and Human Services. *National Strategy for Suicide Prevention: Goals and Objectives for Action*: Office of the Surgeon General ; 2012.
27. Krug EG, Powell KE, Dahlberg LL. Firearm-related deaths in the United States and thirty-five other high- and upper-middle-income countries. *International Journal of Epidemiology*. 1998;27:214-221.
28. Polsby DD, Kates Jr DB. Causes and correlations of lethal violence in America: American homicide exceptionalism. *University of Colorado Law Review*. 1998;69:969-1008.
29. Killias M, Van Kesteren J, Rindlisbacher M. Guns, violent crime and suicide in twenty-one countries. *Canadian Journal of Criminology*. 2001;156:429-448.
30. Altheimer I, Boswell M. Reassessing the association between gun availability and homicide at the cross-national level. *American Journal of Criminal Justice*. 2012;37:682-704.
31. Graduate Institute of International and Development Studies. Small Arms Survey, 2007. [Dataset]. 2007. Available at: http://www.smallarmssurvey.org/fileadmin/docs/H-Research_Notes/SAS-Research-Note-9.pdf. Accessed October 1, 2015.

Table 1. Death rates in the United States per 100,000 population, 2010.

	0-4 y	5-14 y	15-24 y	25-34 y	35-64 y	65+ y	Totals
OVERALL							
Firearm Homicide Rate	0.3	0.4	8.9	8.2	2.7	0.8	3.6
Non-Firearm Homicide	3.2	0.2	1.8	2.3	1.8	1.2	1.7
Total Homicide Rate	3.4	0.6	10.8	10.4	4.6	2.0	5.3
Firearm Suicide Rate	0.0	0.2	4.7	6.3	8.5	10.6	6.3
Non-Firearm Suicide Rate	0.0	0.5	5.9	7.6	9.3	4.2	6.1
Total Suicide Rate	0.0	0.7	10.5	13.9	17.7	14.8	12.4
Unintentional Firearm Death Rate	0.1	0.1	0.3	0.3	0.2	0.2	0.2
Undetermined Firearm Death Rate	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Firearm Death Rates	0.4	0.7	14.1	14.9	11.5	11.6	10.2
Firearm Deaths	82	300	6,152	6,120	14,071	4,695	31,428
MALES							
Firearm Homicide Rate	0.3	0.6	15.7	14.3	4.3	1.0	6.2
Non-Firearm Homicide	3.6	0.2	2.5	3.1	2.6	1.6	2.3
Total Homicide Rate	4.0	0.8	18.3	17.4	6.9	2.6	8.5
Firearm Suicide Rate	0.0	0.3	8.3	11.0	14.6	22.5	11.2
Non-Firearm Suicide Rate	0.0	0.6	8.6	11.4	13.0	6.3	8.8
Total Suicide Rate	0.0	0.9	16.9	22.4	27.6	28.8	19.9

Unintentional Firearm Death Rate	0.2	0.1	0.6	0.5	0.3	0.3	0.3
Undetermined Firearm Death Rate	0.0	0.1	0.2	0.2	0.1	0.1	0.1
Firearm Death Rates	0.5	1.1	24.8	26.0	19.4	23.9	17.8
Firearm Deaths	56	232	5,537	5,392	11,700	4,181	27,106
FEMALES							
Firearm Homicide Rate	0.2	0.2	1.8	1.9	1.2	0.7	1.1
Non-Firearm Homicide	2.7	0.3	1.1	1.4	1.1	0.9	1.1
Total Homicide Rate	2.9	0.5	2.9	3.4	2.3	1.6	2.2
Firearm Suicide Rate	0.0	0.1	0.9	1.5	2.5	1.5	1.5
Non-Firearm Suicide Rate	0.0	0.4	2.9	3.8	5.7	2.7	3.6
Total Suicide Rate	0.0	0.4	3.9	5.3	8.2	4.2	5.1
Unintentional Firearm Death Rate	0.0	0.0	0.1	0.1	0.1	0.0	0.1
Undetermined Firearm Death Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Firearm Death Rates	0.3	0.3	2.9	3.6	3.8	2.2	2.7
Firearm Deaths	26	68	615	728	2,371	514	4,322

Table 2. Death rates in the non-US high-income countries per 100,000 population, 2010.

	0-4 y	5-14 y	15-24 y	25-34 y	35-64 y	65+ y	Totals
OVERALL							
Firearm Homicide Rate	0.0	0.0	0.2	0.3	0.2	0.1	0.1
Non-Firearm Homicide	0.6	0.2	0.6	0.7	0.7	0.6	0.6
Total Homicide Rate	0.6	0.2	0.8	0.9	0.9	0.7	0.8
Firearm Suicide Rate	0.0	0.0	0.4	0.4	0.9	1.6	0.8
Non-Firearm Suicide Rate	0.0	0.4	8.2	13.2	18.5	20.7	14.2
Total Suicide Rate	0.0	0.4	8.5	13.6	19.5	22.3	15.0
Unintentional Firearm Death Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Undetermined Firearm Death Rate	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Firearm Death Rates	0.0	0.1	0.6	0.7	1.2	1.9	1.0
Firearm Deaths	4	35	476	623	3,321	2,181	6,640
MALES							
Firearm Homicide Rate	0.0	0.0	0.3	0.4	0.3	0.1	0.2
Non-Firearm Homicide	0.7	0.2	0.7	0.8	0.9	0.6	0.8
Total Homicide Rate	0.7	0.2	1.1	1.2	1.2	0.7	1.0
Firearm Suicide Rate	0.0	0.0	0.7	0.7	1.8	3.8	1.5
Non-Firearm Suicide Rate	0.0	0.5	11.5	18.9	27.6	31.9	20.7
Total Suicide Rate	0.0	0.5	12.2	19.6	29.4	35.6	22.3
Unintentional Firearm Death Rate	0.0	0.0	0.1	0.1	0.1	0.1	0.1

Undetermined Firearm Death Rate	0.0	0.0	0.1	0.1	0.1	0.2	0.1
Firearm Death Rates	0.0	0.1	1.1	1.3	2.2	4.2	1.9
Firearm Deaths	2	30	438	551	3,042	2,087	6,150
FEMALES							
Firearm Homicide Rate	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Non-Firearm Homicide	0.6	0.1	0.4	0.5	0.5	0.5	0.5
Total Homicide Rate	0.6	0.2	0.5	0.6	0.6	0.6	0.6
Firearm Suicide Rate	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Non-Firearm Suicide Rate	0.0	0.3	4.6	7.5	9.5	12.4	7.9
Total Suicide Rate	0.0	0.3	4.7	7.6	9.6	12.5	8.0
Unintentional Firearm Death Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Undetermined Firearm Death Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Firearm Death Rates	0.0	0.0	0.1	0.2	0.2	0.1	0.1
Firearm Deaths	2	5	38	72	279	94	490

Table 3. Ratio of US death rates to death rates in other high-income countries, 2010.

	0-4 y	5-14 y	15-24 y	25-34 y	35-64 y	65+ y	Totals
OVERALL							
Firearm Homicide Rate	22.3	18.5	49.0	32.0	16.0	9.9	25.2
Non-Firearm Homicide	5.2	1.4	3.1	3.4	2.5	2.1	2.7
Total Homicide Rate	5.6	3.4	14.0	11.4	5.0	3.1	7.0
Firearm Suicide Rate	--	11.2	12.5	15.6	9.1	6.5	8.0
Non-Firearm Suicide Rate	--	1.1	0.7	0.6	0.5	0.2	0.4
Total Suicide Rate	--	1.5	1.2	1.0	0.9	0.7	0.8
Unintentional Firearm Death Rate	--	12.2	12.6	9.3	4.8	3.5	6.2
Undetermined Firearm Death Rate	--	7.7	3.0	3.9	1.1	0.6*	1.4
Firearm Death Rates	33.8	14.2	22.5	20.6	9.4	6.2	10.0
Firearm Deaths	86	335	6,628	6,743	17,392	6,876	38,068
MALES							
Firearm Homicide Rate	27.3	20.3	50.7	34.5	17.2	10.6	28.3
Non-Firearm Homicide	5.6	1.2	3.4	3.8	2.7	2.6	3.0
Total Homicide Rate	6.0	3.7	17.3	14.2	5.8	3.6	8.7
Firearm Suicide Rate	--	9.6	11.8	15.1	8.2	6.0	7.3
Non-Firearm Suicide Rate	--	1.1	0.7	0.6	0.5	0.2	0.4
Total Suicide Rate	--	1.7	1.4	1.1	0.9	0.8	0.9
Unintentional Firearm Death Rate	--	10.0	11.1	9.0	4.2	3.3	5.5
Undetermined Firearm Death Rate	--	6.1	3.3	3.6	0.9	0.5*	1.2

Firearm Death Rates	46.4	12.8	22.1	20.6	8.6	5.7	9.3
Firearm Deaths	58	262	5,975	5,943	14,742	6,268	33,256
FEMALES							
Firearm Homicide Rate	17.3	15.1	37.6	21.3	13.3	9.2	15.7
Non-Firearm Homicide	4.8	1.7	2.5	2.8	2.1	1.7	2.3
Total Homicide Rate	5.1	3.0	6.2	5.6	3.7	2.6	4.0
Firearm Suicide Rate	--	--	25.1	21.4	26.9	28.0	24.8
Non-Firearm Suicide Rate	--	1.1	0.6	0.5	0.6	0.2	0.5
Total Suicide Rate	--	1.3	0.8	0.7	0.9	0.3	0.6
Unintentional Firearm Death Rate	--	--	--	13.5	18.3	5.1	17.5
Undetermined Firearm Death Rate	--	--	2.0	14.6*	2.4*	4.4*	3.0
Firearm Death Rates	21.4	22.3	28.2	21.0	18.6	16.0	18.7
Firearm Deaths	28	73	653	800	2,650	608	4,812

* All associations testing significant differences between US and non-US countries are significant at the $p < 0.05$ level except for those denoted by asterisk.

Table 4. Total death rates per 100,000 population by non-US high-income countries, 2010.

Country	Firearm Homicide Rate	Non-Firearm Homicide Rate	Total Homicide Rate	Firearm Suicide Rate	Non-Firearm Suicide Rate	Total Suicide Rate	Unintentional Firearm Death Rate	Undetermined Firearm Death Rate	Total Firearm Death Rate
Australia	0.2	0.9	1.1	0.8	10.2	11.0	0.0	0.1	1.0
Austria	0.2	0.4	0.5	2.7	12.4	15.1	0.0	0.1	3.0
Belgium	0.3	0.7	1.1	1.3	17.1	18.4	0.0	0.1	1.8
Canada	0.5	1.0	1.5	1.7	9.9	11.6	0.0	0.0	2.3
Czech Republic	0.1	2.4	2.6	1.4	11.2	12.5	0.1	0.2	1.8
Denmark	0.2	0.6	0.8	1.3	8.8	10.1	0.0	0.0	1.6
Finland	0.3	1.6	1.9	3.3	14.5	17.8	0.0	0.0	3.6
France	0.2	0.4	0.6	2.2	14.3	16.5	0.1	0.3	2.8
Germany	0.1	0.5	0.6	0.9	11.3	12.3	0.0	0.1	1.1
Hungary	0.1	1.4	1.5	0.8	24.1	24.9	0.0	0.0	0.9
Ireland	0.4	0.5	0.8	0.5	10.1	10.7	0.0	0.1	1.0
Italy	0.3	0.4	0.8	0.9	5.7	6.6	0.1	0.0	1.3
Japan	0.0	0.3	0.3	0.0	23.1	23.1	0.0	0.0	0.0
Netherlands	0.2	0.7	0.9	0.2	9.4	9.7	0.0	0.0	0.5
New Zealand	0.2	1.1	1.2	1.0	11.3	12.3	0.0	0.0	1.2
Norway	0.0	0.6	0.7	1.7	9.5	11.2	0.0	0.0	1.8
Portugal	0.5	0.5	1.0	1.1	9.3	10.4	0.0	0.2	1.8
Republic of Korea	0.0	1.3	1.3	0.0	31.5	31.5	0.0	0.0	0.0
Slovakia	0.2	1.0	1.2	0.9	10.8	11.7	0.4	0.2	1.8
Spain	0.1	0.6	0.7	0.4	6.4	6.9	0.1	0.0	0.6
Sweden	0.2	0.7	0.9	1.2	11.0	12.2	0.1	0.0	1.5
United Kingdom	0.0	0.3	0.3	0.2	6.6	6.8	0.0	0.0	0.2
United States	3.6	1.7	5.3	6.3	6.1	12.4	0.2	0.1	10.2