



Violence Policy Center

American Roulette

MURDER-SUICIDE IN THE UNITED STATES

Fourth Edition

Road Trip Takes Tragic Turn

**Murder/suicide leaves
city stunned on Sunday**

**Believe officer killed girlfriend,
then turned gun on himself**

Man kills wife, self at tag agency

**COP IN
MURDER
SUICIDE**

Trip Takes Detour Into Murder And Suicide

Father kills son, self

Maumelle mom killed child, then herself, police say

**HORROR AT
THE RANGH**

**Mother of three kills
two children, herself**

The Violence Policy Center (VPC) is a national non-profit educational organization that conducts research and public education on violence in America and provides information and analysis to policymakers, journalists, advocates, and the general public. This study was authored by VPC Policy Analyst Marty Langley and was funded with the support of the David Bohnett Foundation and The Joyce Foundation. A list highlighting select past VPC studies is listed below. For a complete list of VPC publications with document links, please visit <http://www.vpc.org/studyndx.htm>.

- *Black Homicide Victimization in the United States: An Analysis of 2009 Homicide Data* (January 2012, annual study)
- *Lost Youth: A County-by-County Analysis of 2010 California Homicide Victims Ages 10 to 24* (January 2012, annual study)
- *More Guns, More Shootings* (January 2012)
- *States With Higher Gun Ownership and Weak Gun Laws Lead Nation in Gun Death* (October 2011, annual study)
- *When Men Murder Women: An Analysis of 2009 Homicide Data* (September 2011, annual study)
- *The Militarization of the U.S. Civilian Firearms Market* (June 2011)
- *A Shrinking Minority: The Continuing Decline of Gun Ownership in America* (April 2011)
- *Blood Money: How the Gun Industry Bankrolls the NRA* (April 2011)
- *Drive-by America: Second Edition* (July 2010)
- *Lessons Unlearned—The Gun Lobby and the Siren Song of Anti-Government Rhetoric* (April 2010)
- *Target: Law Enforcement—Assault Weapons in the News* (February 2010)
- *Indicted: Types of Firearms and Methods of Gun Trafficking from the United States to Mexico as Revealed in U.S. Court Documents* (April 2009)
- *Iron River: Gun Violence and Illegal Firearms Trafficking on the U.S.-Mexico Border* (March 2009)
- *Youth Gang Violence and Guns: Data Collection in California* (February 2009)
- *“Big Boomers”—Rifle Power Designed Into Handguns* (December 2008)
- *An Analysis of the Decline in Gun Dealers: 1994 to 2007* (August 2007)
- *Clear and Present Danger: National Security Experts Warn About the Danger of Unrestricted Sales of 50 Caliber Anti-Armor Sniper Rifles to Civilians* (July 2005)
- *The Threat Posed to Helicopters by 50 Caliber Anti-Armor Sniper Rifles* (August 2004)
- *United States of Assault Weapons: Gunmakers Evading the Federal Assault Weapons Ban* (July 2004)
- *Vest Buster: The .500 Smith & Wesson Magnum—The Gun Industry’s Latest Challenge to Law Enforcement Body Armor* (June 2004)
- *Bullet Hoses—Semiautomatic Assault Weapons: What Are They? What’s So Bad About Them?* (May 2003)
- *“Officer Down”—Assault Weapons and the War on Law Enforcement* (May 2003)
- *“Just Like Bird Hunting”—The Threat to Civil Aviation from 50 Caliber Sniper Rifles* (January 2003)
- *Sitting Ducks—The Threat to the Chemical and Refinery Industry from 50 Caliber Sniper Rifles* (August 2002)
- *License to Kill IV: More Guns, More Crime* (June 2002)
- *“A .22 for Christmas”—How the Gun Industry Designs and Markets Firearms for Children and Youth* (December 2001)
- *Unintended Consequences: Pro-Handgun Experts Prove That Handguns Are a Dangerous Choice For Self-Defense* (November 2001)
- *Voting from the Rooftops: How the Gun Industry Armed Osama bin Laden, Other Foreign and Domestic Terrorists, and Common Criminals with 50 Caliber Sniper Rifles* (October 2001)
- *Hispanics and Firearms Violence* (May 2001)
- *Where’d They Get Their Guns?—An Analysis of the Firearms Used in High-Profile Shootings, 1963 to 2001* (April 2001)
- *A Deadly Myth: Women, Handguns, and Self-Defense* (January 2001)
- *Handgun Licensing and Registration: What it Can and Cannot Do* (September 2000)
- *Pocket Rockets: The Gun Industry’s Sale of Increased Killing Power* (July 2000)
- *Guns For Felons: How the NRA Works to Rearm Criminals* (March 2000)
- *Cease Fire: A Comprehensive Strategy to Reduce Firearms Violence* (Revised, October 1997)

Introduction

Murder-suicide is “a dramatic, violent event” in which a person, almost always a man, commits one murder or multiple murders, and then shortly after commits suicide.¹ What makes these acts particularly disturbing is that they involve more than one person and often involve a family. They almost always are committed with a firearm. Yet the phenomenon of murder-suicide garners little public attention as a significant contributor to gun-related death and injury. This is despite the fact that, as one medical professional has observed, “because many murder-suicides result in the death or injury of family members and sometimes mass murder, they cause countless additional morbidity, family trauma, and disruption of communities.”²

Currently, no comprehensive national database or tracking system exists to systematically document the toll in death and injury of murder-suicide in the United States.^a In order to more fully understand the human costs of murder-suicide, starting in 2002 the Violence Policy Center (VPC) began collecting and analyzing news reports of murder-suicides, resulting in a series of studies titled *American Roulette: Murder-Suicide in the United States*. This is the fourth edition of the study.^b For each analysis, the VPC tracked murder-suicide incidents over a six-month period using Internet news reports. For this most recent edition of the report, news reports of murder-suicides were collected for the period January 1, 2011, through June 30, 2011. To be included in the study, both the murder and subsequent suicide had to occur within 72 hours of each other and within this six-month time period. While there is no official data to ensure all incidents that actually occurred were included, this study provides the most accurate portrait possible of murder-suicide in America and is most likely the largest and most comprehensive analysis currently available.

^a The Centers for Disease Control and Prevention’s (CDC) National Violent Death Reporting System (NVDRS) compiles and combines data from medical examiners, coroners, police, crime labs, and death certificate registrars and includes such information. Originally started as a pilot project by the Harvard University School of Public Health with the support of six foundations, the National Violent Death Reporting System is now overseen by the CDC and operates in 18 states. For more information, see <http://www.cdc.gov/ViolencePrevention/NVDRS/>.

^b Prior editions of the VPC study *American Roulette* were issued in April 2002 (<http://www.vpc.org/studies/amerintr.htm>), May 2006 (<http://www.vpc.org/studies/amroul2006.pdf>), and April 2008 (<http://www.vpc.org/studies/amroul2008.pdf>) For a chart comparing the key findings of each of these three editions as well as this most recent edition, please see page eight.

Medical studies estimate that between 1,000 and 1,500 deaths per year in the United States are the result of murder-suicide.³ This VPC analysis reveals that in the first half of 2011 —

- There were 313 murder-suicide events resulting in 691 murder-suicide deaths, of which 313 were suicides and 378 were homicides.
- Using these figures, 12 murder-suicide events occurred in the United States each week during the study period.
- Of the 313 murder-suicide events, 280 were known to involve a firearm (89.5 percent).
- Of the 313 suicides, 283 were male, and 30 were female.
- Of the 378 homicides, 288 victims were female, 89 victims were male, and the gender of one victim was not identified.
- Fifty-five of the homicide victims were children and teens less than 18 years of age.
- Sixty-six children and teens less than 18 years of age were survivors who witnessed some aspect of the murder-suicide.
- Sixty-nine percent of murder-suicides involving a male murderer and three or more victims were perpetrated by family annihilators.

By doubling the total number of fatalities during the six-month period for a yearly estimate, there were an estimated 1,382 murder-suicide deaths in 2011. This is within the standard range of estimates for murder-suicides. Due to the necessary limitations of our incident-collection method, this is most likely an underestimate. Anecdotal evidence suggests that our study may have missed a small percentage of murder-suicides. Whether this would be the result of an incident not being reported, not being reported as a murder-suicide, not falling within our self-imposed time frame, or not being published in an online format is not known. In the absence of a comprehensive national surveillance system, there is no means available for a complete and accurate count. However, once again, the VPC study is most likely the most recent, complete, accurate, and detailed accounting available.

Trends Identified from the Study

Listed below are murder-suicide trends and characteristics as identified from the VPC analysis. Following each subsection is an incident taken from the news reports collected for the study illustrating the subsection's findings. At the end of this section, on page eight, is a chart comparing key findings of this study with those from the prior three editions.

Following this section is an appendix that lists the number of murder-suicides by state. Separately, documents containing the news reports collected for the study, arranged alphabetically by state and then chronologically by month and day within that state, are available from the VPC. States with no reported murder-suicides during the six-month period are also listed in the appendix.

Eleven states had 10 or more murder-suicides in the six-month period of the study. In order, these states were: California (34); Florida (27); Texas (20); Louisiana (14); Pennsylvania (14); Illinois (12); Alabama (11); New York (11); Tennessee (11); Virginia (11); and, Arizona (10).

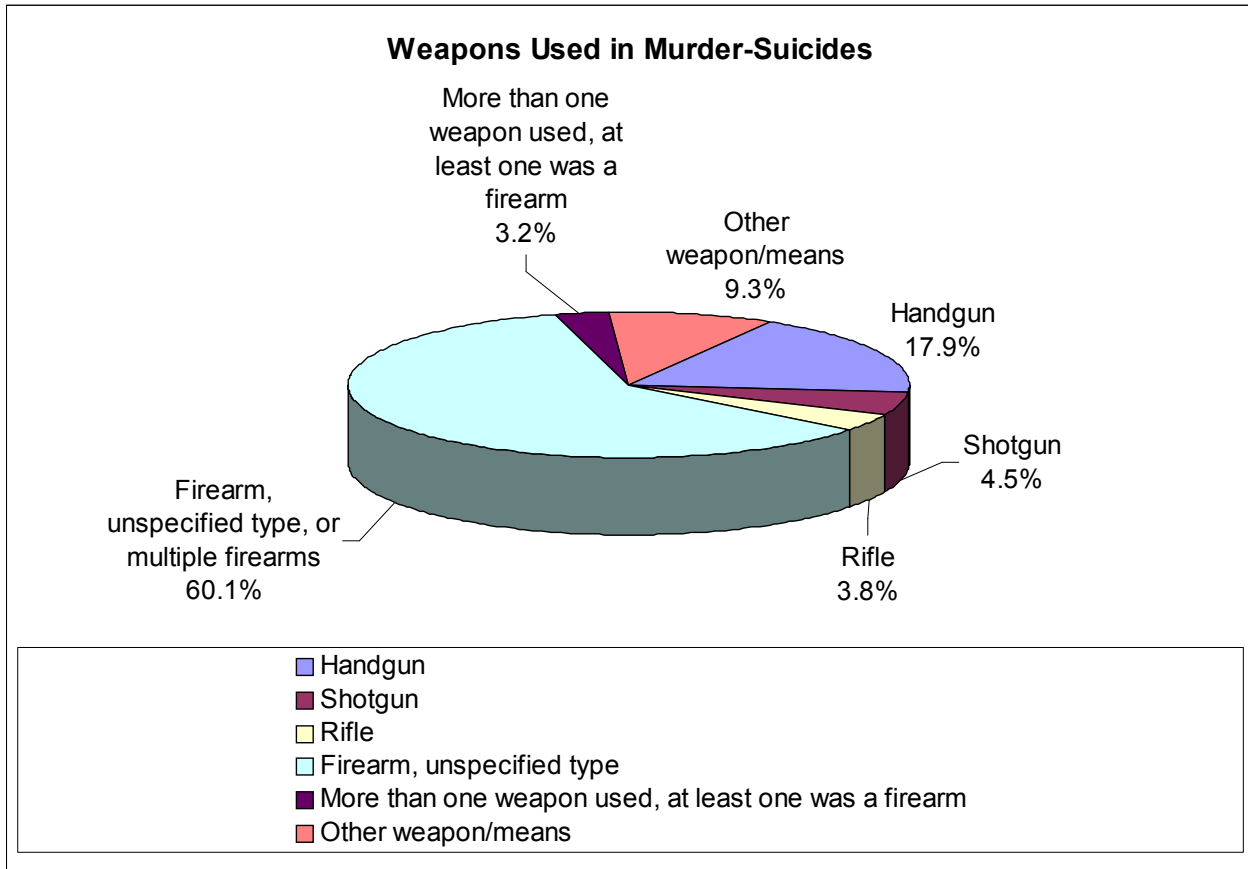
Most murder-suicides involve a firearm

In the analysis, 89.5 percent (280 of 313) of murder-suicide incidents were known to involve a firearm. For *all* murder-suicides:

- 17.9 percent involved solely a handgun;
- 3.8 percent involved solely a rifle;
- 4.5 percent involved solely a shotgun;
- 60.1 percent involved a firearm which was not identified more specifically than "a gun" or multiple firearm types;
- 3.2 percent involved more than one weapon, but one of the weapons was a firearm; and,
- 9.3 percent involved other weapons/means.^c

^c The 9.3 percent involving other weapons/means consisted of 29 incidents in which the weapon(s)/means could be identified. For these 29 incidents, the weapons/means used were: knife or other cutting instrument (11); blunt force trauma (6); hanging (6); drowning (3); suffocation (3); asphyxiation (2); carbon monoxide poisoning (2); drugs (2); fire (2); poison (2); baseball bat (1); bodily

The chart below, "Weapons Used in Murder-Suicides," illustrates the weapons used from the VPC analysis of incidents in which the weapon(s) could be identified, including a distribution of firearm murder-suicides in regard to firearm type.



All major murder-suicide studies in the United States completed since 1950 have shown that firearms are by far the most common method of committing homicide, with the offender choosing the firearm for suicide as well.⁴ Estimates range from firearms being used in 80 percent to 94 percent of cases, but many other weapons, including aircraft, have been used.

force (1); drove car into river (1); ingest drain cleaner (1); ingest paint thinner (1); hit by train (1); jump off bridge (1); jump off overpass (1); jump off roof (1); power saw (1); and, strangulation (1). The total number of murder weapons/means exceeds the number of incidents because multiple weapons/means were used in 17 cases. The means were not identified in four incidents.

Most murderers in murder-suicides are male

In this study, 90 percent of the offenders were male. Other studies analyzing murder-suicide have found that most perpetrators of murder-suicide are male—more than 90 percent in recent studies of the United States.⁵ Another study which only looked at murder-suicides *involving couples* noted that more than 90 percent were perpetrated by men.⁶ This is consistent with homicides in general, in which 89 percent of homicides are committed by male offenders. However, most homicides involve male victims killed by male offenders (65 percent), whereas a male victim being specifically targeted by a male offender in a murder-suicide is relatively rare.⁷

LOUISIANA: In May, Curry Lewis, 39, shot and killed his ex-girlfriend, Santana Marshall, 25, before killing himself. Lewis arrived at Marshall's home as she pulled into her driveway at around 9:30 pm. Lewis ordered her out of her vehicle at gunpoint and shot her in the head and chest, before fleeing in his victim's vehicle. He then contacted a family member and admitted to killing Marshall and said he was going to kill himself. Deputies located the vehicle a short time later and found Lewis inside with what appeared to be a self-inflicted gunshot wound under his chin and as many as three shots to the body. He was pronounced dead at the scene.

Most murder-suicides involve an intimate partner

The most prevalent type of murder-suicide was between two intimate partners,^d with the man killing his wife or girlfriend. Such events are commonly the result of a breakdown in the relationship.⁸ The average age difference between the offender and primary victim was 3.3 years. Overall, the age difference ranged from none to 48 years. (Other studies on fatal violence for spouses have found that there is a greater risk of homicide victimization as the age difference between the husband and wife increases.⁹) In this study, 72 percent of all murder-suicides involved an intimate partner. Of these, 94 percent were females killed by their intimate partners.^e

^d For the purposes of this study, an intimate partner or intimate acquaintance is defined as a spouse, common-law spouse, ex-spouse, girlfriend/boyfriend, or ex-girlfriend/boyfriend.

^e In comparison, in 2009—the most recent data available—for all homicides (where the relationship could be determined) 17 percent of homicide victims were killed by an intimate partner. Of these, 77 percent were females killed by their intimate partners. Data from the 2009 FBI Supplementary Homicide Report, analysis by the Violence Policy Center.

SOUTH CAROLINA: In March, 45-year-old Jeffrey Goldsmith shot and killed his girlfriend of seven years, Linda Dixon, 53, before taking his own life. When Dixon did not report to work her co-workers alerted authorities who went to their home to investigate. Looking through a window, officers could see two people lying on a couch who appeared lifeless. Deputies entered the residence and found the couple dead, with gunshot wounds to the head. Goldsmith was still holding the weapon in his hand.

Most murder-suicides with three or more victims involve a male “family annihilator”—a subcategory of intimate partner murder-suicide

Most multiple-victim murder-suicides involving a male murderer and a large number (three or more) of victims are perpetrated by family annihilators. In this report, 69 percent (nine of 13) of murder-suicides involving a male murderer and three or more victims were perpetrated by family annihilators. Family annihilators are murderers who kill their intimate partners and children, as well as other family members, before killing themselves. In many cases, a family annihilator is suffering from depression and has financial or other problems and feels the family is better off dying with him than remaining alive to deal with the problems at hand.¹⁰

OHIO: In April, Alan Atwater, 31, shot and killed his wife Dawn Atwater, 30, their daughter Ashley, four, and their sons Isaac, two, and Brady, one. Just after midnight, Alan Atwater called 911 and stated, “There has been a terrible accident at my house, my wife and three children are dead.” When asked what happened, he replied, “Gunshot wound,” and added, “I’m getting ready to kill myself right now.” The dispatcher asked if Alan Atwater had killed them, and he replied, “Yes.” A SWAT team was sent to the house and upon entering found five people dead upstairs, all of whom appeared to have died from gunshot wounds. Alan Atwater was employed in the maintenance department at the Davis Besse Nuclear Power Station, and according to the Sheriffs Department, had no criminal record apart from traffic violations, none of which were drug- or alcohol-related.

Most murder-suicides occur in the home

In this study, 80 percent of murder-suicides occurred in the home. For intimate partners, however, 84 percent of incidents occurred in the home. Though not specified in most studies, available data confirm that the home of the offender and/or victim is the most likely place for murder-suicide. Studies show that within the home, more murder-suicides are committed in the bedroom than any other room.¹¹

KENTUCKY: In January, the bodies of Paul Barbee, 42, and his wife Maryanne, 39, were found in their home. Both died of gunshot wounds. According to the deputy coroner, it appeared that Paul Barbee shot his wife and then killed himself. The couple left behind four children, including a 19-year-old daughter who will have to raise two of her younger siblings.

Children are often victims of, and witnesses to, murder-suicide

Fifty-five of the homicide victims were children and teens less than 18 years of age. Sixty-six children and teens less than 18 years of age were survivors who witnessed some aspect of the murder-suicide.¹²

CALIFORNIA: In May, Salvador Acevedo, 45, was driving with his girlfriend, Iris Oseguera, 33, their five-year-old twins, and three other children. Acevedo and Oseguera began to fight, and Acevedo produced a handgun and shot and killed Oseguera and the twins. He then drove the three other children to a relative's home. After he drove away, the three children told an adult about the shooting and the police were notified. Sheriff's deputies located the vehicle and found Acevedo, who appeared to have suffered a self-inflicted gunshot wound. He and Oseguera were pronounced dead at the scene. The twins were taken to a local hospital, where they died.

Unique factors may drive murder-suicide among the elderly

In this study, 25 percent of murder-suicides involved a murderer 55 years of age or older. This is relatively consistent with the fact that 24 percent of the U.S. population is aged 55 years or older.¹³ Older people rarely commit homicide. If most murder-suicides involve family turmoil, a smaller, discrete category involves older people where the declining health of either the victim, the offender, or both is an issue. In 2009, only 6.5 percent of known homicide offenders were 55 years of age or older.¹⁴ Suicide, however, is disproportionately represented in this age group, with 31.6 percent of suicide victims being 55 years of age or older.¹⁵

ARKANSAS: In January, Richard E. Guthrie, 90, fatally shot his wife Elizabeth, also 90, before killing himself. Guthrie reportedly contacted his grandson before the shooting and warned him that he was going to shoot himself and Mrs. Guthrie. The grandson called the police, who investigated and found the bodies. According to reports, Mr. Guthrie had been diagnosed with terminal cancer, and his wife suffered from Alzheimer's disease.

<i>American Roulette: Select Comparisons for 2002, 2006, 2008, and 2011 Editions of Study^f</i>				
Category	2002 Findings	2006 Findings	2008 Findings	2011 Findings
<i>Murder-suicide incidents involving a firearm</i>	94.5%	92.0%	88.5%	89.5%
<i>Murder-suicide incidents in which the killers were male</i>	90%	94%	95%	90%
<i>Murder-suicide incidents that involved intimate partners</i>	74%	74%	73%	72%
<i>Average age difference in intimate partner killings</i>	6.6 years	6.3 years	6.0 years	3.3 years
<i>Murder-suicide incidents that occurred in the home</i>	76%	75%	75%	80%
<i>Number of children killed in murder-suicides</i>	N/T	47	45	55
<i>Number of children who witnessed murder-suicides</i>	N/T	N/T	44	66
<i>Murder-suicide incidents among the elderly</i>	21%	23%	27%	25%

^f N/T = Not tabulated.

Conclusion

Most people think of suicide as a solitary act, affecting only one person. Yet, the effects of murder-suicide go far beyond the shooter: family, friends, co-workers, and absolute strangers are among those who are killed as a result of these acts of desperation. Moreover, murder-suicide often leaves children parentless. During the six-month period tallied in this study, there were 313 suicides—yet the *total* number of deaths was 691. More people died from murders associated with the suicide—378—than from the suicides themselves. These numbers call into grave question the common belief that suicide, especially firearms suicide, is a solitary act that affects only the shooter.

A comprehensive nationwide database to track murder-suicide should be established or integrated into existing data collection mechanisms. In order to better understand the phenomenon and develop effective prevention strategies, the data collected should be detailed and include: the gender, sex, age, ethnicity, and profession of the perpetrator and victim(s); the type of weapon used, including the make and model of firearm; the specific location of the event, e.g. workplace, specific room in residence; and, any available information regarding the motivation of the murderer.

Domestic violence is associated with a very significant number of murder-suicides. Therefore stronger domestic violence legislation may be one avenue of intervention, including programs that assist men with coping with issues of anger, control, and separation. Moreover, experts have suggested that more research should be focused on the impact that domestic violence murder-suicides have on the families in which they occur.

Depression and the strain of providing care for a failing spouse have been cited by experts as a significant contributing factor to murder-suicide among older persons.¹⁶ Health care options that provide aid to older caregivers and that aim to monitor and treat depression in such cases may be one useful intervention.

The most common catalytic component in murder-suicide is the use of a firearm. Firearms allow shooters to act on impulse. Every major murder-suicide study ever conducted has shown that a firearm—with its unmatched combination of high lethality and easy availability—is the weapon most often used to murder the victims, with the offenders then turning the gun on themselves.¹⁷ In this study, access to a gun was the critical component for almost all of the murder-suicides. Of the 46 murder-suicides with more than one homicide victim, 38 were firearm-related. The presence of a gun allows the offender to quickly and easily kill a greater number of victims. If there had not been easy access to a firearm, these deaths may simply have been injuries or may

not have occurred at all. Efforts should be made to restrict access to firearms where there is an increased risk of murder-suicide, for example where an individual has a history of domestic violence and/or has threatened suicide. State and local officials, including judges, should aggressively enforce laws that currently prohibit individuals with a misdemeanor domestic violence conviction or who are the subject of a restraining order for domestic violence from purchasing or possessing a firearm.

Appendix: Murder-Suicides by State and the District of Columbia

This appendix lists murder-suicides by state and the District of Columbia. This chart includes the number of murder-suicide incidents recorded during the six-month study period, as well as the total number of people who died. It is important to note that lack of a murder-suicide during the first half of the year is in no way an indicator of whether or not there will be any reports of murder-suicide in the second half of the year.

State	Number of Murder-Suicide Events in the First Half of 2011	Number of People Dead from Murder-Suicide Events in the First Half of 2011
Alabama	11	22
Alaska	1	2
Arizona	10	25
Arkansas	3	6
California	34	80
Colorado	9	19
Connecticut	2	4
Delaware	2	4
District of Columbia	0	0
Florida	27	57
Georgia	9	18
Hawaii	0	0
Idaho	4	11
Illinois	12	26
Indiana	3	8
Iowa	1	2
Kansas	2	4
Kentucky	5	10

State	Number of Murder-Suicide Events in the First Half of 2011	Number of People Dead from Murder-Suicide Events in the First Half of 2011
Louisiana	14	31
Maine	2	4
Maryland	4	8
Massachusetts	2	4
Michigan	9	22
Minnesota	6	12
Mississippi	3	6
Missouri	7	18
Montana	0	0
Nebraska	3	7
Nevada	3	6
New Hampshire	1	2
New Jersey	6	12
New Mexico	0	0
New York	11	26
North Carolina	7	17
North Dakota	0	0
Ohio	9	21
Oklahoma	8	17
Oregon	5	10
Pennsylvania	14	33
Rhode Island	1	2
South Carolina	6	14

State	Number of Murder-Suicide Events in the First Half of 2011	Number of People Dead from Murder-Suicide Events in the First Half of 2011
South Dakota	0	0
Tennessee	11	23
Texas	20	41
Utah	5	11
Vermont	0	0
Virginia	11	23
Washington	7	16
West Virginia	2	5
Wisconsin	1	2
Wyoming	0	0
Total	313	691

Endnotes

1. Peter M. Marzuk et al., "The Epidemiology of Murder-Suicide," *Journal of the American Medical Association* 267, no. 23 (June 1992): 3179-3183.
2. Peter M. Marzuk et al., "The Epidemiology of Murder-Suicide," *Journal of the American Medical Association* 267, no. 23 (June 1992): 3179-3183.
3. Yekeen A. Aderibigbe, "Violence in America: A Survey of Suicide Linked to Homicides," *Journal of Forensic Sciences* 42, no. 4 (1997): 662-665.
4. Alan R. Felthous and Anthony Hempel, "Combined Homicide-Suicides: A Review," *Journal of Forensic Sciences* 40, no. 5 (1995): 846-856.
5. Alan R. Felthous and Anthony Hempel, "Combined Homicide-Suicides: A Review," *Journal of Forensic Sciences* 40, no. 5 (1995): 846-856.
6. Peter M. Marzuk et al., "The Epidemiology of Murder-Suicide," *Journal of the American Medical Association* 267 no. 23 (June 1992): 3179-3183.
7. "Trends by Gender," *Homicide Trends in the U.S.* (Bureau of Justice Statistics, U.S. Department of Justice), downloaded March 13, 2012, from <http://bjs.ojp.usdoj.gov/content/homicide/gender.cfm>.
8. Yekeen A. Aderibigbe, "Violence in America: A Survey of Suicide Linked to Homicides," *Journal of Forensic Sciences* 42, no. 4 (1997): 662-665.
9. Donna Cohen et al., "Homicide-Suicide in Older Persons," *American Journal of Psychiatry* 155 (March 1998): 390-396.
10. Doug Abrahms, "Finances, Depression Often Issues for 'Family Annihilators,'" *The Desert Sun*, 12 May 2005.
11. Alan R. Felthous and Anthony Hempel, "Combined Homicide-Suicides: A Review," *Journal of Forensic Sciences* 40, no. 5 (1995): 846-856.
12. One study noted that children of the victim and/or perpetrator witnessed the murder-suicide, were in the immediate vicinity, found their parents' bodies, or were killed in 43 percent of the cases studied. E. Morton, C.W. Runyan, K.E. Moracco, J. Butts, "Partner homicide-suicide involving female homicide victims: a population-based study in North Carolina, 1988-1992," *Violence and Victims* 13, no. 2 (1998): 91-106.

13. U.S. Census Bureau, *Age and Sex in the United States: 2010*, http://www.census.gov/population/www/socdemo/age/age_sex_2010.html.
14. Data from the 2009 FBI Supplementary Homicide Report. Analysis by the Violence Policy Center.
15. Data from the CDC National Center for Injury Prevention and Control's WISQARS program (www.cdc.gov/ncipc).
16. J.E. Malphurs and Donna Cohen, "A statewide case-control study of spousal homicide-suicide in older persons," *American Journal of Geriatric Psychiatry* 13, no. 3 (2005): 211-7.
17. Alan R. Felthous and Anthony Hempel, "Combined Homicide-Suicides: A Review," *Journal of Forensic Sciences* 40, no. 5 (1995): 846-856. See, for example, R.D. Comstock, S. Mallonee, E. Kruger, K. Rayno, A. Vance, and F. Jordan, "Epidemiology of homicide-suicide events: Oklahoma, 1994-2001," *American Journal of Forensic Medicine and Pathology* 26, no. 3 (2005): 229-35.