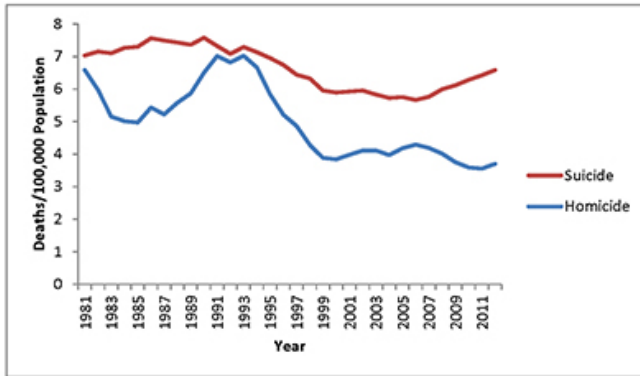


# Firearm violence trends in the 21st century

17 December 2014



Mortality rates for firearm homicide and suicide, 1981-2012

While the overall death rate from firearm violence has remained unchanged for more than a decade, the patterns for suicide and homicide have changed dramatically, a UC Davis study on the epidemiology of gun violence from 2003 to 2012 has found. The study posted online in the *Annual Review of Public Health* on Dec. 12 and will appear in the print edition in January.

"Suicide by firearm is far more common than homicide," said Garen J. Wintemute, professor of emergency medicine and director of the Violence Prevention Research Program at UC Davis. "Over the past 30 years, firearm suicides have exceeded homicides even when homicide rates were at their highest in the late 1980s and early 1990s. But, since 2006, the gap between the two has been widening, with firearm homicides decreasing and suicides increasing."

In 2012, nearly two-thirds, or 64 percent, of deaths from firearm violence were suicides, compared to 57 percent of deaths in 2006. The growth in [suicide](#) is especially prominent among white males beginning in early adulthood, Wintemute said.

After analyzing the data for firearm homicides and

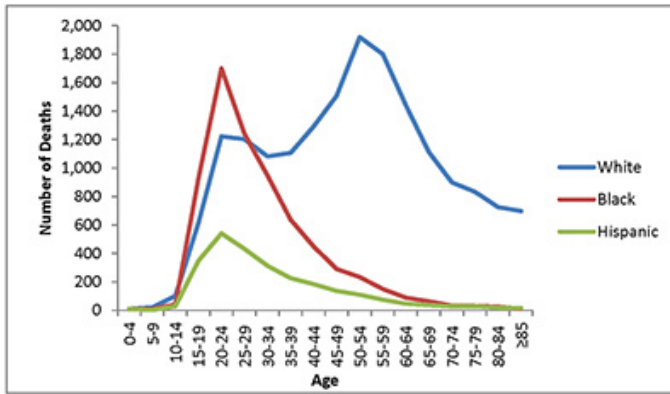
suicides by age, gender and race/ethnicity, Wintemute found other emerging patterns. For example, homicides among black men and women rose steeply in adolescence and peaked in early adulthood before falling steadily thereafter. In contrast, suicide rates among [white men](#) increased in adolescence but continued to rise throughout the lifespan.

When assessing the number of deaths from firearm violence in 2012 for males by age and race/ethnicity, Wintemute found that 88.7 percent of all deaths among [black males](#) aged 15 to 44 were caused by homicide and that 89.2 percent of deaths among white males aged 35 to 64 were from suicide. When he corrected for population growth in both groups, he found that the rate of death among white males aged 35 to 64 had increased by 29.1 percent.

"Suicides among white males accounted for nearly half of the deaths from firearm violence during 2012, and suicide among white men is increasing," Wintemute said. "The increase offsets any decline we might have seen in overall firearm-related mortality during the 21st century."

## Firearm homicide: Young blacks at high risk

As previous public-health studies have shown, homicides are concentrated to a remarkable degree among black males through much of the lifespan, with rates rising at adolescence and peaking at ages 20 to 24.



The number of deaths from firearm violence among males in 2012 reflect the high homicide and suicide rates for blacks and whites, respectively.

"The overall death rate from firearm violence in young black males is very high, and there has been little net change since 1999," Wintemute said.

Firearm homicides among black males aged 20 to 29 are five times higher than those among Hispanic males and at least 20 times higher than for white males. Homicide rates for black females are also higher than rates for Hispanics and whites.

In 2012, firearm homicides were the leading cause of death for black men ages 15 to 24. Among white men, Hispanic men, and black women in that age range, firearm violence ranked second after unintentional injuries.

### Firearm suicide: White males and females at higher risk

The data show that suicides are concentrated among whites, with the risk among white men steadily increasing throughout their lifespans and steeply rising from ages 70 to 74. By 85 and older, suicide for white males was 3.2 times that of Hispanic males and five times that of black males.

Suicide risk among white females, while occurring at a lower rate than white males, also shows steady increases from ages 10 to 14 through ages 45 and 49. The suicide rates for white females also were higher than for black or Hispanic females of all

ages.

"Contrary to popular belief, mental illness by itself is not a leading contributor to interpersonal firearm violence," Wintemute said. "But mental illness, chiefly depression, is an important contributor to risk for suicide."

### Risk factors for firearm violence

According to the General Social Survey, more than 50 million people in the U.S. own firearms. Firearm ownership increases risk of firearm homicide or suicide at the population, household and individual levels, Wintemute said.

"Focusing on known risk factors and predictors for firearm violence can have a broad impact," Wintemute said. "We know alcohol and controlled substance abuse are important predictors of future risk for violence directed at others or at oneself, whether or not mental illness is also present."

Many studies have shown that a prior history of violence also strongly predicts future violence. Wintemute's substantial body of work also has demonstrated effective interventions to reduce gun violence, such as prohibiting persons convicted of violence misdemeanor crimes such as assault and battery from purchasing firearms.

"With additional research, we can identify other interventions that can reduce firearm violence, which is responsible for more than 30,000 deaths each year," Wintemute said.

Provided by UC Davis

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