



Guns & Suicide: The Hidden Toll

Special Report

by Madeline Drexler, Editor, Harvard Public Health

There's a gas station maybe a five-minute drive away from us, and the gas station sells guns. I didn't realize places like that existed. Ryan just walked in and bought a handgun. We had gotten into an argument—which we hardly ever did—and he left. The next morning, the police knocked on my door. A construction crew had found him dead in his car at an abandoned railroad station.

—Emily Frazier, 27, widow of
Ryan Frazier, who shot himself
with a semiautomatic in 2008

continued

In the national debate over gun violence—a debate stoked by mass murders such as last December’s tragedy in a Newtown, Connecticut, elementary school—a glaring fact gets obscured: Far more people kill themselves with a firearm each year than are murdered with one. In 2010 in the U.S., 19,392 people committed suicide with guns, compared with 11,078 who were killed by others. According to

kill themselves with guns than with all other intentional means combined, including hanging, poisoning or overdose, jumping, or cutting.

Though guns are not the most common method by which people attempt suicide, they are the most lethal. About 85 percent of suicide attempts with a firearm end in death. (Drug overdose, the most widely used method in suicide attempts, is fatal in

Institute of Mental Health, complex and deep-rooted problems—such as depression and other mental disorders, drug and alcohol abuse, family violence, and a family history of suicide—often shadow victims. Suicide among males is four times higher than among females. In adults, separation or divorce raises the risk of suicide attempts. In young people, physical or sexual abuse and disruptive behavior

“Cut it however you want: In places where exposure to guns is higher, more people die of suicide.”

—Deborah Azrael, associate director of the Harvard Youth Violence Prevention Center

Matthew Miller, associate director of the Harvard Injury Control Research Center (HICRC) at Harvard School of Public Health, “If every life is important, and if you’re trying to save people from dying by gunfire, then you can’t ignore nearly two-thirds of the people who are dying.”

Suicide is the 10th-leading cause of death in the U.S.; in 2010, 38,364 people killed themselves. In more than half of these cases, they used firearms. Indeed, more people in this country

less than 3 percent of cases.) Moreover, guns are an irreversible solution to what is often a passing crisis. Suicidal individuals who take pills or inhale car exhaust or use razors have time to reconsider their actions or summon help. With a firearm, once the trigger is pulled, there’s no turning back.

NOT “WHY?” BUT “HOW?”

When we think of suicide, we usually think of a desperate act capping years of torment. According to the National

increase vulnerability.

The harrowing fact of suicide demands a story: “Why?” But from a public health perspective, an equally illuminating question is “How?”

Intent matters, but so does method, because the method by which one attempts suicide has a great deal to do with whether one lives or dies. What makes guns the most common mode of suicide in this country? The answer: They are both lethal and accessible. About one in three American households contains a gun.

The price of this easy access is high. Gun owners and their families are much more likely to kill themselves than are non-gun-owners. A 2008 study by Miller and David Hemenway, HICRC director and author of the book *Private Guns, Public Health*, found that rates of firearm suicides in states with the highest rates of gun ownership are 3.7 times higher for men and 7.9 times higher for women, compared with states with the lowest gun ownership—though the rates of non-firearm suicides

ACCESS TO GUNS RAISES THE RISK OF SUICIDE		
VARIABLE	States with the Highest Rates of Gun Ownership	States with the Lowest Rates of Gun Ownership
Average population 2001–2005	49 million	50 million
Percent of households with guns	47	15
Total firearm suicides	16,577	4,257
Total nonfirearm suicides	9,172	9,259

Source: Miller M and Hemenway D. *Guns and suicide in the United States*. *New England Journal of Medicine* 2008; 359:672-3.

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Photo page 24, Jan Strømme / gettyimages.com

“He was struggling with nightmares.”

Emily Frazier’s 21-year-old husband, Ryan Frazier, shot himself with a semiautomatic in November 2008, soon after bringing a lawsuit against a priest who had molested him during his teenage years. Emily, pregnant at the time with their second child, is now the single mother of a 5-year-old son and a 3-year-old daughter. She works in human resources. The priest was convicted in 2007 and sentenced to 30 days in jail.

Ryan and I met in high school and married right out of high school. He was friendly, genuinely cared about everybody. He was one of the top five salespeople in the country for Verizon. He had a business card collection that I still have, it’s five or six inches thick. People would write down their number and they would want to meet up with him again, because he was so kind.

He was very young, handling a lot of responsibilities, working really hard, with the sleep deprivation of having an infant. And he had struggled with nightmares since the incident with the priest.

Ryan had never used a gun before. The police report said he had fired test shots out the window of the car. After he died, I walked into the gas station where he had bought the gun, and the owner was there. I asked him about the process for selling a gun and if they ever screened people for mental illness. Then I said, “My husband bought a gun here and shot himself.” The owner said just a couple of words. I couldn’t read his emotion. I don’t know if he was uninterested or shocked. He didn’t say he was sorry.



are about the same. A gun in the home raises the suicide risk for everyone: gun owner, spouse and children alike.

This stark connection holds true even when other factors are taken into account. “It was a reasonable hypothesis to think that the type of person who chooses to own a gun is different from the type of person who chooses not to. Maybe there’s a ‘go-it-alone’ attitude that leads to less help seeking. Or maybe gun owners are more likely to live in rural areas, and rural locales are associated with greater suicidality,” explains Catherine Barber, director of HICRC’s Means Matter campaign, a suicide prevention effort that focuses on the ways people attempt to take their own lives.

“But when we compared people in gun-owning households to people

epidemic of those years,” says HSPH’s Deborah Azrael, associate director of the Harvard Youth Violence Prevention Center. “Young black male suicide rates approached those of young white males—though black suicide rates had always been much lower than white suicide rates. It was entirely attributable to an increase in suicide by firearms.”

Put simply, the fatal link applies across the board. “It’s true of men, it’s true of women, it’s true of kids. It’s true of blacks, it’s true of whites,” says Azrael. “Cut it however you want: In places where exposure to guns is higher, more people die of suicide.”

IMPULSIVE ACTS

The scientific study of suicide has partly been an effort to erase myths. Perhaps the biggest fallacy is that

that the middle-aged guy had gotten word that the divorce papers had come through. That reactivity surprised me, because I’d always pictured suicide as being a painful, deliberative process, something that was getting worse and worse, escalating until finally you’ve got it all planned out and you do it. It hadn’t occurred to me that it could be a cop arguing with his wife, and in the midst of the argument, pulling out his gun and killing himself.”

This impulsivity was underscored in a 2001 study in Houston of people ages 13 to 34 who had survived a near-lethal suicide attempt. Asked how much time had passed between when they decided to take their lives and when they actually made the attempt, a startling 24 percent said less than 5 minutes; 48 percent said less than 20

“The public health message is neither anti-gun nor pro-gun. It’s pro-data.”

—Matthew Miller, associate director of the Harvard Injury Control Research Center

not in gun-owning households, there was no difference in terms of rates of mental illness or in terms of the proportion saying that they had seriously considered suicide,” Barber says. “Actually, among gun owners, a smaller proportion say that they had attempted suicide. So it’s not that gun owners are more suicidal. It’s that they’re more likely to die in the event that they become suicidal, because they are using a gun.”

While gun-suicide rates are higher in rural states, which have proportionally more gun owners, the gun-suicide link plays out in urban areas, too. “In the early 1990s, the dramatic rise in young black male suicides was in lock step with the homicide

suicides are typically long-planned deeds. While this can be true—people who attempt suicide often face a cascade of problems—empirical evidence suggests that they act in a moment of brief but heightened vulnerability.

“One of the things that got me interested in launching the Means Matter campaign was that I had been reading through thousands of thumbnail sketches of suicide deaths, to see if a reporting system we were testing was catching the feel for the case,” says Barber. “I started noticing that, jeez, this death happened the same day that the kid was arguing with his parents, or that the young man had just broken up with his girlfriend, or

minutes; 70 percent said less than one hour; and 86 percent said less than eight hours.

The episodic nature of suicidal feelings is also borne out in the aftermath: 9 out of 10 people who attempt suicide and survive do not go on to die by suicide later. As Miller puts it, “If you save a life in the short run, you likely save a life in the long run.”

LETHAL ENVIRONMENTS

A central tenet of public health is that environment shapes individual behavior. In the realm of suicide, this truth has played out dramatically in recent history. When widely used lethal means are made less available or less deadly, suicide rates by that method

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“I couldn’t tell people that my father had died of suicide.”



Kristyn Bernier is a detective in Portsmouth, New Hampshire. Her father, Bruce Rogers, a dentist in Connecticut, shot himself in August 2003, at the age of 63. He had suffered for years from undiagnosed depression. Rogers used an antique hunting rifle that had been in the family. Late one evening, after several rounds of drinks, he surreptitiously took cartridges from an open box of ammunition on a neighbor’s refrigerator.

My father had a great sense of humor. He had a thriving dental practice. Volunteered all over the place, he was on every board. In his spare time, he refinished furniture. He made baskets, caned chairs. Those beautiful chairs—I have a couple of them. But he was lonely. Things changed around him, we all changed, and he didn’t.

I am a master at dealing with crisis. I’m a hostage negotiator. I was an EMT for 25 years. I handle child sexual assault cases. I handle felony domestics. I interview predators day in and day out. I have seen the most horrible things people do to each other. But I missed this crisis in my own family.

I couldn’t tell people that my father had died of suicide. I came up with creative ways to answer the question of how he had died. “He died suddenly”—that was my answer. Even in my line of work, suicide is a stigma. And if people aren’t willing to talk about suicide after it happens, how do you expect them to talk about the risks beforehand?



Harvard School of Public Health researchers have conducted many of the key national studies linking gun access and suicide. Left to right: Matthew Miller, associate director of the Harvard Injury Control Research Center (HICRC); Deborah Azrael, associate director of the Harvard Youth Violence Prevention Center; and Catherine Barber, director of HICRC's Means Matter campaign.

decline, as do suicide rates overall. In Sri Lanka, for example, where pesticides are the leading suicide method, the suicide rate fell by half between 1995 and 2005, after the most highly human-toxic pesticides were restricted.

Similarly, in the United Kingdom before the 1950s, domestic gas derived from coal contained 10 to 20 percent carbon monoxide, and poisoning by gas inhalation was the leading means of suicide. A source of natural gas virtually free of carbon monoxide was introduced in 1958; over time, as carbon monoxide in gas decreased, so did the number of suicides overall—driven by a drop in carbon monoxide suicides, even as other methods increased somewhat.

Changing the means by which people try to kill themselves doesn't necessarily ease the suicidal impulse or even the rate of attempts. But it does save lives by reducing the deadliness of those attempts.

DEARTH OF DATA

Though these basic facts are known, there is a striking dearth of research on guns and suicide. In the U.S., govern-

ment officials don't even have current data on where household gun ownership rates are higher or lower. The only survey large enough to produce state-level estimates of gun ownership was conducted by the federal Behavioral Risk Factor Surveillance System, the world's largest ongoing telephone health survey. The survey asked questions about gun ownership in 2001, 2002 and, for the last time, in 2004. It was HICRC investigators who analyzed this state-level data to show that suicide rates run in tandem with gun ownership rates.

Today, the U.S. Centers for Disease Control and Prevention's National Violent Death Reporting System, which collects data from police and coroners' reports and death certificates on every suicide and homicide, covers only 18 states. Compare this with the National Highway Traffic Safety Administration's Fatality Analysis Reporting System, which amasses extensive details within 30 days of every fatal car crash on public roads, from the time and location of the accident to weather conditions to the role of alcohol and drugs. Partly as a

result of this bureaucratic diligence, the fatality rate from car crashes has dropped by about a third over the last two decades. Could the same dedication bring down suicides?

Matthew Miller thinks it can. "Better data is a good place to start. That way, discussions are grounded in facts rather than distorted by ideology. It can only help foster social-norm-shifting conversations similar to those that took place around cigarette smoking, safety belt use and driving drunk," he says. "I'd like physicians to feel it's their responsibility to tell people about the risks. There's no reason that you should have a conversation about a bike helmet or a seat belt, but not firearms."

But change also takes time. "With public health, when you don't have the one-size-fits-all solution, you chip away at the problem," says Barber. Preventing suicides will likely require many approaches, from education and media campaigns to skilled treatment and community support. Ultimately, the goal is to transcend politics—which is why those who have lost loved ones to gun suicide should have the last word:

Ryan is my baby. I remember once telling him, "If anything happens to you, I would cease to exist." And that's what it feels like. It's a pain like no other. I would encourage open conversation—actually talking about it. Preventing just one person from going through what I went through and will go through for the rest of my life—that would be enough for me.

—Wendy Tapp, mother of 19-year-old Ryan Tapp, who shot himself with a handgun in 2011

“A club I never wanted to join.”



Janyce Demers is a school lunch worker in Hooksett, New Hampshire. Her 23-year-old son, Zachary Demers, killed himself with a firearm in 2008—hours after a first drunken driving arrest. Zachary may have been afraid of losing his commercial driver’s license, a great source of pride and accomplishment.

Being a suicide survivor is a club I never wanted to join. But it wasn’t my choice. Zach’s death was a shock to all of us. He was happy-go-lucky, loved his family, loved his sisters, loved his nephews and nieces. But he thought he was in over his head financially. And he was still living at home—that was a bother to him. To have even considered suicide, he must have been so low, just beyond anything.

I went back and looked through all his school papers. What stood out in his teachers’ comments was his impulsiveness. Being impulsive, you sometimes make rash decisions, spur-of-the-moment, and they don’t always turn out for the best.

There were guns in our home. My husband has hunting rifles. My daughter and my son-in-law have guns for target

practice. Zach had purchased his own firearm for hunting and target practice. That being said, I am not a gun lover—I really don’t care for them. But I’m also not anti-gun. I believe there are people who can be trusted with guns for the right purposes.

Today, if I notice anyone in trouble, I don’t step back and assume it’s none of my business. I approach them and say, “Hey, are you thinking of doing this?” I’ll ask them directly, “Do you have a gun?” I’ve experienced it and I’m no longer afraid to ask. People need to know that help is available.

Starting a Conversation

To foster open discussion about the consequences of gun ownership, public health researchers want to know much more about the lure of guns. Why do people own guns in the first place? How do they perceive the risks and benefits? Is the gun mainly for self-protection? Hunting? Target practice? Picking off wild animals that eat crops? And are there other ways to answer those needs that don't involve guns?

They'd also like to know why people just got rid of their last gun or acquired their first. What drives decisions at these inflection points? Is it divorce from a gun-owning spouse? Moving to a city, where guns are less prevalent? The fact that young grandchildren are starting to visit?

And researchers are curious about the beliefs and experiences of non-gun-owners living in a home with a gun. Studies have shown that women aren't always aware that their partners or children are keeping guns, suggesting that these wives and mothers would disapprove if they did know.

The blunt question that community gatekeepers should ask clients or friends who seem troubled: “Is there a gun in your home?”

COMMUNITY “GATEKEEPERS”

Psychiatrists, psychologists and social workers have begun trainings on how to talk with suicidal patients and their families about reducing access to firearms at home. Unfortunately, people contemplating gun suicide are not always in treatment and often don't display clues in advance—not even to themselves. According to Catherine Barber, director of the Harvard Injury Control Research Center's Means Matter campaign, “They may think: ‘It's not my assessment of the world that's the problem, it's the world. I'm headed back to jail, my girlfriend's broken up with me, I've got no hope for the future.’” Even when deep despair prompts people to seek help, their clinicians often fail to ask about guns or feel uncomfortable broaching the topic, in part because they lack suicide prevention training.

All of which suggests that informal contacts, outside the familiar channels of mental health care, may serve as a stronger safety net. In public health lingo, these potentially lifesaving friends and colleagues are known as “gatekeepers.” They include teachers, school psychologists, truant officers, sports coaches, pediatricians, emergency department doctors, defense attorneys, court-mandated batterers' counselors, social workers, rehab clinicians, employee-assistance staff, divorce attorneys, marriage counselors, and clergy. According to Barber, “It's those people who need to get the message, because that's where suicidal people intersect with the system.” The blunt question these gatekeepers should ask clients or friends who seem troubled: “Is there a gun in your home?”

Barber believes that most efforts to keep a firearm away from a suicidal person should be based on conversation, not confiscation. Though some situations—such as with delusional individuals—may be too dangerous to allow guns to remain nearby, in most cases an engaged and respectful approach is more effective. “You want to bring about safety through conversation,” she says. “Very rarely do you want to take control away from a person at risk of suicide.”

The Gun Shop Project

In April 2009, over a five-day period, two young men and an older woman in New Hampshire each bought handguns from Riley's Sport Shop in Hooksett and within hours committed suicide. The victims did not know each other. Soon, as often happens in a small, rural state, word spread, as did the desire to prevent such a triple tragedy from happening again. Thus began the Gun Shop Project, a novel collaboration, guided by the New Hampshire Firearm Safety Coalition, of mental health and public health practitioners, firearms dealers and gun rights advocates. HSPH injury researchers Catherine Barber and Mary Vriniotis helped organize the project, interview gun shop owners and develop educational materials.



To some, the notion of suicide prevention groups finding common cause with gun sellers seems implausible. But to Barber, it makes perfect public health sense. “You’re trying to reach gun owners,” she says. “Gun control isn’t the way to go for suicide prevention groups, because these groups are made up of both gun owners and non-gun-owners. Even internally, they might not agree.” In many ways, the gun-friendly state of New Hampshire—where the Association of Chiefs of Police recently raised money for an annual cadet training program by selling raffle tickets for 31 guns, including an assault rifle—is the perfect proving ground for creative approaches to gun-suicide prevention. Each year, the state sees about 20 homicides, but 150–200 suicides; about half of those suicides are by gun.

Riley’s sells thousands of guns each year. When he learned of the three suicides committed back-to-back with firearms from his store, owner Ralph Demicco was horrified. “The suicide issue deeply impacts me,” Demicco says. “I’ve had friends who have taken their lives. I’ve had wives of friends who have taken their lives. And as a businessperson, having a customer do it—it’s just an ugly, ugly thing. I decided I must become involved.”

Demicco reviewed the store’s surveillance tapes of the soon-fatal transactions, to see if the customers were giving away clues to their intent. They weren’t. But Demicco recalled earlier instances when he had picked up such clues: a customer asking for a very small amount of ammunition, or looking uneasy, or starting to cry after being asked a few questions—and his tactful inquiries diverted them from their plans.

Over the past three years, the Gun Shop Project group produced instructional videos and tipsheets for gun retailers. “Trust your instincts; you are under no obligation to sell a gun to anyone,” says a handout from the New Hampshire Firearm Safety Coalition. Demicco encourages all customers who are not familiar with firearms to get training before he will sell them a gun—valuable from a prevention point of view, because it buys time during which a crisis will often pass.

Posters and brochures for customers discuss how to make firearms inaccessible if a family member appears troubled. They also prominently display the phone number for the National Suicide Prevention Lifeline (1-800-273-TALK).

About half of New Hampshire’s gun retailers are participating in the project, and the Maryland Firearms Dealers Association will be adopting the model this year. The initiative even earned plaudits in the magazine *Combat Handguns*. The next step, says Barber, is to encourage suicide prevention groups to team up with other natural allies such as hunting groups, shooting clubs and gun rights groups.

“It’s important that gun owners and non-gun-owners talk to one another,” she says. “The question can’t be, ‘What do you think of gun control?’ because everybody’s going to be for or against. But when the question is, ‘How do we solve the problem of gun suicide?’ we can work out good ideas that everyone can agree on.”

Politics & Beyond

Gun violence is one of the most politically divisive issues in the United States—and this contentiousness has played out in government funding of research. In 1993, a study supported by the U.S. Centers for Disease Control and Prevention (CDC) found that, rather than conferring protection, keeping a gun in the house raises the risk nearly threefold of being shot by a family member or intimate acquaintance.

Enraged by what it has called an “almost vicious sentiment against personal firearms ownership,” the National Rifle Association in 1996 successfully lobbied Congress to insert this restriction into the CDC budget: “None of the funds made available ... may be used to advocate or promote gun control.” It was a pointed prohibition that went far beyond the rule that federal research money cannot be used for lobbying on any issue. The restriction, which was interpreted broadly by CDC, served as a virtual ban on firearms research. Since the mid-1990s, the agency’s gun safety research budget has dropped by 96 percent.

In 2011, the NRA’s official website offered a rationale for its efforts to stifle research: “These junk science studies ... are designed to provide ammunition for the gun control lobby by advancing the false notion that legal gun ownership is a danger to the public health instead of an inalienable right.”

TRUSTING THE MESSENGER

But according to Matthew Miller, associate director of the Harvard Injury Control Research Center (HICRC), “The public health message is neither anti-gun nor pro-gun. It’s pro-data. A public health approach doesn’t look so much to blame as to understand and prevent.”

“Like older white men, people with mental health problems, people with family histories of suicide, etc., gun owners are ‘our’ people,” adds the HICRC’s Catherine Barber, referring to groups with increased suicide risk. “We can’t reach them with an anti-gun agenda. That’s like sending an anti-gay group to do

a suicide prevention campaign in the gay and lesbian community. If you don’t trust the messenger, you don’t trust the message.”

The Newtown, Connecticut, massacre, in which the young gunman, Adam Lanza, ended his own life after the elementary school rampage, opened another public health line of argument: that preventing suicides may also prevent homicides, including the relatively tiny number of mass murders. “Mass homicide is an outrageously hostile acting out,” says Miller, “and one can only imagine that it is deeply connected with a hostility directed at oneself as well.”



Kevin LaMarque / REUTERS

Yet for Barber, the public health conversation around guns is actually trickier since Newtown, because political positions have grown more entrenched. Toiling for years on the knotty problem of gun suicide has changed her perspective on gun control. “I’m more aware of the cultural divide between gun owners and non-gun-owners, especially when they become politicized and think ill of one another,” she says. “Some gun owners think guns make their family safer. A lot of the guys, they love the mechanism in guns—it’s the same as the love for fine woodworking tools. There can also be cultural connections, where they learned to shoot from their dad or their uncle. Gun owners and non-gun-owners are both caring, but they view the world differently.”

COULD NEW LAWS PREVENT GUN SUICIDE?

The current political debate swirls around universal background checks and assault weapons bans and magazine limits—policies unlikely to have a measurable impact on suicide. Deborah Azrael, associate director of the Harvard Youth Violence Prevention Center, is heartened by a less-trumpeted 1999 Connecticut law, which provides a mechanism for people to contact police when they fear a gun will be used for harm.

Police and prosecutors may obtain warrants to seize firearms from people who appear to be an imminent danger to themselves or others. The individual whose guns are taken has the right to a hearing within two weeks. “There have been hundreds and hundreds of people who have been motivated to call the police since the law was put into effect in the late 1990s,” says Azrael. “And they’re not saying, ‘I think my husband is going to kill me. They’re saying, ‘I think my husband is going to kill himself.’”

“THE COURAGE OF OUR CONVICTIONS”

Azrael worries that in the revived debate on gun violence, suicide will be eclipsed. She also laments that public health researchers are often reluctant to spin out the implications of the scientific evidence about firearms, for fear of being accused of an anti-gun bias. “It’s a constraint that most researchers don’t operate under. People who do research on lung cancer are allowed to draw conclusions about smoking. The same with people who do research on environmental exposure to PCBs, or on motor vehicle design issues, or on drug overdoses. There’s no national organization pillorying them or actively seeking to defund them.”

In other words, the frank and open conversation about guns that Americans need to have among themselves also applies to researchers who want to share their findings with the public. As Azrael sees it, “We need to have the courage of our convictions.”

