

## ON A FRIDAY MORNING IN JUNE, CASSANDRA CRIFASI LOADS A 9MM SEMI-AUTOMATIC PISTOL,

takes aim, pulls the trigger—and 25 feet away, a paper target takes a hit to the chest.

Crifasi, PhD '14, MPH, peers through the gunsight, then pulls the trigger again, and again. The shots are deafening, bouncing off the concrete walls of this gun range tucked into a Severna Park, Maryland, strip mall. Neither the noise nor the kick from the gun rattles Crifasi. She shoots twice a month, so she's used to it. When the magazine is empty she reloads. This time she aims for the head. Because, she says, "you gotta prepare for the zombies."

Crifasi—who goes by Cass—is an assistant professor in Health Policy and Management, a faculty member in the Johns Hopkins Center for Gun Policy and Research, and one of the few gun policy researchers in the nation who not only owns guns but regularly shoots for sport. Daniel Webster, ScD '91, MPH, her mentor and director of the Center, says in his 25 years working in the field, he can't think of another researcher who brings Crifasi's dual perspective.

You don't have to be a gun policy researcher to know that the debate over the right to bear arms is one of the most persistent divides in the U.S.—one driven less by evidence than rhetoric, fear and entrenched narratives.

Crifasi, 34, is part of what she calls "the large moderate swath that is invisible": those who believe the Second Amendment protects citizens' right to have a firearm in their home, but also believe that right should be regulated by effective, evidence-based gun policy.

"What laws we have now regulating guns have holes in them that are so big you can drive a truck through," says Crifasi. "If it's easier to get a gun than a driver's license in 32 states—as it is now—we will never see a meaningful reduction in gun violence."

Nearly a third of American households have a gun in the home, says Crifasi. One of her missions as a gun policy researcher is to engage the people in those households, many of whom she believes are moderates like her, and empower them to become more visible

and vocal. That's the only thing she believes will lead to legislation that protects gun ownership and protects lives.

S GUN POLICY RESEARCHERS IN BALTIMORE. Crifasi and her colleagues at the Center grapple with an issue that is both national and urgently local—especially this year, as Baltimore City recorded its 250th homicide in September and is on track to record more homicides this year than in any year since 1992. Before 2015, the Center concentrated mostly on state and federal issues, Crifasi says. But after the death of Freddie Gray and the violence that spiked in its wake, the focus shifted. "There was a concerted effort to say, 'What can we do here?'" says Crifasi. "'How can we improve the analytics of the police department so we can help reduce violence?"

In January 2016, the Center joined the Baltimore Police Department and the Baltimore City State's Attorney's Office to form the Johns Hopkins-Baltimore Collaborative for Violence Reduction. The Collaborative functions as a research unit for the BPD, helping the department collect and evaluate data on everything from the efficiency of the crime tip hotline to officer recruitment techniques to training curricula—and then develop policies based on evidence rather than assumptions. "We have very scarce resources and a limited capacity to do evidence-based research," says Major Martin Bartness, executive officer of the BPD's Strategic Services Bureau. "There is arguably no one more skilled in the world doing this work than the Hopkins team, and we have them in our backyard."

As the Collaborative's deputy director, Crifasi focuses half her research time on developing and implementing a variety of strategies to reduce violence in Baltimore. Drawing on her dissertation research, which looked at occupational safety for law enforcement officers, Crifasi is supporting the BPD's efforts to train Crisis Intervention Team (CIT) officers, who will be placed throughout the city across all shifts. When a mental



health crisis call comes in, CIT officers will draw on their training to de-escalate the situation, decreasing the likelihood of violence to both citizens and officers. "What has been seen in other cities, and we expect to see here, is a reduction in use of force, reductions in injuries to police officers and citizens alike, reduced emergency department visits and reduced arrests—and an increase in referrals for mental health services," says Bartness. The pilot program began June 12 in the department's Central District, and Crifasi and her team will be evaluating and tracking the calls for service and outcomes, as well as supporting the department to expand the program across the city.

One aspect of her work with the BPD that Crifasi appreciates is that she often sees the results of her research quickly. Last year, for example, when Police Commissioner Kevin Davis asked for an assessment of new recruits' engagement with community members on a pilot foot patrol program, Crifasi created a survey and collected and analyzed the data within a few weeks. Based on the survey finding that new recruits wanted

more instruction on how to initiate conversations with citizens, the BPD modified the foot patrol training for the next class of recruits to include role-playing that very situation. "That's a really nice thing about my public health practice work with the BPD," says Crifasi. "It's making a difference now."

As a gun violence prevention and gun policy researcher, Crifasi naturally focuses much of her work with the Collaborative on guns-illegal guns, that is. Crifasi and her colleagues recently evaluated quantitative data and conducted interviews with people on parole and probation for gun crimes in order to analyze how Maryland's 2013 Firearms Safety Act (FSA) is affecting the supply of illegal handguns in Baltimore. The FSA requires, among other things, that handgun purchasers be fingerprinted and pass a training class in order to obtain a permit. "We heard from a lot of people we interviewed who told us they wanted a gun but they couldn't get one since the FSA," says Crifasi. The National Rifle Association "says gun laws don't work—but we know they do locally. We have increasing evidence that laws making purchasers and

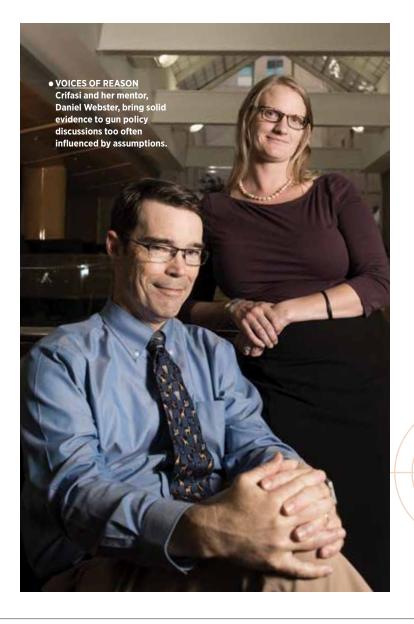
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sellers more accountable reduce the supply of guns easily diverted into the underground market. These laws have a protective effect."

There is also evidence that when laws such as the FSA are repealed, a range of dangerous effects occur. In 2014, Crifasi and Webster published a study showing that the 2007 repeal of Missouri's law requiring anyone purchasing handguns to have a Permit to Purchase (PTP) license, acquired at their local sheriff's office, was associated with a 23 percent increase in annual firearm homicide rates, a 16 percent increase in annual murder rates and a 16.3 percent increase in annual firearm suicide rates. "Every single evaluation we looked at in Missouri showed harmful effects after the repeal," says Crifasi. "This was the first time I'd been involved in a project that so clearly illustrated that when you have good policies you can save lives."

Advocacy groups in Iowa credit that study with helping their 2015 fight against a bill that would have abolished their state's PTP law. Also in 2015, the study figured in a video created by Americans for Responsible Solutions, the advocacy group created by former U.S. Representative Gabby Giffords, to fight a proposed bill that would have done away with background checks in North Carolina. The video featured a former sheriff saying, in a thick Southern drawl, "When Missouri repealed the background check system, homicides shot up." The bill didn't pass.

But in order to reduce violence, says Crifasi, it's not enough just to have sound gun policies. They have to be enforced. And in Baltimore City, for example, data from 2016 show that an estimated 76 percent of sentences for illegal handgun possession were suspended—meaning jail or prison time was put on hold in order to allow the defendant to complete probation. A bill introduced before the Baltimore City Council in July proposed mandatory minimum sentences for first-time gun



offenses. Crifasi doesn't support the proposal, noting that data show that mandatory minimums for first-time gun offenses are not as effective in reducing violence as tackling subsequent offenses—not to mention the social and personal costs of increased incarcerations. In March 2017, she and Webster testified in Annapolis in support of House Bill 1396, which would prevent subsequent offenders from having their illegal handgun possession sentences suspended. The bill did not pass, but Crifasi is adamant that there need to be consequences for having an illegal handgun. Research shows that the number of times an individual has been arrested for illegal handgun possession is one of the best predictors of that individual's subsequent perpetration of violent crime, she says. "When you have a gun, any kind of interaction can become lethal," says Crifasi. "If you can deter people from carrying illegal guns by having swift and certain penalties ... they won't have as easy access to a firearm if they get into a dispute."

Police efforts focused on reducing illegal guns consistently lead to fewer people getting shot, says Webster. Crifasi and Webster are co-principal investigators on a new grant from Bloomberg Philanthropies to study proactive gun law enforcement.

HEN CRIFASI WAS GROWING UP IN Washington state, her father owned a revolver and a pistol. When she was 5 or 6, he showed them to her, saying, "These are tools, not toys." Later, after college, she got interested in bird hunting and clay shooting and bought a shotgun and then a rifle, the only guns she owned until she met her husband, James, who introduced her to the sport of shooting. "Some couples go to the movies," she says. "We go to the range." They also play the first-

person shooter video game Call of Duty, at which Crifasi regularly beats her husband, a fact she attributes to both skill and extreme competitiveness. "I only have fun when I win," she says.

Crifasi bought her first handgun in April 2015 and has since bought two more, most recently a Glock 9mm, which has less kick than her compact semi-automatic pistol. "Guns are like tattoos. You get one, you want more," she says. (She has nine tattoos.)

And yet guns are not like tattoos in one key way: Guns kill. Crifasi's awareness that a piece of technology she uses for sport and protection is an instrument of violence serves as the basis of her code as a gun owner, which is that owning firearms comes with a responsibility to make sure those firearms don't harm innocent victims. That means taking precautions to store her guns safely she and her husband each have a safe on their side of the bed. Inside that safe, which is opened with a code known only to the gun owner (not each other), is a gun and a magazine. Crifasi's other two handguns are stored unloaded in a different safe, with the ammunition stored in a separate locked container. When Crifasi's stepchildren—ages 9 and 11—invite a friend over for the first time, she tells the parents, "I want you to know we have guns in the house and they are stored safely."

Crifasi believes many gun owners living in the 31 percent of American households where a gun is present live by a similar code—and that connecting with them offers a way around the pro-gun/anti-gun duality that dominates discussions of gun policy. What that means, Crifasi says, is gun policy researchers "should start talking to the people we're talking about."

But it's not easy. In 2015, she and a Johns Hopkins trauma surgeon fellow traveled to a Dallas gun show to recruit focus group participants in preparation for the Center's national survey examining gun storage practices

How a lack of funds translates to inadequate research on gun violence in America.

T'S A SIMPLE EQUATION. Cassandra Crifasi describes the main challenge she and her colleagues face at the Johns Hopkins Center for Gun Policy and Research this way: "The amount of funding gun violence prevention and gun policy research receives from the federal government doesn't match the burden of mortality and morbidity caused by gun violence in this country."

The cause of the problem

is less simple to articulate. says Daniel Webster, director of the Center. "Many people believe Centers for Disease Control is prohibited from funding gun policy research because of the Dickey Amendment," he says. "That's a misunderstanding."

The Dickey Amendment, passed in 1996, mandates that "none of the funds made available for injury prevention and control at the Centers for Disease Control and

Prevention (CDC) may be used to advocate or promote gun control." The amendment was introduced after the National Rifle Association lobbied Congress in response to a CDC-funded 1993 study that reported that guns in the home were associated with increased risk of homicide in the home

Webster explains that the lack of funding is due less to the Dickey Amendment itself than to its implications. "Clearly, at CDC 20 years ago," he says, "they got the message that if you fund research that really angers the gun lobby, you risk substantial cuts to your budget."

Without federal funding, there are no training grants to fund doctoral students and postdocs in gun policy research like there are in other injury prevention and public policy fields, says Crifasi. That keeps the

field small—she estimates there are only 30 dedicated gun policy researchers in the country. Additionally, Crifasi says, the NIH offers no K awards (which provide significant career development funding for early-career researchers) in the field of gun violence prevention.

Besides the scarcity of funding, both Crifasi and Webster say the federal government hampers the collection and distribution of data that could significantly enhance the understanding of gun violence. "There's scant research on underground gun markets and how those underground gun markets differ in places where gun laws are relatively strict versus places with pretty lax laws," says Webster, a fact he attributes to Congress "bottling up" data in response to pressure from the NRA. Crifasi says the lack of data

on the incidence of nonlethal shootings, a result of the FBI aggregating that data into a general category of aggravated assault, "means we only have the tip of the iceberg of gun violence in this country. We have more and more people dying and experiencing injuries from gun violence every year, and we're still having problems getting basic research done because we can't get the data or the funding." -LW

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among gun owners. In the next breath, they said, "We're gun owners, and we want to learn from you." Still, she says, "We got a lot of 'no's' when people heard we were from the Bloomberg School." Crifasi and her colleagues persevered and got enough participants for the focus groups. They completed the national survey in 2016.

"One key thing that really stood out from the survey was the idea of responsibility," says Crifasi. "Many gun owners are meticulous about safe storage and adamant they won't sell a gun to someone who doesn't have a permit or won't sign a bill of sale. It doesn't matter to them that the law doesn't require it. They think it's the right thing to do."

The other key takeaway was that "credible messengers" are essential to any public health campaign related to guns. For gun owners, credible messengers include law enforcement, hunting and outdoors groups, active duty military and the National Rifle Association—not academics. That means researchers like Crifasi need to partner with advocacy groups to get their findings to gun owners, like what happened when that retired North Carolina sheriff cited Crifasi and Webster's Missouri study in the 2015 video ad.

Credible messengers are crucial to challenging the narrative created by the NRA, says Crifasi. For example, she says, "The NRA has created the narrative that gun violence is an urban problem, that since 'bad guys' have guns, 'good guys' need guns." But the truth is that two-thirds of all gun deaths are suicides—a fact that Crifasi says shocks every audience she addresses. Guns are the most lethal method of attempting suicide, and those at greatest risk of suicide by gun are older white males—the very people the NRA encourages to have guns in the home. And while the NRA remains resistant to any policy requiring permits or registry, research shows the requirement to get a permit has a "delaying effect" that can reduce the incidence of suicide by gun, says Crifasi. "The NRA doesn't want these statistics to be known because it doesn't fit their story of 'bad guys with guns."

Fighting against the hyperbole and misinformation is "like going up against a brick wall sometimes," she

says. And since funding for policy research is extremely limited in the U.S. (see sidebar, page 36), it can often feel like a David and Goliath battle: a small group of academics taking on one of the most powerful industries in the nation. As Webster says, "The gun industry in America is uniquely powerful."

RIFASI AND HER HUSBAND RECENTLY completed the process to get concealed carry permits in Utah and submitted the paperwork to be approved for permits in Florida. "I did it because I wanted to see what the training is like, what the criteria is. I don't anticipate carrying a concealed weapon," she says. That's because, as a researcher, she knows the data show that states with lenient concealed carry laws have higher rates of firearm violence. And, as a gun owner, she doesn't feel confident she'll be able to hit her target in a crisis situation, despite her bimonthly shooting range sessions.

"When I joke about wanting to be ready when the zombies come, it's really a reflection of my desire to be able to hit my target—not someone else—if my life or another's life is in danger," she says. That's part of her code as a gun owner.

One night in 2015, the family dog came into the bedroom where Crifasi and her husband were sleeping and nudged them awake. "We heard something downstairs and called the police," says Crifasi. "We stayed on the line with them while James got out his firearm and loaded it." As soon as the police arrived, James unloaded the gun and locked it up, she says.

They later learned the intruder was a guest at their next-door neighbor's birthday party who was so drunk he didn't know he was trying to enter the wrong house. It's funny in retrospect, but at the time, says Crifasi, "it was scarier than crap."

That night, it wasn't a zombie. It was a fellow human. Crifasi was very glad to have a gun in the house for protection, and very glad not to use it.