American Gun Violence & Mental Illness: Reducing Risk, Restoring Health, Respecting Rights & Reviving Communities

Jeffrey W. Swanson & Mark L. Rosenberg

Intentional injuries claimed nearly two hundred lives every day in the United States in 2020, about two-thirds of them suicides, each a story of irretrievable human loss. This essay addresses the complex intersection of injurious behavior with mental illness and access to firearms. It explores what more can be done to stop gun violence while respecting the rights of lawful gun owners, preserving the dignity of persons with mental illnesses, and promoting racial equity. Strategies to prevent firearm injury in the United States are uniquely conditioned by a constitutional right to bear arms, the cultural entrenchment and prevalence of private gun ownership, and strident political disagreement on regulatory solutions to stem gun violence. Broad implementation of a range of complementary policies is needed, including community-based programs to address the social and developmental determinants of violence, improved access to a continuum of mental health services, firearm restrictions based on behavioral indicators of risk (not mental illness, per se), licensing for firearm purchase or ownership, comprehensive background checks for firearm purchase, and supply-side approaches to interrupt illegal firearm markets.

In the summer of 2022, following a pair of highly publicized mass-casualty shootings in upstate New York and West Texas, a bitterly divided United States Congress responded to a groundswell of public outrage and forged a path to consensus on the first major piece of gun violence legislation in over twenty-five years.[1] After decades of federal dithering on gun violence, lawmakers enacted a statute that (among other things) promotes the temporary removal of firearms from people at high risk of suicide or violence against others, expands background checks with a waiting period for gun buyers under age twenty-one, and toughens penalties for illegal gun trafficking. But these provisions were wrapped in a bill that makes no mention of firearms in its title – the Bipartisan Safer Communities Act – and designates the large majority of its $13 billion in funding for expanding

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mental health services in the community and in schools.[2] Why did lawmakers think gun violence and mental illness had to be addressed together in a bill about community safety, as if they were the same problem? And how did we get to that point?

This essay examines the prevailing assumption that mental illness and violence are strongly interconnected, and that the key to reducing gun violence is therefore to reinvigorate our nation's failing public behavioral health care system with new capacities to identify, confine, and treat mentally ill people who are potentially violent. There is no question that more effective and accessible mental health services are sorely needed, especially in schools and many neglected communities. If appropriately channeled, the new federal funding could be a welcome resource for that purpose. But while improvements in mental health services may prevent some gun suicides, we argue that such improvements will do little, by themselves, to stem the tide of firearm homicides. Mental illness and gun homicides are two different public health problems that intersect on their edges. Recognizing them as such allows us to see that a broad set of interventions, policies, and legal tools is needed to address the upstream social determinants as well as proximal causes of gun violence – to mitigate its devastating consequences for individuals and communities – but also, and separately, to improve outcomes for people with serious mental illnesses. We advocate and know that it is possible to use science to identify effective, equitable, and feasible ways to reduce gun violence while respecting the rights of lawful gun owners, and to do so without adding to the burden of stigma that people with mental illnesses often bear when others regard them with misplaced fear and scorn.

What is the nature of the problem, and why has it been so intractable to policy solutions? Despite increasing public concern over the nation's long-running epidemic of gun violence, federal officials have largely been unable to act effectively to limit the death toll. The rate of firearm-related mortality increased 45 percent between 2010 and 2021.[3] Efforts to prevent gun violence have been stymied by an intensely politicized disagreement over the very nature of the problem to be solved: Is gun violence mainly about "dangerous people" or "dangerous weapons"? How that definitional question is framed and answered tends to bifurcate policy choices into those that restrict access to firearms and those that restrain the behavior of people perceived to threaten public safety – including, importantly, people with mental illnesses who are so often stereotyped as prone to violence and scapegoated for mass shootings. We argue that policy options that force such a dichotomous choice are unnecessary and counterproductive. Rather, both approaches are important, and even politically feasible in combination, as the Safer Communities Act illustrates. In what follows, we examine dimensions of both problems: gun violence and inadequately treated men-

tal illness in the community. We discuss how these problems are related and not related, and highlight critical opportunities to implement a range of complementary, evidence-based solutions.

What are the dimensions of gun violence in the United States? More than 1.7 million people have been injured by firearms within the borders of the United States since the beginning of the twenty-first century, and more than 700,000 have died, a total surpassing the combined American military combat death toll of World War I and II combined.[4] Fifty-nine percent of those gun deaths were suicides, 37 percent were homicides, and the remaining 4 percent were attributable to law enforcement actions or injuries that were unintentional or of unknown intent. Mass shooting fatalities – incidents in which at least four people are murdered with a firearm – terrify the public and galvanize media attention, but they account for less than 1 percent of gun homicides. On the day of any mass shooting that claims four or more lives, an average of 124 others perish from firearm-related injuries in the United States.[5] Circumstances surrounding these deaths are diverse, ranging from suicides to gang shootings, domestic violence incidents, and arguments gone bad between impulsive, intoxicated, armed young men in the middle of the night. This is the drip, drip, drip of quotidian gun violence in America.

We do not mean, in any way, to trivialize mass shootings with this relative comparison of lives lost. Indeed, the impact of mass shootings goes far beyond their death toll. A 2019 national survey by the American Psychological Association found that 71 percent of U.S. adults reported experiencing fear of mass shootings as "a significant source of stress in their lives," causing one out of three people to avoid certain public places.[6]

Over the past two decades, while chronic disease mortality declined substantially, the gun suicide rate increased by 17 percent and the gun homicide rate by 57 percent.[7] What is different about firearm-related violence, and why does it seem so refractory to public health experts' efforts to solve the problem? Why are we not prioritizing public resources to address gun violence in any way commensurate with the fiscal and social costs that the problem represents? The aforementioned new legislation appropriates $13 billion – not trivial – to a public health problem that costs our society an estimated $557 billion each year.[8] This total includes costs to the health care system, the criminal legal system, lost productivity and opportunities, and an attempt to place a dollar value on the lingering distress and void that victims of gun violence leave in the emotional and social lives of their loved ones and communities. There are additional costs to a great number of other people who may not have personally known victims of violence but suffer psychological trauma and high levels of anxiety simply from living in a community marked by daily violence.

What are the dimensions of serious mental illness as a public health problem? Approximately fourteen million adults in the United States suffer from a serious mental illness that causes a functional disability in one or more important areas of life activity.[9] These are severe health conditions such as schizophrenia, bipolar disorder, and recurring major depression that impair the brain's capacity to reason and regulate mood. They tend to strike young people in their late teens or twenties, often curtailing their opportunities for educational attainment and employment, and wrecking their social relationships. To have some chance at recovery and achieving their human potential, people afflicted with these disorders typically need specialized interventions, treatment, and support over an extended period. For some, their needs require services across a continuum of care, from case management, intensive outpatient treatment, and pharmacotherapy to periodic but timely hospitalizations and longer-term psychosocial rehabilitation.

That one out of three people with a serious mental illness got no treatment at all in the past year – an estimated five million total – is a tragedy and nothing short of a national scandal.[10] These are some of the most marginalized and disadvantaged members of our society, often friendless and estranged from their families, left to navigate alone a public system of care that is fragmented and overburdened, where barriers to access loom large and the professional work force is far too thinly spread. How did this happen?

In the middle of the twentieth century, one-half million adults with serious mental illnesses were housed in large state mental hospitals throughout the United States, under generally dismal conditions. They were often confined against their will and for lengthy periods of time, many of them subdued by high-dose chemical regimens of major tranquilizers and neuroleptics. All that has changed. Today, less than one-half of 1 percent of adults with serious mental illness (about forty thousand people) are treated in state psychiatric hospitals.[11] The need for inpatient psychiatric beds far exceeds the supply.[12] Many adults who experience a serious mental health crisis spend days boarding in an emergency room with little treatment while they wait for an inpatient psychiatric bed to become available.[13] Approximately one hundred thousand are living in homeless shelters or on the streets.[14]

The majority of these unfortunate members of our human community are no more dangerous to others than anyone else. But they might as well be, because most adults in the United States believe that mentally ill individuals are violent, and people in general (along with the politicians they elect) tend to act on what they believe to be true.[15] This often means supporting policies that resort to coercive and punitive interventions to remove mentally ill individuals from society, without due regard for their dignity and basic humanity. An estimated 740,000 people with mental illnesses are incarcerated in state prisons and local jails.[16] On any given day, more people with disabling behavioral health conditions can

be found in our biggest city jails than ever inhabited the largest asylums in the mid-twentieth century.

The causes of the dramatic historical shift in the way our society has treated (or abandoned, more accurately stated) people with mental illnesses are numerous and complex.[17] Scholars have proposed several reasons, including the discoveries in the 1950s of new pharmacotherapies that promised (prematurely, as it turned out) definitive relief from psychiatric symptoms with minimal outpatient medical management; the withering sociological and humanitarian critiques of so-called "total institutions" in the 1960s;[18] the civil libertarian reforms of involuntary commitment laws in the 1970s – disqualifying all but the "imminently dangerous" from the hospital care that many still needed and leaving them to "rot with their rights on;"[19] the divestment and devolution of centralized public mental health authorities with the advent of managed care and privatization of behavioral health services in the 1980s;[20] the continuing disappearance of subsidized and low-cost housing in many of our biggest cities;[21] and epidemic waves of illicit drug use and a misbegotten policy of mass incarceration in the 1990s, 2000s, and beyond.[22] All of these factors together contributed, in complex and intertwining ways, to a phenomenon that is often referred to elliptically as "deinstitutionalization," but which amounted to a cruel betrayal of people with serious and disabling mental illnesses.

This is the sad state of affairs that many politicians and pundits presumably are referring to when they respond to mass shootings by saying, in essence, "Fix mental health." Texas Governor Gregg Abbott exemplified this view in his statement following the massacre of school children in Uvalde in 2022:

> We as a state, we as a society, need to do a better job with mental health. Anybody who shoots somebody else has a mental health challenge. Period. We as a government need to find a way to target that mental health challenge and to do something about it.[23]

Abbott's statement, while resonating with public opinion and widespread fear of the mentally ill, collides with empirical data. The vast majority of people with serious mental illness are not violent toward others. Only an estimated 3 percent of gun homicides are perpetrated by people with serious mental illness, and as we discuss in more detail later, 4 percent of all violent behavior risk is attributable to serious mental illness in multivariable analysis.[24] It is not that mental illness poses no relative increased risk of gun violence at all, but it is not the place one would start to reduce gun violence.

Still, it is noteworthy that Abbott's blanket statement about people who shoot others refers to "mental health challenges," not necessarily serious diagnosable mental disorders. It stands to reason that many, if not most people who shoot to kill another human being are experiencing, at the time, negative emotions antithetical to a state of mental well-being: feelings of anger, fear, anxiety, frustration,

resentment, isolation, hopelessness, or despair. These fall on the extreme end of the spectrum of normal human emotions that most people might experience at some points in their lives. Psychotherapy or pharmacotherapy may help some people who experience distressing and destructive feelings. In 2020, one in five adults received some mental health treatment in the past twelve months, including 17 percent who had taken medication for their mental health and 10 percent who received counseling or therapy from a mental health professional.[25] But we do not have a behavioral health care system that is designed, organized, and financed to deliver interventions to even a fraction of all the people who experience undesirable emotional states. Even if we did, it is far from clear that currently available interventions would work well enough, and for enough of the people at highest risk, to expect to make a dent in gun violence. Meanwhile, the types of psychopathologies that our mental health system is mostly designed to treat contribute very little to the problem of gun homicides.

What causes gun violence: dangerous people or dangerous guns? How does the answer to that question constrain policy solutions, and is it the right question? At its simplest level, gun violence requires two components: injurious behavior and access to a firearm. The perception that gun violence is caused primarily by one of these ingredients or the other creates an explanatory conflict that has come to characterize our nation's highly politicized cultural divide over private rights and public safety. But finding our way to real solutions requires us to move away from this either/or perspective. In our view, both ingredients are important and even complementary concerns. Unfortunately, discussion of gun policy in the public square has become so polarized that many see only a dichotomous choice. To the right of our political center, gun rights advocates tend to view even limited gun regulations as a slippery slope that will lead to all civilians losing their guns. To the left, public health law scholars argue that government should play a major role in regulating the public's access to firearms. This view underlies safe storage requirements, the restriction of guns in sensitive places, disqualification of people at risk of harming themselves or others from possessing guns, giving law enforcement officers and judges the clear legal authority to remove guns from people who behave dangerously, and the legal prohibition of certain types of guns and ammunition.

The argument for gun regulation assumes that there will always be some people in the community at risk of harming others at certain times, but we cannot predict or control that risk with any degree of precision. Therefore, the argument goes, we should try to minimize the catastrophic damage that such behavior can do when potentiated by a firearm, by restricting access to the most lethal technologies, for certain people, at certain times and places. But comprehensive regulatory strategies to prevent firearm injury in the United States are uniquely con-

strained by a constitutional right to bear arms, the fact that four out of ten Americans live in a household with a gun, and the degree to which the American public is strongly divided between those committed to gun rights and those committed to gun control.[26] Thus, while many other advanced countries have successfully avoided a more serious gun violence problem by broadly restricting legal access to firearms in their populations, U.S. policymakers have had to focus selectively on prohibiting certain groups of putatively dangerous people – such as those convicted of a felony or involuntarily committed to a mental hospital – from purchasing or possessing guns.[27] Having relied on this approach for more than fifty years, the United States still suffers with a per-capita firearm fatality rate that is more than five times higher than Canada's, eight times higher than Denmark's, twelve times higher than Australia's, fifty-three times higher than the United Kingdom's, and 203 times higher than Japan's gun death rate.[28]

Clearly, policies that rely on point-of-sale firearm prohibitions for people with a mental health adjudication or criminal record have not been enough to reduce gun violence in America. Moreover, the institutions responsible for determining whether someone has a gun-disqualifying record – mainly the criminal legal system and the public sector mental health care system – operate in the long shadow of America's legacy of racial discrimination. Unsurprisingly, gun restrictions fall disproportionately on communities of color, as does the burden of gun violence itself.[29] Thus, targeted categorical restrictions on who can purchase a gun from a licensed dealer have not only failed to solve America's gun violence problem, but arguably have perpetuated racial inequities.[30] Gun violence prevention policy in the United States faces the triple challenge of saving lives, respecting individuals' constitutional rights, and promoting racial justice – and must accomplish these goals despite stiff political headwinds.

An evidence-based approach to gun violence prevention is specifically limited by the U.S. Supreme Court's interpretation of the Second Amendment, and by the state of our knowledge about which policies, legislation, and programs are most effective in both protecting the rights of law-abiding gun owners and reducing gun violence. In *D.C. v. Heller* (2007), the Court held that individuals, not just standing militias, have a constitutional right to possess firearms for personal protection in the home.[31] In *Bruen v. New York Pistol and Rifle Association* (2022), the Court substantially expanded gun rights by declaring that it was unconstitutional for a state to require an applicant for a concealed-carry license to show they had a good reason to walk around with a handgun; rather, they have a right to do so, if they are not otherwise prohibited.[32] Justice Clarence Thomas's opinion for the majority thus limits states' ability to craft discretionary concealed-carry licensing schemes. It also requires lower appellate courts going forward to consider only constitutional "text, history, and tradition" as the criteria for deciding Second Amendment challenges to states' existing gun restrictions. This could limit op-

portunities for public health science to weigh in to help courts decide whether gun-related laws today are narrowly tailored or they serve a compelling government interest (such as saving lives).[33]

The Court's opinion aligns with libertarian values on the political right, marked by a general aversion to government infringement into private life and the belief that individual moral actors are solely responsible for the consequences of their bad choices. This view tends to bifurcate the population into "good people" (us) and "bad people" (them). The bad people cannot be expected to abide by gun laws, and the good people do not need such laws. According to this view, the main effect of gun control laws is to restrict good people's access to the protective weapons they need to defend themselves from the bad people. The corresponding policy solution is to have fewer laws restricting good people, and fewer bad people in the community.

The narrative that equates gun violence and mental illness is an important example of this approach. In his immediate response to a mass shooting in 2019, former President Donald Trump proposed to address gun violence by building more psychiatric hospitals in which to confine the "crazy people" that he assumed were always responsible for mass shootings: "I think we have to start building institutions again," he said, "because you know, if you look at the '60s and the '70s, so many of these institutions were closed, and the people were just allowed to go onto the streets. . . . We can't let these people be on the streets."[34]

In his view that America's gun violence problem is about mental illness, not guns, the former president has prominent company. In 2018, after seventeen people were shot to death in a high school in Florida, Republican Senator from Iowa Joni Ernst stated: "The root cause is not that we have the Second Amendment. It is that we're not adequately addressing mental illness across the United States. We need to focus on that."[35] The next year, after twenty-two people were shot to death at a Walmart in El Paso, Texas Governor Gregg Abbott again responded by saying, "Bottom line is mental health is a large contributor to any type of violence or shooting violence."[36] And putting this view in the most succinct and provocative way, author Ann Coulter stated, "Guns don't kill people, the mentally ill do."[37]

Are they right? And how would we know? If mental illness were a driving cause of gun violence, we might expect the firearm fatality rate to be higher in states with less public funding for mental health services, fewer psychiatric beds per capita, and a higher estimated prevalence of untreated mental illness in the community. It is not. Instead, gun-related homicide and suicide rates tend to be higher in states with more guns per capita and weaker gun laws.[38] At the same time, it would be a mistake to conclude that mental health in the population is totally unrelated to gun violence; as we have suggested, most people who intentionally use a firearm to injure another person or themselves are not paragons of mental well-being. But they probably have never been involuntarily committed

to a psychiatric hospital and would not be legally restricted from owning a firearm on the basis of a mental health–related adjudication record. We need better criteria.[39]

The case of the shooter in Parkland, Florida, illustrates this problem. It is clear that the shooter had concerning problems and risk factors for violence in his past, but it is far from clear that he would have qualified for a gun-disqualifying mental health adjudication.[40] That is because the federal and state criteria for denying a gun purchase are not only overbroad, but too narrow. While many people who cannot legally buy guns would pose little risk of harm even if they could, many who actually do pose a risk – people with impulsive and destructive anger traits, for example – have no record that would deny them a firearm.[41]

Analyses of mass shooters suggest that the perpetrators often suffer from social, emotional, and behavioral difficulties, but most have not been hospitalized against their will, nor have they been given a diagnosis of serious depression, bipolar disorder, or a thought disorder. Frequently, they have character disorders and a pattern of escalating risk marked by "changes in behavior, demeanor or appearance, uncharacteristic fights or arguments, and telling others of plans for violence, a phenomenon known as 'leakage.'"[42] They typically do not have the sorts of mental health diagnoses that tend to characterize involuntarily committed psychiatric patients who thereby lose their gun rights.[43]

Sometimes, legally mandated outpatient psychiatric treatment – either in the form of a civil court order or a condition of a criminal case diversion – can help to leverage access to intensive services for people whose mental illness has affected their ability to recognize their own need for treatment and to comply with recommended treatment, resulting in a deleterious pattern of repeated involuntary hospitalizations, arrests, or violent behavior.[44] Outpatient civil commitment and analogous legal dispositions also typically confer a firearm restriction under federal or state law. But in general, we do not have a system or procedures in place to identify high-risk individuals who have no record of a mental health adjudication or felony criminal conviction. We need criteria that are sensitive, specific, and comprehensive enough to help identify individuals at high risk of violence and ensure that they cannot purchase and possess firearms.

If we could develop the capacity to identify persons with escalating patterns of risk, and a fair and effective legal process to prevent such persons from acquiring guns, we would be better able to prevent gun homicides and suicides. Such a system requires public participation in gathering information about individuals at risk of harming themselves or others. While certain potential problems arise when enlisting the public in surveillance of their neighbors, there are also plenty of examples in which the public plays an important role in public health interventions.[45] This is the model underlying the implementation of extreme risk protection orders (also known as red flag laws), which have been shown to be effective in

preventing firearm-related suicides in Connecticut and Indiana, where laws have been instituted at the state level.[46] The effectiveness of widespread public participation in the Air Force suicide prevention program is another example. This intervention consisted of instructing every single person in a targeted unit – from officers, enlisted personnel, and their families to service providers like beauticians, barbers, and commissary staff – to be on the lookout for anyone who seemed depressed, despairing, or hopeless. All individuals who appeared to have these symptoms were referred to mental health professionals for screening and interventions where appropriate. This intervention in which "the public" was mobilized resulted in previously unheard of reductions of suicide of 25–40 percent.[47]

Negative and stigmatizing messages about the supposed dangerousness of mentally ill people are destructive and insidious, in part because they resonate with what a large proportion of the public already believes. Data from the 2006 General Social Survey suggest that Americans believe that people with schizophrenia are especially dangerous. After reading a vignette about an individual with common symptoms of schizophrenia, 60 percent of respondents reported that they viewed the described individual as likely or very likely to be dangerous toward others, even though the vignette description did not include any information about violent behavior or characteristics.[48]

Fear and social opprobrium directed toward "the mentally ill" are rooted in Western cultural-historical beliefs going back to ancient times. People who behave in extremely strange ways – for example, those who appear to see invisible visions and hear inaudible voices, who hold bizarre beliefs or succumb to extreme emotions incongruent with the shared experience of others – have often been treated with fear, have been socially ostracized, and thought to be in need of redemptive or miraculous healing. Biblical narratives about demonic possession converge with modern descriptions of psychotic illness. It stands to reason, then, that mental illnesses would serve as a convenient scapegoat for gun violence, perhaps especially for those people with more traditional and conservative habits of thought.

Alternatively, the perspective from the political left has maintained that gun violence prevention should focus mainly on guns, even while efforts to pass gun-related legislation at the federal level have been stymied by the political power of gun rights advocates, as led and mobilized by the National Rifle Association (NRA). As a single-issue lobbying group, the NRA has been most effective in mobilizing resistance by spreading the myth that any data collection, research, or policy discussions around gun control will lead to all civilians losing their guns. The NRA has also been effective in convincing gun owners that their identity as gun owners is closely linked to their identity as someone who cares about protecting their family and their country. The NRA conducted a campaign to stop all federal funding for gun violence prevention research for more than twenty years, with the

result that there remain large gaps in our scientific knowledge about what causes and how to prevent gun violence.[49]

What do we know about mental illness and gun suicides? Guns were used in over half the suicides in the United States in 2020 – 24,292 out of 45,979 suicide deaths – and suicides account for about six out of ten firearm-related fatalities.[50] Mental illness is a strong contributor to suicide, but suicide is caused by many other factors as well and often cannot be prevented by mental health treatment alone. Access to firearms is one of the most important modifiable determinants of suicide mortality in the United States. Evidence-based firearm restrictions and policies that limit gun access to people who pose a clear risk of intentional self-harm could prevent many suicides without infringing the rights of lawful gun owners.[51]

Epidemiological research has demonstrated that the relative risk of suicide is eight times higher in persons with serious psychiatric illnesses and substance-use disorders.[52] Conversely, populations with greater access to mental health care have much lower suicide rates.[53] These findings suggest that the most effective suicide prevention approaches will consist of finding high-risk persons with mental health problems and helping them to get appropriate treatment. This strategy would include protocols for screening and risk assessment for suicide in schools and clinical settings, educating the public to recognize very early signs of depression, hopelessness, or suicidal intent in others, and how to refer them to professionals for help. This approach has proven effective to a certain degree in certain settings, but behavioral health treatment is not always effective and it fails to prevent many suicides.[54] The suicide rate among patients recently discharged from psychiatric hospitals is one hundred times higher than the rate in the general population.[55] Analysis of data from the National Violent Death Reporting System finds that 27 percent of those who died from suicide were currently receiving treatment for a mental health or substance abuse condition at the time of their suicide.[56]

There are many risk factors for suicide that are not related to either mental illness or addiction problems and these are not within the purview of standard mental health treatment. Averaging many different studies, the proportion of suicide risk that is attributable to mental health disorders is about 57 percent for males and 77 percent for females; the remainder of the risk is attributable to social, economic, circumstantial, and other factors that are not directly connected to psychopathology.[57] Interventions that address access to lethal means have untapped potential to prevent a large number of suicide deaths.[58] Most people who try to end their own life get a second chance, but fatality rates vary dramatically by the method of intentional self-harm. People who use firearms rarely survive; almost nine out of ten die.[59] In the United States, even though men have lower rates of

depression, they are nearly four times more likely than women to die of suicide, and greater access to firearms is one reason for this.[60] Gun-safety and safe-storage practices can thus have a beneficial impact on suicide prevention, especially in the male population. The challenge is to keep guns out of the hands of people at highest risk of suicide, without unduly infringing the Second Amendment rights of many gun owners who are unlikely to harm anyone.

What do we know about mental illness and interpersonal violence? Are mental illness and interpersonal violence causally related, and if so, how? This is a simple-sounding question with a slippery answer, one that varies widely with the elastic definitions of its primary terms.[61] If we define mental illness broadly to include every pathologized pattern psychiatrists have ever characterized as conditions for which people might need their professional help – distorted thoughts, dysregulated moods, dysfunctional behavior, destructive relationships, deviant personalities, or debilitating substance use – then serious violent behavior itself can easily stand as a defining indicator of some form of mental illness. The argument goes, anyone who would shoot to kill another person must not be thinking clearly and must be mentally ill.

The most salient example of this definitional tautology is the common construal of any public mass-casualty shooting as the act of a sick mind. If we believe this to be literally true (in a clinical sense), we must ignore or deny scientific studies showing that most mass shooters do not, in fact, have a major diagnosable psychiatric disorder. Instead, they tend to be angry, alienated, resentful young men in the thrall of a deviant cultural script, and with easy access to an instrument designed to kill multiple people in seconds.[62]

A much different answer is obtained when our questions define mental illness and violence independently and more precisely. For example, by how much, if at all, do the symptoms of certain well-described psychiatric illnesses – schizophrenia, bipolar disorder, and major depression – statistically increase the likelihood that people with these illnesses will intentionally engage in violent behaviors toward others within a discrete period of time? Will they hit, push, shove, kick, choke, or throw something at another person, or use a weapon like a stick, knife, or gun to harm or threaten someone? And how much does risk of violence, defined in this way, statistically increase in the presence of excessive alcohol and illicit drug use, whether alone or in combination with serious psychiatric conditions?

The first empirical answers to these questions came more than three decades ago from the landmark National Institute of Mental Health (NIMH) Epidemiologic Catchment Area (ECA) study.[63] A careful understanding of the study's groundbreaking design and method is important to seeing why its powerful findings mattered then, and still matter now. Research teams conducted structured psychiatric diagnostic interviews with more than ten thousand randomly selected adults

living in Baltimore, St. Louis, and Los Angeles and surrounding areas. The ECA researchers conducted a lengthy confidential household interview with each selected participant, first gathering systematic information about the presence or absence of symptoms of specific behavioral health disorders as codified by the American Psychiatric Association's diagnostic manual.[64] After the data were assembled, a computer algorithm was used to analyze each respondent's symptom pattern and mimic a trained psychiatrist's diagnostic assessment; a putative lifetime diagnosis of one or more psychiatric disorders was assigned to those who had ever met the corresponding clinical criteria, a past-year diagnosis to those who qualified with active symptoms in the previous twelve months.

The ECA study's interview also included questions about whether the participant had ever engaged in specific violent behaviors, and how recently. The behaviors included getting into a physical fight while drinking, hitting or throwing things at a domestic partner, hitting a child hard enough to cause a bruise or require medical attention or bedrest, engaging in physical fights that came to swapping blows with other people (not a domestic partner or child, irrespective of drinking), and using a weapon such as a stick, knife, or gun in a fight.

Importantly, the study's community-representative random sampling design avoided the selection bias inherent in two kinds of previous research: retrospective studies of violence in psychiatric patients found in hospitals, secure forensic facilities, and intensive community treatment programs; and studies of psychopathology in people arrested or incarcerated for violent crimes.[65] These earlier studies tended to vastly overestimate the connection between interpersonal violence and mental illness in the community, and it is not difficult to see why. They only looked at the very small proportion of mentally ill individuals who had already been identified as violent, or who needed treatment in a confined or supervised setting to mitigate the risk of harm.

The ECA study found a modest but statistically significant association between having a serious mental illness alone (schizophrenia, bipolar disorder, or depression without co-occurring alcohol or drug-use disorder) and committing one or more acts of interpersonal violence in the previous year. Approximately 7 percent of adults with these disorders reported that they had engaged in some minor or serious violent behavior in the previous year, compared with 2 percent of the general population of adults without these illnesses.

To test whether the increased relative risk might be explained by other correlates of violence that could be more common in people with mental illnesses, the researchers conducted a multivariable analysis that accounted for the independent and covarying effects of age, sex, race, marital status, and socioeconomic status (the latter being a composite of information on income, educational attainment, and occupational prestige). The results held up in a controlled model. Stated in terms of relative risk, then, people with serious mental illnesses were about

three times more likely to be violent than those without those illnesses. When respondents with co-occurring substance use disorders were included among those with the aforementioned disorders, the prevalence of any violence went to 12 percent in the past year, and 25 percent ever in the person's lifetime.[66]

But the findings could be viewed another way. The absolute risk in people with serious mental illnesses was very low. While it was true these individuals were three times more likely to be violent than other people, it was equally true that the vast majority – 97 percent – did not engage in violent behavior. Moreover, the ECA data could be arrayed to answer yet another question, and perhaps even a policy-relevant question about violence and mental illness. If we were to succeed in curing all serious mental illnesses (or at least eliminating any excess violence-risk linked to them), how much less violence would we have in society? The ECA data's answer to that intriguing counterfactual question was that violence would go down by approximately 4 percent, and 96 percent of it would remain.

But if not mental illness, then what is the major driver of violence? The ECA project had an answer to that question, too – one that has been confirmed and elaborated in many other studies in the ensuing decades.[67] The analysis showed there is no one cause, no one explanation, and therefore no one solution to the problem. Rather, violence is caused by many factors that interact with each other in complex ways. Much of it is about demographics, resources, and position in social structure. Violence rates are by far the highest in young men with lower incomes, less education, and either no employment or poorly paid jobs with little prestige.[68] What role does hopelessness play in making violence a way to relieve anger and frustration, a way that does not seem to the shooters to come with a particularly high cost? Should our mental health "system" try to find and help people who are feeling angry and hopeless? What would it take to build the capacity for this?

Alcohol and illicit drug use disorders dramatically increase the risk of violent behavior, especially in combination with other risk factors. In the ECA study, approximately 34 percent of the population risk of violence was attributable to substance abuse; there are several reasons for this. Part of the correlation is due to the pharmacological effects of psychoactive substances. Alcohol, for example, is a central nervous system depressant that can alter mood, distort judgment, heighten perception of threat and malevolent intent from others, and disinhibit aggressive impulses. Intoxication may enable otherwise controlled negative affective states – such as feelings of anger, resentment, envy, or jealousy – to find expression in overtly injurious physical acts of violence directed at others. Psychoactive substances may also increase violence-risk in some individuals by exacerbating certain psychiatric symptoms, such as persecutory delusions, which can sometimes motivate instrumental acts of violence as retaliation for imagined victimization.

Problematic substance use can lead to violence by creating extreme conflict in social relationships, and by exposing affected individuals to social networks

such as those involved with illegal drug markets where violence might be normalized. Finally, the nexus of alcohol and drugs and violence can be self-perpetuating, through observed and learned behavior in early development, reinforcement of substance use and violence as a maladaptive response to conflict or economic deprivation, and exposure to environments where these are linked in socially toxic surroundings. We as a country do not have the capacity to treat all those suffering from addiction to alcohol or other drugs. There are, however, compelling arguments – social, economic, medical, and moral – why we should develop that capacity.

A range of effective public policies to prevent gun violence must address both lethal means and the behavior of people at risk – tailoring restrictions on access to guns, expanding access to behavioral health services, and mitigating the cultural, social-economic, and political determinants of using guns in harmful ways. The potential for developing and expanding a complementary, evidence-based approach to both improving mental health and reducing gun violence in the population gives us reason to hope we will one day live in a society with greater community well-being and far less gun violence. A general strategy to reduce the burden of gun violence without infringing on the rights of law-abiding gun owners is to keep guns away from people who should not have them. This is difficult, but not impossible.

There are several parts to the task. First, we need to identify all the people who are already legally prohibited from possessing firearms and ensure that, in fact, they do not have access to firearms, which could be done through comprehensive record reporting, expanded background checks, and tamping down illegal transfers on the secondary gun market. Second, we need to identify people who are at high risk of using guns to harm themselves or others but do not yet (for various reasons) have a gun-disqualifying record and could pass a background check to buy a gun from a licensed firearm dealer. These individuals, too, should be separated from firearms. Reforms are needed in our existing legal criteria for prohibiting guns – especially in some states – so that the restrictions would apply to high-risk individuals such as those convicted of violent misdemeanors, persons subject to temporary domestic violence orders of protection, and those with multiple drunk-driving convictions.[69]

The criteria of mental illness, when further specified and judiciously applied, may be one way to identify high-risk individuals, that is, to the extent that injurious behavior directed toward others or themselves is indeed related to some particular manifestations of mental illness. Examples include suicidal depression, paranoid delusions with homicidal command hallucinations, and posttraumatic stress rooted in violent victimization, especially when these states of compromised mental health are combined with alcohol or other drug intoxication. But we need ways to

focus on the highest risk subjects rather than trying to prevent violence by "fixing the mental health system." If violence-prevention is the primary goal, we should focus narrowly on ways to identify and deliver timely interventions to people at high risk of harming themselves or others, at limited times when they are at their highest risk. Interventions should both provide access to treatment services and remove access to lethal means. For people experiencing a dangerous mental health crisis, extreme risk protection orders (ERPOs) used in conjunction with short-term involuntary hospitalization illustrate how different legal tools can work together to address both the how and the why of a potential suicide.

There are certainly improvements to be made in our behavioral health care system that could reduce vectors of violence in the community, at least indirectly – for example, expanding drug-addiction treatment and certain criminal diversion programs, and fixing the psychiatric bed shortage (or misallocation, poor distribution of inpatient capacity). These efforts could help alleviate several aspects of the problem that are made worse by untreated psychiatric illness: homelessness, mass incarceration of people with serious mental illnesses, and emergency room boarding of acutely ill psychiatric patients. Each of these problems amounts to a domestic humanitarian crisis of its own, in a country that must do far better.

Involuntary commitment criteria may help to select a population at higher risk of gun violence; the existing criteria that include dangerousness to self or others are specific and make sense, as long as there are opportunities for restoration of rights after a suitable period of time has passed to allow risk to subside.[70] But involuntary commitment to a hospital has never been a very sensitive criterion for gun disqualification, and is even less so now, in a world after deinstitutionalization has run its course and we have very low rates of psychiatric hospitalization (whether involuntary or not). Thus, trying to disqualify only such people from purchasing guns will miss the largest group of persons with symptoms of mental illness who go on to commit violent acts. A longitudinal study of 23,292 previously hospitalized, public-sector patients with a diagnosis of serious mental illness in Connecticut reported that 96 percent of violent crimes in the study population were perpetrated by individuals who had never been involuntarily committed to a hospital, a group ostensibly receiving less inpatient treatment and who did not lose their gun rights through the mental health prohibitor.[71] A nationally representative psychiatric epidemiological study described a group of adults with impulsive anger problems and access to firearms, comprising an estimated 8.9 percent of the adult population of the United States. A substantial proportion of these individuals with destructive and uncontrolled anger combined with gun access met criteria for some type of psychopathology (including personality disorders and substance use disorders), but only one in ten had been admitted to a hospital for a mental health problem. The majority with this risky combination of impulsive anger and access to guns would not have lost their firearm rights through involuntary commitment.[72]

A clinical or judicial finding of dangerousness in conjunction with brief emergency psychiatric hospitalization for evaluation should be leveraged to at least temporarily limit a mentally ill person's ability to legally purchase a firearm, irrespective of whether a formal involuntary commitment occurs. Studies suggest that violence-risk in psychiatric patients is not necessarily inherent or persistent but rather a function of fluctuating risk factors that select people into different clinical settings at different moments in the course of their illness. Violence-risk tends to be elevated during times of crisis and is most likely to become apparent in periods immediately surrounding contact with the mental health care system during these crises. Involuntary commitment proceedings tend to occur at such times and result in a legal restriction of firearms. Short-term holds for a psychiatric examination also coincide with crises but, in twenty-eight states, do not affect firearms rights. This is an opportunity for reform.[73]

What reforms are most needed and would work best to prevent gun violence and improve outcomes for people with mental illnesses? The Safer Communities Act was an encouraging step, in that it incorporates interventions and policies that were scientifically investigated and found to be effective. Research can help to design and evaluate interventions that will simultaneously reduce gun violence and protect the rights of law-abiding citizens. Basically, this means keeping guns out of the hands of persons who cannot legally have them but allowing law-abiding citizens to have and use them. Examples of programs and policies that do this include gun licensing, safe storage regulations, enforcement of laws prohibiting gun ownership by persons convicted of domestic violence felonies or misdemeanors, ERPOs or red-flag laws, waiting periods, and uniform background checks without loopholes. Science can also help us find and evaluate more programs and interventions like these.[74]

There should not be a forced choice between suicide-prevention policies that increase the public's access to mental health treatment interventions and those that decrease at-risk individuals' access to firearms. Both approaches have their place and should be complementary. Both approaches should also be designed to target individuals at high risk for shooting themselves or another. Gun restrictions that apply to people with mental illnesses must be narrowly focused on behavioral indicators of suicide risk to avoid stigmatizing people in recovery and unduly restricting the rights of millions of people who pose no elevated risk of harming themselves or others.[75] But crisis-focused behavioral health care interventions are unlikely to substantially curtail the population-level prevalence of suicidal thoughts and self-injurious behaviors. In the interest of keeping more people alive who will inevitably experience the impulse to end their own life, policymakers in the United States should put more emphasis on expanding the use of tailored legal tools to reduce such individuals' access to firearms. The statutory re-

forms summarized below are targeted, achievable modifications to existing constitutionally tested policy templates that could save lives when enacted at the state or federal level.

First, state legislators should expand and sharpen gun-prohibiting legal criteria to better align with risk.[76] This would ensure that a greater proportion of individuals at risk of suicide would not have access to a gun during a season of hopelessness or a moment of intoxicated despair. States should prohibit purchase and possession of or access to firearms for a temporary period of time by persons with a record of a brief involuntary hold for a psychiatric examination. And they should prohibit purchase and possession of or access to firearms for persons with a record of repeated alcohol-impaired driving, because these individuals are very likely to suffer from alcohol-dependence disorder, which is an especially robust risk factor for lifetime suicide risk.[77] State legislators could institute a time-limited gun prohibition – five to ten years – applicable to anyone who acquires a second DUI conviction.[78] This would not prevent such a person from ever feeling suicidal, but it would reduce their access to the most lethal method of suicide and make any future suicide attempts much more survivable.

Second, state legislators should enact and widely implement ERPO laws that enable police officers or, in some states, concerned family members and health care providers to seek a civil restraining order to temporarily remove firearms from a person who is behaving dangerously.[79] The twenty-one states and the District of Columbia that have already enacted such laws could improve them, and those states that have not yet enacted such laws can design and implement them using funds made available from the Safer Communities Act. ERPOs should confer a purchase prohibition in the FBI's background-check database to prevent persons who are behaving dangerously from acquiring firearms. ERPOs should be applicable to persons under age eighteen who meet the risk-criteria specified in the statute. Clinicians should be authorized to petition for an ERPO for their patients who pose a significant risk of harming themselves or others. States should authorize ERPO petitioners to include physicians and other primary care and mental health care providers. States should adopt an innovative policy known as precommitment against suicide (PAS), or voluntary self-enrollment in the NICS.[80] The PAS amounts to a self-initiated, opt-in waiting period for buying a gun, and it could save many lives.[81]

To meaningfully reduce gun violence, more community-based work is needed that is focused neither on guns nor persons with mental illness. When we talk about firearm-injury prevention, we typically consider prevention strategies that are directly tied to individuals who possess firearms, such as safe storage, background checks, ERPOs, licensing, and carrying. From the legal design of gun restrictions to the mechanical design of guns themselves, these are

all clearly important, but we need more. The roots of our gun-violence problem run deeper, and so must our policies to contain and excise it. The roots that need to be examined include the social and economic determinants of gun violence like poverty, racism, discrimination, and lack of access to jobs, health care, and quality education.[82] Evidence-based policies for prevention of community violence include promoting family environments that support healthy development, providing quality education early in life, strengthening young people's skills, connecting youth to caring adults and activities, creating protective environments such as by changing the physical design of communities, intervening to lessen harms and prevent future risk, street outreach, and hospital-based programs for victims and survivors of gun violence. Many of these latter types of strategies have been emphasized by the White House and others as part of their efforts to address community violence.[83] Political strategies to develop bipartisan support for laws and policies such as the Safer Communities Act will, incrementally and over the long term, reduce the gun violence toll.

Ecologist Garrett Hardin first used the term "tragedy of the commons" to describe what happens when individuals have access to a community resource for which they do not have to pay.[84] They tend to take only their self-interest into account and deplete the public resource. For example, if there is a common pasture in a town where families can let their cows graze for free, there will soon be too many cows eating too little grass and the commons will be stripped bare. Alexandra Spiliakos, writing for Harvard Business School Online, aptly describes this phenomenon:

> [Individuals tend to] . . . make decisions based on their personal needs, regardless of the negative impact it may have on others. In some cases, an individual's belief that others won't act in the best interest of the group can lead them to justify selfish behavior. Potential overuse of a common-pool resource – hybrid between a public and private good – can also influence individuals to act with their short-term interest in mind, resulting in the use of an unsustainable product and disregard for the harm it could cause to the environment or general public.[85]

An individual's decision to purchase a firearm for personal protection is a self-interested act that carries little real cost – until the tragedy of the commons eventually follows. When many people in the community feel the same need to acquire their own guns, the purpose of the first individual's self-interested act is defeated. Everyone is less safe when all are armed. More guns will be stolen and resold illegally and used to commit crimes. In turn, more people will feel unsafe and perceive a need to acquire guns. Even more guns will be purchased, and more residents will feel threatened. The U.S. gun industry, the NRA, and a generation of politicians in their sway have capitalized on this phenomenon, to the ultimate detriment of our civil society and at the cost of many lives lost and families and communities damaged by fear and anxiety.

Consider another relevant example: imagine that a single unsheltered person with mental disability appears on a village green, asking for money to survive. Other citizens feel generous and open their wallets. But when many citizens in large urban centers encounter a growing mass of homeless people with untreated serious mental illnesses encamped on the streets and in city parks, everyone feels threatened; eventually, a whole community's sense of security erodes. In that social environment, imagine that a single act of violence occurs and is attributed to a "homeless mentally ill" subway denizen. Public fear escalates as public trust recedes. Media narratives amplify the story and accentuate its resemblance to a culturally entrenched urban myth about violent insanity. Is it any wonder, then, that a mass shooting prompts cries to "fix mental health"? Or that popular state laws authorizing mandatory outpatient mental health treatment – Kendra's Law in New York, Laura's Law in California, and Kevin's Law in Michigan – are named for victims of homicides committed by people with serious mental illness?

The tragedy of the commons helps us understand how the proliferation of guns can erode the social fabric. With this in mind, we must take the measure of gun violence not only on the dimension of public safety, but overall community well-being. For many individuals, guns provide pleasure, affinity with other gun owners, a sense of personal efficacy, and security. But at a certain point, as economist David Hemenway and his colleagues have shown, a large number of guns in a community is associated with increased levels of homicide, suicide, and unintentional injury.[86] These, in turn, bring increased anxiety, fear, and loss. A sense of danger from homeless persons with behavioral health disorders in the community also contributes to increased anxiety and diminished quality of life. The erosion of the social safety net imposes great burdens on many communities. In responding to all these actual and perceived threats, accurate and effectively delivered information can help individuals and communities reduce their risks and destigmatize mental illness.

In moving toward prevention, it will be important to address the social and economic determinants of health that so often result in infectious diseases and injuries taking a disproportionately large toll on the poor and marginalized communities. Lingering racial disparities and inequality in the functioning of our nation's health care organizations, human services and social welfare institutions, and (perhaps especially) in our criminal legal system all reflect our cultural habits of thought as well as political priorities. These are historically entrenched but can be dislodged to make way for serious reforms. To be sure, thoroughgoing change is needed both in social structures and attitudes that perpetuate racial inequality in communities most adversely affected by gun violence. But the very proposed solutions to the problem must also avoid reproducing and reinforcing the patterns of racial inequality already embedded in these systems, such as expanding draconian prison sentences for certain gun-related infractions that are likely to fall heavily on overpoliced and overincarcerated young Black men.

The social and economic determinants of gun violence are complex and long-standing, and they are intertwined with the abandonment of disempowered and marginalized communities. These include people of color and those with serious mental illnesses, but also the legions of traumatized veterans, and the unemployed or underemployed workers now marooned in economically moribund small towns and rural and agricultural communities left behind by global economic development. Urban gun homicide and rural gun suicide are very different problems with distinct causes, yet they echo from common canyons of human despair. We need a different way of approaching these long-standing and complex problems. They are all too often ignored because they have many causes, require multisectoral collaboration, and cannot be solved without a substantial appropriation of public resources. They also take far longer to solve than the length of a politician's term in office: most politicians want to support programs that are likely to yield easily measured and impressive results before they are next up for reelection. In this light, the Bipartisan Safer Communities Act provides a heartening exception to what has been a dismal norm in the bitterly divided politics of our day: that our existing democratic governance structures seem to have lost the capacity to deliver substantial, equitable, and evidence-based solutions to difficult social problems.

Critical policy opportunities are emerging to reduce gun violence and create safer communities with healthier people. To seize these opportunities, we must communicate effectively. How we communicate information about gun violence to legislators and the public is vitally important.[87] We have learned from our country's experience with COVID-19. We now have a range of interventions that might be thought of as "vaccines against violence": firearm licensing, universal background checks, ERPO laws, safe storage, and laws that prohibit persons with records as violent misdemeanants, habitual drunk drivers, or domestic abusers from purchasing firearms. Over time, research can help us identify and test more and more of these "immunizations" against firearm injuries. But we will still need to overcome our own version of vaccine hesitancy. We will have to overcome the myth that research and policy to prevent gun violence will lead to everyone losing all their guns. This is a myth that has polarized our citizens and politicians into two camps: gun rights and gun control. We must develop the evidence base for gun violence prevention, but that by itself will not be enough. With science, we can find those interventions that will both reduce the toll of gun violence and protect the rights of law-abiding gun owners. But vaccines don't prevent illness; vaccinations do. Laws like the Safer Communities Act provide an *opportunity* for effective prevention, but they must be implemented to have an impact. We must draw upon the important lessons from marketing and behavior change to design campaigns that will reach gun owners and gun violence prevention advo-

cates alike, to reinforce the notion that they share a common goal in wanting to reduce the toll of gun violence. We can find ways to do this by working in our homes and our communities.

We need to put the public back into an active role in public health, whether the prevalent affliction to be solved is COVID-19, serious mental illness, or gun violence. Government institutions – even operating at all levels – cannot by themselves do everything necessary for effective prevention. As we saw in the Air Force experiment for suicide prevention, a bigger impact than ever before was achieved by mobilizing and involving the whole community.[88] Solving big problems like gun violence and mental illness require ambitious policies. They also require individual people who care deeply for their families, friends, neighbors, and communities – people who learn to care, perhaps especially, for those they may disagree with. The golden rule provides a good guide. There is a way out of the morass of gun violence in which we currently find ourselves. We remain optimistic that we can solve this problem if we have the courage to act, the moral compass to steer us toward equity, and the wisdom to use science to find those solutions that both reduce gun violence and protect the gun rights provided by our Constitution.

ABOUT THE AUTHORS

Jeffrey W. Swanson is Professor in Psychiatry and Behavioral Sciences at Duke University School of Medicine. He is a Faculty Affiliate of the Wilson Center for Science and Justice at Duke Law School, the Center for Firearms Law at Duke Law School, and the Center for Child and Family Policy at Duke Sanford School of Public Policy. He has published in journals such as *JAMA*, *Health Affairs*, *American Journal of Psychiatry*, *American Journal of Public Health*, and *Law & Human Behavior*.

Mark L. Rosenberg was the Founding Director of the National Center for Injury Prevention and Control at the Centers for Disease Control and Prevention, and the former President and CEO of Task Force for Global Health. He is the author of *Patients: The Experience of Illness* (1980), *Howard Hiatt: How This Extraordinary Mentor Transformed Health with Science and Compassion* (2018), and *Real Collaboration: What Global Health Needs to Succeed* (with Elisabeth S. Hayes, Margaret H. McIntyre, and Nancy Neill, 2010), and editor of *Violence in America: A Public Health Approach* (with Mary Ann Fenley, 1991).

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