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# Mental Illness, Mass Shootings, and the Future of Psychiatric Research into American Gun Violence

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**Abstract:** This article outlines a four-part strategy for future research in mental health and complementary disciplines that will broaden understanding of mass shootings and multi-victim gun homicides. First, researchers must abandon the starting assumption that acts of mass violence are driven primarily by diagnosable psychopathology in isolated “lone wolf” individuals. The destructive motivations must be situated, instead, within larger social structures and cultural scripts. Second, mental health professionals and scholars must carefully scrutinize any apparent correlation of violence with mental illness for evidence of racial bias in the official systems that define, measure, and record psychiatric diagnoses, as well as those that enforce laws and impose criminal justice sanctions. Third, to better understand the role of firearm access in the occurrence and lethality of mass shootings, research should be guided by an overarching framework that incorporates social, cultural, legal, and political, but also psychological, aspects of private gun ownership in the United States. Fourth, effective policies and interventions to reduce the incidence of mass shootings over time—and to prevent serious acts of violence more generally—will require an expanded body of well-funded interdisciplinary research that is informed and implemented through the sustained engagement of researchers with affected communities and other stakeholders in gun violence prevention. Emerging evidence that the coronavirus pandemic has produced a sharp increase both in civilian gun sales and in the social and psychological determinants of injurious behavior adds special urgency to this agenda.

**Keywords:** gun violence, mass shootings, mental illness, psychiatric research, racial justice

Indiscriminate shooting rampages in public places accounted for approximately 0.5% of homicides in the United States in 2019,<sup>1,2</sup> yet an estimated 71% of adults experienced fear of mass shootings as “a significant source of stress in their lives,” causing 1 out of 3 people to avoid certain public places, according to a national survey by the American Psychological Association.<sup>3,4</sup> In their responses to heightened community concerns over the threat of mass shootings, numerous public officials in recent years have pointed to “mental illness” as a simplified explanation for these terrifying acts of violence.<sup>5</sup> The “deranged shooter” narrative resonates with a persistent (if largely false) belief among majorities of adults in the United States: the notion that people diagnosed with serious psychiatric disorders such as

schizophrenia are likely or very likely to be violent.<sup>6</sup> This construction of the problem relies on an elastic and pejorative definition of mental illness and places psychiatrists in an often unwelcome yet strategic spotlight.<sup>7</sup>

On the one hand, the public’s a priori definition of mass shooters as seriously mentally ill invites and reinforces unrealistic expectations that mental health experts should be able to predict and prevent acts of mass violence. It tends to inspire public support for restrictive policies and interventions targeting psychiatric patients.<sup>6</sup> On the other hand, the “deranged shooter” story can give mental health professionals a powerful voice and audience—people look to them for answers and solutions—which translates into opportunities to reframe the debate over what should actually be done about mass shootings in the United States.

What can psychiatrists and other mental health clinicians, researchers, and policy makers do to foster evidence-based solutions to prevent mass shootings, and to mitigate the population risk of firearm injuries in general, without adding to the burden of stigma and social rejection that people who are recovering from mental illnesses may feel when others assume they are dangerous?

Existing scientific evidence paints a complex—if incomplete—picture of the causes of mass shootings and other acts of serious violence. Until recently, a congressional ban on federal funding for most gun-related research has prevented scientists and scholars from conducting the full range of interdisciplinary studies that would provide a better understanding of the problem and point the way to effective solutions.<sup>8</sup>

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In what follows, we outline a four-part strategy for future research in mental health and complementary disciplines that will broaden our understanding of these tragic events and how to effectively prevent them.

First, researchers must abandon the starting assumption that acts of mass violence are driven primarily by diagnosable psychopathology in isolated “lone wolf” individuals, and must rather situate such destructive motivations within larger social structures and cultural scripts. Second, mental health professionals and scholars must carefully scrutinize any apparent correlation of violence with mental illness for evidence of racial bias in the official systems that define, measure, and record psychiatric diagnoses, as well as those that enforce laws and impose criminal justice sanctions. Third, to better understand the role of firearm access in the occurrence and lethality of mass shootings, research should be guided by an overarching framework that incorporates social, cultural, legal, and political, but also psychological, aspects of private gun ownership in the United States; what is needed is a sustained inquiry into how these dimensions might shape the contours of gun violence as a broader public health problem. Fourth, effective policies and interventions to reduce the incidence of mass shootings over time—and to prevent serious acts of violence more generally—will require an expanded body of well-funded interdisciplinary research that is informed and implemented through the sustained engagement of researchers with affected communities and other stakeholders in gun violence prevention. Emerging evidence that the coronavirus pandemic has produced a sharp increase both in civilian gun sales and in the social and psychological determinants of injurious behavior—especially in marginalized communities—adds special urgency to our agenda.<sup>9</sup>

Acts of mass murder implicate the psychologies of perpetrators. A better understanding of the reasons behind their behaviors—a kind of “rationality within irrationality”<sup>10</sup>—remains important to the hope of preventing such crimes in the future.<sup>11</sup> Retrospective analyses suggest that a nontrivial minority of high-profile mass shooters demonstrated clinical symptoms, including paranoia, depression, and delusions, at some point in their lives.<sup>12–14</sup> Still, the assumption that mass shootings are driven solely or even primarily by diagnosable psychopathology stretches the limits of mental health expertise. It also sets up a false expectation that advancing neuroscience and better therapies to manage psychiatric symptoms will provide “the answer” to solving gun violence. There is no existing or forthcoming unified theory of impaired brain functioning or of cognitive, mood, or behavioral dysregulation that could adequately explain mass shootings or multiple-victim gun homicides.

Symptoms of mental illness by themselves rarely cause violent behavior and thus cannot reliably predict it. Certain psychiatric symptoms, such as paranoid delusions with hostile content, are highly nonspecific risk factors that may increase the relative probability of violence, especially in the presence of other catalyzing factors such as substance intoxication.<sup>15,16</sup> Yet the absolute probability of serious violent acts in psychiatric patients

with these “high risk” symptoms remains low. In general, focusing on individual clinical factors alone leaves too much unexplained, as it tends to ignore the important social contexts surrounding mass shootings and multiple-victim homicides.<sup>17</sup> To assume that gun violence is primarily a problem confined to a perpetrator’s brain may impede inquiry into a ranges of factors that could be crucial to a full understanding of mass shootings—factors such as the perpetrator’s sex, race, socioeconomic status, relationships, attitudes, personal history, the place where a shooting occurs and the perpetrator’s (dis)connection to it, and the ways in which local gun cultures and unrestricted access to guns might create the conditions under which these events become more likely.

How can mental health research change the dominant narratives surrounding mass shootings and multiple-victim homicides, and thus broaden debates about the community effects of gun violence? Our selective literature review and research agenda present a strategy for moving beyond the “diagnose-the-mass-shooter” framework to a perspective that emphasizes the multi-determined nature of gun trauma. In so doing, we advocate for broadening the scope of concern and the potential contribution of mental health experts and researchers to include the larger gun-violence epidemic, recognizing its structural dimensions as within their purview, especially at the intersection with social science, public health, and other complementary disciplines.

## AN AGENDA FOR MENTAL HEALTH RESEARCH INTO MASS SHOOTINGS AND MULTIPLE-VICTIM GUN HOMICIDES

### 1. Move Beyond Simplistic Mass Shooter Profiling and Media-Driven “Diagnose-the-Shooter” Formulations to Situate Destructive Motivations Within Larger Social Structures and Cultural Scripts

Politicians and media commentators often quickly label mass shooters as “mentally ill” without defining the term and before any valid psychiatric history is known, simply on the basis of the aberrant nature of the crime itself: “*What sane person could do such a thing?*” Media-stylized accounts of the motivation of mass shooters tend to rely on misleading stereotypes of the inherent dangerousness of mental illness. When such accounts are widely adopted as master explanations for shooting rampages, the easily recognizable features of the narrative can obscure the role of many other potentially important contributing factors. These might include the perpetrator’s stressful economic circumstances and level of social disadvantage, maladaptive personality development in response to early-life trauma, the psychological sequelae of domestic violence exposure, aggrieved resentment and smoldering anger against individuals or groups perceived to be hostile and threatening,<sup>18</sup> and male gender and aberrant constructions of masculinity—all enhanced by the disinhibiting effects of substance intoxication and easy access to a semi-automatic firearm. These kinds of vectors and background conditions, often interacting with each other in complex ways, can

be far more germane to comprehending a particular act of mass violence than a diagnosis of acute psychopathology.<sup>19</sup>

Recent studies suggest that approximately 25% of mass murderers had exhibited a mental illness, but most of them had not appeared on the radar of either the mental health or law enforcement systems.<sup>13</sup> Similarly, a Federal Bureau of Investigation (FBI) study of 63 active-shooter incidents between 2000 and 2013 found that 25% of shooters were known to have been diagnosed with a mental illness of some kind, ranging from minor to more serious disorders. The study concluded that “formally diagnosed mental illness is not a very specific predictor of violence of any type, let alone targeted violence.”<sup>12</sup> These relatively weak associations highlight how mental illnesses in themselves rarely cause violent behavior and are not reliable predictors of multiple-victim gun crimes.<sup>16,20</sup>

In some sense, each mass shooting incident is unique. Substance use comorbidity and a range of putative risk factors ranging from the shooter’s level of economic distress and housing insecurity to politically extremist attitudes and ideology, to social isolation have been cited as stressors in analyses of mass shootings.<sup>21</sup> No single variable emerged as a common feature of mass shooters. Still, the “diagnose-the-shooter” narrative persists and furthers a number of stigmatizing stereotypes, such as the notion that persons with mental illness resemble “ticking time bombs.”<sup>11,22</sup> Representations of people with mental illness as being irrationally and unpredictably violent can have real adverse consequences, ranging from community resistance to the placement of housing and treatment facilities for people with mental illness in particular neighborhoods, to the escalation of tense interactions between people with mental illness and law enforcement officers, often resulting in avoidable arrests and incarcerations and sometimes ending in fatal shootings by the police.<sup>23,24</sup>

Defining an appropriate role for mental health practitioners in preventing mass shootings is inherently difficult. While recent studies have found that the majority of mass shooters did not show signs of acute psychosis or serious mood disorder, the estimated prevalence of psychiatric disorder is still higher among these perpetrators than in the general adult population. As we have already suggested, there is some evidence that certain combinations of clinical symptoms and affect patterns may temporarily increase risk of gun violence. Researchers have identified delusions, fixation, and perceived persecution as clinical symptoms that may precede violent behavior.<sup>16,25</sup> But does this implicate psychopathology in mass shooting, and therefore call for psychiatric surveillance and risk assessment to prevent at least some of these events?

Ironically in this context, disorders such as major depression and schizophrenia are often marked by psychomotor slowing, negative affect, intellectual disorganization, social isolation, and other symptom clusters that would seem to render a person *less* likely to plan and implement a complex gun crime.<sup>18,26</sup> It is perhaps not surprising, then, that some studies have found that persons diagnosed with these mental illnesses are less likely than non-mentally ill offenders to use firearms

in violent crimes.<sup>27</sup> Along these lines, Swanson and colleagues<sup>28</sup> found that adults with serious mental illnesses in public behavioral health systems in Florida were at least no more likely than other adults in the general population to be arrested for a gun-related violent crime.

A study of individuals who were clinically fixated on harming members of Congress found that having a psychiatric diagnosis alone was not associated with aggression or actual violent behavior. More relevant predictors included the individual’s motives and means.<sup>29,30</sup> The MacArthur Violence Risk Assessment Study<sup>31</sup> identified a group of 100 repeatedly violent individuals in a sample of 1136 discharged psychiatric inpatients but found that psychosis immediately preceded only 12% of violent incidents. The researchers concluded that “psychosis sometimes foreshadows violence for a fraction of high-risk individuals, but violence prevention efforts should also target factors like anger and social deviance.”<sup>32</sup> In addition, the MacArthur study found that only 2.4% of the study participants engaged in any act of firearm-involved violence, defined to include brandishing or threatening someone with a gun, over the 12-month follow-up period.<sup>31</sup>

A large U.S. study of schizophrenia patients in the community found that 5.4% of participants engaged in at least one act of injurious violence during an 18-month follow-up period, but baseline symptoms of psychosis or depression did not predict injurious violence. Rather, the significant predictors were severity of illicit drug use (hazard ratio = 2.93), recent violent victimization (hazard ratio = 3.52), childhood sexual abuse (hazard ratio = 1.85), and medication nonadherence (hazard ratio = 1.39).<sup>33</sup> These findings would suggest that the large majority of patients with schizophrenia do not engage in acts of serious violence, and even when they do, psychiatric symptoms alone do not provide a sufficient explanation for their violent behavior.

Still, “mental health” remains the focus of many existing regulations as well as proposed policies to prevent gun violence in the community. Despite evidence that there is no strong connection between gun crime and mental illness,<sup>2</sup> federal law since 1968 has prohibited firearm purchase or possession by anyone with a record of involuntary civil commitment to a psychiatric hospital or other mental health-related adjudication.<sup>34</sup> A few studies have suggested that this restriction prevents some violent crime—and gun crime, in particular—but its population-level impact is severely limited since very few patients are involuntarily committed.<sup>35,36</sup> The vast majority of violent gun crimes are perpetrated by people who would never be committable to a psychiatric hospital, and the important correlates of violent behavior tend to be the same in psychiatric and nonpsychiatric populations—for example, being young, male, or socially disadvantaged, exposure to trauma in early life, and using drugs and alcohol to excess. Future research into mass shootings and other acts of serious violence should move beyond the diagnostic template that looks for psychopathology to adequately explain the perpetrator’s behavior.

## 2. Scrutinize any Apparent Correlation of Violence with Mental Illness for Evidence of Racial Bias in the Official Systems That Define, Measure, and Record Psychiatric Diagnoses, as Well as Those That Enforce Laws and Impose Criminal Justice Sanctions

U.S. popular and political discourse frequently applies the mental illness descriptor to white male shooters, but analysis of whiteness itself, or discussions of whiteness as a race or ethnicity, are usually omitted from published studies about U.S. mass shootings.<sup>37–39</sup> By contrast, race and ethnicity often play a key role in accounts of mass shootings when the perpetrator is not white. For example, after the 2007 mass shooting at Virginia Tech University perpetrated by a college student of Korean-American heritage, media outlets reported that Asian-Americans experienced fear of retaliation and felt forced to issue an apology on behalf of their “group.”<sup>40</sup>

A content analysis of news documents covering mass shootings from 2013 to 2015 found that white and Latinx male perpetrators were more likely to have their crimes attributed to mental illness than were shootings by black men.<sup>41</sup> White men were qualitatively described as more sympathetic characters than black and Latinx men, who were more often labeled as violent threats to public safety.<sup>41</sup> Despite the popular stereotype of mass shooters being white, statistically just over half (57%) of the perpetrators of FBI-defined mass shootings since the early 1980s have been white, and the majority of victims of mass shootings in recent years have been nonwhite individuals.<sup>42,43</sup> When a mass shooting occurs and the identified perpetrator is black, content analysis shows that politicians’ press briefings, media reports, and research articles rarely mention mental health and illness in descriptions of the perpetrator. Rather, such incidents are more likely to be described under rubrics such as “gang disputes,” “drive-by shootings,” or other forms of “urban” violence, often with little further elaboration on motives or effects.<sup>44,45</sup>

These white/black dichotomies in the definition of mass shootings carry implications for resource allocation for studying these incidents and for potentially interrupting their causal pathways and mitigating their harmful consequences to individuals and communities. Defining urban violence as essentially out-of-range for our concern with mass shootings makes it much more difficult for researchers to discover the ways in which these shootings, too—as commonplace as they have become in certain urban neighborhoods—can have profound and lasting psychological and community effects.<sup>46</sup>

Mass shootings in urban areas have received little attention from mental health researchers, and the relatively few studies on this topic mostly amount to superficial, group-based comparisons between urban and suburban perpetrators. For example, Knoll<sup>47</sup> describes aspects of social identity in summarizing how urban and suburban perpetrators seem to differ, citing an urban “honor culture” and strong, group-based “social hierarchies” as the context for urban mass violence, in contrast to the image an isolated loner who commits a mass shooting in a suburban public setting.

Meanwhile, a large body of research has focused on the link between violence and mental illness in general, much of it relying on data from the criminal justice system, forensic facilities, state psychiatric hospitals, or other publically funded systems in the community. Due to the historical nexus of racial discrimination and economic disadvantage—which had led indirectly to entrenched disparities in arrest and incarceration as well as to involvement with the public behavioral health system—individuals who are identified as violent (or at risk of violence) in official institutional settings tend to be disproportionately people of color.<sup>48–50</sup>

These systems curate and disseminate the records of felony conviction and involuntary civil commitment that are used to determine that a person is ineligible to possess firearms under federal or state law. Specifically, official agencies report gun-disqualifying records to the FBI’s gun-purchase background check database, with the result that racial disparities in the reporting institutions’ practices and policies tend to be reproduced in the implementation of firearm restrictions that are applied to putatively risky categories of people.<sup>51</sup> As one example, a large study of gun restrictions in a population of adults with serious mental illnesses in Florida found that black individuals made up 15% of the surrounding population but 21% of the study group in the public behavioral health system, 31% of those disqualified from guns due to a mental health adjudication, and 36% of those disqualified due to a criminal record.<sup>28,49</sup>

As a result of these entrenched selection effects, much of what we know regarding the intersection of violence and mental illness extends only as far as people with mental illnesses who are socially and economically marginalized or use public services. But this misleading picture is often used to justify further institutionalization or incarceration that disproportionately affects people of color, producing an insidious feedback loop between biased data and discriminatory practice. Studies that are able to account for a range of social correlates of violence in multivariable models tend to find that the statistical association between violence and race is much attenuated, as is the link between violence and mental illness as defined in the official records of state agencies.<sup>31,52</sup>

In summary, racial bias can creep into available data and distort our understanding of mass shootings and other gun violence, limiting the scope of what should be a broader and more productive inquiry into the complex causes and effects of gun-related injury and death. What, for instance, are the psychologies that underlie shootings in areas of concentrated urban poverty, and what particular traumas emerge in their wake?<sup>53,54</sup> What are the traumatizing effects for young people who frequently hear gunshots or have seen shootings or dead bodies?<sup>55,56</sup> How can mental health expertise be effectively deployed to address these more quotidian, but no less problematic, aspects of gun violence in the United States?

Reckoning with the biases in its own framework can then aid mental health research to promote anti-racist work<sup>57</sup>—such as collaborating with community-based violence interrupters,<sup>58</sup>

imagining and advocating for structural change, and addressing how gun victimization in black communities intersects with other unequal systems, including health care, education, and community safety.<sup>46</sup>

### 3. Promote Awareness of the Social and Political Determinants of Firearm Violence

To better understand the role of firearm access in the occurrence and lethality of mass shootings and other forms of gun violence, research should be guided by an overarching framework that incorporates not only social, cultural, and political, but also psychological, aspects of private gun ownership in the United States. Mental health researchers should play a key role in a sustained collaborative inquiry into how these dimensions might shape gun violence as a broader public health problem. Following the lead set by public health scholarship, adopting such an approach would enable mental health researchers to contribute productively to building interdisciplinary evidence for gun laws and policies that are both effective and equitable, minimizing potentially adverse collateral consequences for at-risk individuals who are subject to restrictions.<sup>59</sup> Mental health professionals and scholars could have much to offer, for example, in the development of better guidelines for restoring firearm rights to persons with gun-disqualifying records in their remote past.<sup>60</sup>

A study by Reeping and colleagues<sup>61</sup> found that states with more permissive gun laws and higher rates of gun ownership also tend to have higher rates of mass shootings. But do these patterns mean that gun laws are effective, or do they reflect the intersectionality of other social and economic differences among states? Research by Steadman,<sup>31</sup> Tuason,<sup>62</sup> and others suggests that serious acts of violence attributed to “mental illness” often are more robustly associated with socioeconomic factors that may also be indirectly linked to mental illness, including unemployment, insecure housing, histories of trauma, or lack of access to care.<sup>63</sup> Perhaps the broader determinants of population well-being, illness, injury, and death can independently affect all of the following: cultural attitudes toward gun ownership; responses to social conflict; policies and laws concerning gun access; the motivations of a mass shooter; and the probability of being able to carry out an act of mass violence.<sup>64</sup> Understanding such potential connections through interdisciplinary research that includes a trained mental health lens could help to both reduce gun violence and improve other dimensions of population well-being over time.

### 4. Use Community Engagement to Expand the Scope and Impact of Research to Prevent Mass Shootings and Other Gun Violence

Effective policies and interventions to reduce the incidence of mass shootings and other acts of serious violence will require an expanded body of well-funded interdisciplinary research that is informed and implemented through the sustained engagement of researchers with affected communities and other stakeholders. Within the mental health community, persons

with lived experience as well as some family members and advocates have been loath to engage with gun violence prevention efforts in the past, due to the perception that these efforts play upon the public’s exaggerated fear of people with mental illnesses and thus exacerbate the stigma and scorn that mentally ill individuals feel from others.<sup>65</sup>

In reality, people in the community who are recovering from serious mental illnesses often have more to fear from other people. Like other vulnerable populations,<sup>54,66,67</sup> persons diagnosed with mental illnesses are statistically more likely to be victims than perpetrators of violent crime.<sup>18,68,69</sup> They represent between 25% and 58% of those shot and killed by police officers each year,<sup>70,71</sup> and there is an apparent interaction between race and mental illness when citizens are shot by law enforcement officers. A recent study found that when police shot and killed people in the line of duty, their explanatory reports applied the label of “mental illness” more than twice as often to white individuals as to black individuals (32% vs. 15%).<sup>72</sup>

These findings suggest the need for community-engaged research to explore how perceptions and potential biases surrounding mental illness and firearms intersect with those that involve race, gender, and class.<sup>73</sup> Such research could help to dismantle the stigmatizing assumption that mental illness causes violence, clearing the way for larger debates about community safety and resource allocation. This step could be important because studies have found that people who associate mental illness with danger are less likely to support allocating funds to community services and programs designed for individuals with mental illness.<sup>74–77</sup>

Future research should determine what are the best practices for engaging communities in gun violence prevention, and should better promote existing efforts in that regard. For instance, following the Sandy Hook shooting, the Interdisciplinary Group on Preventing School and Community Violence recommended developing channels of communication between schools and surrounding communities.<sup>78</sup> Their report highlights “channels of efficient, user-friendly communication” and emphasizes the importance of ongoing dialogue between different community stakeholders such as students, parents, health care providers, security and safety officers, and school administrators.<sup>78</sup> Community-engaged mental health researchers who are focused on broadening the discussion and inquiry into why mass shootings occur may occupy a strategic position for informing and fostering such dialogue among stakeholders.

## DISCUSSION

It is important to move beyond a preoccupation with determining the mental health status of mass shooters and, more generally, with the question whether “the mentally ill” are prone to gun violence. This preoccupation has served to limit the important role that mental health expertise could actually play in addressing broader questions involving the balance between the perceived benefits of gun ownership and the risk that guns may pose in the hands of some persons at certain times—all in the interest of promoting the well-being of

individuals and society. The ability to acquire reliable data on the causes and consequences of gun violence was seriously hampered by a decades-long federal ban on funding for gun-related research at the Centers for Disease Control and Prevention. That ban, which prohibited any studies that could have been perceived as promoting gun control, had a chilling effect on all federal research funding aimed at preventing gun violence. But now that the ban has been at least nominally lifted and some new federal funds have been appropriated for such research at the CDC and National Institutes of Health, the time has come for mental health experts and researchers to join other scholars in complementary disciplines and seize the opportunity to build the next generation of research to prevent violence. They must develop broad conceptual frameworks and creative methodologies to study gun violence as the persistent and multifaceted public health crisis that it is, and to insist on a level of public investment commensurate with the human and societal cost that gun violence exacts.

The reviewed literature makes clear that a diagnosis of a mental illness alone is an negligible factor in any effort to explain, predict, and prevent mass shootings or other acts of serious gun violence. These tragic events have many individual and social determinants—from trauma history to substance dependence, from unemployment and insecure housing to the proliferation of guns in the community—that may interact with each other in complex ways. Public mass shootings are still rare events when considered at the population level, notwithstanding a fearful public's perception of their frequency and salience; these will always be exceedingly difficult events to study, predict, and prevent. Filling in the gaps in knowledge about these events requires a better understanding of the cultures and contexts that surround guns in America, in addition to a focus on specific shootings. More broadly, preventing gun-related injuries and deaths is a collective, social responsibility. Psychiatry stands to be an agent of change in promoting interventions and solutions for improving the health of a community, rather than narrowly addressing the most sensationalized manifestations of gun violence.

This body of research becomes more salient as gun ownership emerges as an important theme in narratives surrounding America's responses to the COVID-19 pandemic and the reckoning with racism in the aftermath of the killing of George Floyd.<sup>79</sup> Unprecedented surges in gun ownership,<sup>80</sup> weapons brandished in the lobbies of statehouses,<sup>81</sup> and armed presence at protests and counter-protests across the country<sup>82</sup> have marked the American pandemic moment. Mental health experts have also warned of a “perfect storm” for suicide risk that is especially concentrated in COVID-distressed communities, with a sharp increase in the socioeconomic and psychological determinants of self-injurious behavior coinciding with an influx of guns, the most lethal of suicide methods. And while these trends may heighten the risk of gun-related morbidity and mortality linked to mental illness, they also illuminate gaps, blind spots, and omissions in mental health expertise: we need to know more.

Just like mortality rates from the novel coronavirus, social vulnerabilities and inequities that contribute to gun trauma have been exposed and exacerbated by the shift in resources away from communities that were already at risk. Recent multiple-victim shootings in cities like Baltimore and Philadelphia were all the more lethal because first responders and emergency rooms were already deployed to capacity with COVID-19 treatment instead.<sup>83–85</sup>

Future research will need to address ways in which U.S. gun trauma has morphed in relation to the changing structures surrounding human interactions.<sup>86</sup> For instance, the possibilities that previously public gun violence is shifting during the pandemic to private spaces or that it involves new or different victims are developments that heighten the urgency of recalibrating risk assessment and mounting interventions that can reach people where they reside.

Again, people who are already within the mental health system do not represent the highest-risk groups for many types of gun violence, such as intimate partner shootings and other stress-induced and alcohol-fueled tragedies that increasingly occur in private residences during the pandemic.<sup>87</sup> Calling the police is not always the most realistic or desired first step in these delicate situations; mental health experts might, instead, need to develop new networks through partnerships with organizations, technology platforms, and services that reach individuals in threatening circumstances. Here, for instance, mental health knowledge tailored to these situations could be adapted and disseminated by social media companies, first responders, employment boards, or other delivery services.<sup>18</sup>

By reframing and broadening their approach to mass-casualty shootings, mental health professionals and researchers could move mental health expertise to the fore in promoting firearm safety in schools, workplaces, and public gatherings, and among and between differing communities in post-pandemic America.<sup>88</sup> Moving beyond diagnostic frameworks and the futile quest to “foresee” mass shootings will allow mental health research to more fully address how mass shootings and multiple-victim homicides occur within broader systems and frameworks. Doing so could broaden our understanding of gun violence and point the way to fair and effective policy solutions that could save many lives, while respecting both the rights of gun owners and the dignity of persons affected by mental illness.<sup>89</sup>

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