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Perspective

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How to Stop Mass Shootings

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Seventeen people were shot and killed on Valentine's Day 2018, and another 17 were wounded, at Marjory Stoneman Douglas High School in Parkland, Florida. The shooter, a former student at the school, had made credible threats of violence against schools and students for years, during which time he legally purchased the AR-15–style rifle that he used on Valentine's Day. "I know he's going to explode," an acquaintance told the Federal Bureau of Investigation a few weeks before the shooting, "[maybe by] getting into a school and just shooting the place up."

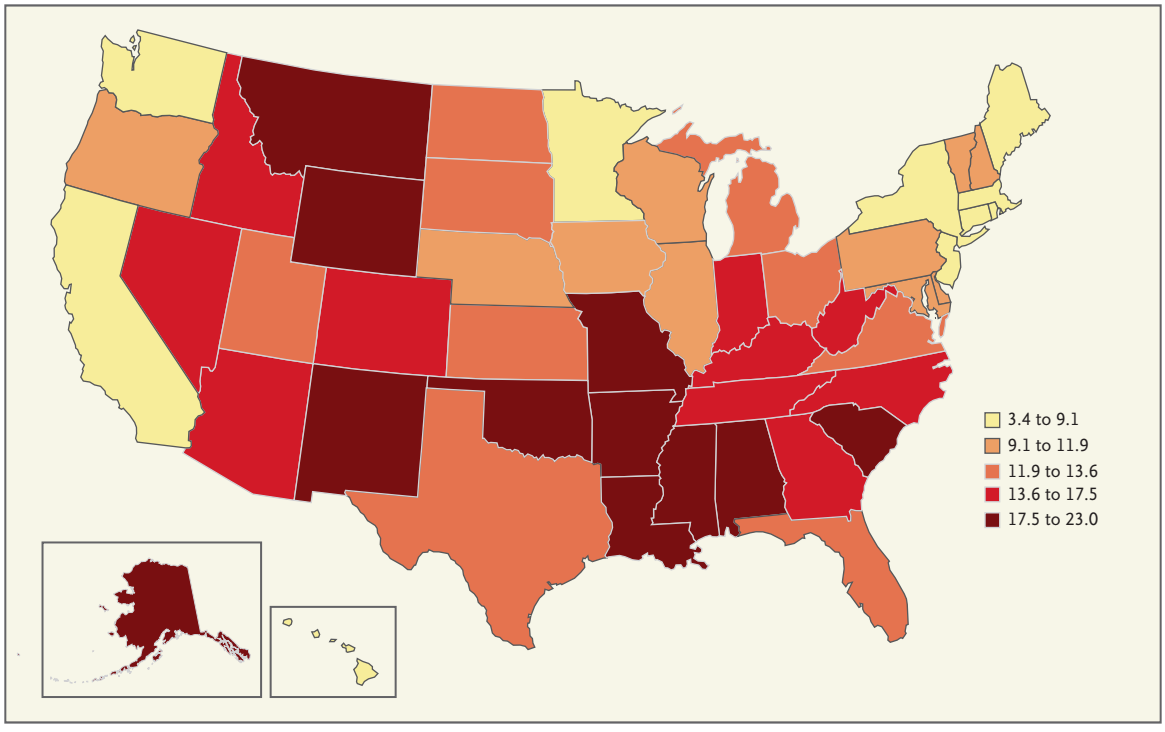
Three months earlier, 25 people (one of whom was pregnant) were killed and another 20 wounded at the First Baptist Church of Sutherland Springs, Texas. The shooter had been convicted of domestic violence while in the Air Force, but the Air Force had failed to report that event as required. Because of the conviction, the shooter should have been prohibited from purchasing firearms. But because the conviction was not reported, he passed background checks and purchased four firearms, including the AR-15–style rifle used in the church, from federally licensed dealers.

An interactive map is available at NEJM.org

These tragedies and others — 9 dead in a South Carolina church, 6 dead outside an Arizona supermarket, 12 dead in a Colorado movie theater, 32 dead at a Virginia university — were entirely preventable. Two policies exist today that if properly designed, widely enacted, and adequately implemented would likely have saved these lives and could potentially save many more in the future. Their benefits would extend far beyond reducing the incidence of mass shootings (see map and the interactive graphic, available at NEJM.org).

The better known of these policies is the requirement that firearm sales involve background checks on purchasers. Background-check policies work at the population level to prevent firearm purchases by felons, people convicted of certain violent misdemeanors, and others who are at increased risk for violent behavior (specifics vary from state to state). Using background checks to prevent such persons from acquiring firearms is associated with a reduction of at least 25% in their incidence of arrest for a firearm-related or other violent crime.[1]

In many states, however, transactions between private parties are exempt from background-check requirements, and 22% of all firearm transfers nationwide proceed without a check being done.[2] (I have observed hundreds of these transfers at gun shows throughout the country; entire transactions can be completed in



Age-Adjusted Rates of Death (per 100,000) from Firearms in 2016 (All Intents).
Data are from the Centers for Disease Control and Prevention.

less than a minute.) Comprehensive background-check policies remove this exemption and require most private-party transfers to be routed through a licensed retailer so that a check may be conducted and records kept.

Recent research suggests that background-check policies, as commonly designed and implemented, fall short of their expected effectiveness when it comes to reducing population-level rates of violence.[3] But the findings do not support a conclusion that background-check requirements are fundamentally ineffective. Rather, they highlight the consequences — such as the breakdowns in communication and reporting that led up to the Sutherland Springs shooting — of specific and widespread defects in design and implementation, which have been well documented for decades and which can be overcome.

Perhaps most important is that information that would prohibit high-risk people from purchasing firearms is frequently — many thousands of times per year — not reported. The Air Force alone has apparently failed to report tens of thousands of prohibiting events, and its reporting has been the best among all branches of the military. Remarkably, other than for federal agencies, reporting of such events is not required. Since the Supreme Court decision in *Printz v. United States*, a federal mandate for state and local agencies to report prohibiting events to the federal government has been seen as unconstitutional. States, however, remain free to impose such mandates.

Other substantial built-in barriers exist. Classes of people who are prohibited from purchasing firearms are defined vaguely and anachronistically under U.S. law; "adjudicated as a mental defective or . . . committed to a mental institution" and "unlawful user of or addicted to any controlled substance" are good examples. Not surprisingly, there can be serious ambiguity about whether a specific event is in fact prohibiting. Noncompliance and lax enforcement may be common.

The second policy that could prevent firearm-related deaths is to allow courts to have firearms removed temporarily from people who pose an imminent hazard to others or themselves but are not members of a prohibited class. Again, provisions vary; in California, family members and law-enforcement officials can follow procedures based on those established for domestic violence to petition for a firearm to be removed. Physicians can play an important role in these cases by notifying eligible petitioners when

intervention is warranted; disclosure of otherwise-confidential information is expressly permitted by Health Insurance Portability and Accountability Act regulations when an imminent hazard exists.

These gun-violence restraining orders, also called extreme-risk-protection orders, have also been used to prevent firearm purchases. In two such cases in California, people who apparently did not own firearms and were not members of a prohibited class made credible threats to commit mass shootings and attempted to purchase firearms at essentially the same time. California has a 10-day waiting period for firearm purchases, however, during which restraining orders were sought and issued in these cases. The purchases were prevented, and the threatened mass shootings did not occur.

Gun-violence restraining orders are typically initially granted in emergency situations, without formal hearings; in California, they stay in effect for not more than 3 weeks. Renewals or extensions require hearings to address judicial due-process requirements. Gun-violence restraining orders or closely related policies have been adopted by 13 states, and many more states are considering them. An evaluation of Connecticut's gun-removal law, which focused on suicide prevention, suggests a level of effectiveness high enough that such policies could reduce population-level rates of firearm suicide[4]; a forthcoming study of Indiana's law has reached the same conclusion. Law-enforcement case reports in California have been very encouraging. My colleagues and I are conducting a formal evaluation of the California statute.

An audio interview with Dr. Wintemute is available at NEJM.org

Actions to Prevent Firearm Violence

Improve background-check policies
Require background checks for private-party transfers
Require state and local agencies to report prohibiting events
Fully implement the existing federal background-check requirement
Clarify definitions of prohibiting events
Strengthen enforcement efforts
Consider a permit-to-purchase approach
Prohibit release of firearms until background checks are completed
Enact gun-violence restraining order policies

Like comprehensive background checks, gun-violence restraining orders will fall short of their maximum potential for preventing violence. Some families won't want to involve a judge in what they see as a private matter. Physicians may be reluctant to act, even when action is necessary and permitted. Some people who are aware of threatening behavior will fail to report it, and, as in the case of Parkland, some law-enforcement agencies will fail to respond to credible reports.

But the argument that a policy will not function perfectly should not prevent it from being enacted. What's more, the vast majority of Americans support these policies: 87.8% are in favor of comprehensive background checks, and 78.9% support gun-violence restraining orders, with differences between firearm owners and nonowners of just 3.4 percentage points on background checks and 5.4 percentage points on gun-violence restraining orders.[5]

Specific actions can be taken now (see box). States can enact background-check requirements for private-party firearm sales and commit to adequate enforcement. It may be important to require people planning to purchase a firearm to first obtain a permit, usually from a law-enforcement agency, in addition to passing a background check; many studies have found permit-to-purchase laws to be effective. States can require that prohibiting events be reported rapidly and completely. They can enact gun-violence restraining order policies, which have now been given a limited endorsement by the National Rifle Association.

Congress, at a bare minimum, can bring the language of relevant statutes into the 21st century, enforce existing reporting requirements for federal agencies, and continue to support state efforts to mobilize and submit their records. A responsible Congress, I believe, would also enact a comprehensive federal background-check policy — not one restricted to gun-show sales or other special circumstances — and give it teeth.

Mass shootings are changing the character of public life in the United States and creating unprecedented demand for action. The policies described here are not "gun control," whatever that term means. They uncouple harmful behavior from its consequences and help preserve our fundamental right to live safely in a free society.

Disclosure forms provided by the author are available at NEJM.org.

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Mental Health Services for Medical Students — Time to Act

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Medical students have higher rates of depression, suicidal ideation, and burnout than the general population and greater concerns about the stigma of mental illness.[1] The nature of medical education seems to contribute to this disparity, since students entering medical school score better on indicators of mental health than similarly aged college graduates.[2] Roughly half of students experience burnout, and 10% report suicidal ideation during medical school.[3] Descriptive surveys documenting the scope of this problem are complemented by personal narratives. In a recent essay, a medical student described her experience with depression; when she shared her struggle with her classmates, she learned that "depression and its vestiges are everywhere."[4] The most devastating consequence of depression — suicide — is felt by the entire school, as described in the story of a fourth-year medical student in New York.[5] Stories such as these are prompting medical schools to revisit their procedures to ensure that they are doing everything possible to meet the mental health care needs of their students.

Although published in 1992, the Association of American Medical Colleges' Recommendations Regarding Health Services for Medical Students remains relevant and includes sensible guidance on policies related to mental health and substance use disorders. Recommendations include providing all students with access to confidential counseling by mental health professionals, establishing policies regarding the confidentiality of students' mental health records, and creating clear policies about administratively mandated evaluation and treatment. However, lack of resources often keeps schools from effectively implementing these recommendations.

To evaluate medical students for mental illness and get them into treatment, medical schools generally rely on a combination of university counseling centers, community providers, and university psychiatry faculty who may be called on to consult in urgent cases. Although these approaches work well enough, students (and school administrators) are often challenged by long wait times for counseling centers; insurance and self-pay issues with community providers; concerns about future employability and licensure; and a reactive scramble to assemble evaluations for medical leaves of absence and clearances to return to school, which may not be reimbursed by insurance. In addition to barriers including stigma and lack of time — a particular challenge for students during their clinical years — there are financial challenges posed by copayments, and students who are still on their parents' health insurance plans may not want their families to know they are receiving mental health treatment. At our medical school, a final wrinkle in access to private-practice psychiatrists and therapists is the fact that a substantial minority of students are covered by Medicaid, which most mental health clinicians in our community do not accept.

At the University of Pittsburgh School of Medicine, we have been addressing these challenges of access, privacy, and stigma with a dedicated medical student mental health care team. This team is financially supported by the medical school to provide care for our 560 medical students and 360 graduate students. It is codirected by one of us (J.F.K.) — a faculty psychiatrist who receives 30% salary support — and a full-time master's level psychologist who receives 100% salary support. First-year medical students are introduced to the mental health care team during orientation, and teaching faculty and advisory deans are educated about the team annually. Although most students seeking mental health services are initially evaluated by the psychologist, who determines the need for further psychiatric evaluation and treatment, students