SPECIAL ARTICLE

Recommendations from the American College of Surgeons Committee on Trauma's Firearm Strategy Team (FAST) Workgroup: Chicago Consensus I

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This brief report of recommendations is from the American College of Surgeons Firearm Strategy Team (FAST) Workgroup. The FAST Workgroup was created by the American College of Surgeons Committee on Trauma (ACS COT) to serve in an advisory capacity toward the development of an effective and durable strategy for reducing firearm injury, death, and disability. The ACS COT has pursued a broadly inclusive strategy taking in all points of view to effectively develop a consensus approach.[1-3] This strategy has incorporated input from views across the spectrum, including multiple survey(s) of surgeons, town hall meetings of COT members, ACS COT Injury Prevention Committee Meetings, interactions with the ACS Board of Regents and Board of Governors, and multiple small group/individual meetings with surgeons across the country. This approach has led to a dialogue between those who might differ with respect to their views on the benefits of firearm ownership and personal liberty, but who agree on the critical importance of reducing injuries and deaths related to firearms.

Through this dialogue, we came to realize that the community of firearm owners are often approached as a part of the problem, but less commonly approached as a part of the solution.[4] The ACS COT and others have called for a public health approach to the epidemic of firearm-associated injury, and more specifically firearm violence.[1,5-8] A key step integral to a public health approach is community engagement.[9-15] Community engagement strategies for public health interventions are a core step in implementation and are recommended by major international public health organizations.[9-11] The degree of community engagement can make a critical difference in efficacy or lack of efficacy of a public health program. As a specific example, if a local trauma center's injury prevention and outreach team were moving forward with a bicycle safety initiative, an important early

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step would be to reach out to bicycle owners to engage them as a part of the solution and to use their expertise in the activity with the goal of making the prevention initiative as effective as possible. For the initial work of our FAST Workgroup, the community of interest is the community of firearm owners in the US.

Just as with surgery, engagement is a blend of science and art.[9] A good example of this type of effort in the firearm injury prevention arena is Barber and colleagues'[4] work on suicide prevention through engagement of the firearm owner community. Barber and colleagues describe the importance of working with "trusted messengers" as a necessary step in community engagement. As described here, the individual bicycle rider is simply more receptive to a safety message from a bicycle enthusiast or representative from the bicycle community, and generally much more receptive if the message comes from those who are supportive of bicycling. This is also true in medicine; surgeons are much more receptive to messages from their surgical colleagues. Likewise, critically injured trauma patients are more receptive to advice and counseling from trauma survivors who have been in a similar position, which is the basis of the using a trauma survivors' network.[16]

To create the FAST Workgroup, the ACS COT leadership sought out surgical leaders who are firearm owners, specifically looking for a geographically representative sample of trauma surgeons passionate about firearm ownership with expertise as hunters, sport shooters, self-defense, law enforcement, and/or previous military service. The FAST Workgroup is composed of respected surgeons who meet the criteria of being on the frontline for the care of firearm injuries, involved in meetings with the COT Injury Prevention Committee, have a track record of working well as a part of a team, are avid firearm owners, and practice in areas distributed across the US.

This article describes the FAST Workgroup's approach and methods, and summarizes consensus recommendations for strategies and tactics to increase firearm safety, reduce the probability of mass shootings, reduce firearm-associated violence, address mental health factors, and encourage federally funded firearm injury research, while preserving the right to own and use a firearm.

METHODS AND APPROACH

For the past 5 years, the ACS COT has worked to develop a consensus strategy around how best to reduce the firearm injury death and disability. This strategy was built around 3 guiding principles:

1. Advocate and promote a public health approach to firearm injury prevention;
2. Implement evidence-based violence prevention programs through the network of ACS COT-verified trauma centers
3. Provide, foster, and promote a forum for civil dialogue within our own professional organization with the goal of moving toward a consensus on programs or interventions aimed at reducing firearm injuries and deaths.

These principles have allowed a maximally inclusive process whereby input has been obtained from all points of view. This inclusive approach has led to the creation of a common narrative that creates a bridge between groups of people who do not agree about the general benefit of firearms, but agree on the need to reduce violence, injuries, and deaths.[17] We have demonstrated that surgeons with strong opinions about the benefit or lack of benefit of firearms can and will work together to reduce firearm death and disability. The next steps of this process are multifaceted, but the goal is to develop a durable, effective, and common-ground set of policies that reduce firearm injury and death. The COT leadership believes that a durable and effective strategy requires the engagement and partnership with firearm owners.

Members of the FAST Workgroup had all been engaged in previous discussions with the COT Injury Prevention and Control Committee and had all either expressed an interest in the topic or had contributed their opinion(s) about the work of the ACS COT's firearm injury prevention initiative. Three of the authors (RMS, DLK, EMB) worked to identify surgeons who had identified themselves as avid firearm owners. These surgeons were then invited to attend as a member of the focus group. Multiple conference calls were held along with 3 in-person meetings. The group consciously worked to focus the discussion on efforts that could reduce injury and death and preserve the ownership rights of responsible Americans. The group recognizes that firearm injury is a complex and multifaceted problem and that the underlying cause of the injuries might be different and can require different solutions based on the context of the injury. For the purpose of this initial set of meetings, the FAST Workgroup centered its efforts on how best to make firearm ownership safer, decrease the risk of intentional mass shootings, and start to address the culture of violence in the US. A consensus process was used for making the recommendations. To be included as a recommendation in this article, all members of the group needed to agree with the recommendation. There were some differing degrees of agreement, but if every participating member did not agree enough that they could accept and support a given recommendation, then

the concept or idea was not put forward as a recommendation from the Workgroup.

The recommendations are given in the form of stating a principle that the group believed is important, followed by specific recommendations related to the principle. We believe this provides a description of the rationale and also allows for flexibility in implementation.

RECOMMENDATIONS FROM THE FIREARM STRATEGY TEAM WORKGROUP

Obtaining ownership

Principle: We believe those who are a danger to themselves or others should not be allowed to purchase or receive a firearm as a gift or as a transfer from another person.

Recommendation: We support a robust and accurate background check in accordance with federal law 18 U.S.C. § 922[g][1-9] for all purchases and all transfers of firearms.

Rationale and background for recommendation: The FAST Workgroup believes the bipartisan Fix NICS Act of 2017 was a necessary step in the right direction; however, not conducting background checks on all transfers and sales of firearms creates a real opportunity for those who are a danger to themselves or others to illegally obtain firearms. The law requires federally licensed dealers (those with a Federal Firearms License) to conduct background checks on all gun sales and transfers through the FBI's National Instant Criminal Background Check System (NICS). No such requirement is codified in law for private sales or transfers of firearms.

We recommend a NICS background check for all transfers of firearms with the recognition that this recommendation creates some potential challenges to legitimate private purchasers and sellers of firearms, and would also create an increased load on the computerized system on which the NICS functions. After extensive discussion, we believe these challenges can be effectively and efficiently managed by partnerships between private sellers (who do not have a Federal Firearms License) and retailers (who have a Federal Firearms License) who routinely conduct background checks through the NICS. The federal government must insure that the computerized system can handle the increased number of background checks required before implementation of this recommendation.

Effective state implementation is critical if the Fix NICS Act of 2017 is to achieve its purpose. We recommend expeditious full and complete implementation of the Fix NICS Act of 2017 by all states, combined with continuing ongoing efforts to improve the NICS. This comprehensive approach requires more complete, timely, and standardized state reporting of information to the NICS, particularly regarding criminal convictions, drug abuse, and mental health data. In discussion, our FAST Workgroup supports the addition of intimate partner domestic violence offenses and the misdemeanor offense of stalking be added to the disqualifying criteria for purchasing a firearm.

Although the group did not reach consensus, there were extensive discussions and a significant amount of support for the concept of a permit to purchase approach (which is implemented in some states) especially for high-capacity, magazine-fed, semi-automatic rifles, and for those younger than 25 years who wish to purchase a firearm.

Firearm registration

Principle: A firearm should be transferred with registration in accordance to federal law 18 U.S.C. § 922[g][1-9] just as other properties are, such as vehicles or a home. This would include the private sale and the transfer of property that is bequeathed from an estate or among family members.

Recommendation: We support firearm registration and the development and implementation of an electronic database for all registered firearms.

Rationale: We believe firearm registration and the ability to track a registered firearm is important to aid law-enforcement professionals in preventing the illegal sale of firearms to those who cannot pass a background check due to criminal activity or serious mental illness. We recommend a reliable database to track these registrations.

Licensure

Principle: Certain classes of weapons with significant offensive capability are currently appropriately restricted and regulated under the National Firearms Act classification as class III weapons (eg fully automatic machine guns, explosive devices, and short-barreled shotguns).

Recommendation: We recommend a formal reassessment of the firearms designated within each of the National Firearms Act classifications. For instance, high-capacity, magazine-fed, semi-automatic rifles should be evaluated, and consideration given to reclassification as an National Firearms Act class III firearm or a new class designation.

Rationale: The FAST Workgroup extensively discussed licensure for all firearms, which is distinct from the ability to purchase a firearm. The group did not reach a consensus on the recommendation for licensure of all firearms; however, the group does support state licensure in the form of concealed carry permits[18] and, therefore, believes that licensure could be applied, and might be

warranted, for high-capacity, magazine-fed, semi-automatic rifles. In this setting, increased screening and additional evidence of safety training could be opted for by individual states. This could also provide a more efficient and focused setting for an electronic database, in contrast to a database for all firearm purchases.

Education and training

Principle: Responsible firearm ownership and use comes with significant responsibility and understanding of safe handling, care, and use.

Recommendation: We endorse formal gun safety training for all new gun owners and endorse hunter safety and safe gun handling education. Any training program must include the 4 vital safety rules: assume the gun is always loaded; finger off the trigger until ready to fire; never point at anything you do not intend to kill or destroy; and always check all chambers before cleaning.

Recommendation: We recommend direct adult supervision in the use of firearms for children younger than 12 years and indirect supervision for children between the age of 12 and 18 years, where not already state-regulated.

Rationale: As surgeons who routinely provide care to patients that is important and generally beneficial, but also entails risk, we believe education is a cornerstone of safety. There are numerous resources available for high-quality firearm safety education and we believe this should be universal, foundational training for all new firearm owners.

Ownership responsibilities

Principle: Owners who do not provide reasonable, safe firearm storage should be held responsible for adverse events related to discharge of their firearm(s).

Recommendation: We endorse requiring firearm owners to provide safe and controlled firearm storage. Owners who do not provide reasonable, safe firearm storage should be held responsible for adverse events related to discharge of their firearm(s). This includes the responsibility for the use of a stolen firearm, unless there has been timely reporting of a stolen weapon made to law enforcement.

Rationale: Safe, controlled storage reduces the risk of unintentional harm to others.

Mandatory reporting and risk mitigation

Principle: For individuals who are deemed an imminent threat to themselves or others, firearm ownership should be temporarily or permanently restricted based on due process.

Recommendation: Programs to remove firearms from those individuals should be standard as is done in Extreme Risk Protection Order policies, Red Flag laws, and federal law 18 U.S.C. § 922[g][1-9]. Specific due process measures should be required for removal and return of firearms. Mandatory reporting to (and by) law enforcement and medical personnel for those who are threatening to themselves or others should become standard practice.

Recommendation: We recommend treating mass shootings as terrorism and support and encourage domestic law-enforcement efforts and strategies (within the limits of Fourth Amendment protections) to predict, detect, and deter future mass firearm violence.

Rationale: We believe that risk mitigation by law-enforcement professionals is important to public safety, and is necessary to prevent violent individuals from inflicting harm at an individual and societal level.

Safety innovation and technology

Principle: Firearm ownership should be made safer through the use of innovative technology such as that used in automobile safety.

Recommendation: We encourage the development of firearm technology that would significantly reduce the risk of self-harm, prevent unintentional discharge, and prevent unintended use by someone other than the registered owner of the firearm.

Research

Principle: Research to understand health conditions underpins the modern practice of medicine and is essential to improve care and develop effective interventions for all health care conditions.

Recommendation: We recommend that research for firearm injury and firearm injury prevention must be federally funded at a level commensurate with the burden of the disease without restriction.

Recommendation: This research must be conducted in a non-partisan manner. The research agenda should broadly address firearm safety, including safe storage and safe use; violence intervention and control research; serious mental illness and firearm violence; and improving treatment of patients injured from firearms.

The research agenda should include:

1. Root causes of violence. These research endeavors should be focused on identifying intervention programs and strategies to prevent actions of violence involving a firearm, as well as all other mechanisms.
2. Effect of media content (ie social media, television, movies, and video games) on interpersonal violence. This research should investigate the effects of exposure

to high level of violence in modern media. The research should be sufficiently rigorous to determine whether this exposure is causally related to actual violence, and should be powered to examine the effect of this exposure in high-risk subsets.
3. Effective forms of safe storage and safe guns. Technologic changes (such as biometric locks) to firearms could prevent their unintended use by those other than the legal owner. Effective, safe storage mechanisms in the home or vehicle could prevent unintentional injury and death.
4. Effective firearm safety counseling and training.
5. Evaluate effectiveness of restricting access to firearms by violence-prone individuals.
6. Epidemiology of highest-risk populations (subset based on mechanism and intent) for suicide, homicide, mass shootings, intimate partner violence, unintentional injury, and other subsets of firearm violence.
7. An assessment of firearm lethality differences based on specific type of firearm and numbers of deaths and injuries per unit time.

Rationale: Science, research, technology, and innovation are proven approaches to improve safety, reliability, and efficacy. We believe encouraging this approach is beneficial to firearm owners and those who do not own firearms. Revolutionary improvements in automobile safety have come in concert with improvements in reliability. We believe a similar approach to firearms could yield the same result-improved safety with improved reliability. Addressing intentional violence requires a robust research agenda that is supported at a level commensurate with the burden of the problem. Research, innovation, and technology are critical if we are to have effective interventions.

Culture of violence

Principle: We all own the culture of violence. The same principle of freedom with responsibility applies to the manner in which mass killings are communicated to the public. We have concerns that the manner and tone in which information is released to the public and covered by the media likely leads to "copy-cat" mass killers.

Recommendation: The public, professionals in law enforcement, and the press should take steps to eliminate notoriety of the shooter and take an editorially muted approach to the coverage of these events.[17-19]

Rationale: Although we would prefer better data based on solid research, we believe we should encourage best practices directed toward eliminating or mitigating motivation for socially isolated, violent individuals from moving from contemplation to action. This point of view is well stated by the journalist Zeynep Tufekci[18]: "The media needs to adopt a similar sensible framework to covering mass killings. And in the age of social media, that also means changing our own behavior. This doesn't mean censoring the news or not reporting important events of obvious news value. It means not providing the killers with the infamy they seek. It means somber, instead of lurid and graphic, coverage, and a focus on victims. … It means holding back reporting of details such as the type of gun, ammunition, angle of attack and the protective gear the killer might have worn. …." She and others recommend that law enforcement professionals not release details of the methods and manner of the killings, and those who learn those details should not share them.[19-21] This is not a call for censorship, but rather a request for editorial nuance, responsibility, and judgment.[19]

Social isolation and mental health

Principle: Social Isolation combined with exaggerated depictions of violence, especially when targeted towards young men, likely contributes to violence in the US.[22]

Recommendation: We encourage recognition of mental health warning signs and social isolation by teachers, counselors, peers, and parents, and when these warning signs are identified, immediate referral to appropriate mental health professionals. When signs of violent ideation, thoughts, or actions become evident, peers, teachers, and family members should be encouraged to "see something, say something" and report to appropriate local and national law enforcement.

Rationale: Although solid scientific evidence of sufficient quality to determine causation awaits, common sense would dictate efforts be focused on increasing social capital and decreasing social isolation.[22,23] This involves actual human interaction combined with communicating a sense of hope to young men and women. This responsibility rests on all of us.

DISCUSSION

Firearm injuries are a major public health problem in the US. As a group of surgeons, we care for the patients who suffer and die from firearm injuries. In the current polarized environment, political solutions appear to be lacking; however, we believe implementation of this Workgroup's recommendations would result in fewer injuries and deaths while preserving constitutional freedoms. We acknowledge and appreciate that American surgeons have strongly held views on this issue and we remain

Table 1. Summary of Firearm Ownership, Firearm Ue, and Firearm Storage of Firearm Strategy Team Workgroup Participants

		Handgun		Rifle									
Participant	Shotgun, n	Revolver, single-fire, or not specified, n	Magazine-fed, semi-automatic, n	Traditional (not high-capacity, magazine-fed, or semi-automatic), n	High-capacity magazine, semi-automatic (AR15-style), n	Antique or muzzle loader, n	NFA class III weapon, n	Target practice, shooting sports, Y/N	Hunting, Y/N	Collecting, Y/N	Home or personal defense, Y/N	All locked and secured, Y/N	Total firearms, n
Surgeon 1	3	1	4	1	1	0	0	Y	Y	N	Y	Y	10
Surgeon 2	7	2	2	5	0	6	0	Y	Y	Y	N	Y	22
Surgeon 3	5	6	0	5	0	0	0	Y	Y	N	Y	Y	16
Surgeon 4	12	2	5	5	0	0	0	Y	Y	Y	Y	Y	24
Surgeon 5	2	3	1	3	0	0	0	Y	Y	N	Y	Y	9
Surgeon 6	8	3	6	11	5	4	2	Y	Y	Y	Y	Y	39
Surgeon 7	1	0	0	2	0	1	0	Y	N	Y	Y	N	4
Surgeon 8	0	0	3	0	1	0	0	Y	N	N	N	Y	4
Surgeon 9	0	0	1	0	0	0	0	Y	N	N	Y	N	1
Surgeon 10	3	2	3	1	2	0	0	Y	Y	Y	Y	Y	11
Surgeon 11	0	1	1	1	0	0	0	Y	Y	N	Y	Y	3
Surgeon 12	1	0	1	0	0	0	0	Y	N	N	Y	Y	2
Surgeon 13	6	1	3	4	0	0	0	Y	Y	Y	Y	Y	14
Surgeon 14	1	0	2	1	0	0	0	Y	Y	N	Y	Y	4
Surgeon 15	6	1	4	9	5	0	0	Y	Y	N	Y	Y	25
Surgeon 16	0	1	0	1	0	0	0	Y	N	N	N	Y	2
Surgeon 17	4	0	3	2	0	0	0	Y	N	N	N	Y	9
Surgeon 18	1	3	0	1	0	0	0	Y	Y	N	Y	Y	5
ACS/COT	0	0	0	0	0	0	0	N	Y	N	N	NA	0
ACS/COT	0	0	0	0	0	0	0	N	N	N	N	NA	0
ACS/COT	0	0	0	0	0	0	0	N	N	N	N	NA	0
ACS/COT	4	1	0	1	0	0	0	Y	N	N	N	Y	6

ACS/COT, American College of Surgeons/Committee on Trauma, N, no; NFA, National Firearms Act; Y, yes.

respectful of those on both sides who might disagree with the recommendations that the FAST Workgroup has made. However, we also understand that the US has a major public health problem with firearm injuries and believe our recommendations endorse the best-available options to lessen the current impact of firearm violence at the population level.

Current educational programs through the ACS such as Stop the Bleed, the ACS COT Trauma Center Verification Program, and the Trauma Quality Improvement Programs continue to be extremely effective in addressing the care of firearm-injured patients and clearly will have a positive effect on outcomes as these programs continue to develop. The FAST Workgroup was created based on work begun by the ACS COT Injury Prevention Committee to focus on effective and durable strategies for the prevention of firearm injuries.

The ACS COT has pursued a maximally inclusive process to develop effective and thoughtful strategies for firearm injury prevention as they relate to suicide, homicide, and unintentional shootings. We have engaged with major stakeholder groups, including the National Rifle Association, Brady Campaign to Prevent Gun Violence, Giffords Law Center to Prevent Gun Violence, and Everytown for Gun Safety. The approach we have taken is consistent with other injury prevention strategies used by the ACS COT. We have worked carefully and deliberately to develop an inclusive narrative that can be supported by both sides of the often-polarized debate about firearms in the US.[17] This workgroup and follow-on workgroups are designed to engage diverse stakeholder groups and have them contribute constructively, so that they can be part of the solution.

The FAST Workgroup includes 22 experienced surgeons (median of 28 years caring for trauma patients). Eighteen of these surgeons met all of the criteria described in the introduction: surgical leaders who are firearm owners that are passionate about firearm ownership with expertise as hunters, sport shooters, self-defense, law enforcement, and/or previous military service. Four represented the leadership of the ACS COT and the ACS (EMB, DAK, RMS, MW). All have cared for, and most continue to care for, patients with serious firearm injuries. The group is geographically diverse, representing 16 states, and includes surgeons that treat both injured children and injured adults. Nine (41%) surgeons in the FAST Workgroup have past or present military experience, and others have formal training in public health. Five (23%) are current members of the National Rifle Association and 4 (18%) are former members. All are committed to preserving liberty and preventing firearm injury using an evidence-based approach. Although the group was not polled on where they stand politically, it is clear that the group is extremely supportive of Second Amendment rights. We are not constitutional scholars, but we do not believe that any of the FAST Workgroup's recommendations impinge on the rights guaranteed by the US Constitution.

These recommendations come from surgeons who are likely representative of the approximately 40% of American surgeons who own firearms.[1] An acknowledged weakness of the recommendations is that they result from a small convenience sample of firearm-owning surgeons, and are subject to selection bias. To assist the reader in determining potential bias, every surgeon voluntarily provided an inventory of their firearm ownership, years of experience spent caring for firearm-related injury (Table 1), National Rifle Association membership (past and present), and past or present military service.

The FAST Workgroup is not trying to speak for all firearm owners, and is not speaking for all surgeons; however, as a group of firearm owners and surgeons who were convened by the ACS, the members of the FAST Workgroup did try to objectively and thoughtfully consider a wide range of possible approaches to lessen the public health burden of firearm injury and death. The members of the workgroup believe that the recommendations are reasonable and preserve Second Amendment rights for responsible firearm owners. The FAST Workgroup expects that some firearm owners will contest the emphasis on freedom with responsibility, but our view stems from our belief that a democratic society requires that its citizens act responsibly.

The members of the workgroup also expect that some will contest these recommendations based on the belief that the FAST Workgroup might be implicitly or explicitly influenced by firearm stakeholder groups, or influenced by the participants' philosophical beliefs about the Second Amendment. Just as this workgroup is not speaking for all firearm owners, the FAST Workgroup is not speaking for all surgeons. As surgeons, we tried to make these recommendations align with the best interests of our patients (their families and their communities) who suffer from the consequences of firearm injury and death.

The FAST Workgroup as currently composed will need additional input and participation from different stakeholders when it comes to addressing subsets of patients based on age and manner of injury (ie suicide, homicide, and unintentional). This requires an ongoing process and will require refinement of objectives and recommendations over time.

CONCLUSIONS

The members of the FAST Workgroup believe these recommendations will increase public safety and improve our understanding of firearm injury in the US. We understand that there is not a perfect or simple solution for an issue as complex as firearm injury in America. These recommendations would make firearm ownership safer for those who own a firearm, as well as those who do not. The group's general approach is centered on enforcement of existing laws and strengthening existing statutes and regulations, with the goal of keeping firearms out of the hands of those who are a danger to themselves or others. This basic, responsible approach is supported by organizations across the spectrum.[24,25] Through the ACS COT's consensus-driven firearm injury prevention project, ACS COT members have demonstrated the ability to work together (across regions and philosophic differences) to advance substantive public health recommendations and programs. We hope this approach can serve as a model for other Americans and other organizations.

The members of the FAST Workgroup know there will be people who think we did not go far enough, and also people who think we went too far, but we believe the middle ground moves the purpose forward. We know thousands of American lives can be saved each year. Full implementation of the measures we call for in this report would preserve freedom and simultaneously make our country safer, stronger, and healthier.

Author Contributions

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LD 2283

I am a board certified general and pediatric surgeon who cares for children in the state of Maine with firearm injuries.
I would like to offer strong support for LD 2283 and the crisis intervention order act. My national professional organization is the American College of Surgeons. In 2018, they assembled a workgroup to develop effective and durable strategies for reducing firearm injuries, death and disability. In an innovate approach, they only included surgical leaders who own firearms themselves in the hope that they would offer a middle path. Among their thirteen recommendations, there was direct support for "programs to remove firearms from those individuals should be standard as is done in Extreme Risk Protection Order policies, Red Flag laws and federal law 18 US 922[g][1-9]." Please find this article attached. The three major trauma surgery groups (American Association for the Surgery of Trauma, Eastern Association for the Surgery of Trauma, Western Trauma Association) also endorsed these recommendations
General surgeons and trauma surgeons directly manage firearm injuries. They also own firearms similar to the general population, 40% by a recent survey. As a group, we are practical and decisive. I stand with my national organization to support passage of this bill. I hope you do the same.