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BOSTON UNIVERSITY
PREVENTING GUN VIOLENCE: THE ROLE OF ACADEMIC PUBLIC HEALTH
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>> SANDRO GALEA: Good afternoon. Good morning. Good evening, everybody.

My name is Sandro Galea, and I have the privilege of serving as Dean of the Boston University School of Public Health. On behalf of our school, welcome to this Public Health Conversation. These events are meant as spaces where we come together as a community to engage with issues of consequence for health. Through a process of discussion and debate, we sharpen our thinking about what matters most for health, to elevate ideas that support a healthier world. We are guided in these discussions by expert speakers from both within and outside the field of public health.

Thank you for joining us for today's event. In particular, thank you to the Dean's Office and the Marketing and Communications team, without whose efforts these conversations would not take place. And thank you to today's cohost, the Association of Schools and Programs of Public Health. Last year, over 44,000 people were killed by guns in the US. The year before that it was by some counts about 45,000.It is estimated that for every death, two to three people are also injured by guns, with injuries that have enormous lifelong consequence for those affected and their communities. These numbers reflect something

we in academic public health have long known: gun violence is a public health crisis in this country. Addressing gun violence means applying all our capacities to solving this problem, from research and training to policy and advocacy, to practice.

Today, we will discuss next steps for academic public health's engagement with gun violence, work that was conducted in large part under the auspices of ASPPH. We have the privilege of hosting members of the ASPPH Gun Violence Prevention Task Force, colleagues who are leading on this issue. I look forward to learning from them this afternoon as we discuss how we can get to a world without gun violence. I am now pleased to turn over the event to Laura Magaña, President and CEO of ASPPH. Under Dr. Magaña's leadership, ASPPH has continued its mission to advance academic public health by mobilizing the collective power of its members to drive excellence and innovation in education, research, and practice. Dr. Magaña has launched five strategic initiatives to address critical issues in public health as part of ASPPH's Vision 2030: Dismantling Racism in Academic Public Health, Climate Change and Health, Framing the Future 2030, Gun Violence Prevention, and the ASPPH Workforce Development Center. She is a longtime colleague and friend who has done much to support public health's engagement with the issue of gun violence.

Dr. Magaña, the floor is yours.

>> LAURA MAGAÑA: Thank you. Thanks.

>> CATHERINE ETTMAN: Dean. Very generous with your words. I want to thank for your active role in raising the voice of this public health crisis. Just this year, the U.S. has already surpassed 500 mass shooting and has taken the lives of more than 30,000 citizens. And of course, countless have been injured as well. So we're very proud and happy to really cohost this important webinar.

Recognizing that urgency of the issue and the opportunity to act, ASPPH established a gun violence prevention task force in 2022, led by the

>> CATHERINE ETTMAN: Dean. Many of whom are on today's panel. Our gun violence prevention task force spent six months reviewing existing literature identifying needs and gaps and developing for accommodations through an academic public health lens. We launched the final report in January 2023 and gun violence prevention web page that provides resources and relevant actions that ASPPH took in this area. If you haven't read the report, see the recommendations developed by our task force and meant to encourage more engagement from our academic community in reducing gun violence. The report frames strategies in four areas: Education, research, advocacy, and practice. ASPPH is working with our members and external partners on this

initiative year's one implementation phase which we hope you will all be engaged.

It's now my honor to introduce Jennifer Mascia, Senior News Writer and founding staffer at "The Trace." Jennifer covered gun violence at "The New York Times. She's covered community gun violence, the intersection of domestic violence and gun, and growing role of firearms in public life. She proceeds over the ask "The Trace" series and tracks news development on the gun beat. Over to you, Jennifer.

>> JENNIFER MASCIA: Thank you, Dr. Magaña for that introduction. It's my pleasure to be moderating today's discussion. It's an important one.

Gun deaths hit a record-high in 2021 with nearly 49,000. And provisional figures from the CDC show that gun deaths in 2022 are not that far behind. Mass shootings have more than doubled in the last 10 years. Federal legislation that would more closely regulate gun access faces substantial political hurdles. There's been significant progress at the state level. But only in blue states while red states seem to be in a race to loosen their gun access laws. And guns are continuing to fly off the shelves. 22.5 million guns were sold in 2021, the most ever in a single year.

But public health has entered the chat. A few years ago, Congress relaxed the federal freeze on gun violence research. And at the same time, researchers and trauma surgeons and academics and public health experts declared this is our lane. And they've opened up a new avenue for solutions by insisting that we view this as a public health issue, and it is. As our reporter just reported, gun violence cost significantly more in America than any other developed nation. Medical expenses alone for firearm injuries total at least $290 million a year. When other costs are factored in, that figure soars into the billions.

So the public health community has a fundamental role in advancing long term solutions to our gun violence epidemic. And today we're going to hear about them. First, we will hear from Dr. Linda Degutis, a lecturer at Yale University School of Public Health and a consultant in injury and violence prevention and policy, public health preparedness, and public health policy. Some of her current work focuses on suicide prevention in veterans and firearm violence prevention as well as public health practice. And then we will hear from David Hemenway. Dr. Hemenway is Director of The Harvard control research center and Professor of Health Policy at the Harvard T.H. Chan School of Public Health. He's written on injury prevention including Articles on firearm, violence, suicide, child abuse, motor vehicle crashes, fires, fall, and fractures. Heeded the pilot

for the national violent death reporting system which provides detailed and comparable information on suicide and homicide. In 2012, he was recognized by the CDC as one of the 20 most influential injury and violence professionals over the past 20 years.

Next, we turn to Corinne Peek-Asa. Dr. Peek-Asa is the Vice Chancellor for Research at UC San Diego where she's a profess fess his or her with distinct of epidemiology. He was formerly the Associate Dean for research in the College of Public health and the distinguished professor at the University of Iowa. Her research focuses on the epidemiology, implementation, and translation of programs and policies to prevent acute traumatic injuries and violence.

Finally, we turn to John Rich. Dr. rich is the director of the Rush BMO Institute for Health Equity, a part of the Rush University system for health. Prior to his appointment at

>> CATHERINE ETTMAN: Rush, he was a professor and former Chair of the Department of Health management and policy at Drexel University. He was also Co-Director of the Drexel center for nonviolence and justice, a multidisciplinary effort to address violence and trauma to improve physical and mental health. Dr. rich's work has focused on urban violence and trauma and health disparities, particularly as they affect the health of men of color.

Dr. Degutis, we would like to start with you.

>> LINDA DEGUTIS: Thank you. So I'm going to talk about the opportunity we have in actualizing a public health approach to gun violence prevention. And how this effort being made by ASPPH and what we have put together is really going to make a difference in this area.

So why do we need the public health approach? As Jennifer stated, we acknowledged that gun violence is a public health issue in the United States. But we haven't really gotten to the point of engaging diverse stakeholders and public health leaders and agencies and colleagues in implementing some evidence-based and evidence-informed policies and practices that can prevent the death, injury, and disabilities that result from gun violence.

Right now, we have a great opportunity to take the lessons we can learn from successes in taking a public health approach to other problems such as motor vehicle traffic safety, tobacco control, and other issues that are major public health issues. We know there's more -- a need for more progress in motor vehicle safety but a lot was accomplished by starting this process. And we know there are effective strategies that can be put into place that are public health strategies. Policy change, technology improvements, changes in cultural and physical

environment, and then we know there are specific examples that can help us in understanding how we were successful in other areas of public health and that can inform our approach in preventing and mitigating gun violence.

It's important that we incorporate these initiatives in schools and programs of public health at all levels and we engage not just students but faculty and staff in working on these issues.

So I thought just by giving examples of what we did with motor vehicle safety, we took interventions and many interventions that took place with input from public health, the insurance industry which had a stake in the whole issue, the automobile industry, consumer, people who were taking care of people who were injured in motor vehicle crashes or traffic crashes, and then mothers against drunk driving, advocates for highway and auto safety, the American Public Health Association, and then federal and state governmental agencies such as the NTSBB, the CDC, and others. And the change's impacted policy on both the State and federal level but also impacted technology and they did decrease motor vehicle related traffic fatalities, despite increasing number of vehicles on the road and increasing number of miles traveled.

So this opportunity that we have for schools and programs in public health, educating the public health workforce for the future, we know that in public health, we talk about epidemiology and surveillance. We teach people how to collect the data that's important in understanding the issue and documenting progress over time.

We also teach people how to engage in the community. How to get them involved in the work. How to get their ideas and how to find out what they see as some of the main problems that they have. We educate the workforce in program development and implementation and intervention and evaluation of programs. So that we know that the programs are effective and that the ones that we put the energy and time into implementing and spreading can be effective in places.

We also teach about policy development, research, and the impact of policy as well as its unintended consequences. So we have the opportunity to do more with that. And we know that we can have a significant impact if we have the basis, the evidence base for telling people what works and helping them understand how to put it in place.

Advocacy is another important piece of this whole process. And teaching people who are going to be the public health workers and leaders in the future how to advocate for things that will improve the health of the public, for improving people's safety and decreasing gun violence. And of course, the

research side of things which requires funding, which requires knowledge of how to do the research, how to evaluate it. But we also know that public health knows how to convene diverse stakeholders and use an evidence base with the stakeholders. And then, innovation is another piece of things that so many people in public health have the talent to use. And we can look at things a little bit differently than they've been looked at in the past.

I would also say that the other piece of things that we can look at is how can this work, how can the work that was done by the ASPPH task force also be spread to other health professions, to other places that can start to understand the need for a broad-based approach to preventing gun violence rather than taking an approach that only looks at law enforcement or criminal justice. But helping this emerging to understand what else they can do and how they can advocate for this approach.

And I wanted to say, one of the questions is, if we continue to do the same thing we've always done in order to prevent gun violence, why do we expect different results? We have to be innovative. We have to take a more diverse strategy. We have to change the conversation. We have to not talk about gun control, but we have to talk about safety and keeping people safe. Despite the fact there are guns in our environment.

And we want to really use this effort to create public health's action in accepting responsibility for addressing this really important public health issue and changing the dialogue around preventing gun violence. Being able to discuss it with people who have diverse opinions but also to have the debates and continue to learn what can work, what can make a difference, and continue to inform people of what the evidence shows.

And the ultimate question, I think, that we have is because we are not going to be eliminating all the guns in our environment tomorrow, how do we keep people safe given that there are guns in our environment? Thanks.

>> JENNIFER MASCIA: Thank you. And now we have David Hemenway. Take it away, David.

>> DAVID HEMENWAY: Hi, thank you. Okay, I'm going to talk about research. And what do we need more research about? And the answer is everything. We know so little about so many things and about guns. And I'm going to talk about one big, big issue, and that is gun suicide.

And what I would like to talk really about is reducing suicide without changing anyone's mental health.

So historically, when people thought about suicide, they said, why? Why do people attempt suicide? Why do they do from suicide? And in public health for the last 25 years, we have been asking a different question, how do people die in suicides?

And I would argue that in the 20th century, some of the great success stories in suicide stories have nothing to do with mental health. In Britain, in the 1960s, the leading method of suicide was domestic gas. It's how Sylvia Plath died. You put your head in the oven. It's painless. Non-disfiguring. Over the 1960s, the gas in the stoves became non-toxic. People still put their heads in the oven, but they didn't die. And they weren't seriously injured. And suicide rates overall dropped by a third. An incredible success story.

In the 1990s, Sri Lanka had the highest level of suicides in the world. And their pesticides were the leading suicide method. People would drink the liquid pesticide, a horrible death. Take three days, so you couldn't do anything to help them. Finally, the post toxic pesticides were banned. And suicide rates dropped 50% within a decade. An incredible success story.

In the United States, it's not the stoves. It's not the pesticides. It's the guns. In the United States, if you talk about suicide, you have to talk about guns because most suicides are firearm suicides. Even though firearms represent a small percentage of suicide attempts, they represent more than half of all suicides.

And why would it matter to do something to reduce the easy availability to firearms to people at risk? There's lots of reasons, but put together, many, many suicide acts are impulsive, in a crisis that are fleeting. The method that people use largely depends on the ready availability on these methods. If firearms aren't readily available, people may take pills. The case fatality rate among methods varies greatly. Pills and cutting, for example, the most commonly used methods of attempted suicide, the case fatality rate is under 5%. Medicine is good about saving people. The case fatality rate for firearms is about 90%. These people typically go straight to the morgue. And it matters because if you can save a person from suicide attempt, they are typically very pleased to still be alive and over time, fewer than 10% of survivors of even near-lethal suicide attempt where is they expected to die ever go on to die from suicide.

In the United States, the evidence is overwhelming that a gun in the home increases the risk of suicide to everyone in the home. The gun owner's spouse, the gun owner's kids by three-fold. An incredibly high increase in risk. We have evidence from case control studies. We have evidence from a lot of ecological studies. We have evidence from now huge multi-longitudinal studies of millions of people. The case control study, for example, here in just in a 10-year period from 1996 to 2004, there are 16 case control studies. They all show the same thing,

a gun in the home increases the risk. And on average, by about three-fold.

There have been dozens of ecological studies. This is not a study that gives you a flavor of when you look across states. So you can do the same thing across city, across regions. I like this because I lived in New England for over 60 years. There are six states in New England. Three have high rates of suicide. Three have low rates. Three have lots of guns. Three have few guns. Three have lots of gun suicides. Three have few gun suicides. And the northern states have many more suicides overall because the non-firearm suicide rate is sort of the same across all the States. If you look across all 50 states, you find the same things. There's no evidence at all that the people in Maine, Vermont, and New Hampshire are more depressed or more likely to have suicide ideation or even more likely to attempt suicide. They just attempt with what is readily available. And there, it's guns. You can see across the 50 states, basically, more guns. More gun suicides. And more overall suicides. And trying to explain differences across states is not because of mental illnesses. Differences is not even because of suicide attempts.

And we've been trying to disseminate this message to people in public health. And I think we've done a good job with suicide experts. Now, finally, in the last decade, we have all the suicide experts in the United States understand the Army understand, the Veterans Administration understands, the experts understand of the importance of guns. We have been working with providers. And we've now also in the last decade been working to work with the gun-owning community.

With working with providers, over 15,000 include anything every year take a free online course called counseling on access to lethal means, trying to get them up to speed on what the evidence shows. Because the evidence is overwhelming. We've been finding common ground with gunners, with people, gun trainers and gun shops and so forth. Working with gun trainers, they focus on safety. But they haven't typically focused on suicide. They have been trying to prevent gun accidents. But they have not recognized that for every accidental gun death in the United States, there are about 50 gun suicides so. If you want to save people with guns in the home, you have to care about suicide. And we have worked with them and created modules. And it's a similar to a friend's don't let friends don't drive drunk. They really love it. And basically, it says what everybody in the gun-owning community should understand is that if someone is in a period of crisis, they're at risk for suicide, their wife's divorcing them, they are talking crazy, they are drinking, it should be the responsibility of their friends and they should

know it. And the friends show know it too. Babysit the guns for a while until things get better. And then they can get the gun back. They get a new girlfriend and things calm down. This is presented by the gunners as the 11th commandment of gun safety.

There's been big national changes about knowledge of guns and suicide in the United States. And 20th Century suicide experts really didn't understand the importance of guns. All about mental health. And now they are beginning to understand about guns. Firearm experts had never talked about suicide. And now, at least some, we have gun shops and shooting ranges and at least 20 states talking about suicide prevention outreach and actually doing things to try to help reduce suicide.

But big problem is that still, even though the evidence is overwhelming, most physicians are not talking about guns to their patients who are at risk for suicide. And they really need to. We're still only 30% of physicians believe that a gun in the home increases the risk for suicide, even though the evidence is overwhelming. And even worse still, only 15% of the public believes that a gun in the home increases the risk for suicide. And they are buying guns and putting their whole family at risk.

Next steps, we need clearly more effective dissemination of the results in lots of ways. And there's still so much research, basic research, applied research that we need to do in this area. We've been looking, for example, at Black firearm suicide and the relationship with guns and suicide is different than for whites. And a lot of related issues. Gun storage, we need to learn so much more about gun storage. And we need to understand -- we know that gun storage matters for suicides of adolescence. We don't know whether or not gun storage matters for suicides among gun owners or not.

And especially if it's stored inside your own house.

Suicide, the second-leading cause of injury death in the United States. And so much can be done and so much needs to be done.

Thank you.

>> JENNIFER MASCIA: Thank you, Dr. Hemenway. Corinne Peek-Asa, Vice Chancellor for Research at UC San Diego. Take it away.

>> CORRINE PEEK-ASA: Great. Thank you. David Hemenway is one of our most notable economists in this area, but I will do my best to cover it, especially speaking to this audience, how important the data that we use and how we interpret it is when we are advocating for change.

Figure out how to move my slides. There we go.

So research in the U.S. has ranged looking at the cost estimated cost of firearm injuries from $371 million to $175 billion. This is a range of costs that is really hard to wrap your head around. It is difficult to synthesize as a researcher

but more so if you are, for example, a staffer in a very busy Congressional office.

These are not wrong estimates. They just look at very different things. So for example, the 370 million was for pediatric emergency department visits and. When we look at the 175 billion, it is the estimate of the lifetime total cost for the firearm injuries sustained in one year. And that type of figure is what we often see the large economic projections estimate is the lifetime cost for a cohort of events that happen at one time.

So basically, the dollars get bigger based on two things. One, what are the costs, how many of the costs and rejected costs are being measured. So acute medical care cost is smaller per individual than the total societal lifetime costs. We also see a great difference in looking at the data that we use. So looking at medical data, admission, fatality, all injuries, when we add costs that maybe the victim and the shooter, so what are the costs for the justice system. And then the population impact, what are the pain and suffering, the community costs, what are the disparity costs. We see that these costs also get very, very large. But no matter what estimate we are using, the cost for gun violence is jaw-dropping. It's a cost we should not be willing to take from an economic standpoint and certainly not a social and pain and suffering standpoint.

It's mated median charge per patient for a firearm admission is $47,000. That's four times higher than AHRQ tells us for an overall hospital stay. And in the U.S., this is by public source, when we look at both uninsured and Medicare, Medicaid, it's over half of the costs. So these are important. They're necessary pieces of arguments. They're not sufficient to make the argument. We need so many additional data points. But I want to talk for a second about how varied the data that we use is because we all need to be aware that there are a lot of data sources, and they all have their strengths and weaknesses. In the U.S., the hospitalization rates from the two most common sources of data related to traumatic injury, one is from HCUP, and one is from the CDC WISQARSs, one of the best sources of data. We're not alone in the U.S. in having this issue. So for example, these are data that show variants in estimating of homicide rates in the country of France. So France has a national health system. It has good census data. Good death data. And even with that, counting the number of homicides per 100,000 people shows a range over the different sources of those estimates. When we look even more globally, in 199 to, looking at this Heatmap, pay attention to this slide to the countries for which there is no data. Many countries we are not able to count the number of homicides. The World Health Organization has

many ways that they estimate deaths by cause. That include community autopsy interviews that include estimates from hospital data and weighted estimates based on some of the known pockets of good death data.

But what's really interesting, when we look at 2021, there's improvement. We see that some countries have invested in health data infrastructures, but we still have large swaths of the world for which we don't have accurate data. And many of these countries are countries that have political unrest. They have wide availability of guns. They have very active gun markets. And often they don't have systems to register and track firearms that are owned either by military or by individuals.

So I want to focus on, we usually feel confident that we are good at estimating the number of deaths and their cause in the U.S. And we are very good at it. But it doesn't mean that we don't still have work to do. If we look on the left at the injury pyramid which is the slope of the relationship between the number of deaths to the number of hospitalizations to the number of people treated and released from care, we see that there's a fairly standard slope. And for the most part, hospitalizations and emergency department visits are far more common than deaths. If we look at firearm injuries we see a different slope. And that we have as many hospitalizations as we do or very close hospitalization deaths because it is such a lethal means and. This is data from 2017 where we have seen an increase in number of these.

So this is important. It's largely, in part, driven by the suicides that David was talking about because they are so lethal. But when we look at assaults, there are many, many people shot who don't die from the injuries. So let's think about those for a moment.

We have in 2017, 70,000 people who were treated in a medical facility. And were recorded as being related to a firearm. What was their ultimate cause of death? And are we really able to track all of these back to what might be an initiating event that led to a cascade of events that ultimately caused, perhaps a premature death? It might be that someone was shot and had a spinal injury and died from complications from the spinal injury. And someone was shot multiple times and many bullets left in the. And all of the medical professionals and emergency department doctors and nurses and acute care specialists can validate the fact that many people are walking around with bullets in them. Perhaps they're leaking lead and that's going to lead to health consequences that ultimately cause medical reasons for death. And there might be reasons that maybe you're shot and that leads you to you losing your job and then your health insurance and then your house. So there's a

social spiral that might lead to an early death because of complications related to the initial injuries.

So even though we are pretty good at counting acute events, we're less good at counting what are the long-term events and costs personally, economically, psychologically, to individuals, families, and communities related to firearms.

So I'm going to end with just why does this matter? Why do we really care? Again, this is a strong value proposition to bring partners to the table. For example, interest in insurance costs. In tough economic times, especially looking at startup and new companies or emerging companies, cost for insurance are a very important business issue. It's a struggle for businesses. So if there's a lot of costs associated, it's going to get attention. Certainly Congressional attention. But it's also very important, especially for all of us, to be advocates for how important data quality is. It's imperative to advance evidence-based practice and policy. And understanding what are the priority investments for action? What are the impacts of those actions? And how do we maintain an evidence-based strategy which is going to take multiple approaches to really drive down our injuries and the consequences from gun violence.

Thank you. And now we go to John Rich, Director of The Rush BMO Institute for Health Equity at Rush University.

>> JOHN RICH: Great. Thank you so much. It's really powerful to be part of this discussion. And to build on what we've talked about before and to think about the impact of the report, I want to talk a little bit about firearm violence, particularly the connections between trauma and health equity. And as you know, health equity was a cross-cutting, key theme throughout our work to think about the impact of firearm violence on community.

And I like to start with some aspirations. That is what would we want to see that all of us could embrace? So I've, for me, our aspiration might be that all people will have the opportunity to be safe from intentional and unintentional injury due to firearms as well as free from the physical and psychological trauma of violence. Which we know has downstream consequences. Just as Korrin was talking about, how do we map the influence going forward?

From a health equity perspective and as we teach public health students, we know that this issue is sometimes depicted in black and white. But an intersectional perspective helps us understand the ways in which different identities put individuals at risk for these consequences. And we know that young Black and Brown people in cities are disproportionately impacted by firearm injury and death. But we know that middle-aged white men have higher or climbing rates of suicide. For

children of all races and ethnicities, the, it's unprecedented levels. And we know transgender and gender-non-confirming people are also at a particularly high risk according to the HRC, nearly two-thirds towards transgender and gender-non-conforming people involved a gun. And the majority of the victims were Black women under the age of 30. So this is an issue that crosses identities, requires us to take an intersectional lens to understand these risks. And that speaks to the issues of complexity. And I think throughout our work, we have to embrace and understand that there are complex facets to this, many of which are most salient to those people directly affected.

And so there are ways in which trauma feeds the cycle of violence. And certainly, the manifestations of post-traumatic stress which are at very high levels in inner city communities. So hyperarousal, flashbacks, nightmares. In my own work, as I've interviewed young people who have been victims of violence, patients of mine, I recall talking to a young man named David. He and his cousin were sitting in a car in Massachusetts, actually. Someone walked up to the car, fired into the car. David was injured. Had a non-life-threatening injury, but his cousin was killed. And I sat with him. And he described one of the most disturbing manifestations of post-traumatic stress that is emotional numbing. He said to me, some things that I used to be nervous or scared about, I'm not scared of it anymore. I feel like I've already been through the worse. Like if someone kept giving me mean look, I used to get nervous. But it doesn't happen. It's like -- (frozen video). And that scared feeling, it's gone. So one can think about what is the impact of the loss of the ability to feel fear on a young person who is living, often, in the community that's economically disadvantaged.

Well, we know there's a cycle. And as we've looked at young people who have experienced a violent injury, the data suggests that up to 44% of people who suffer a penetrating injury will suffer another penetrating injury in the subsequent five years. But there's a cycle. Injury can lead to symptoms of traumatic stress, but those symptoms themselves can lead and in the population we talk to, behaviors that are about self-medicating so, the use of marijuana or cannabis to ease those problems. But, of course, using cannabis subjects you to risks in the criminal justice system. It will bar you from employment. And when you're barred from those basic opportunities, you may find yourself forced, as it were, into elicit economies, where weapons are common. There are other ways in which, for example, lack of faith in the police, to protect you, may lead young people to get a weapon because of their desire to, in their own words, protect themselves.

Now I offer this not as an excuse for these behaviors but an explanation for what is happening among young people. And so, even as we think about systems thinking and complexity, the kinds of skills that we want to encourage amongst our learners, we have to think about the ways in which, for example, bounded rationality means that people make quite reasonable decisions based on the information they have. So if young people turn to weapons, that may feel rational in their lives, but they don't have a view of the entire system.

Our interventions that we might envision around firearms might have themselves unintended consequences so. For example, as we begin to talk about or plan for regulation to decrease availability of firearms, we know that may increase the tendency for people to purchase firearms in anticipation of some change in availability.

And certainly, we know there are feedback loops, to the extent that people feel unsafe because of the presence of firearms so, they feel unsafe, they may purchase firearms. More firearms lead people to feel more unsafe. And may drive people to acquire firearms. And I think we have to believe in complex ways. And we have to intervene in those ways.

So as you may know, across the country, healthcare settings have become a point of intervention. To identify those people who have experienced prior injury and people month are suffering the consequences of post-traumatic stress to intervene. The health alliance for violence intervention is an organization that has supported the development of programs across the country. They now exists in cities. And they have brought together professionals from many different disciplines. So I speak to a need for a public health approach that thinks about interprofessional work and interprofessional teams. So we see in of these intervention, public health people working with nurses, social workers, community health workers, violence interrupters, physicians, psychologists, a whole range of different disciplines. And together, pushing for policy change. For example, changes in Medicaid policy at the local level that may allow for resources to flow to sustain these programs.

It is this kind of coming together, across the range of disciplines, and I would include law enforcement here, with the understanding that from a public health perspective, we want to identify those root causes. We want to move forward with a healing perspective. Not a punishment perspective. We want to change the environment together to decrease injury.

This is a key component of our work going forward. And the opportunity that we have to decrease firearm violence among those who are most vulnerable.

>> JENNIFER MASCIA: Terrific. Thank you so much for your presentation, panelists. I would like to start with a few questions.

So John actually, since you just gave your presentation, I have a question. So I've written before about hospital-based violence intervention. And how it can really be very effective at interrupting that cycle of violence. I understand it starts at the bedside and continues after discharge ideally. Can you tell us a little bit more about what that involves, the logistics of it? And how you can engage somebody like after discharge and continue with them through their life as some programs do.

>> JOHN RICH: Yes, thank you. The it's a critical question. And we encounter people who have experienced violence or suffering from trauma often at the bedside, but not necessarily. We may reach out afterwards. And the goal is to engage them in understanding whether they're safe. To orient them to the possible consequences that may occur after injury. Like post-traumatic stress. And to deal with the other health related social needs which are a critical piece to evaluate. Certainly because we know that ongoing involvement with the criminal justice system, ongoing substance use, whether for a self-medication, will often derail these young people. The goal is to use a team approach that is people with social workers, psychologists, paired with community health workers that represent people with the lived experience. And to have a tailor add approach that meets the needs of the individual. And so it is very much a clinical initiative. But it's paired with public health professionals and public health principals. So increasingly, as in Philadelphia, the public Health Department is engaged in this work by supporting evaluation, supporting quality, supporting training, and using innovations like guaranteed basic income for participants in the programs, recognize that a fundamental driver of involvement in illicit activities and lack of resources P. so we're looking to do a wrap-around for those who need it. For some. And it's tailored. For some, they may need only one or two things. And the goal is to connect them with existing systems. Where they exist. To walk with them for that six to eight to 12 months. And to use and advocate for greater support for young people and survivors of violence in those settings.

>> JENNIFER MASCIA: Thank you for that. That's also something you need when dealing with gun rights advocates as well. David, you mentioned that you've worked with gun trainers on suicide prevention. The national shooting sports foundation has paired with the American foundation for suicide prevention to reduce suicides. How receptive has the gun industry and gun

rights activists been overall to this push for suicide prevention? How do you approach that community? Which can be kind of closed off, especially in light of the political stalemate we're in?

>> DAVID HEMENWAY: Who in my group has done all the work is Cathy barber. And I think being a woman actually helps with the gunners. So the example in Utah about the gun trainers, she went there. You the Super Tuesday a red state as the gun-training capitol really of the United States. And she got herself invited to this group of concealed carry trainers. This huge group. And she basically said, do you realize that, you know, I think you're doing such a good job trying to reduce gun accidents, but did you know in Utah, and this shows the importance of good data, that in Utah for every accidental gun death, there were 85 gun suicides? And they said that can't be true. And she said, raise your hand if you know someone who accidentally killed themselves with a gun. And a couple hands go up. And raise your hand if you know someone who committed suicide with a gun. And every hand goes up. Because they're all these old, white guys and they have guns. And they're the ones at really high risk for death. And then she said, what if we work together and create a module? And they loved the module.

Then they said, we need to get -- because of -- it wasn't the government stepping in. It was like friends don't let friends drive drunk. And how can we get all the trainers to do this? And then they thought about it and said, you know, it's going to be hard to train all the trainers to understand this. Well, we know so many people in the legislature, we'll make it mandatory. And now Utah, one of the three states in the union where it's required, if you teach a concealed carry class, to have a module about gun suicide.

And it's -- I think it's, you know, she worked -- she's worked with really the public health community has worked with gun shops. Really started in New Hampshire. This one gun shop. And there's gun shops aren't very big. There's lots of them. And in one week, three people came in and bought a gun. And within six hours, killed themselves. And the gun shop owner when he found this out was devastated. And he thought, we have to be able to do something about that. Ands the not like it's going to change everything. But it means if there's -- a woman comes into the hop and says, I want a one. What kind of gun would you like? I don't care, any gun is fine. Okay, how about this one? She says, great. And then, well, how many bullets would you like? And she says one is enough. And you don't need to sell the gun to this person. It's not going to affect your sales. But you can help that person at that time maybe get the help she needs. And in 20 states now, gun shops are trying to think about the things

they can do to make a difference in this. At the individual level, not at the level of these lobbying organizations who you're not going to change. But at the individual level, everybody, you know, everyone agrees, we're trying to figure out ways to reduce gun deaths. And as Linda said, trying to figure out ways to live with the guns rather than so many people dying or being seriously injured by the guns.

and to treat these people as allies, that they are not the problem, but they can provide the solution to the problem. They help create, I think, the best PSA I have ever seen. So it's a 30-second PSA. And briefly, there's a guy who is clearly a gunner. Knows what he's doing. And shooting bang, bang, bang, bang. And he said, last year things were going bad in my life. And my buddies, they took my gun for a while until things got better. And I think they saved my life. And puts the earmuffs back on and goes bang, bang, bang. And it's such a success story. Not just things are bad. Here's a way to help reduce the problem. And here's the success in a real person so yes, there's ways. And it's not the only thing to did. But as we understand, as Linda pointed out in the motor vehicle area, knots like we got rid of cars. It's not like we fixed everything. But we made the cars safer. And we can make the guns safer. And we change the way people behave so they have designated drivers more than we ever did 50 years ago. So there's lots of things and. That is the public health approach. It's not the nanny looking at it. It's trying to work together and figure out ways to make the world safer.

>> JENNIFER MASCIA: Definitely facilitating a culture shift in the absence of legislation. Corinne, I understand you want to chime in.

>> CORINNE PEEK-ASA: Yeah, I do. The vast majority of gun owners are in favor of reasonable approaches to reduce gun violence. And one thing we can do is create an engaging culture that we can reach out and involve them in things that they agree with. Because as David said, many approaches are going to be directly related at gun design, gun ownership, gun regulations. But a lot of things are also going to be, and we need things that aren't directly focused on the firearm itself. And John talked about some of those. We need social change as well. So I see some questions on advocacy. I hope that comes up. But we need to build the largest advocacy base we can. So we have to play a little politics. Where do we find ways to move forward that we can agree on? And recognize and be okay with the fact that there are things that we don't agree on. And in addition to suicide prevention there are ways to access youth. And we know from other injury prevention, we have seen a culture change in how youth can be drivers for changes and safety culture. And I

think looking at high school track clubs, which my daughter was one. Thinking about how youth see and are literate about what they see about firearms and the games they play and how does that relate to their fear in their neighborhood. So I think we can be more savvy in creating an inclusive culture to talk about these things.

>> JENNIFER MASCIA: Corinne, since taxpayers pick up so much of the tab for the gun violence cost, can you see where it gets to a point where it becomes more than the economy can bear? And lawmakers start to step in at what point do the economics outweigh the political considerations? And can that finally be what moves the needle?

>> CORINNE PEEK-ASA: I'll be honest, I don't think that's going to be the thing that moves the needle. In our legislative process, there is a big disconnect between cost now versus cost later. And cost in my appropriated bucket versus others. So it's good to bring cultural attention to it. But I think we can use economics to bring more people to the table. I don't think, for example, there are many CEOs that have looked at how much a gun suicide, a gun shooting has cost them from an insurance standpoint. There's more and more recognition of this in cancer treatment and how much that can cost. So I think that it's very important, maybe necessary but not sufficient piece of the advocacy argument at the appropriation level. But I think it's an even more essential and powerful piece to bring more people to the table who even though we're getting so much growth in public can help people understand this is your problem in a bigger way that you may not have known.

>> JENNIFER MASCIA: On that note, Linda, you mentioned how motor vehicle interventions and tobacco control, they were big strides made that haven't been made on gun violence. But motor vehicle interventions were accompanied by legislation and at that tobacco had the master settlement agreement, because of the gun dealer community is not possible here. Except in a few states. Can gun safety, education, and advocacy ever be enough? I guess the hope is that the cultural shift will come from a number of places. Is that possible without legislation? And how far can that take us, the education and advocacy?

>> LINDA DEGUTIS: I think that education and advocacy is important. But we also need to have changes in the way we do things. We need some changes in technology. I've seen a couple of questions, and I think there's a few questions about whether there's ways of changing the technology of guns so they can't be fired. But we know there's ways of making a gun so that it can only be fired by the owner. With a thumbprint. And people get worried about that. And then you think, well, what do we do with our phones? Our cellphones? We put our thumb on it to open it

up. It's not -- we're not risking this identity theft in the way that a lot of people will talk about it.

So there are some things that can be done. So I think education and advocacy alone are not going to do it. Policy, I think, we need to recall that a lot of the policy is at a state or local level, not at the federal level. And I think people the end to forget that and make some assumptions that almost all of the policy is federal when it's not. So much of it isn't. And there's so much you can do in your own state. So that's one piece of it.

But the interventions have to be funded. The programs have to be funded. And when Corinne was mentioning some of the economics of it, yeah, the economics they're a challenge. You asked her whether we might argue about the economics and how that might really get people engaged in it. It's a challenge to get people to listen to the economic argument. There is some funding in the legislation that was passed last year. There's some funding for mental health interventions. Funding for violence prevention. But it's not something that's long-term funding. It's not something that we're going to be able to just keep on using. And it's not going to necessarily take care of all the problems. By need more than education and advocacy. We need technology. We need, you know w motor vehicles and tobacco, social change, cultural change we need to look at some of the issues of equity, the disparities that occur as John mentioned. You know, about nonbinary gender identification, how that impacts something. We also need to look at the assumptions that we make about what happens. And even with the data where when we use certain classifications in data, sometimes we classify race, but we don't always classify it correctly. We classify it incorrectly and assumptions are made based on that classification. That because you're a specific race, you're at more risk. That's not necessarily the case. There may be other factors involved. So we need to look at the other public health issues of social determinants of health to understand more of it. We have a lot to do.

>> JENNIFER MASCIA: I would like to ask one last question before we get to audience questions, and this could be for any of the panelists. How will the new White House office of gun violence prevention affect your work? I know there was a demand for it among survivors and that community. Because it showed that the president prioritized the issue. But aside from that, will having this office where gun violence response is streamlined make your life easier at all? Whether it's data collection or advocacy or funding. What are you expecting to come out of there? Anyone can chime in.

>> CORINNE PEEK-ASA: I can start. Unfortunately, own one hand, we've seen a lot of offices that have no funding behind them started. It's really hard for them to make a difference. It does bring a level of attention. So I think it has yet to be seen. But it's going to be a struggle.

>> LINDA DEGUTIS: I think it's going to depend on what the focus is as well. I mean, you know, we hear a lot of people say, oh, we can take a public health approach. But all they do is give it voice. They don't really understand what it means. And so it's going to really depend upon what kind of approach they take. Who they engage. Whether they really focus on evidence. And then, I think, as Corinne said, the issue, the long-term funding or stability of an office like that is a challenge as well.

>> JOHN RICH: I do view it as a positive development. In the sense that to the extent that I think our hopes would be that this office will convene, will bring people together, will identify places across the country where people have come together and really communicating potentially differently about this issue. That it is framed around a common value like safety and not around contentious issues. There are shared values. Right now, who would we look to do that? I think it's a lead. Perhaps there is a larger leadership opportunity here to bring people together and to identify and lift up those -- we call them common sense interventions. And move some momentum. Because I think our greatest challenge is the sense that we can't do anything about this. That is a completely intractable and impossible problem. That is paralyzing in its own right.

>> DAVID HEMENWAY: I guess since we're all saying something, I will say it really depends on what they're able to do and what they decide to do. I mean, as Linda pointed out in terms of motor vehicles, things were institutionalized. And so we have the national highway traffic safety administration whose job it is to try to make motor vehicles and the whole system safer. We have the Insurance Institute for Highway Safety. Which is the insurance companies got together and said we'll give money to an institute which will try to help reduce motor vehicle crashes. And to have maybe -- this is a nice thing. But who knows what it will do and how much money it's really going to have and how long it will last. I mean, one of the things for me, personally, is, if it said, certain things are really important. This is what we want. That is at least an indication for researchers. Because as I mentioned, there's so much we don't know. Maybe we should focus on the three things they think are really important and try to do a little more research and try to figure out how to create better data in those particular areas. And while I have the floor too, I just want to put in a

big plug for "The Trace." "The Trace" is free. And people should -- I get it five times a week, or seven, whatever. And I learn so much about the area which I'm supposed to be an expert on. So I think it is just an incredible -- that we have this news group which is providing information about this really important topic. Which was not available when -- six, eight, 10 years ago. So I think -- I just want to say this is so great what you guys do.

>> JENNIFER MASCIA: Thank you. And also, I wish there was no need for it. Nothing would make me happier than "The Trace" not having a reason to exist because we would have little to no gun violence.

Going on the audience questions now. Somebody has a question. What is the most effective action of primary care clinician can take when counseling a patient on firearm ownership? And this is a tricky subject. Because doctors occupy this authoritative but politically-neutral space. So what is the right approach? Maybe, David, would you like to start? For

>> DAVID HEMENWAY: For a pediatrician, you as the pediatrician are the expert about child development. Much more than parents are. And NSA what you're really talking about. And just as you talk about all these other things about safety, about wearing a seat belt and not taking drugs and whatever, one thing you want to emphasize is how dangerous guns are. And you want to emphasize that to the parents about that adolescence, in particular, can go through bad patches and. If the gun is around, if there's attempted suicide, these people, your wonderful child will be dead. Rather than being saved by the medical profession. That's what I would --

>> CORINNE PEEK-ASA: I would say just talking about it really does make a difference. There's a lot of criticism when research and screening for domestic violence started popping up. Because often, a woman or a patient would be asked about their experience. And then it wouldn't be followed up. And that is a criticism. We need to provide the support if we're going to ask the question. But just asking the question brought attention to it. It helps support individuals by normalizing and letting them know they are not alone. And is also, even if your answer was, no, my doctor is asking about it. It must be a big deal. It does change the culture just to have the healthcare community recognize this is a health issue. So that's important.

>> LINDA DEGUTIS: Another thing too is being familiar with terminology. That people who are gun owners use. So that what we're finding with veteran, for example, is there's a difference between safe storage and secure storage. And what they consider safe storage might be to have the gun stored and loaded where they can access it, but secure storage means it's stored so that

nobody can access it or get it. So terminology makes a big difference overall. And understanding what you're talking with the patient about. And not having -- and not being judgmental. That's the other piece. It's got to be, you know, just and the questions. Provide information. Provide counseling. About what they can do to keep their homes safe. And keep people in their homes safe.

>> JOHN RICH: And I would finally say, we should use the tools that we know for behavior change and medical encounters. To motivational interviewing is a way to engage people in the positives and negatives. People often know the positives and negatives. So we can move people along with the patience to know, if they don't walk out, you have convinced me, I'm going to make a change, that's not the end of the discussion. But facts matter. So there was a study not long ago that indicated that many parents who have guns in the home believe that their children don't know where that firearm is or have not had contact with it. Interviews with the children found out that many of them had. So breaking some of the misconceptions or the, yeah, the misconceptions about what is and is not safe will help, I believe, using science to do so but translating to it the moment.

>> JENNIFER MASCIA: This question actually is for you, John. Someone who worked with you in Boston back when you developed the young men's health group. Our current MADPH project has many elements by working with youth on life and job skills, providing options for paid training and living wage jobs. As an option to put the gun down and still be able to eat. Can you talk more about the young men's health crew.

>> JOHN RICH: Hi, it's great to hear your voice. I appreciate your raising that. It is about people with the lived experience of not only injury but of stigma, of racism, and really preparing them, realizing that they are the best experts to engage, not only if specific issues like firearm violence, but what we call social determinants or health related social needs. We have historically underfunded, undervalued fair work, under paid, and sometimes expected them to work 24/7 to do work because we somehow feel that they ought -- they are dedicated, but part of where we can go for future is to ensure that they are part of the healthcare team. And that we are extending that out of healthcare facilities into community. And so much of the work that happens needs to happen in the homes of young people where we can actually engage with the challenges that they're facing. That is a unique role that these young people can have. And I'm encouraged that there are now efforts to fund their work using Medicaid and others in a holistic, bundled, wrap-around way to improve the help. Because if these young people don't

feel safe, if that is not a prime objective, then we will not succeed in decreasing violence and communities. So thank you for elevating that. I appreciate all your work. It's inspired me.

>> JENNIFER MASCIA: Yes, one issue is the pay. We've done stories about that before. And that's definitely an issue that needs more attention. This is a unique question. How can we design federal pressure or incentives to get states with lax gun laws to strengthen them, much the way the Federal Government threatened to withhold highway fund if you knowing that wouldn't raise the drinking age to 21. That was a little before my time. But that's really interesting.

>> LINDA DEGUTIS: There was -- so there were a couple of people in Congress who were champions of that legislation. And they created -- it was actually a series of things. It was not just raising the minimum legal drinking age to 21. But then there were some further efforts. And a lot of the Senator Lautenberg was one of the people very involved and very engaged in it. Were things like decreasing the limit for driving while impaired to .08 from .10. Implementing graduated licensure laws. So there were a number of things. And for the impaired driving legislation, it was a requirement for states to pass administrative per se laws which allow immediate removal of a license if somebody tests positive or above the legal limit for driving while impaired or they refused to take a test. So there were a number of things that were in that legislation. So it really it required a majority vote of both the house and Senate in order do that and get it to move forward. So that's really the challenge at this point in time, getting something through both houses of Congress.

>> CORINNE PEEK-ASA: The reason it worked for motor vehicles is the Federal Government gave states a whole lot of money for road work and other things related to transportation. So they had that as a reverse carrot that they could withhold the funding. We don't have the same pot of funds. But another technology, there were instances where states decided not to accept the federal highway none because they didn't want to implement certain laws. And in almost all cases, only a handful, but in almost all, they didn't want to implement a motorcycle law helmet law. If you think about the power of advocacy, most people who don't ride motorcycles don't care a whole lot about motorcycle laws. And here's a state saying I'm willing to give up this federal money because my motorcycle advocates are saying they don't want a law. But it is an interesting window into how a powerful advocacy body can make a huge difference that may almost seem at odds to a larger social good. So I think we don't have the same financial avenue, but we have the same potential advocacy power. And we need to be stronger, more New Hampshire

front of this, and more in front of it. It's the laws that are increasing the things that might reduce the gun violence. So for example, looking at how many states are implementing more and more laws that don't allow local governments to make decisions, a lot of the advocates behind that are focused on gun rights. So we need to look at -- we need policy experts, and we need advocates and advocates who are really able to work at the high levels.

>> LINDA DEGUTIS: Yeah. Mm-hmm.

>> JENNIFER MASCIA: So this is an interesting question. And this is something we have grappled with at "The Trace." Our Seattle mayor wants to install shot spotter in some of the neighborhoods. Mostly neighborhoods of color, to react to the increase in gun violence here. Is this a good idea? A lot of good and bad. And the bad we have heard is it draws police to neighborhoods of color and then it gives them a justification for over policing. But when shot spotter started, it was a revolution. Now we can go exactly to where the gunshots are. How do you all feel about this technology now that it's starting to sour? No one, okay. It's a tough one.

>> CORINNE PEEK-ASA: I will say at the very outset, do I not have data or know the body of research that shows the impact of shot spotter. Looking at the really big outcome, not just gunshots but how does it impact health, wellness, engagement of the community. So on that, not knowing that a call for good data and more research, we can't make an evidence-based decision. But we do, I think, over time and accruing more and more evaluations, looking at violence in workplaces and communities, we see there are short-term outcomes that are directly related to the action of the implementation and larger and maybe more cultural impacting Us. The two points to make, not that I can answer the question directly. One, it's really important to understand the context and cultural context of what that outcome is going to be. But the other thing that is really just as important is to understand that tools are a means to the end. And the power and the intention of who has the tool that will dictate the outcome it has. The tool might work differently in different types of communities with different types of cultural pressures and relationships. Just like AI, it's a tool for which you do things, and we want to make parameters around the tools. Any tool is going to have to be implemented in an ethical, equitable, justice-driven way for it to have the outcome that we anticipate and want it to have.

>> JENNIFER MASCIA: Woulds anyone else like to chime in?

>> DAVID HEMENWAY: Same thing with tasers with police. Could have been this great tool. Or some police seem not to use them as well as they should, and the potential of that kind of

tool could create biases in various ways. Where, well, I don't live in a community that requires shot spotter, so I don't have to worry about that community. Or for children who are in a community that has shot spotter, do they worry about the violence? Does it already imply that they're in a high-risk community?

>> What message does that send to them? I think that ties into some of what Corinne was mentioning on the cultural implications. But I think it's important to look at the biases it can create as well.

>> JOHN RICH: And I would say, it is a form of surveillance. And People of Color have always been under the specter of surveillance as a kind of structural state sponsored form of violence. Sarah brand who was at Princeton put forth the theory of system avoidance. People avoid systems that do surveillance, so they often generalize from police-type surveillance to healthcare. So it becomes a barrier. Now if we were thinking about it in the public health sense and really trying to understand a surveillance to understand whether interventions were having a difference, we would ask yourself, would that be the thing we would be looking for? Would we use this tool to measure the effectiveness of our work? Perhaps in some cases that would be appropriate and others not. But said, it has to have a purpose that moves us in a direction. And it has to not have the unintended consequences that are so often not measured.

>> JENNIFER MASCIA: We've gotten several questions about the role of media and Hollywood in glorifying violence. We all know that other countries are exposed to the same media and video games. But do not have our levels of gun violence. But since we are a country with more guns than people, and guns are so easily accessible, and you know, mentioned out Hollywood dramatically cut down depictions of smoking. Should the entertainment industry take more of a role here considering that we are armed to the teeth in this nation?

>> DAVID HEMENWAY: So at my school, Jay Winston was effective at using Hollywood to try to promote the concept of the designated driver. And he was able to do that at a time when there were just three major networks, and it wasn't -- but there were so many writers there that wanted to figure out ways of doing something positive rather than being told don't do certain negative things. So often, they would throw in small little things where someone -- at a -- people would be eating or having dinner. And the waiter or waitress would be getting drinks for everybody. And one person would say, no, I'll just have water. And she would say, oh, you're going to be the designated driver tonight. You're going to make sure you don't drink. And no one

had quite heard that before. And adding that within a year, it went from like 10% of the people had heard of the term "designated driver" to 85% had heard of it and really understood what the notion was.

Years ago, maybe 20 years ago now, twice a group of us went, the CDC got a group of three or four gun researchers to talk to the Hollywood creative community. And we talked about all these wonderful things that they might be able to do and whatever. They came up with the idea that what they should do is give themselves awards. I thought, jeez, just what we are more holiday awards. But thinking back on it was really good. Because they would give awards to shows which tried to figure out a way to model non-violence. Or to make it so you could figure out ways to have less violence, you know, violent relationships. And I think now as I've gotten older and older, giving awards turns out to be a really good thing. People respond to Washington, D.C.s. People are gratified by awards. And I thought that was a tiny little thing that was good. And I remember looking at some of the movies that they gave awards to. And I thought, this is not -- guns are bad or don't -- it was all about just these tiny little things. The same way when Hollywood did about gays has made a big difference. To help allow gay marriage. It became so much more acceptable. And I think if we were clever, we could figure out ways to -- just like everything else in public health, trying to figure out ways to elicit help from people who have interest or power or knowledge or whatever. Yes, I think we should be doing more along those lines.

>> JENNIFER MASCIA: That leads into my next question and last question from an audience member. And this is related. COVID-19 pandemic in the U.S. has made a very clear that an evidence-base is no longer enough to galvanize transformative action. How do you see us concurring the growing gap between research and action as it relates to firearm violence? What is our responsibility as academics?

>> DAVID HEMENWAY: Well, even -- I just think science doesn't always matter but I think science does matter. And what matters, like in the gun area, is one of the many reasons research is important, even research which reiterates the same thing that seat belts save lives and cigarettes are related to cancer and heart disease, just the drum beat. That what most people didn't believe 25 years ago, if they keep hearing and it another study, after a while, oh, everybody knows that. Of course. It's just -- and I think that actually really matters. And matters a lot. More than people think. And any individual study is not enough, certainly not enough for scientists and shouldn't be enough for the arch person. So I think one of the things is, yes, we have to figure out ways to talk to the public

in terms that they understand and work with the advocates and work with people who are really good at changing people's minds. I mean, one of the reasons I think the national violent reporting system got off the ground was we did the pilot. But money was given by the smart foundations to groups which were advocates, groups which knew how to present data, how to present the information that this was an important thing to be done. And suddenly, we had -- and groups which had strong affiliations with associations which might be allies. And suddenly, we had this coalition. Not only like we showed that this could be done in a cost-effective way, but the other groups being funded by the smart foundations made it clear that in an understandable way that you could be a strong advocate for this, and people were strong advocates and groups were strong advocates for it. And it was able to be done. So I think, you know, if your foundation and multi-prong add approach, not just funding research or not just funding, but picking a topic and funding all the different aspects could matter.

>> LINDA DEGUTIS: One other thing too, putting a face on the data. It's not just reporting that this is what it shows, but it's also putting a face or faces on the data. And the more you can help people to relate to the people who the data are applied to, the more they may care about doing something in order to prevent what happens.

So it's really important. When you hear that doesn't happen in my neighborhood or I don't know anybody who has been impacted by gun violence, you really have to be able to put a face on the data. And let people know this is impacting everybody.

>> JENNIFER MASCIA: Well, thank you very much for a great discussion. And thanks to the audience for some really great questions. I would like to pass it back to dean Sandro Galea.

>> SANDRO GALEA: Thank you, Jennifer, David, Linda, Corinne, and John. I've been immersed in this topic for more than a decade. And I learn from each of you every time I listen to you talk. And I learn from our audience. I think has been an excellent, engaged conversation in which we're at a paradoxal time at this time with academic engagement with gun violence. As I was discussing before we started, there's more attention and junior scholars engaged in this topic than ever before. And at the same time, peak number of gun violence and injuries in the country. I do think we're at an inflection point. And continuing the work that everybody here is doing. Both in the panel as well as in the audience. That will turn, bend the curve to where it should go. I appreciate Jennifer's comment about nothing would be better than not to have reason to have these conversations. And I lean into hope and optimism in seeing that the work with if people involved on this call, we can get there at some point.

So thank you for all the work you're doing. I want to thank ASPPH for their leadership on this and cosponsoring this. Have a good afternoon, evening, or day. Take good care.

>> LAURA MAGAÑA: Thank you.