

Yale Talk: Conversations with Peter Salovey

Episode 39: Approaching Gun Violence as a Public Health Issue

Guest: Megan Ranney, dean of Yale School of Public Health; C-E.A. Winslow Professor of Public Health (Health Policy); and Professor of Emergency Medicine

Description: President Peter Salovey and Megan Ranney, dean of Yale School of Public Health, discuss a public health approach to the gun violence epidemic and her bold, inclusive vision for YSPH as it transitions into an independent school.

Publish Date: August 22, 2023

FULL TRANSCRIPT

Peter: Hello, everyone. I'm Peter Salovey and welcome to Yale Talk. In July, Professor Megan Ranney joined our community as the dean of the Yale School of Public Health. Megan is an internationally recognized public health leader, investigator and advocate, a physician scientist. And the reason I've invited Megan to today's program, of course, is to welcome her as the new dean. But I won't get to that until a little later. More importantly, many of our alumni have reached out to me because they're very grateful that someone of Megan's expertise is coming to Yale, particularly given her work on gun violence. They feel, as I do, that the scale and severity of this crisis command further research nationally, and Megan is widely known for her leadership in firearm injury prevention, and she brings a scholarly depth to a subject often prone to partisanship, enriching discourse with data, with facts, with research. So I'm going to devote much of our discussion today to the gun violence epidemic, and then we'll come back to her bold and inclusive vision for the Yale School of Public Health. So, Megan, welcome to today's program and welcome to Yale.

Megan: Thank you. I'm thrilled to be here.

Peter: Thanks so much for joining me today. So let's start with the gun violence epidemic in the United States. A few statistics that I came across the U.S. Recently eclipsed the milestone of four hundred mass shootings in 2023 already. This means more mass shootings in 2023 than in any previous year in this decade. And we're only in August. For context, that took nearly all of 2019 to hit four hundred mass shootings. So we've reached that marker in just seven months. About 327 people are shot every day in the United States. Nearly 1 in 5 U.S. Adults has had a family member killed by a gun that might be homicide, that might be suicide. More than 95% of Americans know someone who has been shot. These are harrowing statistics. And as you yourself have pointed out from 2001 to 2020, cancer deaths in the United States fell by 27%. And yet we're seeing this enormous rise in shooting deaths. So as firearm injury soars, it still is a not very researched and not very well funded area of public health in this country. So I kind of throw all that at you. Tell us a little bit more about research on the prevention of gun injury and then let's talk about some of the solutions to this epidemic.

Megan: Absolutely. Thank you, Peter. So I love the way that you frame the problem of firearm injury in this country. It is an epidemic. We are seeing a rising number of injuries and deaths in

concentrated areas across the country. But one of the things that we often miss when we're talking about firearm injury is we do concentrate a lot on those mass shootings, which are horrific, hopefully never events. And we should be doing everything we can to stop those. But those are really only 1 or 2% of all gun deaths in the United States.

Peter: And a mass shooting is defined as.

Megan: So there's a bunch of different definitions out there. The Gun Violence Archive, which is a leading nonprofit, define a mass shooting as four or more people being shot. Others say it's four or more people being killed. So different sources will report different numbers of mass shootings as a result.

Peter: So even though mass shootings are way up, they don't represent.

Megan: Most.

Peter: Most deaths by firearm.

Megan: That's correct. Over the last decade, about two thirds of gun deaths each year are gun suicides, which is a statistic that often surprises Americans. But then if you think about it, perhaps the listeners to this podcast would agree, that many of us know someone who has died of firearm suicide. The other third of deaths are mostly firearm homicide, mostly community violence. Those deaths disproportionately affect young Black and brown boys and men who are about twenty times more likely to die of firearm homicide than a young white boy or man. And then there's intimate partner violence, homicides, which are the leading cause of homicide death for women in the United States. I point this out because these individual shootings are where the majority of the research needs to be, because those mass shootings, which are the tip of the iceberg, are going to be very difficult to get under control if we don't talk about the underlying factors that are driving this larger epidemic of gun violence in the United States. They're all deeply connected. Many mass shootings, if you use the four or more people shot definition, are connected to domestic violence. Many public mass shootings, like the shooting in the school in Nashville this spring or Uvalde, are connected to firearm suicide, and they're also all connected to these larger structural public health factors. We can talk a little bit more about the reasons that we've had very little research into this problem with real health effects, but because we've had very little research, we lack the most basic understandings that we apply to any public health problem. So public health, as you know, it's a well-established discipline. There are really four basic steps that we apply to any health problem in the world. The first is we measure it. We say, how often does it happen and to whom? Second, we identify risk and protective factors. Who's more likely or less likely to be affected? What things can we do to increase protection or to decrease risk? The third thing is that we develop and evaluate interventions to try to reduce risk or improve protection or to mitigate the effects of exposure. And then when we figure out what works, we scale it. We have used that four-step approach--measurement, risk and protective

factors, development and validation of interventions, and then scaling--over and over and over for umpteen public health problems in the history of the world.

Peter: Can certainly say a smoking cessation, cancer prevention, car crashes, etcetera.

Megan: And it works. But we've just not used it to date for this problem.

Peter: Is that because it's so politicized and polarized or what do we think the reason for that is?

Megan: The biggest reason is that from 1996 until 2020, there was virtually no federal funding. So no NIH or CDC funding to study firearm injury, partly because it wasn't defined as a public health problem, but partly because in 1996 there was this junior representative from Arkansas, a guy named Jay Dickey, who passed the now infamous Dickey Amendment, which told the CDC that it was prohibited from using funds to promote or advocate for gun control. Now, the CDC can't advocate for policies or legislation regardless, but at the time that this Dickey Amendment was passed, Congress removed all of the money from the CDC's budget that they had been spending on firearm injury prevention, and then soon thereafter followed suit with NIH. So there was no money appropriated. And there was a very clear message to those agencies that if they funded research in this area, they would have money removed from their agency budgets. I will say, Peter, when I started doing this work as an emergency physician in the mid to early 2000s, I was told by mentors to not take on this issue because I would never get funding. And in the early days of my doing this, we could get all of the researchers who were studying this issue literally in a room. It was a dozen of us. There was no funding for a large-scale data collection. There was no funding for those types of cohort studies that we need to identify accurately risk and protective factors. People were coming up with programs to try to reduce risk, but there wasn't money to test them and see if they actually worked.

Peter: I think that's one of the great contributions of public health research in that it takes on what we intuitively think works and doesn't work and really puts it to the test. Sometimes our intuitions are right, sometimes we're surprised and our intuitions don't guide us to effective interventions. So you started your career as an emergency room physician. Obviously, you're seeing the consequences of gun violence come into the emergency room by ambulance and you say there was a dozen people working in this field. You helped organize them, right? You started something called the American Foundation for Firearm Injury Reduction in Medicine, AFFIRM, I think is the acronym for that. So you're not just doing research, right? You're taking a kind of national role in this field. Tell us a little bit about that kind of organizational level work that you do.

Megan: Absolutely. So I'd done a fellowship specifically in injury prevention. It's a whole field of science within public health. And it struck me as ridiculous, unconscionable, that we weren't applying these very standard public health methods to this problem that was filling my emergency department certainly every weekend night and many weeknights as well. So I started to create connections across the country with other physicians, public health researchers, social

workers, and then with victims, survivors, with firearm owner groups, to try to create a coalition to start to work together to do this research. Because as we know here at Yale, we do things better when we do them as a team and have that exchange of ideas. No one was willing to do it, though, it was still too politically risky. So we created this small nonprofit called AFFIRM to help jumpstart the field. Back in 2016, 2017, we started to organize groups of researchers across the country who had similar interests. We created listservs where we could share data and those very few opportunities for funding that existed. And then in 2018, there was a poorly-worded tweet sent out by the NRA, which I don't usually talk about when I talk about firearm injury research because I don't want to get into politics, and I do my research separately, but they sent out a tweet telling self-important doctors to stay in their lane, that gun violence was not a health problem. And so my organization, AFFIRM, responded, This is very much our lane, and here are all the reasons that gun violence is a health problem, not just that daily toll of victims in the emergency department, but also the long-term effects on survivors, the effects on community members, the effects on healthcare workers themselves, and the very personal stories that so many of us had. That movement helped lead to the reinvigoration of funding. So in 2020, for the first time in 24 years, Congress appropriated money to NIH and CDC to fund research into firearm injury prevention, which was just a landmark moment. And that was partly thanks to the work that we did at AFFIRM.

Peter: That's great. So in public health, you mentioned measurement and intervention and scale, but sort of hovering over all of that is the role that public health professionals play in the policy arena. And let me read a quotation from you. The quotation is "we've never solved a public health problem in the United States without policy, but we've also never solved a public health problem in the United States with only policy.", So what do you mean by that and how does it apply to the firearm issue?

Megan: So I'm actually going to use an analogy here, which is car crashes. Back when I was born, car crash deaths were at an all-time high. Over the last almost 50 years, car crash deaths have gone down by almost 70%, depending on how you count. And we've done that not by focusing exclusively on the car, not exclusively through legislation, but through a suite of different sorts of research and interventions that have effectively decreased both the number of car crashes, and the severity or the likelihood of death. So some of what we did to decrease car crash deaths is put legislation in place: speed limits, we required airbags in cars, we have drunk driving laws. But some of what we did was not at all legislation based. It was about enforcement of those laws. So are we actually enforcing drunk driving laws? It was about educating youth around what drunk driving looked like, and the importance of taking a friend's keys, or now calling an Uber if your friend's had one too many. It's having programs like one that we had in my hospital where we didn't let new parents leave the hospital with their baby without making sure they had a safe car seat to put their kid in and knew how to use it. That helps decrease infant car crash deaths. And it was things like setting up trauma systems nationwide to help save those who were in a car crash. And of course, we redesigned cars and did a lot of other things, too. I use those analogies because for firearm injury, I'm really talking about the same thing. We have the one extreme, which is ban all guns. And yes, that would get rid of all gun deaths. But that's

not happening in the United States. On the other extreme, we have people that say arm everyone; that's not going to get rid of gun deaths. So somewhere in the middle, there's a combination of great policies that we have great research on that we know are effective. But then we also need to change the norms, the behaviors, the beliefs to make safe storage, something that is a top focus of any firearm owner, to help people in communities where there are high rates of firearm ownership to recognize risk factors. If your loved one has dementia and they own a firearm, you should have a conversation with them about maybe taking the firearm out of the house, at the same time that you're having a conversation about whether or not they're safe to drive. If you have a child or a friend who's showing signs of depression or suicidality and they have access to a firearm, maybe talk about ways to reduce their access for a bit. And then how do we empower police officers to be able to recognize and respond to risk factors and to appropriately enforce laws, like safe storage laws, or domestic violence restrictions on firearm ownership, that already exist but that we're not using appropriately. So it's really a combination of different strategies.

Peter: We're trying to talk public health today rather than politics. But it seems obvious to me that the kinds of solutions that you just described should be broadly appealing across the political spectrum. Non-gun owners want guns to be owned safely. Gun owners want guns to be owned safely. There should be a lot of room for agreement, those kinds of interventions.

Megan: That's exactly it. And we cannot solve this problem if we make it in 'us versus them' debate. I personally do not own a firearm, but the majority of my research collaborators do. And we have a tremendous working relationship. I'm working with 4-H in rural communities, in urban communities nationwide. Most of the people that I work with do own firearms. This is not an us versus them debate. It's about how do we keep the community safe. And there's one more thing, Peter, which is that many of the spaces where we have emerging data for ways to prevent gun violence and gun deaths may actually have nothing to do with a gun at all. One of my favorite studies that was done by a colleague at Penn looked at the effect of putting in gardens in vacant lots in Philadelphia. Her name is Eugenia South. She randomized neighborhoods with vacant lots to either have a garden put in or not. And then there was another study where they rehabbed vacant buildings versus left them derelict. And in the communities where those improvements were made, they saw lower rates of stress and depression, lower rates of violence overall, but also lower rates of gunshots fired. So there are some simple things that we can do to help change those structural drivers of poor health, which help us to step away from this heatedness of the debate and put things in place that we desperately need today. And that will help our society in many other ways to be healthier, in addition to addressing the gun violence epidemic.

Peter: Those are also not expensive interventions--creating community gardens in vacant lots. And you can piggyback all kinds of other interventions on there: growing healthy food, learning how to cook with healthy food, getting fresh air, physical exercise of gardening itself, community building, all kinds of things. When you were describing car crashes, part of it was changing the culture around seatbelt wearing. I remember the campaigns when I was a child, Buckle up for Safety was a song, we all knew it. Mass media campaigns around seatbelt wearing

were an attempt to change culture--that this was not a limit on your freedom, this was not going to wrinkle your clothing. It wasn't embarrassing to wear a seatbelt, or some commentary on your driving skills. And now it seems very second nature. I don't know anyone who says they're comfortable getting in a car and not putting on a seatbelt. We have changed the psychology of the whole thing, and it seems like that's part of what it means to take a public health approach to a problem and part of what you're doing with respect to gun violence.

Megan: Absolutely. Those theories of behavior change are very much part of public health, and creating spaces where we can recognize that no one wants themselves or their loved one to die of a firearm injury. So let's start at that universal truth and think about how we can put solutions in place that are culturally relevant and acceptable. Whether I am talking about Native American populations that have a significantly higher rate of intimate partner homicide and suicide, whether I'm talking about working with the youth in New Haven and Bridgeport, these young, predominantly black and brown boys who are at higher risk of being shot, or whether I'm talking about working with rural, elderly white men who have some of the highest rates of firearm suicide in the country. We need to work in ways that allow communities to be healthy themselves. And it is about culture change, behavior change, but also respect of culture and making sure that the interventions that we're developing fit within people's ways of life.

Peter: The need to meet people where they are and where they live, and the context in which they lead their lives just seems critical. And I think the public health perspective is especially sensitive to it. Let me turn to Yale a little bit. Are you going to continue this work here at Yale? Do you imagine organizing a research team around gun violence?

Megan: So certainly my first and biggest job here at Yale is to be a great dean, but absolutely, I am bringing much of my research with me and already having some collaborations, for example, with the law school and with folks at the medical school, but also to grow that work. I think we have an enormous opportunity here at Yale to be one of the leaders in good, effective, impactful firearm injury prevention work. There are not a lot of universities in the country that are taking this issue on in a rigorous and impactful way. And I think there is a very special role that this university can play and that I hope to usher forwards here at the School of Public Health.

Peter: I think we have two things that are obvious to me. One, a wonderful setting in which to work. Another is an ability to bring scholars and researchers together across disciplinary boundaries. You've already talked about people who have a background in public health or medicine. I would add social psychology, economists and the modeling they do around policy, the Law School has a Justice Collaboratory, and I'm just scratching the surface.

Megan: School of Environment, if we're talking about greening; Engineering, if we're talking about how to make firearms actually safer, less likely to be used if they're stolen. There's some really interesting stuff that we can do.

Peter: Sign me up!

Megan: You're a secondary faculty in my school, so consider it done.

Peter: I'm very proud of my epidemiology and public health professorship. And in fact, back in the days when I ran a lab, about half of what we did was focused on psychologically-based interventions to change behavior relevant to a public health outcome. For us, it was mostly in the cancer area or in the HIV-Aids area. But a lot of those strategies will work, I think, in this area too. But this is not about me. It's about you. So let me continue just with one more question about gun violence, it does relate to my field, and that is this link that you see often made in the media, and sometimes in political discourse, between gun violence and mental health. And you have challenged that framing of the gun violence problem. Say a little bit more about that for us.

Megan: So it's a complex problem, but there are two big issues with labeling gun violence as a problem of mental illness or poor mental health. The first is people with serious mental illness are more likely to be victims of violence than to be aggressors against others. And if they die of a firearm injury, it's almost always going to be because of firearm suicide, not because they are perpetrating homicide against others. So when we label gun violence as a mental health problem, it exacerbates the existing stigma against identifying and getting treatment for mental illness. And I'll tell you, Peter, we know that some of the communities with the highest rates of firearm suicide are our military and our vets. Somewhere around one and a half to two times the risk of firearm suicide compared to the average population. I have taken care of folks in my emergency department, police officers, veterans who have told me that they were afraid to talk about their mental illness, the post-traumatic stress, the depression that they were experiencing, because they were worried that they were going to be furloughed or have their service weapon taken away. And so when we label it as a connection, it then dissuades people from getting the treatment that they need. So that's the first reason. If we're talking about mass shootings, we want to think that it's about mental illness, but really, it's substance use, violence. Now, maybe those count as DSM-diagnosable disorders, but that's not what most of the world means when they say mental illness. And so it's a distraction from the real causes of mass shootings. The second part where there is a relationship between mental illness or mental health and firearm injury, is around the consequences. So we have growing data about the effects of exposure to gun violence on an individual's mental health, but also on a community's mental health. We have a growing number of studies, some of which I've been proud to be part of, showing that not just friends and family members of someone who have been shot are more likely to have depression and anxiety. But the entire community where a shooting has happened, whether it's community violence, suicide, or a public mass shooting, is affected. A recent Kaiser KFF survey reported that 84% of us have fear of ourselves or our family members being shot and have changed something in our lives because of that fear. So that mental health impact of gun violence is something we don't talk about. And it's why I protest that almost specious or very easy link between, oh, it's just people with mental illness, it does a huge disservice both to those with mental illness and to the real effects of gun violence.

Peter: It goes back to your model of what public health does as a field, which starts with measurement. If a prevalence of mental illness in the United States is about the same as it is in most of the world, the prevalence of gun death in the United States is far higher than it is in most of the world. Those are facts.

Megan: Exactly.

Peter: And it makes it hard to simply explain gun violence as a product of mental illness. Alright, I can't let you go without talking a little bit about Yale's School of Public Health and how excited we are about you joining us here at Yale. You come to Yale at a time when we are making historic investments in Yale School of Public Health. Covid 19 and the pandemic really highlighted for everyone on campus, for our alumni, for the larger community, just how important fields like public health, medicine and nursing are, both from the need for a substantial workforce in these fields, but also the need for good policy, good modeling, good interventions. Just what we were talking about earlier. The provost, Scott Strobel and I have moved essentially \$100 million of endowment to the School of Public Health. Plus we are matching \$50 million of giving to the School of Public Health with another \$50 million. And the idea is that this will create financial support for a rethink of our School of Public Health. We are within a year or so, it will be not a department within the School of Medicine, but a freestanding, independent school of public health. That is how it is accredited, but that is also how it will be organized at Yale. But I'm not the one who figures out how to spend those funds and how to find the great faculty to come here. That's a part of your job. And so I'm delighted you're here. How are you thinking about all of this?

Megan: I came here because I think that the Yale School of Public Health, at this moment in time, has an enormous opportunity. I studied the history of science as an undergraduate, and in the history of science, we talk about there being paradigm shifts in the way that we conceptualize the science, or the interaction between science in society. I think that we are at one of those paradigm shift moments or inflection points for the field of public health. Pre-Covid, I'll bet a lot of people listening to this podcast maybe kind of vaguely thought about public health because we did vaccines and clean water, but they probably didn't think a lot about exactly what we did. They didn't really understand what epidemiology was. That all got put in the public eye over the last three years. As we come out of Covid, though, we also have to talk about all the ways that public health is so much more than just Covid or pandemic preparedness. The ways in which this is a discipline that informs how we approach health problems in the country and across the globe, how we identify solutions and how we scale those solutions. The Yale School of Public Health has the chance to lead that transformation in the field. I am coming into a school with unbelievable faculty, unbelievable staff, truly incredible students who came to Yale because they want to be leaders in the field of public health. Building on that history on our 110-ish years of tremendous influence on the field of public health, building on the incredible work already being done, we have the chance to supercharge that, to create new collaborations with other professions and fields across Yale and across the globe, and to really become the school of public health that defines the future of public health, scholarship, education, and practice. I think there are four

themes that I have heard over and over in my national and international work that are essential to the future of public health. The first is around inclusivity, both around diversity, equity, inclusion and belonging within the school, but also inclusivity of lived experience of community, voices of professions that may not traditionally think of themselves as being part of public health. Business owners know now how much public health is part of their economic success. School teachers, journalists, they are all part of that inclusion, which needs to be part of our field. So that's the first pillar. The second is around innovation and entrepreneurship. When we look at our greatest successes during Covid, rapid development of tests and vaccines deployment, it was around that innovative and entrepreneurial spirit and also about creating a sustainable business model. That's something already being done here at Yale before I arrived, and that I'm so excited to work on with Josh Geballe and Yale Ventures with the School of Management and so on, to think about how do we enhance that spirit of innovation and entrepreneurship within public health. The third area that's necessary for the future is communication. You mentioned the mass media campaigns around seatbelts. Certainly, we all saw the ads around vaccines. We're also aware of the fact that our information ecosystem right now in the U.S. As well as globally, is a bit broken. And I think we have a chance to create great information and to share it with communities who are then the credible messengers. So that relationship is critical to the future of public health. Finally, the fourth pillar is around data driven leadership. The foundation of public health is great data. Our ability to find health data in places that no one else might think to look, to enhance its rigor, to analyze it quickly, and then to apply it to create change. And that's the ultimate marker of our success at the Yale School of Public Health. Can we create, both within our student body, but also enhance within our faculty and staff and in our collaborations across Yale, the ability to effectuate that data-driven leadership, to help people go out and be leaders in addressing the myriad health problems that exist today, but most importantly, to give people the disciplinary skill set so that they can address whatever happens tomorrow. We don't know what the next Covid is going to be. We're facing climate change. We know that we need new solutions to help enhance the health of populations that are facing the effects of climate change. Those are problems that we need to train people for today, and then we need to be ready to pivot and use those same great scientific skills and social skills and political or policy skills to help transform the health problems of tomorrow.

Peter: So you've talked about your long-term plans for the School of Public Health at Yale, but in this very first year, there's probably a lot to do to get us ready to be independent. Talk a little bit about that.

Megan: So my first priority is, of course, listening and learning and meeting the community, but then taking this enormous opportunity to define the public health school of the future, that requires us creating a structurally sound foundation, making sure that our financial and administrative structure is set up the right way, that we have the right incentives in place to encourage cross-sectoral collaboration, to make sure the school of public health system is set up to allow us to do the types of work that is needed to achieve that vision.

Peter: This is great, and this vision for our School of Public Health couldn't come at a more auspicious time, given the other initiatives around the university. Initiatives in policy, like the Tobin Center, initiatives in data science, like what's going on right now in the Klein Tower, which we will reopen quite soon, initiatives around innovation and venture creation from Yale Ventures, and the general approach of bringing schools and their faculty together across boundaries, allows public health to not be in the periphery, but to be quite central as a unifying force that brings, as you say, people at the Law School, people at the School of the Environment, people at the School of Management, people at the Jackson School of Global Affairs, I would even add in the arts, because the arts are a way of designing interventions that are quite effective. But with your imagination and energy and vision, and the strength of our faculty and the excitement of our students, I believe this is going to be Yale's time in the field of public health, broadly speaking. And I'm so glad you're here.

Megan: Thank you.

Peter: And I'm so glad you'll be leading it. So, Megan, I'd like to thank you again for joining me today on Yale Talk. I share our whole community's delight in welcoming you here to Yale and in recognizing this historic moment for our School of Public Health. And I look forward to working with you to advance the school's research and its education and its practice, right at a time when this is critically urgent in our world.

So to friends and members of the Yale community, thank you for joining me for Yale Talk. And until our next conversation, best wishes and take care.

The theme music, Butterflies and Bees is composed by Yale professor of music and director of university bands Thomas C. Duffy and is performed by the Yale Concert Band.