

Gun Violence and its Impact on Healthcare

While the pandemic took a disproportionate toll on American life last year, there was another devastating, enduring public health crisis that only got worse, **gun violence**. In the United States, there are over 100 gun deaths each day and about 38,000 each year. Despite the number of deaths, lingering health impacts from gunshot wounds, and the psychological impact a gun death or injury can have on a household or community, gun violence is framed as a political or criminal justice issue rather than a health issue. There is a great need to begin reframing the impact of gun violence as a medical issue, not a political one.

We are discussing the many perspectives related to gun violence and its impact on healthcare with an esteemed panel of experts from the University of Pennsylvania. The panel will touch upon,

- Perspectives on gun violence from the emergency room – trauma, psychological effects
- How can physicians talk about firearms with patients?
- Gun violence research / firearm injury-prevention research
- Role of public health in preventing gun violence

Join the discussion by sending in a question for the panel or sharing your perspective with us in the comment section.

Full Transcript:

Priya Menon: Hello everyone and welcome to Cure Talks, I'm Priya Menon and today we are discussing Gun Violence and Its Impact on Health Care. Every single day in America, health professionals find themselves on the front lines of treating patients injured by firearms from emergency departments and primary care settings to behavioral health and specialty care, these professionals grapple with not only tragic and firearm related injuries and mortality but invisible wounds that firearms inflict on individuals their families and communities. Despite the epidemic level of firearm related mortality and injury, gun violence is predominantly a political or criminal justice issue rather than a health issue. Of course, any discussion must recognize a role of politics in this. Today's talk but is not about the politics, it's about what happens in the ambulances, the hospitals, it's about the places where gunshot victims take their last breath, despite the best efforts of Medical Teams. We will discuss the impacts of gun violence from the perspective of the medical professionals on the frontlines of America's gun violence epidemic. Dr. Therese Richmond will share her perspective on gun violence from public health and research experience that she has. And we will hear perspectives from the emergency room from Dr. Zaffer A. Qasim and Dr. Chidinma C. Nwakanma is Professor and Associate Dean for Research and Innovation at Penn School of Nursing. Dr. Qasim is Assistant Professor of Clinical Emergency Medicine. Dr. Nwakanma is Physician and Assistant Professor of Clinical Emergency Medicine at University of Pennsylvania. I extend a very warm welcome to our esteemed panel here. Thank you everyone for taking the time to join me on Cure Talks today.

Dr. Therese Richmond: Glad to be here.

Dr. Zaffer A. Qasim: Thank you very much.



Priya Menon: Starting off with the very first question, I want to hear from each one of you, how you decided on that particular moment or incident that helped you decide that to become a gun violence advocate. Dr. Richmond, you have talked and research a lot about gun violence, and can you talk a little bit about how you first started to think about fire? Our arms as a public health issue and the particular story that made you realize that this is where you want to focus.

Dr. Therese Richmond: Well, for me, it started quite a long time ago. I would say in the 19, late 1970s early 1980s, when I was working as a clinical nurse in a Trauma Center in Washington DC, and at that time, gun violence was a huge issue. Not unlike what we see today, and I worked in resuscitation and critical care, and followed, and took care of people on a day-to-day basis. So, one of my patients was a man named Andy, and Andy came to us after a close-range shotgun wound to his abdomen in a robbery gone wrong. And really, by all accounts, Andy should have died. It was a devastating injury, he was with us in the ICU for months, but he survived. And I will say, as clinicians, we all sort of had it ourselves on the back and said, what a good job and this is fabulous. But one of the things that made me wake up and say, what's, what's happening here is as Andy came back to visit us, maybe a couple months after he was discharged from the hospital and he was irate. He was beyond irate and he came in our ICU and started yelling at us and he goes, you saved my life, but I am not healed, and nobody understands what I went through and my life will never be the same again, and it was a first time I thought beyond the ICU doors and I thought what happens to people. And that was a really important point in my life and it really took me down to pass. What happens to people who survived gunshot wounds and then how do we stop it? How do we move upstream and stop it? So that really was what started me down this path and I've been on the path ever since.

Priya Menon: Thank you. Thank you for sharing that Dr. Richmond. Dr. Qasim you are practicing emergency physician. Do you have a story too that you could share with us about a patient who was affected and how that experience drew you into becoming a gun violence advocate?

Dr. Zaffer A. Qasim: Thank you for the question. And I think, for me, it's probably not one particular patient story, but probably a combination of cases. I moved to the US about 10 years ago and I worked in the high-volume Trauma Centers throughout my time here. And as you're working by and large the patients that you see being shot, you notice certain similarities. Oftentimes they're from poor, socioeconomic backgrounds, largely black patients. Sometimes they are kids sometimes they're teenagers and having to tell the parents of these children that they're critically injured. They maybe have been left paralyzed or that they've been killed is difficult and no matter how many times you're doing it. And when you hear stories from the mother, or the father that their child was actually just getting into school or college or finishing a degree or starting a business. It becomes even more painful to kind of deal with that. And certainly, one recent victim, we had just returned to Philadelphia with a friend of his, with a plan to finalize a business deal, they were setting up a business and more recently we had a spate of shootings that came in number of victims, who came in, who were actually at a vigil, for a person who's been shot, just the previous week. So, when you hear all of these stories of how needless this violence is and how these people are plucked out of the prime of their life. You come to think that we need to look at this more objectively and we need to do something about this to prevent all this needless violence. So, I could say, a combination of all those has kind of driven me in this direction.

Priya Menon: Thank you. Thank you, Dr. Qasim. Dr. Nwakanma, I have the same question for you. Was that a particular story or moment when you realize that this is where you wanted to focus?

Dr. Chidinma C. Nwakanma: Yeah. Thank you for the question. Yeah. I do think that there was a particular moment or two moments where I felt like Okay this is something that I think is necessary for me to put my attention towards and one of those moments was, there was an act that day where we had this onslaught of gun violence, like this. trauma after trauma after trauma. I remember feeling very like, desensitized by it and as Dr. Qasim said, most of the victims are black, young black males and actually that day, there was a white male that came in as a victim of trauma and one of my colleagues said, oh, that could have been my son and I felt, as a black physician, I'm seeing black bodies every single day and those could be that could be my son that could be my nephew, my cousin my brother and my father and so as one of the few black



physicians in the emergency room I felt a certain amount of responsibility to jump into this field. Because who am I waiting for to do that? I'm feeling a certain pool to my community as a black position and that's what that was one of the driving forces for me to become, I guess an advocate at this point for a gun violence. The other thing was, I actually moved from Center City to West Philly so now I'm actually living in the community that we serve, and ironically on our first on my first night, living, in my new house, I actually heard some gunshots. And then there was, I don't know if you guys know about the citizens app but it sent out that there was a shooting at this cross street and it wasn't too far from where I just moved and so, I literally drove behind the ambulance. I was going to work that night, I literally drove behind the ambulance, and pulled up to the trauma Bay with the ambulance, and then took care of that person that had gotten shot in my community. So, it just kind of brought it home that this is not something that's happening over there. This is not something that's happening to them, but it's happening to us and it's happening in my community. So those are the two things that really made me wake up and say, okay, I can't just be piecing together bodies every single day, I need to do something to aid in the prevention.

Priya Menon: Absolutely an impact is really devastating reach and wide-reaching I should say. Circling back Dr. Richmond the topic, as we all know today, we're discussing is gun violence and its impact on health care. It would be great if you could talk a little bit about what according to you is the impact on Health, well-being and health care in general.

Dr. Therese Richmond: I think the impact on health care as providers, we see on a daily basis, man's inhumanity to man and its unbelievable what people do to each other and I think that takes a toll. We saw in the pandemic, I think the public actually saw the toll that covid took on healthcare providers, it was all over the news. They really highlighted that, but we don't see that with gun violence. It's like, that's not in the media, that's not what people see and yet clinicians and providers see that every single day and it takes the toll. I'll say from a healthcare system perspective, the fact that we live in communities with such high levels of gun violence alters our clinical spaces and it alters our clinical spaces in ways that can be challenging and problematic. So, for example, in Philadelphia there's a policy, the police can transport injured people in the back seats of police cars and usually that's gunshot victims. And that could be good in many ways because it can really facilitate rapid transport to emergency departments or trauma centers. But the other thing that it does, is it gives Police entree into our clinical spaces and that entree into our clinical spaces changes a feeling tone, changes the interactions that we have with patients and we see firsthand the intersection between trauma care, emergency care, law enforcement and race. And we see that play out in our clinical spaces. So, we did a study where we're trying to understand the implications of that, and I'll just read one quote from that. So, this is from a patient who was shot, and he goes the doctor said in there, trying to operate on me and the detective is coming around them. Do you know who did this to you? Do you know his name? Do you know where he lives? And I could hardly breathe, you want to sit here and ask me questions while I'm getting ready to die. Well, nothing in Nursing School prepared me to deal with those kinds of interactions in clinical settings and I don't think that's at all what we think about when we think about patients under care, right. And really meeting needs of patients. So, I'm just using that because you asked about the healthcare space and say I think the impact of that is that people have start conflating law enforcement and health care because we're both bureaucratic systems and we lose trust and I think the last thing we need is for patients and people in our communities to lose trust in us as healthcare providers. So, we really need to think hard about that. So, I'll leave it at that and talked specifically about the Healthcare System there and pass that off to you then.

Priya Menon: Yeah. So, what about health and well-being in general? Of course, you did mention about health care, but could you talk about the general impact on health and well-being of person involved and people around?

Dr. Therese Richmond: Certainly, the person involved has a huge impact, right. So, it's an impact in terms of do you survive and it's an impact in terms of if I survive, what's that survival like. And so, just the individual, there's a huge impact. So, for example, and just to contextualize, so people really understand this, I did a study, I engaged a colleague from Wharton, John LeMaire, who is an actual scientist, which is not a skill set that I have, and we were interested in what's the impact on firearm violence or living in a world



with guns. And what we found is black men and should we talk about this, this is the population which is just proportionally affected. Black men lose over a year of life expectancy because we live in a world with guns, a year, 371 days to be exact and just like try to say, well what does that mean like a year on, so I looked on 77 versus 78, that loss of life expectancy for black men is more than the loss of life expectancy when we combine lung, colon and prostate cancer together. So, it really shows you the impact on health and well-being of individuals and it's profound.

Priya Menon: Dr. Nwakanma you want to jump in and add here?

Dr. Chidinma C. Nwakanma: I agree with everything that she's saying. I think from the health side or the clinician side, what we're seeing is that people aren't just dying, it's the debilitation afterwards that causes a lot of strain on the healthcare system and that I think is the big impact there. I think it is estimated, like two hundred twenty-nine billion dollars from the American economy that goes towards the gun violence. As a result of gun violence, I should say. And what we're seeing in the, ER, as we're seeing a lot of debilitated young black men and what I mean by that is there paraplegic, quadriplegic colostomy bags, bedsores, sepsis as a result of these gun injuries from gun violence and its really is just driving up the cost of the need for home health aides, health care in the home, rehab facilities, frequent ER visits because of infection or pain. And so, it really does have a huge impact on health care and what we're seeing and not to mention the effects of mental health afterwards for the victims, for the families and chronic pain that comes as a result of some of these injuries. So, we're really seeing this kind of multi-faceted effect from gun violence in the ERs and in our clinical spaces, that is something that is devastating, and it's crazy that it's something that's not from a natural cause, but it's something that could potentially be preventative. And that's the sad part about it.

Priya Menon: Absolutely. What I understand is whichever way you go the impact is devastating. It is not the person alone is affected, it's this huge circle of people around the victim, family, community. Another Circle of Care, Medical and medical providers who get drawn into this and the numbers are concerning not to mention the psychological impact of all this. And I feel that gun violence should certainly be discussed with the stakeholders, especially at the healthcare worker's toll. So, my next question is, for all of us, all three of you, and I'd like to start with Dr. Richmond, that we are discussing gun violence and healthcare. So, do you agree that gun violence is a public health issue and if so, can you share your reasons on why you think this could be classified as a public health issue and go on to talk a little bit about what public health issue would involve? Of course, it's about prevention. So, do you foresee any difficulties, any hurdles and such an approach we have or any advantages that this would have to actually bring about changes?

Dr. Therese Richmond: Absolutely. It's a public health problem and it's absolutely health problem, right. So, let's think about the health problem and somebody shot they come into the emergency department. It's no different than a heart attack, a stroke, pneumonia, symptoms from any other disease that we have. But when we think beyond the individual, we say, let's think about the population, right. The population as a whole, or even subsets of the population, we see what a huge toll that it takes. So, if we think about in 40 years, now, I'm older than 40. So, in 40 Years, in last 40 years of my life, we've seen 1.2 million deaths in the U.S. from guns. If that's not a public health problem, I don't know what it is. I mean really and we certainly see it playing out in Philadelphia. So, if we think about the prevalence of the problem, the impact on health and well-being, the economic costs to society, we can't ignore it as a public health priority. So, it's absolutely a top public health problem. It's an epidemic, 1.2 million deaths in 40 years. I don't think anybody would say it's within an acceptable range. So, I think that answers your question, I don't know if you were asking specifically about prevention, but I'll stop there, and we can always come back to prevention if you like.

Priya Menon: I'll move on to Dr. Qasim. Dr. Qasim, what is your opinion on tackling violence as a public health issue?

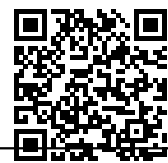
Dr. Zaffer A. Qasim: I think certainly it is very much a public health issue and I think the pandemic is really highlighted what public health means to the world really. And certainly, in the United States, we see all the



issues surrounding mask-wearing and all these trying to prevent the spread of covid-19. And really, if you look at it and gun violence is an epidemic that's been there before the pandemic. It's been exacerbated by the pandemic and unless we do something about it, it's an epidemic that's going to continue after the pandemic. And certainly, it's like a disease, it's kind of pervasive, it causes destruction to the victim, to the victim's family, to society. It spreads because there's a sense of retribution and need to shoot people in terms of revenge of previous shooting and it creates a kind of ...in ongoing injury to a number of people which will continue and worsen, unless it's addressed. And so, just look at other things that we had, you go back to the 70s and we had a number of automobiles coming onto the streets, people were driving drunk, people were driving at high speed and there were a number of accidents and people were losing their lives and that was seen then as a public health issue and that was addressed. So, speed limits were introduced, drunk driving laws were introduced, seat belts were introduced, car seats were introduced for children and all these were accepted because people looked at this problem, they studied it, they identified where the problem was, they identified solutions and then they implemented solutions that were then accepted and enforced by the society as a whole. And unfortunately, with gun violence, no matter how much we want to kind of steer away from politics and evidently politics kind of comes into this because there are specific laws like Dickey Amendment of 1996 that specifically states that if I wanted to research gun violence tomorrow and seek NIH funding or funding from the CDC to do that, I by law I'm not able to do that. And that's a big restriction in terms of as scientists who are looking to identify and further characterize this problem and the effects objectively without bias in the public health and medicine perspective. And so, we can't approach this the same way that we did car accidents. Just for that reason as well as other reasons. And then inevitably there's Backlash from lobbying organizations, recent example was there was a study in a pediatric journal that was published, that identified issues surrounding gun violence and gun use that then released a large social media backlash from one of the prominent I'll say "rights groups" in this country that we as Physicians should stay in our lane in terms of addressing gun violence issues and really to be honest this is early in but to have this backlash from these organizations that carry a lot of followers and a lot of public opinion really stymies our efforts in an attempt to address an ongoing problem that's been there for a very long time and will continue unless we have the opportunity to address it, just like any other Public Health Emergency that we're facing. And no doubt that this is a public health emergency that we have not addressed effectively for a long time in this country.

Dr. Therese Richmond: So, can I add in for a minute on something that Zaffer said, in terms of that motor vehicle crash, is an excellent example and it actually, I think identifying it as a health priority happened way before the 70s. I think we saw a lot of Technology introduced in the 70s, but it was in the 1930s that FDR, the president at that time, identify motor vehicle crash as a not national priority and that we need to decrease death by cars. And that was the 1930s and the decrease in death by cars really was one of the top 10 Public Health successes of the 20th century. So, that unfolded over nineteen thirty or sixty or seventy years, but it worked, and it worked for several reasons. One is, there was a surveillance system, there was a lead agency, we had, there was stable funding for researchers, which is problematic, we had data accessible to researchers, which is problematic with gun violence. We had interdisciplinary approaches Physicians, and nurses and engineers, and Street designers and we researched all possible points of intervention and I think the really important take-home point is we know what it takes, we know how to do it, we know these elements need to be in place. We just have to have the will and remove restrictions that prevent us from doing that. And I think the biggest take-home point if we're trying to figure out how to come together around a problem, is we have more cars in this country now than we did in the 30s than we did, in the 70s, we have more miles driven per person than we did in the 70s, that we did in the 30s and yet we have decreased death by cars. So, that is a wonderful case study in public health approaches to decrease injury, that are directly applicable to the issue of gun violence.

Priya Menon: Absolutely, that is a great example, quite doable too, as you said, Dr. Richmond if you have the will and support, I guess. So, as a professional Dr. Nwakanma I'm just going to skip over to the next question. We've heard a lot been talking about public health issue and so can you tell me a little, what could be Dr. Richmond here outline how considering it as a public health issue can have advantages on how maybe in a long run, we can actually help reduce gun violence in the country? What could be some of the other Pros or some of the disadvantage of looking at it or looking at this approach. Can you talk a little bit about this?



Dr. Chidinma C. Nwakanma: Yeah, of course. So, I honestly don't think that there are any disadvantages of looking at gun violence as a public health issue. I do think that advantages are like my colleagues are saying here it really legitimizes gun violence as an issue that the public needs to take attention, needs to give their attention to as opposed to something that is just happens, because someone is criminal or they're just bad or they deserved it or it just legitimizes it as an issue. And I think once you legitimize it, then you can start looking at the root causes and start examining it. And I know we were using the example of like, Motor vehicle accidents but I can also look at like the war on drugs or the opiate epidemic. Once that was identified as a public health issue, then that's when we started having strategies, serious funding started to go into, we had a Suboxone programs, we had Narcan being passed out readily and there was a lot of national programming and researching that poured into opiate abuse and this approach to controlling the deaths and the mortality and morbidity in the hands of drugs. I do feel like we have a lot of case studies here that we've seen, I think opiates would probably be the most recent one. But we've seen case studies, where these issues I've been taken more seriously because they were determined to be public health issue. So, I don't think that gun violence is any different. I think that making it a public health issue, definitely does legitimize it, and allows people to understand that this is something that's one preventable and too widespread and affects all of us. Even if you're not directly a victim of gun violence. So, I am trying to rack my brain to think of any disadvantages or cons and I really don't have any.

Priya Menon: Thank you Dr. Nwakanma. Dr. Qasim, my next question is for you. So, professional organizations for clinicians such as American College of Physicians are encouraging Physicians and healthcare workers to talk to patients about guns in their homes. And with the surge in activism around firearms, the concept of gun violence as a public health issue that we were discussing has gained much traction, even outside of the Public Health Community. So, as I understand, it's a perfect topping for clinicians and public health professionals to think about together. What I want to know from you is how do you recommend that Physicians talk about Firearms with the patients? What and how do you go about something like this?

Dr. Zaffer A. Qasim: Yeah, I think that's a key question to ask, and I think we have a lot of opportunity as healthcare workers to discuss this with our patients and I link it to when some of our patients present with say drug or alcohol problems. It sometimes provides a in the moment opportunity to kind of provide some guidance or information that may affect change and there's some evidence to support the benefit of doing that in other issues as well. But I think a couple of things just to take into account is that being frank, open and in particular a non-judgmental is really key. The patient themselves may not want to disclose that they have a firearm in their home for fear that there might be legal repercussions or something like that. And so, it's really important to develop a sense of trust that you're asking really for their safety or perhaps for their family's safety about the presence of a gun. And, certainly our nurses tend to ask about this question, and we do as well when we're dealing with someone who is maybe suicidal or is a victim of domestic abuse or something like that. But I think there are other opportunities also, including when our victims come in, whether there's also a firearm in their home that may be accessible. A lot of us may have biases about Gun ownership and of course the effects of the gun used, but I think, there's not really a place to bring that bias into the conversation when you're talking to your patient there and then. And it's important to understand especially living in this country that, safe gun ownership is in some families a tradition. And it's the reason a lot of people might be against people talking about banning guns and the thing is because traditionally, they've had guns in their families for a long time and they've used them safely. So, taking the bias out of it, just understanding a little bit from the cultural perspective as well why people may have a gun in their home is important to understand. But other things that you can talk about is not only, if they have a gun in their home or not, is whether they're storing that gun safely and asking questions around that how do you store your gun? Do you have a gun safe? Do you have a gun lock? Do you store ammunition separately from the gun and have you thought about is this gun in a place that my child is not able to access it? Because there's a lot of unfortunate instance where people think that they've sort of stored their gun in a secure place but kids being kids, they get access to the weapon and if it's loaded and not locked and secured and unfortunately, they might shoot themselves or they might shoot another member of the family. And so not only kind of the fact that they have a gun, but also are they responsibly storing that weapon while at home as well. So, there's lots of different opportunities to do that. I think ultimately, we have to be open and frank



about it, develop a nice quick rapport with the patient so that they trust us and then talk about kind of wider issues. Well, so they use that opportunity that short period of time you have to the best effect.

Priya Menon: Dr. Qasim, so exposure to violence really increases the risk of lifetime medical problems too. I know it's not only the deaths, it's a spinal cord injuries, traumatic brain injuries, mental health problems. Can you comment on this by touching upon some of the common medical problems that you have seen in your time in the Emergency and Trauma Center?

Dr. Zaffer A. Qasim: Yeah, that's a great question. Thank you for that. And certainly exposure to gun violence can be extremely stress inducing for anyone involved, a victim and those around them. And we know that there are certainly disturbances in brain and body physiology that occur over time directly and indirectly to the people involved and this can lead to abnormal coping mechanisms, which can ultimately lead to poor health. And there's actually just in this past month's ____ of emergency medicine my colleague Dr. Gina South published an article looking at short-term effects of gun violence and presentations to the emergency department found that people would present more with syncopal episodes soon after gun violence exposure. But in the longer term, we've also seen evidence that this can manifest as many mental health issues, primarily depression, suicidal thoughts, and ultimately that can lead to disregard for personal health in general, and that can worsen chronic health problems like hypertension and diabetes. And these are issues that can also be kind of indirectly affected by gun violence as well say, for example, if that episode of gun violence leads to loss of financial security that can add to the fact that a lot of these victims are number one from poor socioeconomic areas anyway and we see a lot of racial disparity in terms of healthcare access in general. And so, the chronic health problems can be exacerbated further just from the fact that they now may not have a source of income and certainly then can't take care of their chronic health needs. So, we'll see kind of the indirect effects that almost kind of domino effect of problems that can lead on from just an exposure to gun violence directly to the victim as well as to those around them. Some of the things Dr. Nwakanma mentioned that some of these victims are now disabled. They may not be in a position then to adjust their home to say manage a wheelchair or something like that. They may be confined to their home. They then develop problems from not being able to access healthcare. So we might see them come in as a result of the infections or other problems related to bed sores, things like that that have developed at home. And similarly, the caretakers for these patients, will often be suffering financially because they're taking care of their loved one. And so again, that domino effect of health issues that can result to that because they're not in a position then or don't have the time or the means to address their own problems. So, they might have pretty devastating consequences of chronic health problems. So, as you can see, it kind of manifest in broad manners, both in the short and the long term for the victims, as well as those living with them as well.

Priya Menon: Dr. Nwakanma, I'm going to move on, move away from the victim to the health of the health care workers, the Frontline workers who are giving this care. How does the constant viewing of trauma affect you, your colleagues? How do you manage this? How do you go through this?

Dr. Chidinma C. Nwakanma: So, that is a very difficult question because I've been trying to ask myself this for many years now what's going to be the effect of this? Because I don't think I'm seeing it right now, but I do think that there will be some type of long-term effect because think about it, we're seeing death and dead bodies and destruction every single day, that's kind of similar to what soldiers see in war. And they have a lot of mental health issues, PTSD. So, I'm wondering when you study the brains of the doctors that are taking care of these patients in another 20 or 30 years, what the effects would be? Day-to-day effects, we are I think and this is my opinion that we're very desensitized to death at this time because we have to be in order for us to do our jobs and in order for us to work very efficiently, we have to take a lot of emotion out of assessments and resuscitative efforts so that we can zero in and make sure that we're doing the best thing for the patient without being overwhelmed with sadness or grief for these patients and their families. And so, I do think that there is a desensitizing that happens with Physicians. My residents have been coming to me, especially on days that have been particularly heavy violence days. They have come to me and said, how they felt overwhelmed, or how they felt sad, or just needing to take a minute before going to see the next patient. And so, there is this fatigue that you get from seeing constant trauma, constant death, and I do



believe that it is taking a toll on our mental health. I'm not sure if different people are able to deal with it in different ways. But I do think that there's something that's undeniable, it's affecting all of us. And like I said, I have a unique perspective as a black physician, seeing black bodies over and over and over does do something to me. And I'm sure it does something to a lot of other black Physicians that are in this position because we are seeing people that look like us being killed and dying and it is something that I do think affects me. I just don't know the gravity of it yet and that's very concerning.

Priya Menon: Dr. Richmond, what is your opinion on this? How does this actually affect people who are giving this care in the medical emergency rooms?

Dr. Therese Richmond: I think I spoke to that a little bit earlier, so I'm not sure I can add much more to what my colleagues have said. I would like to just switch a little bit to say because I touched on this very well, the mental health consequences of gun violence on individuals who are shot. And we've shown that without a doubt and the impact of that on their lives. But their families, but also think about the youth in our community who are living in pervasively violent communities, who are exposed to gun violence almost on a daily basis. What we found in our work when we talk to Youth and we have done a variety of studies with 10- to 16-year-olds in Western South West Philadelphia. This is our community. This is who we serve and what we find is 87% had directly witnessed violence and primarily gun violence and 54 % have been directly victimized, not necessarily by guns but directly victimized. So, when you're 10 to 16 years old and you're witnessing and hearing about and experiencing violence on a daily basis, there is an impact on that and there's an impact on their development, there's an impact on the absolute chronic stress that they bear as a result of that. So, I think we need to make sure everybody understands it has an impact on Health Care Providers, it has an impact on the individual who is shot, it has an impact on their immediate family, but it is a huge impact on communities and children who are growing up in these communities. I guess the final thing I'll about sort of the impact is it drives decisions about resource allocation in ways that are probably not helpful to the growth and development of healthy communities. So, if we're spending money on metal detectors to get into schools and we don't have sufficient books for children, that's a problem, right. And we don't think about that as we think about gun violence, but we better darn well be thinking about that because the allocation of resources in terms of the broader health of families, and communities is going to have a long-term impact.

Priya Menon: Dr. Richmond, can you talk a little bit, I know we did touch about gun violence prevention. Could you talk a little bit more about what is being done in terms of preventing gun violence, in terms of research. Can you touch upon those points?

Dr. Therese Richmond: Well, I think, first of all, Public Health, if we want to really improve the health of the nation, that's all about prevention. It starts with prevention and the three of us are at the endpoint, right? We see you are shot; you have come into our setting and we have to, and we've all committed to moving upstream to the prevention. So, there's a couple things I'd like people to think about one is, my colleague talked about this in terms of how Physicians talk to patients about guns, and we've got critiqued by variety of people in the country for you have no right to worry about prevention of gun violence. Well, certainly we do, and I liken it to, of course, we need to do that. Consider, let's take of an analogy, somebody has a myocardial infarction or heart attack, and they come into our emergency department and we're providing emergent care for them, think about if the Healthcare Community didn't also focus on prevention of heart disease, didn't focus on poor diet, on obesity, didn't focus on blood pressure control, didn't focus on get your cholesterol down and everything. I would say, the majority of the world would view us as being negligent at best or it would be malpractice or worse. So, how is gun violence any different than that? So that's just a course we have to move upstream. The thing I would say in terms of prevention, is it opens up a repertoire of interventions that take us away from yes-gun/no-gun. It opens up, can I change somebody's behavior, can I change that environment in which you're at risk? So, for example, a pen. We have students who are going home late at night call people to walk you home, we have better lighting, we have social supervision within communities. I can certainly look at somebody's behavior, I can look at the interaction of alcohol and gun violence, I can look at the environments in which gun violence occurs, whether its economic, or physical, or social. My colleague, Charlie Brown at Columbia did a whole study on ____, right? So, take poorly used land,



make that land better and he could show in a very well-done study a decrease in gun violence. He's doing the same thing now with abandoned houses. So, if you manage abandoned houses, if you change the environment, can you decrease gun violence. So, I think the public health prevention approach opens up so many avenues that I can change one thing and alter the outcome, which in this case is being shot by a gun.

Priya Menon: Thank you Dr. Richmond that is very well said, I should say that's really what is the thinking part. So, I have just one last question. I know this has been a great discussion. We will have just one last question and then take some of the audience questions that have come in. So, my question is, what can each of us do to tackle the problem of firearm violence and improve safety in our communities? I know Dr. Richmond, you gave us some thoughts, some points to think about. So, I'd like each one of you to be in and then we go on to the audience. Dr. Richmond you can start first.

Dr. Therese Richmond: I think the first thing we have to do is to find common grounds. We live in a world right now that is just so like this versus how we come together for something. I think we need to speak from facts and separate facts from opinions, right. Here are the facts I might have a difference of opinion but let's separate facts from opinions. I think we need to understand that words matter, and how we use words matter. So, it's not about pro-gun anti-gun. It's how do we keep people and communities safe? Like, can you join me to help keep our communities safe and just recast the conversation. All of us can do that and I think Zaffer made this point so well and talking about how do we counsel people about Firearms. We have to understand there's a lot of different views in the world, but I think, what's in common is we all want to be safe. How we feel and what we do to make ourselves safe may differ, but all of us want to be safe. And then I absolutely think, and this is bigger than me as a nurse or Physicians we absolutely have to look at the growth social inequities and the economic inequities in the world and start taking them on and providing opportunities for people. So, that would be my recommendation.

Priya Menon: Thank you, Dr. Richmond. Dr. Qasim?

Dr. Zaffer A. Qasim: Yeah, those are all great recommendations from Dr. Richmond and I think I would say that we need to really kind of focus on us being allowed to kind of do our job, which is gathering that information that helps shape this argument. And so, getting involved with advocacy in terms of allowing changes in laws and regulations that as far, prevented us from studying this problem to the full kind of research effect is certainly one way and similarly getting involved in your community as well I think is important. I think there's a big trust issue especially in some of the communities that we serve with between Physicians and the general public and there's a long history behind that. And so, getting involved in the communities that you live in and the people that you treat is an important aspect as well. Not only to gain trust, but also to understand about where people are coming from and in terms of what's the challenge. And once you understand the challenge just like we do in science in general, we will be able to maybe prefer solutions for that. So just a couple of things that I think we can do.

Priya Menon: Thank you, Dr. Qasim. Dr. Nwakanma?

Dr. Chidinma C. Nwakanma: Yeah, I think understanding that gun violence is this multifactorial thing or entity is something that is helpful in trying to think about ways to combat it. So, there are different things Dr. Richmond talked about, just the green spaces in the vacant lots, and just the overall investment in dilapidated communities, and fractured communities and neighborhoods goes a long way in preventing gun violence. And so, we know that homelessness, we know that unemployment, we know that mental health has an effect, we know that community involvement has an effect. And then us on the clinical side, we are a catchment area for people coming in victims of gun violence, families of victims of gun violence, potential victims of gun violence. So as clinicians we have a point of contact that is unique to us just the same way that we counsel people about taking their medications and making sure that their diet and their exercise is appropriate for their daily activity, we should be doing the same thing with gun violence. So, I think that's because there are so many factors that are affected. There's a lot of ways that you can even if you're not a doctor, if you're not a nurse or just a community member, there are a lot of ways that you can jump into at least do your part or do your piece of the puzzle to make sure that overall, the net goal is to decrease gun



violence. So, I think addressing like we said, thinking about gun violence as a public health issue and making sure that it's something serious and seen as a threat to our life at this point and that's nationally not just people who are direct victims is huge but also making sure that all these different pieces are collaborative, making sure that no one's working in silos that the community, the hospitals, the primary care, the federal infrastructure that all these things are happening together and collaboratively. Because if it's happening in silos, nothing's going to happen and I think that's what's been happening for a lot of decades each piece is trying to do its part, but I think if we collaborate and we know what the other hand is doing, we're able to scratch each other's backs. And I think that that's the way that we're going to have a net effect that's going to be a decrease. So yeah, I think looking at as a collaborative and then also making sure that you fit in where you are, fit in where you can and do what you can on your scale.

Priya Menon: So, the takeaway being coming together for a common cause as Dr. Richmond also specified. It's been great to discuss quite a few interesting things. I'm just looking at the questions here. I think we have touched upon quite a few of them, but I'm going to read out the questions because they've been sent in and our audience might be listening in to hear exactly what the answers are. So, Dr. Qasim, I think you can take this because you were the one who mentioned Dickey Amendment. And so, the question is, what exactly does Dickey Amendment say? And how has it affected your ability to perform research?

Dr. Zaffer A. Qasim: To paraphrase the Dickey amendment that was passed back in the late 90s and specifically restricted the use of federal funding towards research into gun violence and kind of a contribution of guns towards violence. Essentially kind of preventing us from attaining federal funding for researching this particular problem. And so, of course, that becomes a big challenge because then that places real restrictions on us that are punishable by fines and other things to prevent us from doing our work. So, it was an amendment and so amendments can be amended again. And so, I think one of the things that we should focus on is kind of addressing opportunities to bring this back into the light especially I think as we get more insight into how big a problem this is, and I think you know this past year certainly highlighted that even more that we should be allowed to utilize some funding from the government to address this public health problem. But that's a big kind of challenge certainly for us.

Priya Menon: Yeah, so there's another question on the kind of research that's happening, Dr. Richmond maybe I think you can take this. The question is, why is there no research happening about gun violence?

Dr. Therese Richmond: Oh well, first there is not no research happening for gun violence. So, first of all, there is research happening. So let me just recast the question. Second just going back to the Dickey Amendment, that had chilling effect on funding of research, and it said, none of the funds made available for injury prevention and control CDC, maybe _____ approval for gun control. So that's important to understand that language because it didn't say we couldn't do research. It said, you can't use it to advocate for gun control, but it's been interpreted as not being able to do research, and that's why we saw a real drop in research funding. There are some glimpses of hope so, after Sandy Hook in 2013, we saw an actually a program announcement from NIH focused on firearm violence that lasted for about four years and that went away. The last two years we've seen 25 million dollars allocated to NIH and CDC. So, it splits a 12.5 and 12.5 focused on firearm violence, that's great. And 25 million sounds like a lot of money but it is a drop in the bucket for the magnitude of the problem. So, the limited research is because of limited funding. We've seen people really be able to work around the limited funding and frame their grants in ways to get research done. But it's had a chilling effect on the next generation of researchers coming up because who wants to be, think about academics, who wants to be in an academic setting doing gun violence research when I have to get funded and publish to be promoted. And, and the money is really, really tight. So that's the chilling effect on gun violence research. But there is research happening, and we're seeing it really getting bolstered right now but not at a sufficient level.

Priya Menon: Thank you, Dr. Richmond. The next question is in the U.S. there are more than 300 million guns, that is about one per person. What would be the best approach to deal with the problem of this magnitude? Any one of you can jump in and I think we've been discussing handling this looking at gun violence as a public health approach. Is there anything more that any one of you want to add to this?



Dr. Therese Richmond: I'll just say for a minute like my Mantra is almost the Richmond Mantra people are used to me saying this, you know what, I'm a pragmatist. We've chosen as a society to live in a world with guns, we have to figure out how to do it more safely. And you know what I prefer to live in a world without guns? certainly, but that's not going to happen. And that is exactly why the public health approach is important. And I'll pass that off to hear what other people would do.

Dr. Zaffer A. Qasim: Yeah. I agree. I think it's similar to when you look at it in car crash issue, they didn't ban cars, they looked at ways to work around it safely and so when the culture is such and our constitution as people keep reminding us as the right to bear arms in it and you are not trying to just say well, laterally that we're going to get rid of guns all together is not going to fly. So, look at ways that you can use those guns more safely and to be fair, a lot of gun owners are worried about this, they want to utilize their guns safely, they want to store them safely and they are worried about people who don't use guns properly. And so, maybe you can look at optimistic, educate more on gun safety, the distribution of gun locks, prevention of children getting hold of guns and things like that. But the other thing we're facing in particular over this past year is the incidence of ghost guns as well. And so, these are guns that are made from essentially manufacturing kits that don't have serial numbers or not. And then kind of don't have any way of being registered anywhere and so we don't know how many are out there, so that's a big problem. So, looking at ways to prevent, that is another way. And then empowering the agencies that are responsible for addressing this thing, for example, ATF agency, which for years has been kind of restricted for a number of kinds of similar reasons that I would say that the gun violence research has been kind of restricted, which is a lot down to the politics of it. But empowering those types of agencies to actually affect the change. And so those are kind of a few ways that if we're looking at using or having a society with guns in it, then we should look at ways how to utilize them or have them use more safely.

Priya Menon: Thank you, Dr. Qasim. Thank you for that. I think we can wrap up for the day. You know. It's been a great discussion, Dr. Richmond, Qasim and Nwakanma. It has been a pleasure talking to all of you, and this talk will be available at Cure Talks website, the University of Pennsylvania's pages. So, I wanted to share this with the audience that while the pandemic took a disproportionate toll in American life last year, there was definitely another devastating end during Public Health crisis that got worse, the gun violence. And in the last hour you have been listening to the impact gun violence can have on health, healthcare, well-being, and the Doctors Richmond, Qasim and Nwakanma shared what each one of us can do toward to prevent this and how we can help with gun violence, advocacy, and think about this as a public health issue and prevent it. As Dr. Richmond mentioned just come together for a common cause and have a will to get it done. So, with that note, thank you everyone. Have a nice day. Stay safe.

Thank you.