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GUN VIOLENCE RESEARCH AND DATA COLLECTION: GETTING THE FACTS STRAIGHT
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>> Joanna Hathaway: Hello and welcome to "Gun Violence Research and Data Collection: Getting the Facts Straight." This is an installment of the Dialogue4Health series on gun violence prevention. My name is Joanna Hathaway and I will be running today's Web Forum along with my colleague Holly Calhoun. Closed captioning will be available throughout today's Web Forum. Beth with Home Team Captions will be providing realtime captioning. The closed captioning text will be available in the Media Viewer panel. The Media Viewer panel can be accessed by clicking on an icon, a small circle with a film strip running through it. On the PC this is on the top right-hand corner of the screen and on a Mac it should be located on the bottom right-hand corner of your screen. In the Media Viewer window on the bottom right-hand corner you see the show/hide header text. Click on this to see more of the live captioning.

Sometimes during the Web Forum another screen will ---will close the Media Viewer. Don't worry, you can always reopen the window by clicking on the icon that looks like a small circle with a film strip running through it. If you experience technical difficulties during this WebEx session, please dial 1-866-229-3239 for assistance. Take a moment to write that number down in case you need it later. The audio portion of the Web Forum can be heard through your computer speakers or headset plugged into your computer. If at any time you are having technical difficulties regarding audio, please send a question in the Q&A panel and Holly and I will provide teleconference information to you. Once the survey ends -- once the Web Forum ends today, a survey evaluation will open in a new window. Please take a moment to complete the evaluation as we need feedback to improve Web Forums. The recording and presentation slides will be posted and available for download on our website at Dialogue4Health.org.

We are encouraging you to ask questions throughout today's presentation. To do so simply click the question mark icon, type your question in and hit send. Please send your question to all panelists. We'll be addressing questions throughout and at the end of the presentation. We'll use the polling feature to get feedback in the event. The first is on screen now. Please select your answer from the available choices and click the submit button. Are you attending this Web Forum:

A, individually.

B, in a group of 2-5 people

C, in a group of 6-10 people

D, in a group of more than 10 people.

Hit submit.

Once you're done answering the poll question click on the Media Viewer icon to bring back the closed captioning if you need it.

It's my pleasure to introduce our moderator, Linda Degutis. Linda worked on several remember forums in this series and I appreciate her devotion and expertise on this topic. Prior to current consulting she served as the director of the National Center for Injury Prevention and Control at the CDC and is on task forces working to reduce violent injury. We are so lucky to have her here guiding this conversation today. Thank you for your time and your work for us, Linda, and please go ahead.

Linda, are you there?

Linda, are you there? I can't hear you.

Hmm...

It seems we're having a little trouble unmuting Linda. That's very strange.

I am also having trouble unmuting Linda. Let's try this again.

Wow.

I apologize to our listening audience. All of our panelists are on mute and the regular function to unmute them does not seem to be working.

And I'm not sure exactly how to handle this except to tell you, Linda, would it possible to have you call back into -- to hang up and call back in and I'm so sorry for the interruption.

Linda, if you wouldn't mind hanging up and calling back in and I will chat the number to you right now to our listening audience, I request that you give us one moment while we work out this technical detail and I'm sure Linda will be calling back in in just a moment.

Thank you for your patience.

To the rest of our panelists, assuming this works for Linda it seems likely we will all need to call back in. You'll all have a little bit of time in order to do that and I'll make sure to send you the right information. However, Susan, since you're up first, you might want to dial back in right away. And I'm sending that number out to all of the panelists.

Panelists, you also have an attendee ID number that you will need to use. You can find that by hitting "communicate, audio conference" and that should give you your attendee ID number. To our listening audience, I'm so sorry for this interruption.

Linda, looks like you're back on the call, are you able to unmute yourself?

Nope?

Holly, are you able to unmute yourself, Holly?

It appears that everyone is stuck. I'm going to try something. Holly, I'm going to leave this and hope that you become the host.

In which case hopefully we will unstick this muting into our listening audience. Again, I apologize. Hopefully we will have this solved in the next minute or two.

Yes, Holly, please take the host key.

>> Hello?

>> Holly Calhoun: This is Holly. I've been taking our panelists off mute, so I think if folks call back in we should be able to get their audio going.

>> Joanna Hathaway: It appears we're up and running, is that right?

>> Holly Calhoun: Yes, but looks like Linda is no longer connected to the audio. So if you can dial back in, then I should be able to take you off of mute and, again, our apologies to folks for the technical issue here.

>> Joanna Hathaway: Susan, are you there?

Not quite yet. Hopefully she's calling back in too.

>> Holly Calhoun: And Jeremy, I'm going to test your audio while we're testing, so you can come off mute.

Wonderful.

>> Joanna Hathaway: Hi, Linda. Welcome back. Looks like we do have audio if you're able to unmute yourself.

>> Linda Degutis: Okay.

>> Joanna Hathaway: Fantastic! We are good to go. Thank you so much to our audience for your patience throughout this. We really appreciate it.

>> Linda Degutis: Great. Thanks very much and good afternoon. We really appreciate all of you joining us for this dialogue on research on gun violence and I think it's an important issue that we really need to continue to talk about and to bring to the attention of the public as this is a major public health issue.

You've all heard about the recent mass shootings, but, again, I want to remind you the daily toll of gun violence of approximately 90 people per day, 60% of which are suicide events and the rest being homicide and unintentional shootings. So our panelists today have a range of expertise and experience and I think you'll enjoy hearing from them, learn a little during this webinar and have the opportunity to ask them questions about their work and about how we can all do more to increase funding for gun violence research.

So our first presenter is going to be -- actually, I have four presenters. I'll introduce each as they come up to do their presentation, but our first presenter is Susan Polan. Susan is the executive -- associate executive director for public affairs and advocacy at the American Public Health Association, and Susan has been there for a number of years and she's really a major -- I'd say major player at APHA and key to functioning of the organization as well as the efforts that are being made on legislative, regulatory and legal activities and communication activities. And the other thing I have to say, because this hasn't happened for so long, she's a Cubs fan and I know that she's actively engaged and watching the playoff games and cheering for

the Cubs. So I'd like to welcome Susan and ask her to give a little bit of a perspective on APHA.

>> Susan Polan: Thank you, Linda. And, yes, that is absolutely true. I am a Cubs fan, so, please, everybody, cast votes for tonight.

We have a poll as the next slide.

>> Joanna Hathaway: Actually, we just need to move you to your slide deck, if you click on the tab that says Polan, Susan.

>> Susan Polan: There we go. I want to talk a little about gun violence and

why it is a public health issue and why it is so important to the American Public Health Association that we engage in this issue. As some you may know, we have been working on a new strategic plan for the association, and looking at the world of public health and the role of that in a different way than we have in the past. And part of the challenge that we have set out for ourselves to create the healthiest nation in one generation. We know that APHA can't do it alone. We know we need to do it with partnerships, traditional and nontraditional and we need to look at the critical issues that impact the health of people in our country. It doesn't -- you don't have to be a public health expert to understand or know about how much money we know on health and how poor our outcomes are and we're talking about making a difference. We need to do it in coordination with others and we need to do it with the health policies approach and addressing issues that are bigger than some of the classic public health measures, which are important to continue but not going to get us through by themselves.

So one of the reasons this fits so nicely in with the work we're doing, unfortunately, it's so needed right now, it is an issue that we know is preventable. Gun violence is preventable, but we need to move upstream as with all good public health you need to find the root causes before we understand the issue and to meet our long-term goals of creating healthy nation we have to address gun violence as one of the leading causes of premature death. One is years of life lost and along with a general sense of well-being. Addressing gun violence is the only way to get to the goal of creating the healthiest nation. We know we have to do it in partnerships and building a public health movement is how we plan to do it. We defined as generation public health. It is our members, it is our partners it friends and family and colleagues and everybody interested in making a difference and recognizing the importance that these kind of issues play in day-to-day life. So I hope to see all of you in Chicago next week and I hope that all of you also will become part of this goal to create a healthy nation and deal with gun violence and other issues. With that I'll turn it back to Linda. Thank you very much, Linda.

>> Linda Degutis: Thanks very much, Susan, and we appreciate the background on APHA and it is an organization that is committed to improving public health and really improving the communities. The health of the communities we live in. So we have a poll we would like you to answer. And as you have the instructions before on the first poll, this is the same thing.

Do you engage in any aspect of gun violence prevention activism or advocacy?

And the answers are

Yes, regularly.

Yes, but not often.

No, I would like to but I don't know how.

No, I would like to but I haven't prioritized it yet.

No, and I am unlikely to do so.

Or some other response to this.

And we'll move along to our next presenter, who is David Hemenway. David is a professor in the Department of Health policy and management and director of the Harvard Injury Control Research Center, which is one of the oldest Injury Control Research Centers in the United States. It's based at the Harvard School of Public Health, and for those who know David you know that his work has largely focused on violence and

violence prevention and he has written numerous articles and authored several books. He's got a couple of recent books that are really very important, I think, to all of us. One is called *Private Guns Public Health*, which talks about gun violence and the public health issue, and the other for those who struggle to explain to people what you do in public health and what public health means, it's called *While We Were Sleeping: Success Stories in Injury and Violence Prevention*. And it's something that you can give to someone who is a layperson to help them understand a little bit more about public health. But I know that David will help us move along with this dialogue and will get us engaged in some of the data and some of the controversies that exist in this kind of funding. So, David.

>> David Hemenway: I emphasize that, of course, this is an enormous public health problem and then I will just talk some about the lack of data and lack of research funding. As you can see on the left of the slide, this is CDC research funding and it's been going in the wrong direction for the last 20 years.

This is an enormous problem. On an average day in the United States over 300 people are shot and more than 90 die and then you have all sorts of criminal gun uses and intimidations with guns.

If you just look at, you know, any time period, it's just amazing how many civilians have died in the United States since I graduated from college at Martin Luther King died there's been more civilians killed with guns in the United States than military Americans soldiers have been killed on the battlefield, in all of American history by any means, Civil War, World War I and World War II and on and on and on.

When you compare us to the other high-income countries, we just do terribly. The gun lobby likes to compare us to Mexico and Honduras and Russia and Jamaica and south Africa, but if you compare us to our peer countries, the high-income countries, the first world countries, we just have a study out looking at United States versus the other high-income countries as defined by the World Bank. And this table is frightening because this just looks at one age group, five to 14, K-8, and it shows that typical American child compared to children in Germany or Australia or Italy don't just have a higher rate of gun homicide victimization, not like 20% higher or 50% higher or four times as high. It's 18 times higher. Gun homicide rate is the average. Same for suicide for this young age group. Gun suicide rate for this group is 11 times higher. And unintentional firearm is 12 times higher. Overall a child in the United States is 14 times as likely to die from a gun as children in other countries, in other developed countries. I'm going to talk about the importance of data and research. Linda gave a nice call-out to this book, *While We Were Sleeping: Success Stories in Injury and Violence Prevention*, my publisher said I should promote this wherever I went. It's only \$20 on Amazon.com and it's 64 documented successes, how the world has been made safer in terms of injury and violence prevention. And one of the many things I liked about when I wrote the book is that not only did I learn a lot, but in all this successes, in every success data mattered and so did research, which was very pleasing to me. In all the successes, data was crucial in at least three ways and often more. One, to show that there was a problem, to get people mobilized to say this is an important issue, that we should do something about. Secondly, to show the kinds of things, what could be done. And third, to evaluate the interventions. So as an example, one good example is graduated driver licensing. In the United States, the data showed that a typical 16,

17-year-old driver had three times the likelihood of dying in a motor vehicle crash than an 18-or 19-year-old and ten times the rate of a 40-year-old. So there's a big problem. The data showed what could be done. It indicated there are two times when these young drivers were at incredibly higher risk. One was at night and one was when they were driving with other teenagers. And so we have a graduated licensing scheme now in all the states which say, yes, if you're 16 it's important for you to get experience but we want you to get experience and not die. So you can't initially drive at night or with other teenagers. And crashes and deaths among 16-to 17-year-olds in the United States have fallen 30%.

I'm having trouble moving this.

I'm going to talk about three or four examples of missing data in the United States. One of the things we know is that we have lots of cars in the United States and we're slowly learning to live with them. We also have lots of guns and probably will have for a long time and we have not yet learned how to live with them.

One of the areas where we need better data is in -- for the national violent death reporting system, which I'll talk about what a great system it is. Right now we have this system in only 32 states. These states are in purple. The states we are missing, we are missing states like big states, California, Texas and Florida. We are missing most of the confederacy, Alabama, Mississippi and so forth. We are missing a lot of the northern mountain and plains states, so we don't have a representative sample of the United States. It would be like, imagine if our motor vehicle fatality system, the FARS system had data from only 32 states. And we can do much, much better.

Oops, go back one.

Just to give an example of the many, many strengths of the national violent death reporting system, we just had a study out looking at unintentional child firearm deaths age 0-14. Again, this is birth through middle school. The vitals, the numbers typically cited from whiskers is very incorrect. They miss a large percentage of the deaths. We estimate that the number of unintentional child deaths are 80% higher than reported because the vitals mistakenly puts a lot of these as homicides. There are experts -- supposed experts who are advocates for firearms and they claim that most of these children are being killed by adult criminals and we find, of course, that is completely incorrect. This is a problem of children killing children. A third of these deaths are self-inflicted. A third are other children, typically brothers and best friends as shooters, 1/6 are 15 and 16 and 17-year-old teenage shooters and the rest are mainly parents. What else we find, we look at these data next. You find really interesting things, because the data are there. Most of these children are being shot by others, other brothers and so forth, but for the two to four-year-olds, they are shooting themselves. Typically they get their thumbs on the trigger and look at the gun and point it in their face. Also this sets the kinds of policies we ought do to worry about this. It also says we should worry about children when they go to other people's houses but it indicates we shouldn't worry about girls and we particularly should not worry about an eight-year-old girl who goes to somebody else's house who is killed at somebody's houses or boys when they're 11, 12, 13 and 14.

Next.

Another example is we're trying to always determine what percent of households by state contain firearms, what percent of residents of Missouri have firearms, what

percent of residents of Alaska have firearms and we really don't know. We used to know very well because the behavioral risk factor surveillance system used to ask. Three years in early 2000s they asked that question and asked about gun storage. Here we have this great BFRS system from CDC, 400,000 interviews per year. Instead they have stopped asking that question about the firearms, even though it's such an important issue. And instead we have to rely on, like, things like the Chicago surveys, which are maybe 1200 people every two years. So we have no really idea at the state level what percent of firearms are -- what percent of households have firearms and we have to use proxies. We also don't really know where guns are coming from. We actually collect these data, but because of congressional prevention, it's hard if not impossible for researchers to get the data. So if you wanted to find out where are guns coming from, which are used by criminals in Massachusetts, we certainly don't know which gun dealers. If we wanted to know the guns used by adolescents in Massachusetts, we don't know. We just have aggregate data. And we can't look, even though the data are available. And so what we, of course, want is for all guns to be traced and then for the data to be available to researchers.

It's not only the government, which has been very bad about providing data, it's also private sources. One of my goals in life has always been to get the injury questions on other people's surveys and I've been successful, but trying to get gun questions on other people's surveys has been difficult because people are afraid to ask those questions because they're afraid that somebody will complain and then their funding could be taken away.

So right now in the United States, as far as I know, there has never been a longitudinal study about the effects of guns in households, on suicide or anything else. Because it's so difficult to get gun questions on surveys. And it's not -- now, I always say that compared to medicine, public health is underfunded and within public health, injury and violence, research is under-funded and injure, research is under-funded, not only because the government provides so little but also because private foundations provide so little. There's less than a handful of brave foundations providing money but other foundations which could -- I think they're afraid they have -- they have some board member who might be a member of the national rifle association and they say, we don't want the controversy, we're not going to provide funding. For this incredibly important topic there's been so little funding. One of my pet peeves has been -- have many in life, but one is reporters call and say, where do we need research? Tell me one or two things we really need research about. I say, what do we need more information about? Basically it's everything. We know very little, for example, about gun storage. Very little. Almost nothing about gun training. Virtually nothing about gun theft. Very, very little about gun threats. All if nothing about purchasing. Very little about gun shop practices, almost nothing about the effects of open gun carrying. Not that much at all about guns at work. Very little about gun insurance for owners. Almost nothing about gun ranges. Very little about the police discretion for concealed carry and on and on and on, and I just got tired of writing. And it's just very sad state of affairs for such an enormous and continuing public health problem in the United States, how little we know.

Thank you.

>> Linda Degutis: Thanks, David. It's a grade lead-in to the next -- to Alan

Leshner's presentation, but before we do that, we have a poll, and the poll is: How important do you believe better data and research about gun violence is?

The answers are

Crucially important, it could change policy by bringing opposing sides together with a new, joint understanding of facts

Data and research has some potential to help, I'm not sure how much

Not very important, people believe what they want to believe, independent of the data

I have no idea. Or another response.

And as you're doing the poll, I'm going to move on to our next speaker, who is Alan Leshner. He's the chief executive officer emeritus of the American Association for the Advancement of Science. Prior to that he was the director of the National Institute on Drug Abuse, and the deputy director and acting director of the national institute of mental health. But one of the reasons for asking Dr. Leshner to work with us on this and participate in this webinar. He headed the Institute of Medicine Committee that was looking at public health priorities for research into gun violence, and the goal of that was to really look at what kinds of research questions do we need to answer and which are the most critical to answer very -- you know, very quickly or which ones -- you know, which ones might wait a little bit. But what are the questions that we might be able to start working on with respect to gun violence?

The committee didn't deal with the issue of funding but really looked more at just the research questions. So Dr. Leshner, I will turn this over to you. Take it away.

>> Alan Leshner: Hello, everyone. The situation is exactly as Dr. Hemenway said, and I had the pleasure, I guess, of chairing the Institute of Medicine National Research Council study directed toward developing a public health research council surrounding ways to deal with firearm violence. The reason that I said it was mixed is that, as you'll see at the end of my presentation, we actually posed all the right questions, but sadly, as Dr. Hemenway said, there has been no funding response, no real funding response. So the way I'm going to do this is I'm actually not going to read what is on the slides. I'm going to trust that the audience can read faster than I can talk. I have a whole lot of slides and what you need to do is skim them to get the points. I'll highlight the major points. Are you ready? Here we go.

First of all, the question of dealing with the whole issue has been extremely difficult. We have the problem. As everybody knows, it's an incredibly complex issue, and everybody thinks they have the right idea of what to do. But what we've learned over the years is we don't do very well making it up. And we don't seem to understand what works. From my perspective a large part of the reason is that we have no science base. A part of the complexity is that it's both criminal justice and a public health issue and the tendency, just like in many other issues is to try to simplify it and come up with a simple answer all the time, and we can. We won't be able to deal with the issue until our strategies are as complex as the issue itself. So we had a bit of a discussion already about what makes it a public health issue, and I'm just going to repeat that a bit. If you look at the burden of firearm violence -- I'm on the fourth slide -- the U.S. has the highest rate among industrialized countries. You see the numbers in front of you, and the issue of firearm related suicides is an important one.

It's severely significantly outnumbering homicides for all age groups. You need a public health approach to be used because it's associated with high morbidity and mortality, and because it has a major impact on the health and safety of U.S. residents.

Again, the only way we'll be able to deal with the issue of firearm related violence is when we, in fact, have strategies as complex as the problem we're trying to solve. Dr. Degutis mentioned that I used to run the National Institute on Drug Abuse and I can tell you that the same problem exists there where people see it as either criminal justice issue or a public health issue. and what we've learned is it's both. The strategies have to include both. So we have no public health strategy for dealing with firearm related violence. And as Dr. Hemenway said, we don't have a database from which to develop one. Typically when we're dealing with a public health crisis, whether it's an infectious disease that is spreading or an issue like tobacco or blood pressure, we start out trying to identify the risks and the patterns of use. We look at what kind of prevention interventions we could use. We try to develop techniques for multidisciplinary collaboration, because we know it takes all of the relevant players in order to make whatever strategy work. All effective public health strategies are typically science based. Those that we make up in the shower, those that are based on people's etiology, intuition or so-called common sense rarely are effective. And that tells us that this problem that we don't have a science base is heavily responsible for keeping us in that problem.

So who ought to be doing that kind of research? Who should be funding it, leading it? The Centers for Disease Control and Prevention is the U.S. major public health agency and therefore it has clear responsibility on this issue.

However, since 1996 CDC has been effectively prohibited from intervening in firearm-related violence or even supporting that kind of research. Now, there is a nuance that it's not an explicit prohibition, it's just they take all the money away that is devoted to that, or, in fact, there have been conditions written into the appropriations, the budgeting bills that basically send the message, you can't do it.

2013 number, the best number we were able to find was that CDC was spending \$100,000 a year, just to give you a perspective on the issue of drug abuse and addiction. And I'm not saying one is more important than the other, but they're similar in the sense that they're both major public health issues that also have criminal justice component to them. The National Institute on Drug Abuse's budget is over a billion dollars a year. In 2013 CDC spent 100,000. So President Obama issued a series of executive orders related to firearm related violence saying that federal agencies needed to improve the quality of the knowledge base and that CDC should go back to supporting firearm-related violence research. And then the question came up, okay, so what are we supposed to do? Well, the CDC and the CDC Foundation asked the Institute of Medicine and the National Research Council to convene a committee to help them develop a potential research agenda, and I had the pleasure, I guess, the honor at least, of chairing that committee. And I won't go through the details of the members, but I can tell you that it was a very diverse group with very diverse expertise. And I just want to run through rather quickly the kinds of research questions that we suggested should be answered. And this, I think, follows very closely with Dr. Hemenway's presentation.

So the over-arching issue, as Dr. Hemenway said, is that we really don't have high quality data. We also don't have very sophisticated research designs that we would

be able to apply and that told us that that was sort of a cross-cutting issue that went across the different domains we were worrying about. So, again, as Dr. Hemenway said, we know very little about the nature of firearm violence. You can read as well as I the number and location of guns. You know, being able to characterize the kinds of firearm violence, again, you can look. There are different populations that should be telling us things and we should be able to separate the data from these populations so that we can do a better job of targeting interventions towards individual sub-populations. So the first major character recommendations was that research is needed, and, again, you can read as well as I to characterize the scope and motivations for gun acquisition, ownership use, characterize differences in non-fatal and fatal gun use. And I won't repeat the comment that in each of these cases we have a little bit but virtually no data around these issues. I don't want to keep saying that over and over again, but that's the core point here.

Second one, understanding what constitutes risk for gun violence. You have to understand, of course, what protects against it. Just to give you a sense of the kinds of issues that have to be looked at. Society level factors can increase the risk or decrease the protective factor against gun violence. Community level factors all, we believe, are affecting firearm related violence, situational. And then, of course, characteristics of individuals, and so we recommended a whole research program devoted to risk factors. And associated with juveniles and youths having access to and carrying guns, look at the potential health risk and/or the benefits, improve an understanding of the risk factors. Prevention. Obviously, the big goal here is to prevent firearm related violence through the development of hopefully sophisticated interventions. Typical public health approach is to target either the agent, you know, the firearm or its possessor, the host, which turns out to be the victim of violence. Or the environment, the social, physical and virtual environments that can shape this.

And then if we go -- whoops, I just jumped ahead too many slides. I apologize.

So in order to develop appropriate preventions, we recommended a variety of research priorities that involve understanding virtually all of the aspect that lead to the characteristics of firearm related violence and what to do to better deal with it. You can see what interventions work and what don't. When I worked in drug abuse, I frequently encountered this situation where people would say, oh, you know, I met someone once who used drugs, let me tell you how to deal with it.

Again, we can't have the etiology trumping science. It has to be that whatever our interventions we don't waste money. We know what we're doing but you can't know what you're doing if you don't understand all to have factors that lead to the phenomenon or what works and what doesn't work. And that's what we're suggesting here.

We had a section on gun safety technology and I won't go into that any detail, but, again, same set of issues. Research priorities. Let's understand what it is that makes different technological approaches more or less effective. Let's look at past history. Let's look at policy approaches to the use of technologies since we believe they vary tremendously. Then, again, this is an interesting topic area and that is the question of video games and other media. I don't know about you in the audience, but I can tell you most people I know have a strong view about, you know, violence and media, violence in video games, and it doesn't affect firearm related violence, particularly in

young people.

Well, our committee was tremendously struck at how little they know about that. This question was posed to us. We went and tried to find out. Well, what do we actually know? And it's embarrassing, in fact frightening, how little we know. For people who are interested, this was the report. Priorities for research, research agenda for dealing with the threat of firearm related violence. For people who want to look, this is a website where you can download the report for free. In the course of the study we had a series of public meetings and meetings with organizations and individuals who had expertise, and you can download the event of the public meeting we had with virtually every involved sector on either or any side of this issue and gave them a chance to have input into our discussions.

A reasonable question is, so you went to this trouble and you produced this fancy report and it went out to thousands of people. So what happened with it?

Well... we briefed everybody. And I tell you, everybody said all to have right things. We understand. This is tremendously important. We know that we can't just make it up. We have to have a science base. And -- this was interesting -- we thought there would be a negative backlash, that people who were either advocates for the possession and use of firearms or took other positions like that would be opposed. Because there had been this prohibition on doing research or supporting research, and so there had to be people who didn't want to do it. Nobody objected to the recommendations, and anybody who was asked said, yep, we know you need a science base.

So what happened after that? Fundamentally nothing. Very little happened.

Nothing has come from CDC. The agency did ask a couple of times for a small amount of money. Remember the proportions here. 10 million was their request for firearm-related violence. The Congress said no. A couple of members at the time, Congressman Maloney and marquis introduced a bill supporting CDC work. The rest of the Congress said no. And when you look at the latest CDC calls for proposals about violence, there's still a focus elsewhere, not on firearm related violence.

And National Institute of Health did in September 2013 put out an announcement calling for some research on the health determinants and consequences of firearm-related violence. And they did make a number of grants but nowhere near the number or the magnitude of a research program that we really need to see. The National Science Foundation has very quietly made a number of grants related mostly through the social and behavioral sciences. But, again, we haven't seen much come of it.

So the bottom line, and the point I would leave you with is that we know we need a science-based public health strategy. There is no question about that. And we have little or no science base to tell us what that strategy really ought to look like. And what makes it even worse, we know what research needs to be done and nobody seems to want to-make the investment necessary to have science replace etiology and intuition and common sense as the way we approach this set of problems.

Thank you.

>> Linda Degutis: Thanks very much, Dr. Leshner. I think that was a great summary of what happened with trying to move forward with the research agenda and the work that was put in by the committee, which certainly took a lot of time and a lot of effort and a lot of thinking on the part of people who had various viewpoint in this area.

What I would like do now, we have another poll. And it is: What do you need to be a more effective communicator about gun violence data collection and research? And just mark all of those that apply.

You need more background information about how data and research could help the gun violence prevention conversation.

A better understanding of the oppositions point of view.

More conversations like this

A media advocacy toolkit

Or something else. And I would like to introduce our final speaker, who is Jeremy Richman, Dr. Jeremy Richman. He's the founder and chief executive officer of the Avielle Foundation, which I also work with, and he's going to take a little different tack on this, although he has some extensive research experience, his had been in a little bit of a different area than looking specifically at gun violence or even violence in general. But he and his wife started the Avielle Foundation after their daughter was killed in the Sandy Hook shootings, and he has been instrumental in moving forward the conversation about looking at violence and looking at brain health and violence. Jeremy, please go ahead.

>> Jeremy Richman: I really appreciate the opportunity to come and talk on this webinar today and the presentations have just been outstanding. We're going to shift gears a little bit and I'm going to introduce the Avielle Foundation with the mission of preventing violence in general and building compassion through neuroscience brain search community engagement and education. I don't want to derail the discussion, though, to say that we're moving away from gun violence. You want to prevent, in our foundation, violence in general, but the discussion shouldn't be swayed away from the fact that the firearm is the most lethal form of violent tools that we have available to us. So I don't want to change that discussion, and I hope we can come back to it. Let me first introduce myself. I'm a research scientist, neuroscientist by traditional training. I did post graduate work at Vanderbilt and moved into the drug discovery world working at Arena Pharmaceuticals to I'd therapeutics to treat brain disorders and eventually in the cardiovascular metabolic disorders and that brought me out to New England here to work at Boehringer Ingelheim in Connecticut. Unfortunately I have the ability to introduce myself. I lost my daughter Avielle, when she was six years old when she was murdered in her classroom with 19 classmates and teachers and administrators on Friday, December 14, 2012 in the Sandy Hook Elementary School shooting here in Newtown Connecticut. As you can imagine, this left as about as personally distraught and touched by gun violence as you can get. And after heartbreak we really needed to do something. And we recognized that our country sensational act of violence, of mass violence more and more, and more these days now than ever before. To the point that I think everybody sees it as appearing sort of as an epidemic. But the reality that this isn't an epidemic. This is just the consequence of sensationalized media. But what is epidemic is gun violence in general. And it's the violence that virtually goes unreported. As you can see from the first two presentations, there is very little data and hardly any media about homicides on our streets, suicides in our homes, and tragic firearm accidents.

Jennifer, my wife and I were faced with this horrible tragic loss of our daughter Avielle. We needed to respond with an answer why these things happen.

And this is so needed because we got literally thousands of letters all asking why this has happened, why do we see this.

Jennifer wanted to play to our strengths, both being scientists, we wanted to ask, can we study violence in a scientific way, specifically bridging behavioral and biochemical sciences to understand violence and risk factors that lead to violence and the protective factors that lead to compassion and connection and connectivity to other community members.

We also recognized that science in a vacuum is really irresponsible if it's not given to the everyday person in a very approachable, usable tool-like fashion. What we mean by that is everybody from students, parents, teachers, healthcare providers to law enforcement really need these tools to balance the information that we've been talking about so they can be engaged and informed. And we feel that goes a long way towards fostering empathy and increasing connection, and we believe that the statement "knowledge is power" can go even further because we think knowledge is empowering. And once you have this, once you've been touched and you can imagine it, then you're willing to roll up your sleeves, put your boots on the ground and do something about it, have people engage and have dialogue about how to prevent violence. The two missions of the foundation are fostering neuroscience based research, community engagement and education. Why do we want to start in the brain? Well, it turns out the brain is just another organ like the heart, lung, liver, kidneys, the brain can be healthy and it can be unhealthy. But unlike the other organs we know very little about it so it takes on this sort of mystical role. But we still have to realize all our behaviors come from this organ. So if we understand what can be healthy or unhealthy about it we can explain a lot of our behaviors. Unfortunately, brain science is the least explored of all of our science bar none. We know about the bottoms of the oceans and the surface of Mars than we do about our brains and brain science in general. One of our interns sums it up in a great way when she said "considering this is the organ we use to consider, it's very ironic how little we know about it. We need to fill in the pieces of the puzzle so we can understand our behaviors and the risk factors that lead us to engage in violence in general. Violence to self or to others. And how we build protective factors that lead to compassion, connection and community engagement."

But there's a lot of barriers.

Right now, diagnoses of diseases of the brain are made symptomatically, using checklists and surveys and often define the individual. Imagine going to your doctor and she looking at you and saying, your nose is running and your eyes are red and throat is scratchy and hurts. You're a cold. As ludicrous as that may be, when you go to the doctor feeling overwhelming grief, sadness, depression, if you answer yes to five out of nine questions on a questionnaire, you are depressed. Or you are schizophrenic, you are bipolar. Notice we don't identify pathology or anything wrong with an individual, and therefore it becomes very scary and seems almost like a character judgment. In fact, the invisible world of mental health leads a lot of times to self-fulfilling prophecies as people label diseases. You are schizophrenic or depressed. Your child is broken in some way. So that leads to fear, trepidation and it causes a lot of people to avoid getting help advocating for themselves or their loved ones, and as a result a lot of insurance programs, healthcare providers fail to accept insurance for this organ just like any other organ. They don't do that and they don't study brain science in the same

way.

Whereas if we can identify the pathologies and things that can go wrong in the brain and understand them, we make this invisible world visible, tangible, understandable and it's not a matter of character but rather the chemistry underlying it. It's a lot less scary to understand that your child has too much dopamine in the right cortex. That's indicative of impulse control problems. That's something you can work with. It's something that is hopeful and it's not something that you're going to feel judged by or that your child is broken. We need to recognize when we move to treating the brain as just another organ as any other and move into the realm of brain health, we de-mystify it and we make the study of our health much more tangible. And we can then approach preventative measures beyond just the study of how guns can be made safer but how individuals can be less likely to engage in violence to themselves leading to suicide, or to others in general or homicide. As we've been discussing, the first three decades of our lives, the vast majority of death is preventable. You can see here that unintentional injury, suicide and homicide represent almost 80% of death up to the age of 30 and we need to recognize that and put the appropriate resources in to understanding how to intervene and prevent the death from occurring.

Can we study violence, our question became. Can we identify risk factors and intervene to prevent them? Or to treat them, so that people can become healthy and protective of themselves and advocate for their loved ones.

And we can come up with a model or paradigm if you will, where we can identify the genetic and environmental risk factors that lead to violence. We named a few of them adverse childhood experience, environmental stresses. For example, if you grow up in East LA, Chicago, parts of Chicago, downtown Detroit, here you have a lot of environmental stress that causes outbreaks of violence. Traumatic brain injury has gotten a lot of attention recently that leads to violence if not treated. Sedentary lifestyle and violent media. Violent media is a scientifically proven risk for violence so much so that there were surgeon general warnings about violent television and there's no question interactive video games that research will also reveal the harmful nature of that as well.

So we need to engage in protective factors that build compassion. This isn't just the absence of the risk factors. We have to actively engage in the protective factors to advocate for ourselves and we need to not be afraid of doing that.

One thing I would like to pause at this point in the talk and just make sure that people understand, when a lot of people wonder, is it our genetics or our environment that leads to the risk of engaging in violence? It's really important that we recognize there's really no debate. There's no such thing as a nature/nurture defense. You can't separate the two of them. Genes determine how you interact in the world and the environment determines what genes are expressed, what organs they're expressed in and how long they're expressed there. You can't separate them and a great behaviorist has a famous quote "what contributes more to the area of a regional? Length or width? They both are critically important."

And so we can pause it if we focus on eliminating childhood adversity and these risk factors. We will go a long way towards preventing violence to self and others, like a path of behavior and engaging in dangerous risky behavior. And if we focus in engaging on the protective factors we'll build a lot more resilient leaders in

a nurturing and healthy way with a lot more compassion in the world.

Of all the things we could be really focusing on in terms of prevention of violence to self and others, do you really engendering the understanding and value of emotional intelligence also recently been called social and emotional learning skills. The ability to set and achieve goals, to identify your own emotions and then control them, to have empathy for others and then act on that empathy in the form of compassion. Helps you to make informed choices that help to almost guarantee success in life. Nothing else can predict that as effectively, and I would argue is the most important thing that we can engender in both our communities, in our families, and in our schools.

When we understand that emotional intelligence is really the secret of success. Whether you define success as health, wealth or happiness, the degree of your emotional intelligence can predict this. People are shocked to see that your emotional intelligence is inversely related to your adult criminal conviction. It's inversely related to substance abuse problem. It's also inversely related very strongly with adult health problems.

Your emotional intelligence predicts your credit rating. It also predicts the income that you will earn as an adult. And finally, and probably the most importantly, it predicts your positive parenting skills and the family unit and structure and your overall satisfaction with life. This is your own perception of your emotional intelligence, your parents' perception of it and recently papers have come out to show this is also your teacher's perception that can predict the health, wealth and happiness of your adulthood.

Nothing else can predict this as well. So we really need to focus on this and we need to recognize that this can be used as a tool to help prevent violence to self and others, because our brains are plastic throughout our lives and this gives us a lot of hope. Neuroplasticity refers to the brain's ability to adapt and change in respect to our experiences but occurs on a molecular and cellular level and regional basis, just like a muscle if you use it, it hypertrophies and grows stronger. If you don't use it, it atrophies and grows weaker. Environment influences this. And we have a quote from an ex-slave, Frederick Douglass. It's easier to build strong children than repair broken adults.

I think this is important. We really need to focus early on at eliminating risk factors that are completely preventable in an environmental frame that lead people to engage in violence.

And focus very proactively on protection factors. This does not mean that we cannot use these strategies to intervene and prevent somebody from recommitting and recidivating violently we can't help people already exposed to adversity, already going down this road where they don't have the socioeconomic status to potentially eat healthy or get themselves out of an environment. We can proactively help even adults. So it gives us a lot of hope.

So what do we need in terms of research? This is not to relay a shadow or to create any lesser value in all of the research that was just pointed out by Dr. Hemenway and Dr. Leshner, that's critical in terms of understanding gun violence. But we also need to bridge the biochemical and behavioral sciences. We need to create links from the pee in the cup science, measuring something in fluid, looking for traditional biomarkers they call them, and the science that you can see, behavioral science, in the

Freudian sense you picture somebody laying on the couch and telling you about their mother.

And we have some of these bridges as examples. Here I have the molecule serotonin. A lot of the lay community understands that poor serotonin signaling is associated with feelings of sadness, overwhelming grief and sadness. What we're missing is pieces of the puzzle that link biochemically to the reactive violent individual who snaps and explodes inappropriately. And what is the difference between the reactively violent individual and the insurmountably violent individual who is disenfranchised from society? These are serial rapist and people who contemplate ways to sensationally do overwhelming acts of mass violence, for example a murder of a six-year-old in the first-grade classroom. What is the difference in the brains? These are the puzzle pieces we need to fill in. This is a huge unmet need and what we want people to do is shift away from the invisible world of mental that is kind of mystified and invincible and de-mystify it, understand what leads to engage in violence. Refer to it as brain health because that's what it is, and that's where behaviors come from. No strings attached. We're not puppets. We are responsible for our actions, but those actions are all biochemical in nature and we need to not be afraid of it. We need to explore it, understand it and delve into it. So quickly to conclude, we want to leave three points. First is that brain health and a shift to the visible world that is tangible, understandable and we can work with in the tool fashion, when we can give to people to create hope, to build compassion and prevent violence.

The next point is that I think it's ironic that a lot of people approach this question and they say, well, at the end of the day you know what, we're just animals. You can't blame us for acting on our base instincts. The irony here is that the human species the human race has evolved with a big part of the brain called the cortex. This has allowed us to live in a community-like fashion. Now, through the trading of ideas, stories and imagination is what allows us to be human and to evolve. So ironic to that sentiment, while we are just animals, what makes us the most human is being humane. Finally I want to leave with the point that violence is preventable and treatable as we said as a public health threat and we need to study it as a public health threat, but the huge unmet need it needs to be studied on many levels both in public health fashion and in a biochemical and behavioral fashion.

And I would hope you would all engage with me in using your imaginations so that we can come up with innovative and new ideas to approach behavior and health and prevent violence.

>> Linda Degutis: Thanks very much, Jeremy. It's good to hear that perspective on all of this. We've had a lot of -- a great combination of information on environment, policy, brain health, and all of these issues related to gun violence research. But now is the time for us to hear from you and hear the questions that you have. So please submit any questions using the question and answer feature that is on your screen in WebEx, and just submit the questions to all panelists and we will ask them and see what -- get a dialogue going so that we can all talk a little bit more about this.

While we're waiting for you to ask questions, I would like to start and what I would like to do is ask David Hemenway a question about what -- how much money, if you had a figure somewhere that you could use, would give us a good start in studying gun

violence? Do you have any suggestions? Any ideas what we would need to get going?

>> David Hemenway: More is better. We have so little that I think you could look at trying to figure out how much money, for example, you are spending on various other issues that we think are -- we're doing a good job on maybe in terms of research from HIV or maybe even motor vehicle crashes, but, I don't want to give a number. The more money you spend, the more we'll learn. People always ask me -- I teach economics. People ask me, how long, you know, do I have to study economics before I understand? And the answer is, you know, forever. But you understand it better, you want to understand it longer.

>> Linda Degutis: Okay. A question -- another question that has come up now. Is there a reason that CDC took the questions out of the BRFSS? Anybody have a -- I guess David that's probably a question for you.

>> David Hemenway: Yeah, I really don't know. I'm trying to get them back in. It's so important, and there's always like a reason like, oh, it's -- we have all these other questions and we have to eliminate one of those questions. The answer is, no, you can add another question, one question. But it costs money, like everything else and I'm sure CDC is trying to save money and CDC, you know, during this whole period being afraid even to say the word "guns" or "firearms" in conferences makes it hard to collect data on guns. But, no, the answer is it's readily doable and I have no idea exactly why this happened. I know at the state level people are afraid to put these questions on because of repercussions, and this is a simple question as: Is there a gun in your household?

>> Linda Degutis: Right. Okay.

One of the things -- one of the questions that has come up from someone in the audience is the issue becomes emotional so quickly. How can public health reframe things to have a meaningful discussion? And I'll start with Alan on that one.

>> Alan Leshner: That's not an easy one, obviously. I think that one of the things that is needed is to have some kind of public campaign that lays out the complexity of this issue that says, first of all, it's not just about mass shootings. It's not just about some to have more dramatic big events that we hear about these effects, every individual directly or indirectly and in every neighborhood. Some kind of social marketing that first of all separates the issue just from those very news worthy events. And secondly that begins the layout that this is, A, a public health issue and B that it's approachable but we need to know as much about it as we do about other public health issues that we want to attack, including what works but more importantly what doesn't work. Somebody asked a question earlier about how big a budget -- a research budget is needed. One of the big problems is there are actually relatively few researchers who are focusing on this topic, because they don't think it's viable. So at the same time that we're supporting research, we need to build the research community who have confidence that their work will get supported.

>> Linda Degutis: We have a couple of questions about three of the panelists really asking what is the most effective way for the general public to influence funding of research to, you know, promote gun violence research? What can your average American or, you know, what can your mom or neighbor or your aunt do about this to influence research -- funding for research? I'll start with, perhaps, Jeremy.

>> Jeremy Richman: Yeah, and this is -- thank you, Linda. This is related to

the last question as well. As we pointed out through the entire session there is an entire lack of information and knowledge. People are afraid to engage in the dialogue because -- and why it gets so polarized is because we don't understand it. We don't understand it because we haven't spent any time researching it.

I think that the point -- the most important point to be made is that this is a public health threat. We need to engage as communities to recognize how do you prevent it? How do you contain it? And how do you respond to it appropriately when it's occurring or happening?

We don't have those responses yet because we don't have the data.

You take a lot of the passion out when you eliminate sort of the propaganda. When you actually can give numbers and data that are sort of inarguable, then it becomes a discussion where you say, well, now what do we do about it? This is eater fact, what do we do about it? But now there's so much misinformation out there and it's all, again, mystified and people are polarized and afraid to engage in it because it is so polarized as a result of the lack of a learnedness and understanding. So once we have that understanding, then people can be less intimidated to engage in the discussion. But what I encourage people to do for brain health but also for just in general gun violence prevention is let something touch you. Go ahead and don't shy away from it. Don't be afraid to say, you know, I just don't want to deal with this. I'm just going to tune it out. Because I guarantee you you'll get involved when it touches you personally. And what we need people to do is let it touch them, to get -- to make it personal, to understand what people are facing throughout the country on a street corner, in our households and in our schools, et cetera. And say I want to do something, let me educate myself and let me advocate for it. Just a loud voice will change attitudes over time.

>> Linda Degutis: Great. Go ahead.

>> Can I jump in here?

>> Linda Degutis: Sure.

>> I think what people can do on a very individual level, if every person on this call went to their local member of Congress, to their representative's local office and said, this is an important issue to me without hyperbole, without too much drama, but went to policy makers and explain why you think this is important. That would go a long way. They're not hearing from people that we need to support research. They hear from a lot of people who say, fix it. You're my congressman or my congresswoman, you fix it. Well, they don't know how to fix it. And they won't know until they do some of this research. So go to your representative and advocate for that and do it at the local level.

>> Linda Degutis: Good advice. And it's not leaders who have to do it. But David, go ahead.

>> David Hemenway: I would like to stay often it's very hard for individuals to do things. But it's really helpful if you can form tiny little groups or church groups or whatever where you actually meet and try to figure out, you know, what is happening and what the group can do, because then you can mutually support each other.

Even little things -- I got a lot of comments on newspaper stories and blogs or whatever, and too often it's filled with people who have one point of view and it's a pro-gunpoint of view. And I would just like to see more people having some knowledge

and writing comments saying, well, you know, one of the big problems we is we should really find out what is going on. And just even add that to every conversation. Let's really find out more about what works and what doesn't work. About what the problem is and what really isn't.

>> Linda Degutis: Great. Somebody asked a question about whether we have enough firearm policy research from other countries to inform policies here or is the gun culture here too unique?

I'm going to give that to David.

>> David Hemenway: Yeah, one of the things to recognize is that every one of these other developed countries does not have our gun problem. So there's relatively little gun research in these other countries. There's some, but they don't have an enormous problem. So it doesn't make as much sense of them to be doing research. And they also don't have as many handguns available to people and so most of the research that has been done has been U.S. research.

>> Linda Degutis: Okay. A couple of questions about -- have come up about environment and environmental factors in neighborhoods where there's not sort of a positive environment or resources for young people, and that the young people turn to gangs and potentially guns.

So what is being done to address this, if anything, or what could research do in order to address this kind of issue?

[overlapping comments]

>> David Hemenway: I'll talk just briefly. There's a good amount of research -- not good -- relative to guns. There's a good amount of research not relevant to anything else about youth violence and what we can do and there's a lot of criminology research about gangs and so forth, and we clearly should do much more. But one of the things I would emphasize is all these other developed countries have problems with youth and gangs and whatever but they don't have our problem with death because they don't allow ready access to firearms to anybody who wants it.

>> Linda Degutis: Alan, did you have something to add to that?

>> Alan Leshner: Those issues are exactly the kinds of issues we need, a much more fine-grained level of understanding about. As David said, there's a fair amount of research that has been done about risk in communities, risk in various settings, but we really don't have the level of detailed understanding we need in order to develop effective interventions.

>> Linda Degutis: Okay. Great. And I think it does highlight the importance of having sort of science-based interventions that we know work, because many communities have a lot of money put into them to deal with issues in the community, but we're not really sure that that money is funding interventions that have been demonstrated to be effective.

That's a really important piece of this.

And, you know, I think one of the things -- you know, what I want to say is it's the same thing -- it's a feel-good kind of thing. You feel good because something is being done, but it's not necessarily something that is going to work. That's where some of the emotion comes in and the lack of science, you know, science-based intervention. Another question that came up, since the scope of research and data needs are so large, what would you recommend smaller organizations focus their resources

towards? Should they emphasize advocacy versus education or something else, for example? Or should they focus their resources towards increasing funding for the research? Anybody want to take that?

>> Alan Leshner: It's hard to advise people on what organizational priorities should be, but if you go to the trouble of bringing people together to try to do something about this issue, you have to include a certain amount of advocacy in your agenda. Because otherwise it's very hard to get any kind of change going.

What you may need is people to figure out common strategies. So there are coalitions that can be formed between or among all of the various involved sectors and maybe collectively they can develop strategies. That's a lot less expensive than mounting elaborate social marketing or advocacy campaigns?

>> Linda Degutis: Okay. Somebody else had a comment on that?

Okay. There's a couple of questions asking for a comment on the role of both local or municipal boards of health and on the role of state boards of health in gun violence prevention, whether it's -- you know, should they be engaged in funding. What do you think the appropriate roles are for health departments basically at the local and state level?

Any thoughts on that?

>> Can I chime in, Linda?

>> Linda Degutis: Sure.

>> I think we treat the brain issues separate from other health issues and as a result people don't get help. Insurance coverage doesn't usually coverage a lot of brain health issues, resilience studies therapies to help individuals that have been exposed to violence or trauma. We don't have studies on safety, firearm safety. We don't have studies, but specifically when it comes to the individual, to the family, to the school environment, we don't have studies or support. And so health departments could really go a long way to recognize that this is public health issue but that it's also a medical issue and that it needs to be covered on equal playing field.

>> Linda Degutis: Okay. We have a couple of questions that are really asking more about research results, which I think, you know, the research results, it's more looking for -- you know, looking -- you might want to look some of that up. And there is some information in the previous webinars which we'll talk about, which are archived on the site and you can access. But there were a couple more questions related to research funding and, you know, the relationship between research funding and basically practice or implementing things.

So are there -- do people see viable funding opportunities now for surveys and research or are they just so limited that, you know, it's very hard to get started in the field and it's hard to do any kind of research? Are there any -- you know, are there any kind of bright spots right now in the research endeavor as far as funding goes?

>> Alan Leshner: Not that I'm aware of. I don't know, maybe David knows. David, you're muted.

>> David Hemenway: Yeah. There's not a lot -- no, there's not lots of money. What there is -- what's nice is the Bloomberg advocacy money is making a difference and there's, I think, more researchers doing an occasional article about guns, which is really helpful. But I would never still advise any doctoral student to write all their

dissertation about guns and go into market.

>> Linda Degutis: Okay. We are out of time at this point. It's 4:00 o'clock and we appreciate everybody's attention to this and the questions. I think there's interesting questions and I hope it's been valuable for everybody. I would like to thank our presenters for their time and their input into this, and I would also like to thank our behind-the-scenes people who have really helped to shape this and frame this. Holly Calhoun, Mighty Fine with Public Health Institute and Joanna Hathaway, you have heard her but not much about her. She's a person who has really taken this whole effort and moved it forward with us. So thank you to everyone.

And thanks to the sponsor, the Jacob and Valeria Langeloth Foundation who helped sponsor these webinars. Thank you for joining us for the series. You can get the entire series on www.dialogue4Health.org. And you may find it there.

Thank you.