Dr. Rebecca Cunningham - University of Michigan

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Marianne O'Hare: Welcome to Conversations on Health Care with Mark Masselli and Margaret Flinter a show where we speak to the top thought leaders in health innovation, health policy, care delivery and the great minds who are shaping the health care of the future. This week Mark and Margaret speak with Dr. Rebecca Cunningham, Interim Vice President for Research at the University of Michigan's Office of Research and Director of the CDC funded University of Michigan Injury Prevention Center. She's leading a national team that has just been awarded a sizable grant to study the causes of the gun violence epidemic, now the second leading cause of death for children overall.

Lori Robertson also checks in, the Managing Editor of FactCheck.org she looks at misstatements spoken about health policy in the public domain, separating the fake from the facts. We end with a bright idea that's improving health and well being in everyday lives. If you have comments please e-mail us at chcradio@chc1.com or find us on Facebook or Twitter, or wherever you listen to podcast. You can also hear us by asking Alexa to play the program Conversations on Health Care. Now stay tuned for our interview with gun violence and injury prevention researcher, Dr. Rebecca Cunningham here on Conversations on Health Care.

Mark Masselli: We're speaking today with Dr. Rebecca Cunningham, Professor of Emergency Medicine at the University of Michigan Medical School. She also is the Interim Vice President for Research at the University of Michigan's Office of Research and Director of the CDC funded University of Michigan Injury Prevention Center. She was recently named to the National Academy of Medicine, Dr. Cunningham, welcome to Conversations on Health Care.

Dr. Cunningham: Thank you so much for having me today.

Mark Masselli: You know, I think guns are now the second leading cause of accidental death for children in this country, and yet, gun violence affecting American's use gets 30 times less funding than any other cause of harm in it. For those of our listeners who aren't familiar, there was a Congressman Dickie who was from Alabama, who 20 years ago put a prohibition on research funding coming out of the CDC or NIH. This really limited the research that could go on and be sponsored by the government, but your team has just received a large grant from the National Institute of Health to expand gun violence research, and I'm wondering if you could help our listeners understand why this is such an important turning point in research.

Dr. Cunningham: Yes, and it is a really exciting and important time. I think as our country starts to realize the full impact and devastation that gun violence and injury is having on really our whole population. Our team

is really focused on children and teens. Our team identified that data last year that this is going to be the second leading cause of death for children that lived through infancy through the age of 18. In fact, it's the number one guns are the number one cause of death for high school age children in the country and really are affecting populations across all communities that where we live. Children in rural communities, children in suburban communities and children in urban communities, all are dying at about the same rate of about 4 per 100,000.

The grant that we were very fortunate to receive from the NIH was really to start to get ahead of the problem you mentioned when you first started, which is there was a real chilling effect on the research. Research is kind of a wonky word, but what that really means is, what kind of how we can find solutions to health problem, is how I think about it. We have a big health problem on our hands, and we need to find solutions that we can show work for taxpayers money and work to help put in place in our communities to help stop this toll. But unfortunately, there are almost no researchers left working on this because in order to have researchers working on something you have to have funding. That funding overwhelmingly, for health problems comes from the government.

From about the late 1990s when you mentioned through 2017, there was really very little, less than a million dollars a year for this giant health problem across the country. My team recognize this, and we pulled together about 20 of the experts around the countries who are still working on this at all into a firearm safety for children and teens consortium, which is really meant to jumpstart the field to start getting the research done, again to start building the teams that need to happen, and getting data out there.

Margaret Flinter: The grant is really to study root causes of the firearm related violence that's affecting our nation's youth. You talked a little bit briefly about these partners, but maybe tell our listeners a little bit more, who are they? What are those root causes that you think you'll be focusing on?

Dr. Cunningham: Sure, so the consortium is centered here at the University of Michigan, but it's with leading scientists who've been working on this across the country. We have partners in Seattle, we have partners at UC Davis, in California, partners at Brown, 12 different universities engaged with us. There's a few very senior researchers who've been working on this since the late 1990s, and other people that we're just bringing on board young, energetic scientists who really want to help solve this problem. Right now we have about 25 scientists that are working together on an assortment of teams as part of our consortium.

We are focused on the full problem of gun violence, some of the root causes. We're also focused on what some of the programs are that we know work right now, and as well as figuring out other information that is simply unknown, such as, what exactly are the consequences of gun violence on mental health and mental health on teams? We saw last year devastating after Parkland. Some of the survivors of Parkland went on to commit suicide, some with a gun. We know that these are not uncommon after witnessing really devastating violence like this, and we need to understand what happens after so that we can put better programs in place. This field of gun violence, there's been so little data out there, that there's an awful lot to learn.

Mark Masselli: Well, there's so much to learn trying to create evidence based research. Some of the research already shows that the simple presence of a gun in a home increases the likelihood of death by gun by orders of magnitude. Wonder if you could talk about the research you and others have done already on the factors that increase the likelihood of gun violence, and its many contributors.

Dr. Cunningham: Sure, absolutely. So we really take an injury prevention approach to this and really think of it in very much the same way we think about cars and car safety. I think pools and pool safety is another good concept for your listeners. Having a car increases your risk of dying in a car. Having a pool increases your risk of having your kids die in a pool. Having a gun increases the risk of having your child injured in your home by a gun. Those facts are all true. There are a variety of things that can be put in place that are safety measures for cars without necessarily getting rid of cars and for pools that will help keep kids and teens a lot safer, and those are the things that we're studying.

We know that people that are engaged in other kinds of domestic violence or other kinds of violence in general are really high risk for being perpetrators and/or victims of other gun violence. Substance use, alcohol misuse and other drug use are really high risk factors. Their engagement with a gun increases the likelihood many times fold for having an injury with that gun or in your community.

When we think about gun violence in our facts consortium, we're thinking about accidental or unintentional injury like you talked about. We're also talking about intentional injury, so getting shot by your partner, getting shot on the street, including mass shootings, but we're also talking about suicide by gun. If you look at the entire population, 60% of deaths in our country are related to suicide by gun of the gun death. For kids, the numbers are a little bit reverse for adolescents and teens and children. Oddly about 3000 children that die and teens that die every year by gun, about 40% are suicide and about 60% are homicide, with a few percent attributed to the sort of

really horrific mass shootings and public shootings that we're seeing.

Suicide, when you talk about risk factors is something that if you decrease the impulse at the moment, their access to lethal means, like a gun, you can change the trajectory of that suicide attempt. There's been good studies to show that, that people who are feeling suicidal at a particular moment if they don't have access to that lethal means, they won't go on to complete by other means. It's a way to save a life by having guns either stored safely, or not having people who are at super high risk, like people who are depressed or people who are suicidal to separate them from their firearms during that time that they're at really high risk.

Margaret Flinter: We know you've also been studying the effectiveness of some prevention measures. The application of behavioral interventions in the emergency setting, and also some success deploying tech enabled solutions. I wonder if you could elaborate on those a little bit more for our listeners and how they're having an impact.

Dr. Cunningham: Prevention is, is a key part of this, and we have an intervention that we developed called the Safer Teens Intervention, which for 14 to 18 year olds who are coming into emergency departments, who live in neighborhoods where there's been a lot of violence. There are risks simply by the neighborhood that they live in. In fact, there are so much risk that the number one thing -- and as an emergency physician that they're likely to die from after I treat them. In the next year, their number one cause of death in our urban communities would be by gun violence.

We started a program Safer Teens in which we took kids and teens who were in the emergency department and we did a behavioral intervention with them, a counseling session that was structured that really gets them talking about what's going on in their life, what their risks are and help them help us think about how they can be safer, what choices they can make that would make them lower risk. We found that that intervention with kids decrease their violence in our experiences over the next year in multiple studies, and has been a real success. That's the kind of intervention which we're looking at now, how that could apply to gun violence specifically, and how we can also stop the cycle of violence before it escalates to necessarily having a gun involved.

Mark Masselli: We're speaking today with Dr. Rebecca Cunningham, Interim Vice President for Research at the University of Michigan's Office of Research and Director of the University of Michigan's Injury Prevention Center. You know, Dr. Cunningham, we see this clash happening between policymakers who were supported by the NRA and policymakers who are in favor of limiting access to guns. But also there's this groundswell of grassroots support in particularly moms

demand actions, calling for really sensible gun laws including universal background checks. What specific gun policies have been proven to have an impact on reducing harm for gun violence? What laws would you like to see promoted on both the state and federal level?

Dr. Cunningham: I think first of all, to speak to your two sides that are kind of screaming at each other and over each other, there are couple points I get across to your audience that are really important. One, we can all agree that we need to have less gun injury and less gun deaths, and as we're having people screaming at each other, that's the common ground I think that we can find and that we can start from. Our most ardent NRA and gun rights folks as well as our most liberal citizens can agree that, that is a good common goal. That is a place I encourage your listeners to work from.

I also really like to get rid of the term gun control and move really to the thought of gun safety. Controlling people is not really a good place to start a conversation. Safety is really where our common ground is. There's a lot of different views on how we get safer, but this is really about gun safety and how we get to a safer place with the guns that we own.

Mark Masselli: Great point.

Dr. Cunningham: Our group has done some policy analysis, the first policy that I would put forward overwhelmingly that is important is really about is really about more research on this topic. We saw recently in the past month that Congress has passed the $25 million to really begin to jumpstart research again. I can only say we spend about $300 million a year on cancer research for kids, and if we really want to make an impact on this topic, the country is going to have to start funding the health research that we need on it. We won't find solutions by our well meaning elected representatives guessing. We need evidence based research and the way you get evidence based research is health research, and the way you get health research is funding it.

We don't ask elected officials to come up with cures for cancer. We ask our scientists to do that. We really have to fund this better. But we do know even without research, some things that are healthy. First of all background checks are universally accepted by more than 85% of the country right now in some form or another, and getting to the idea to an acceptable position on that for the country likely would lead to less injury and less death. Some of the other things that we know that I've seen early success are something called ERPO Laws, Extreme Risk Protection Orders, which are otherwise known as red flag laws that are laws that have been put in place increasingly around the country over the past years. That whereas if you know that the person next to you is making threats, threatening their spouse with a gun or threatening to shoot up a school, that there's a law and a

mechanism in place in many states now where the police can investigate that, and those guns can be held from that person for a period of time to protect public safety. We're actually doing some analysis of those laws now that they're being rolled out. How do they work? What happens? What happens when people get their guns back? Those are questions that we can help answer but the early analysis across multiple state show that those red flag laws had saved lives, that are a good place for us to start thinking about those that are most extremely hurt.

Mark Masselli: Great.

Dr. Cunningham: The other work that our team has done are on CAP laws, which are Child Access Prevention laws, which hold adults responsible. If they either purposely or through negligence allow a child or a teenager access to a gun and something bad happens with that gun, there's good evidence across states that some form of that law does indeed help decrease child deaths in the places where it happened. Those are two beginning places. But then I'd also really put out there that there's a lot that can be done that isn't policy and legally based either.

We know that if Americans start having safe storage in the same way that in the 60s and 70s we learned to wear seatbelts and be safe in our cars. That was a huge culture change. You guys are both old enough I know to remember too, in the 60s and 70s and 80s. We learned, we thought it was radical, we were told we would all die in our cars, in our seatbelts and we learned that this culture keeps us safer. Eventually we can get to a culture change place that doesn't have to do with policy either where we would know that having a handgun in our purse that's unsecured next to our toddler might be a risk that we wouldn't take. Those are culture change things that we can pass that can have happened as well, but are going to take a lot of thoughtful work.

Margaret Flinter: Well, I was thinking Dr. Cunningham, in appreciating your reference so the -- of factors some of them social factors that contribute to gun violence. You talked about, just to name a few, intimate partner violence or domestic violence, substance abuse, and addiction, a history of repeat offenses or violent offenses. We really live in the primary care space and it seems like we're getting piecemeal at lots of these. We screen for substance abuse, we screen for intimate partner violence, we screen for depression. I'm wondering if it's any element of your study to look at how people on the front lines and health care primary care providers can be very effective facilitators for violence prevention across the board, but how do we bring all this awareness and screening of all these other factors together to really make a big difference on gun violence?

Dr. Cunningham: Yeah, and recognizing, I think that physicians can't do everything in

the few minutes that they have with patients, but also as a leading cause of death is one that needs to be high on our list of things to be comfortable with working on prevention for. One thing I think primary physicians and emergency need to be way more comfortable than we are now and talking about firearms. I think pediatricians have been better at this than some of our other specialties, and the rest of us who are catching up.

I talked a little bit about taking back to the F word. We have to be comfortable asking our patients about firearms, and then more importantly knowing what to do with the answer. Most physicians weren't trained on this topic necessarily at all. To that end on our facts website which we mentioned is childfirearmsafety.org. We have resources for both pediatricians including training videos for them on how you ask this and have this difficult conversation, and what you do with the answer. Simple handouts on where to direct families to store firearms more safely.

For emergency departments physician, it's about focusing on the higher risk of folks who are coming in, who are clearly have had -- or depressed or suicidal and really be clear about asking about lethal means access, but offering resources and encouraging the family to be actively investigating that as well in terms of when it's safe. Sort of the same way that culture messages is you look too drunk to drive your car, can I hold your keys? You and your wife have really been fighting, why don't I just hold your guns for you for this time so that everyone can be safer. There's ways to approach that conversation and we can get better at it, and there are some good training modules within our site as well as popping up across health care sites across the country on how to have those conversations. We just need to start doing it, we need to start modeling it for our trainees so that they're as comfortable with it as, as anything else.

Mark Masselli: We've been speaking today with Dr. Rebecca Cunningham, Director of the University of Michigan's Injury Prevention Center. You can learn more about her important work by going to injurycenter.umich.edu. Dr. Cunningham, thank you so much for your dedication and your focusing on this important public health issue, and for joining us as well on Conversations on Health Care today.

Dr. Cunningham: Thanks.

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Mark Masselli: At Conversations on Health Care we want our audience to be truly in the know when it comes to the facts about health care reform and policy. Lori Robertson is an award winning journalist and Managing Editor of FactCheck.org, a nonpartisan, nonprofit consumer advocate for voters that aim to reduce the level of deception in US politics. Lori,

what have you got for us this week?

Lori Robertson: An outbreak of viral pneumonia that began in the central Chinese city of Wuhan at the end of 2019 had sickened more than 20,000 and led to more than 400 deaths as of February 4th. Scientists have made rapid progress and understanding the culprit, a new virus in the coronavirus family, which temporarily goes by the name 2019 novel coronavirus (2019-nCoV). As the virus has spread however, misinformation has too. Multiple social media posts falsely claimed that the virus has been patented and a vaccine is already available. That's not true. The patents the posts referred to pertain to different viruses. Websites and social media posts circulated the erroneous claim that there are thousands or 10,000 dead as a result of the Wuhan coronavirus.

When we published a story on that falsehood on January 27th, the estimated death toll was 81. As of February 4, it had risen to 427 with all but two of those deaths in mainland China. A conspiracy theory website distorted the facts about an emergency preparedness exercise to falsely suggest that "Gates Foundation and others predicted up to 65 million deaths from the coronavirus now spreading" the exercise dealt with a hypothetical scenario involving a fictional virus. Numerous social media posts falsely suggested that because Clorox and Lysol products list human coronavirus on their bottles, the new coronavirus driving outbreak in China was already known. It wasn't. There are many human coronaviruses, and these products were tested against the strain that causes the common cold. For more on these viral falsehoods and a Q&A on the new coronavirus see our website FactCheck.org. That's my fact check for this week. I'm Lori Robertson, Managing Editor of FactCheck.org.

Margaret Flinter: FactCheck.org is committed to factual accuracy from the country's major political players and is a project of the Annenberg Public Policy Center at the University of Pennsylvania. If you have a fact that you'd like checked, email us at chcradio.com. We'll have FactCheck.org's Lori Robertson check it out for you here on Conversations on Health Care.

Each week Conversations highlights a bright idea about how to make wellness a part of our communities and everyday lives. Baltimore, Maryland has one of the highest emergency medical call volumes in the country, and it results in a significant number of patients being taken to the ER for conditions that could have been treated outside of the ER. The University of Maryland Medical Center and the Baltimore City Fire Department teamed up in the hopes of reducing unnecessary ambulance trips and hospitalizations. They created a new pilot program which pairs doctors and nurses at the hospital level with paramedics in the field bringing medicine right into the patients'

homes

Dr. David Marcozzi: 911 low acuity calls, we augment the Baltimore City EMS system, so that we co-dispatch a paramedic and either a nurse practitioner or doctor to the scene of low acuity calls, have them logged in at scenes through Epic. Ask the patient what they would like to be treated at scene. We then enroll them into our program, register them there just like a mobile urgent care center. We then treat them at scene, discharge them with the same exact paperwork we discharge them from the hospital, with prescriptions as needed. Then we follow up with them within 24 hours to make sure they got what they need.

Margaret Flinter: Dr. David Marcozzi of the University of Maryland Medical Center says that this community paramedicine program has a two prong goal. One, reducing unnecessary trips to the ER by delivering right care at the scene. Two, bringing a coordinated paramedicine team including doctors and nurses into the homes of patients being released from the hospital to ensure that their recovery is supported for better outcomes, with paramedics doing frequent follow ups over a 30-day period, and thus greatly reducing the risk of re-hospitalization.

Dr. David Marcozzi: It's eye opening to, once you understand the challenges when we discharge a patient or when patients are seen for low acuity issues, people face just at home to navigate this short industry, the multiple providers they're supposed to follow up with, then the follow up back to their primary care. We are exploring, could we do this for longer or is there a better way once we hopefully empower folks to transition to maybe a lower resource intensive setting for THS, the Transitional Health Support the 30 day follow program. Our data demonstrates that the patients who are followed in our program are admitted to the hospital significantly less and utilize their health care primary care services significantly more that translate into lower cost to the system from a physician billing's construct, from a hospital construct. Oh, by the way, for many of us construct, because you know what happens? Those patients typically call 911 to get to the hospital.

Margaret Flinter: Dr. Marcozzi estimates that the two-year pilot will save the University of Maryland Medical Center at least $4 million. But most importantly he says the patient outcomes are markedly improved. The mobile integrated health care community paramedicine program reducing unnecessary emergency room trips. Now that's a bright idea.

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Mark Masselli: You've been listening to Conversations on Health Care. I'm Mark Masselli

Margaret Flinter: And I'm Margaret Flinter

Mark Masselli: Peace and health.

Dr. Rebecca Cunningham - University of Michigan

Marianne O'Hare: Conversations on Health Care is recorded at WESU at Wesleyan University, streaming live at chcradio.com, iTunes, or wherever you listen to podcasts. If you have comments, please e-mail us at chcradio@chc1.com, or find us on Facebook or Twitter. We love hearing from you. The show is brought to you by the Community Health Center.