Female: 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. Megan Ranney, Emergency Medicine Physician and Director of the Brown-Lifespan Center for Digital Health, a frequent contributor on the COVID-19 pandemic to multiple news programs across the cable landscape. She is the founder of Get Us PPE national coalition to get much needed personal protective equipment to frontline providers. Also MyCOVIDRisk is a free app she helped develop where anyone can calculate their activities with COVID risk.

Lori Robertson also checks in, the Managing Editor of FactCheck.org, and 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 and you can also ask Alexa to play the program. Now stay tuned for our interview with Dr. Megan Ranney here on Conversations on Health Care.

[**Music**]

Mark Masselli: We're speaking today with Dr. Megan Ranney, Emergency Medicine Physician and Director of the Brown-Lifespan Center for Digital Health. She is the Assistant Dean of the Brown Institute for Translational Sciences and Associate Professor of Emergency Medicine at Brown University.

Margaret Flinter: Dr. Ranney is also the co-founder of Get Us PPE, a national coalition that seeks to get the necessary personal protective equipment to frontline clinicians battling COVID-19. She co-developed the app MyCOVIDRisk, a free tool to help anyone assess their risk of exposure. She's the co-founder of the American Foundation for Firearm Injury Reduction in Medicine, AFFIRM, and that seeks to empower health professionals to reduce preventable harm from gun violence. Dr. Ranney, we welcome you and thank you for joining us on Conversations on Health Care.

Dr. Megan Ranney: Thank you it is an absolute honor to join you both.

Mark Masselli: You know, as a frontline ER clinician, and thank you for the work that you do and your colleagues do. You're located in one of the many COVID-19 hotspots right now and it's pretty safe to say that we're in that phase that Dr. Fauci has warned us the darkest days are ahead. I think he's also said it's a -- we're having a surge on a surge. Many hospitals are reporting they're at this breaking point from the millions who are traveling, came back during Thanksgiving. I think we're going to perhaps start to see another surge as folks are returning from their

Christmas travels, and the death toll is rising exponentially. I think today there are reported 3700 deaths. I'm wondering if you could help our listeners and put this pandemic surge into perspective right now.

Dr. Megan Ranney: Where we are right now is honestly the worst we have ever been. Our current death rate is more than 150% higher than our highest in April. Our hospitalizations are approximately 300% higher. The thing that's really different about now is compared to the spring is that our surges are not just in your state and my state in New York and Massachusetts, but literally spread across all 50 states. What that means is two things. First, every health care system is strained. Second, every health care worker is strained. There's just no more space to give. We're having trouble getting traveling nurses. We're having trouble getting some basic supplies. My colleagues that are in LA are reporting that they're running out of oxygen. We don't see this stopping anytime soon.

As you mentioned, the travel numbers during the Christmas and New Year's holiday have dwarfed the number of folks that traveled over Thanksgiving. I'll tell you as a frontline provider, I have seen patient after patient over the last week who got sick over Christmas. They got together with family for just one day. They said I've done everything right. I thought I could get together for one evening, and that was enough to get multiple members of their family sick. I'm quite scared about the weeks ahead.

I think we have the resilience still in our system to make it through. But I worry about getting into those kind of crisis standards where we have to start rationing care or once again, canceling elective procedures which aren't always elective, right, that sometimes help put off other emergencies down the road.

Margaret Flinter: Well, Dr. Ranney there's so much to talk about, but let's talk about vaccines for a couple of minutes. We have two vaccines now with emergency authorizations from Pfizer and Moderna. We all remember Dr. Fauci telling us that we are not going to get to vaccine herd immunity till 80% to 85% of the American public has been vaccinated. This HHS Secretary Azar promised that we see a 100 million vaccines distributed by the end of the year. But maybe we're at a 10^{th} of that, and I understand maybe about 2 million doses administered and that, of course, is the first of what is still required of the two doses.

From your understanding, where have we fallen short in the vaccine distribution chain? I say that with full appreciation and admiration for what it took to develop these two vaccines, but we've got to distribute them. What is going to be required to catch up at this point?

Dr. Megan Ranney: Yeah, absolutely. The science is amazing and the investment that we put into developing these novel vaccines for the novel coronavirus is really nothing short of remarkable. I agree, I don't want to diminish incredible accomplishment of scientists across the world that have already created two vaccines that have made it through our emergency use authorization process, and with more vaccines seemingly on the way. But where we failed is that at the same time that we were investing money into developing the vaccines, we should have simultaneously been investing money into that last miles.

We've already seen our country fail at getting and distributing personal protective equipment. We've already seen our country fail at rolling out adequate testing, both getting the supplies, setting up the centers to test people and then setting up the IT system to accurately track test results. I don't know why we thought that vaccines would be any different. It's the same sort of logistic system both in terms of distribution and of course, with these Pfizer and Moderna vaccines, the need for that special cold storage. In terms of that last mile boots on the ground, having the workers to put vaccines in arms, having the vaccine clinics in places where people can easily get to, and having of course that data system, the data infrastructure to track who's gotten vaccinated and when a second dose is due. None of that's been established. We're relying on already overstretched local public health departments.

This latest stimulus bill is supposedly going to give some money onto state health departments to set up vaccine infrastructure. But my goodness, this is too little too late. It should have been done nine months ago at the same time that we started Operation Warp Speed.

Mark Masselli: You know, and you both obviously lauded our scientist and the research they did. I think we have pretty good data on the efficacy of the vaccines, probably less so on the effectiveness which will come over time, right, when the general population is being vaccinated. We'll learn more about how it operates in the general public. But now we have a concern with a new variant of the coronavirus originally emerged in both South Africa and the United Kingdom, it was recently identified here in the country, I think in Colorado. It seems like it's a more contagious variant. But it doesn't appear to be more lethal at this point. But I'm wondering, talk about how scientists are tracking it and what public health officials should be concerned most about with this variant.

Dr. Megan Ranney: Yeah, so a couple of things. One is, is that the first reported detection of this new strain was in late September in the UK. We didn't know until today that it had been discovered in the United States. But even before that revelation of the Colorado man who did does have the UK -- is infected with a UK variant, it would have been foolhardy to think

that the virus wasn't already in the United States. We have traveled between the two countries, right, there's just no way it isn't here. We're just not sequencing genomes of the virus in the United States the way that Britain is, which is probably why we haven't picked it up yet, so that's the first thing.

The second thing is, is that the data so far from the UK suggests that what's different about this mutation is that it makes the virus more transmissible, it means it's easier to transmit from person to person. It doesn't seem to change the pathogenicity. It doesn't seem to change the course of the illness. But what we worry is that it's going to lead to more of those super spreader events. It's going to make it the virus more on the level of measles which spreads really easily than on the level of, say, flu. That's, of course, going to change the number of people that we have to get vaccinated.

So far, it seems that the vaccines that we've already developed will work against this novel strain, but the jury is still a little bit out on that. I think the thing that worries many of us more is that most of the vaccines that have been developed are against this spike protein. If we get significant mutations in the spiked protein, we don't have anything else right now. We're all super excited about the mRNA vaccines and the fact that they can be super targeted. But as opposed to a full viral vaccine, it means that those other elements that can drive an antibody or an immune response may not be fully represented. We just don't have a lot in our armamentarium if this mutation does end up causing resistance to the vaccine.

Margaret Flinter: Well, Dr. Ranney we're fighting this on so many fronts. I think back to what now seems like ancient history, but very real and present to us in March when all of this started. Dr. Frank Gabrin was the first ER clinician that we know to die from COVID in the United States while on the front lines, treating patients. You warned at that time that there would be more deaths to follow if we didn't do a better job of getting the personal protective equipment or PPE that we needed to our healthcare workers on the front line. That's when you launched Get Us PPE the National Alliance to help fill that gap by collecting and sourcing and distributing PPE to those most in need.

I'd like to say that that was something that we solved completely. But it still feels like there's big needs out there and there's challenges getting all the PPE that's needed, where we need it when we need it. What's your sense of how we're doing with that? What's the status of your project that you started to address this?

Dr. Megan Ranney: When we started Get Us PPE, we really imagined that we were going to be in existence for a couple of weeks, and that FEMA or HHS would step in and take over. We thought the Defense Production Act would be activated, that we would grow domestic manufacturing, and that

someone else would make sure that PPE was being sourced and distributed in an equitable fashion. Here we are more than nine months later, and the requests for PPE continue to come in to our organization.

We have seen shifts in the need over the last nine months. We can actually watch as COVID spikes occur in different parts of the country, we'll see spikes in demand for PPE in those regions. The other thing that we've seen is that the larger hospital systems that have a little more funding and a little bit more robust of a supply chain have managed to stabilize their PPE supply to a large extent. Many of them are also fitting out their workers with things like elastomeric respirators instead of depending on disposable N95s.

But what we're finding is that it's the smaller clinics, home healthcare aides, nursing homes, school nurses, who are still in desperate need, they can't afford it, they can't source it. They, of course, are the true frontline, right. We know that the first outbreaks of COVID that we found in our country were in those nursing homes in Washington State. It's just unconscionable to me that these same folks are still going without protection.

I love that my fellow ER docs are for the most part protected, with some exceptions. But the fact that we've left this whole segment of our frontline healthcare workers unprotected just astounds me. I'm hoping that with the new administration that we'll both have activation of the Defense Production Act, that domestic manufacturing is incentivized, and we'll have increased attention towards equitable distribution at Get Us PPE.

When we are distributing on the personal protective equipment donations that we get, we try to account for both logistical efficiency, getting it to the closest place possible, but also for the prevalence of COVID-19 and for the social vulnerability index. Knowing that there are going to be certain types of facilities that are just aren't going to have the financial resources to get it, and who are going to be treating the populations that are at highest risk for infection.

Mark Masselli: We're speaking today with Dr. Megan Ranney, Director of the Brown-Lifespan Center for Digital Health. You know, I think we've heard from so many of our guests this year that actionable data and consistent public health messaging have been lacking in this pandemic. But you and your colleagues developed an app called MyCOVIDRisk, which really allows anyone to determine their risk of becoming infected with COVID-19.

I think it's fair to say the pandemic has spawned a wave of new digital tools to track outbreaks, to empower the citizenry, and really to help inform public health officials. I'm wondering how do you feel such

tools are forming a more effective public health response, and what's new and encouraging about all the digital and data development that you see on the horizon?

Dr. Megan Ranney: This has been a really exciting time for those of us in digital health, partly because there is no alternative, right? The in-person visits are really tough to do right now for many folks, and so it has given a wind beneath the sails of what many of us have been pushing for, for a long time. There also, of course, has been some relaxation of regulations around telehealth that allow us to use things like FaceTime or Skype in order to interact with patients synchronously in ways that weren't allowed prior. There are still a lot of concerns, though.

There has been this massive surge of new digital health products, not a lot of them have been validated. In fact, there was a systematic review in by Cochrane showing that these digital contact tracing apps may not actually do much both because they aren't adequately penetrating into the population, and because they may not work as well as they're touted to. The other thing that's consistently ignored by many are considerations of both privacy and ethics and equity.

At the Center for Digital Health, we try to develop tools that are private and ethical, and that are developed with an eye towards being available to those who are most in need. That's why we developed MyCOVIDRisk app without collecting PHI, it's one of the concerns about some of the contact tracing apps that are out there. Although we initially developed it just in English, because of funding limitations, we tried hard to make it graphically easy so that for folks with low health literacy it was easy to interpret, and are currently translating it into other languages.

I think there's tremendous promise, I'm seeing some surges, for instance, in digital health for substance use treatment and mental health that I think will be durable. But in order for us to achieve long lasting change we have to keep an eye on efficacy and that eye on privacy ethics and equity as well.

Margaret Flinter: Dr. Ranney, there were big problems we were facing before COVID. One of the areas that you were doing very important work in was addressing gun violence in this country, and you created AFFIRM the American Foundation for Firearm Injury Reduction in Medicine. Even with all that you're doing around COVID you're still directing research on ways to address the American predilection for gun freedoms as a direct threat to public health. We can't help but notice some of the analogies may be in the response to the pandemic in resisting the science behind the public health protocols developed to keep people safe from harm.

Really curious how your research and work on gun violence maybe is

informing the work you're doing now as we watched some of the harm being done by resistance to proven safety protocols. We had Dr. Hotez on the show. He said he felt like we might have lost the war on the internet around vaccines, for instance. It's just an example of how challenging this is and wonder if you could comment on that.

Dr. Megan Ranney: A couple of things one is, is that I'll sometimes kind of joke that I cut my teeth with the firearm injury work on kind of politicization of public health. It is an issue that is absolutely a public health issue but that had been ignored as such for well over two decades. Over the last seven years or so, I've had the privilege of helping to lead and be part of a much larger group of healthcare professionals who really have succeeded in restarting the science of firearm injury prevention and are working on a community by community basis to redefine the conversation about firearm injury prevention to not be political, but rather to be focused on the health effects of firearm injury to identify risk behaviors and to talk about the ripple effects of not preventing firearm injuries and deaths.

We've done that in collaboration with firearm owner groups with 4H as well as some of the more typical public health players. I think I learned a lot about how to create collaboration, how to depoliticize public health, and how to move the science forward in a way that allows everybody to come to the table. I think our failure in COVID-19 which may not be entirely on the public health community, certainly partly on our federal leadership, but is that this virus did get politicized and that those internet bots did dominate the conversation for a while. We were unable to kind of pull that back. I think it's one of the things that has motivated me to be involved in the national media, right, that's not my day job. I still do my research. I still work as an ER doc. It is, I think, an essential thing for us to do right now for us to be out there as science communicators.

It’s why I've been on Twitter for a decade is because I kind of will say that it's the public agora of the 21st century. Our democracy is created right now, online, that's where the debates are happening. If we're not part of them then we see the discussion to others. Just as with firearm injury, there are going to be the extremists on either side who are not going to be able to kind of come together into a nuanced middle ground. There are the people that think that we should be purely shut down forever. Then there are the people that think that we should do nothing. That's also ridiculous. But when you reframe the issue in ways that make sense, when you approach people with respect and when you are willing to engage, I find that much of the time for kind of that middle 70% or 80% we can come together. Again, I'm hopeful that as we move forward into 2021, that our messaging will be a little more consistent and clear and that we'll be able to kind of move past the horrors that 2020 has brought.

The last thing I'll say, though, is that this is not new. I actually was a student of the history of science as an undergraduate. My entire undergraduate major was about the ways in which society and politics influence interpretations and implementation of science, right. This is something that goes back to Galileo and Copernicus and certainly to the smallpox vaccine. I don't know why we would expect that somehow we're special and different and that politics isn't going to effect public health. It's a question of using it effectively, and kind of channeling people's fears and desire to keep themselves and their family healthy into something that also helps the larger community and respects the evidence.

Mark Masselli: Let me just pull the thread on the whole issue of messaging, and it's starting at the top. You just wrote a powerful op-ed for CNN urging public health and policy leaders really to model their behavior that they're demanding of their constituents. Really, there's no question that the American public has been sent many mixed messages during the course of the pandemic, especially from the White House, and that will soon change. The Biden team has really, I think, assembled really an impressive array of influential voices, including Dr. Fauci really quite a remarkable COVID-19 taskforce. What are you hoping to see in the next coming weeks in terms of new messaging about this pandemic?

Dr. Megan Ranney: The biggest thing I'm hoping is to move beyond this like Marie Antoinette like, let them eat cake kind of attitude that we've seen for the last nine months, I'm hoping to see a few things. The first is, like you said, consistent messaging about how this virus is spread, about how to protect ourselves and about how to get back to normal. The second thing is that I'm hoping to see improved emphasis on the logistics of testing, of PPE and of course of vaccine distribution. We need to put funding into it, we need to have consistent messaging and we need to support our on-the-ground public health workers in all 50 states and in Puerto Rico.

The third thing that I'm hoping to see is continued emphasis on and funding of science going forwards. We still don't know what we don't know about COVID-19. It's not like on January 20th we are going to flip a switch and this virus is going to magically disappear. Moreover, it's going to continue to mutate. It is going to be part of our society for a long time to come. I'm hoping to see from Biden an awareness of that and an awareness of all of the knock on effects of the virus. The CDC just released today, new data around opioid overdoses. We're talking about mental health crises among kids. We're of course seeing rising numbers of gun injuries across the country. We need to focus on those after effects of COVID as well as the virus itself.

Margaret Flinter: We've been speaking today with Dr. Megan Ranney, Emergency

Dr. Megan Ranney

Medicine Physician and Director of the Brown-Lifespan Center for Digital Health. She's the co founder of Get Us PPE, the co-developer of the app MyCOVIDRisk, and you can learn more about her impressive work by going to www.digitalhealth.brown.edu, or follow her on Twitter @meganranney. Dr. Ranney, thank you for all that you're doing for the dispatches from the ER frontlines of this pandemic, for the digital health innovations you're bringing to the public and for taking the time to join us today on Conversations on Health Care.

Dr. Megan Ranney: Thank you. It's been a pleasure to join you both.

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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 healthcare 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: Late in the presidential campaign, President Donald Trump claimed that state COVID-19 restrictions are a partisan ploy with Democratic governors purposely keeping their states closed while Republican governors are opening them. But that doesn't square with the facts. For instance, in Bullhead City, Arizona, just across the border from Nevada, Trump wrongly contrasted the reopening actions of both states.

In that speech on October 28th, the President said "In Arizona you've opened up, but Nevada get your governor to open up your state please." By Trump's telling Arizona, which is run by a Republican Governor Doug Ducey is opened up but Nevada run by Democratic Governor Steve Sisolak is not. But the reality is both states have very similar restrictions. In late October, in both Arizona and Nevada bars, restaurants, movie theaters and gyms were all open, but use was capped at 50% of capacity.

Jennifer Tolbert, Director of State Health Reform at the Kaiser Family Foundation which has been tracking policy actions taken in states in response to the pandemic confirmed to us that the two states were in similar phases of reopening. In fact, Arizona has slightly tighter restrictions in some areas. For example, large gatherings are limited to 50 people in Arizona, but it is 250 in Nevada, Nevada is stricter than Arizona in one respect. Nevada has a statewide facemask mandate requiring people to wear them in public spaces when they come into close contact with others, such as on public transportation or in a business. Arizona does not have such a mandate and leaves it up to local governments to impose them if they want. That's my fact check for this week. I'm Lori Robertson, Managing Editor of FactCheck.org.

Dr. Megan Ranney

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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, e-mail us at www.chcradio.com we'll have FactCheck.org's Lori Robertson check it out for you here on Conversations on Health Care.

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Margaret Flinter: Each week Conversations highlights a bright idea about how to make wellness a part of our communities and everyday lives. Daniela Tudor had a revelation A few years ago, waking up on the cold floor of a jail cell. She could ask for help for her drug and alcohol addiction or she could die. She chose the former. Tudor then launched not only on her own recovery journey, but on a broader quest to develop tools that could help all people grappling with addiction recovery to avoid relapse, which is so common, especially in the early days of sobriety. She realized that there needed to be more readily accessible tools for those in recovery to stay connected to their treatment goals beyond the 12-step meetings and the talk therapy sessions.

Daniela Tudor: I am in long term recovery. I went through a four-week inpatient treatment program where at the end of that four week program, all I received was a piece of paper that listed an enormous amount of things I'm supposed to do on a daily and weekly basis for the rest of my life to stay in recovery. I knew that building something on our cell phones that are with us 24/7 regardless of where you're from and who you are, would be a way to bridge that gap and keep people accountable through an app to those activities.

Margaret Flinter: She founded WEconnect a relapse prevention on the go mobile application that can be downloaded on a smartphone. The platform is designed to keep people engaged in their recovery plan using daily reminders and a reward system for when you perform the tasks that are essential to recovery.

Daniela Tudor: The individual along with the support of our certified peer recovery support specialists are able to input those activities into the app, and when it comes time for that activity to start, you simply check into it. You see at the top of the app how you're earning your incentives. By the way, this incentive program is based on evidence based research called contingency management. It's actually proven to show that it keeps people accountable to their recovery plans or their care plans. The way that we've digitized it and the immediacy of that incentive keeps people accountable to checking into those activities on the go.

Margaret Flinter: The digital platform also allows everyone who's connected to the

person's healthcare ecosystem to see in real time activities that are enhancing recovery, and also when one might be at higher risk for relapse.

Daniela Tudor: We have trained peer recovery support specialists all across the country, and they get to a leverage tool that we developed called the data dashboard, where they can see in an instance if someone needs additional support or outreach. That is built through the app with keeping them accountable to those activities and the peer having insights on how they're staying accountable to those activities in real time. It really allows for this connection of support 24/7 and visibility so that when someone needs that added support not days or weeks go by which is without this program is what happens, but rather gives insight and gives the option for connection in real time.

Margaret Flinter: Since the pandemic hit Tudor says the WEconnect platform has been a lifeline for those in recovery. Those now often cut off from meetings and in-person sessions during the shutdown.

Daniela Tudor: Actually, when the pandemic hit, immediately, my heart went out for, wow, none of us have support meetings to go to any more in person. We immediately stood up with a set of partners these mutual aid meetings that are online that are led by certified peers. Within just a couple months over 200,000 people joined from all states and several countries.

Margaret Flinter: WEconnect a downloadable app designed by people in recovery for people in recovery, to help maintain sobriety with a support system in the palm of their hand, keeping them on track with health goals, staying connected to a care team and avoiding relapse. 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.

Female: Conversations on Health Care is recorded at WESU at Wesleyan University, streaming live at www.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. This show is brought to you by the Community Health Center.

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