

Speaker 1: Welcome to on the pandemic, a Rutgers cast series where university experts and leaders in health examine the critical challenges we face in our recovery from the COVID-19 pandemic. This episode is hosted by Mario Dowd, the executive director of health systems and population health integration for Rutgers biomedical and health sciences at Rutgers university. Previously, she led the New Jersey department of health as commissioner, after serving as the deputy commissioner and chief of staff. Joining the discussion [00:00:30] today is Dr. Robert Johnson, Dean of the New Jersey medical school and interim Dean of the Robert Wood Johnson medical school professor of pediatrics and director of the division of adolescent and young adult medicine at the New Jersey medical school. Also joining us today is Dr. Emily Barrett associate professor of biostatistics and epidemiology at the Rutgers school of public health and the Rutgers environmental and occupational health sciences Institute.

Speaker 2: Good morning, this is Mary O'Dell from Rutgers university. [00:01:00] And today we are going to talk about the impact of the COVID 19 pandemic and response on our healthcare system and workforce. We will talk about the vaccine, the experience of the healthcare workforce and how the system is improving to better understand these topics. We are talking with two records, faculty members, Robert Johnson has been leading both of the medical schools here at Rutgers throughout the pandemic. He is a pediatrician with a clinical focus in adolescent physical and mental health. He is a well-known leader [00:01:30] in the healthcare in the city of Newark, and is one of the first New Jersey ins to receive the COVID-19 vaccine. Emily Barrett is a Rutgers school of public health faculty member and researcher. She recently published a fascinating study that looked at the risk of COVID-19 infections for hospital workers in the first wave of the pandemic during the spring.

Speaker 2: And she's also a fellow virtual and hybrid school parent, or warrior like myself. So welcome to both of you today. [00:02:00] I want to start our conversation today discussing the vaccine program it's on top of mind for many people. The first two vaccines were authorized for use here in the United States in December, which was just last month. And the first dose was given in New Jersey on December 15th, which is the same day that you got your vaccine. I understand Dr. Johnson and you were up at university hospital in Newark, New Jersey. So I wanted to start by asking you, how did it feel to get your shot? Well, actually I was the first or second [00:02:30] person in the state to receive this vaccine. Um, the first person was one of the nurses in our emergency room and the governor and the commissioner of health were present lots of press and everyone stood around to see whether how it was going to do. When I got the shot, it felt just like a flu shot. I'm able to have a press conference afterwards. And I went right from after 15 minutes. I went back to my clinic and saw about 20 patients. So nothing different I've now the second shot

Speaker 3: [00:03:00] Had that, uh, in the beginning of January and a similar reaction, no problem at all.

Speaker 2: That's great. It would have been embarrassing if you passed out in front of the governor. Um, can you talk a little bit about why you chose to get vaccinated?

Speaker 3: Well, I'm a very big believer in science. And one of the things I know is that, uh, the way we get out of this, uh, endemic is by increasing the immunity of the large number of people and people who are [00:03:30] at greatest risk should be the first ones to receive it. So I am 74 years old. I'm African-American and I take care of patients who have COVID 19. So I check all the, all the boxes. Now I don't see patients in the hospital by see teenagers and young adults in our clinic. And over the course of the pandemic, I've actually cared for about 60 young people who've been infected. And so every time I see a new patient who comes in with any respiratory problem, [00:04:00] I'm always wondering whether or not that's a possibility that I'll discover after we do the test. I always wash my hands. I always socially distance. I always wear, wear a mask and I always wear a shield if it's needed, but still there's that possibility. So I thought it was important for you to get it. The other thing is that I think that we need, uh, African-Americans who endorsed, uh, accepting the vaccine to do it publicly, to show our community that this is something safe and important to do [00:04:30] for our future.

Speaker 2: That's. That's great. Thank you for sharing that. My sister-in-law is an ER doctor here in New Jersey and she actually got COVID-19 during the spring wave and she just got her second dose of the vaccine as well. So I think that speaks volumes. We need to really protect our workforce. And that's part of what we're here talking about today. Do you think enough of our healthcare workforce and workers are getting vaccinated

Speaker 3: Well before we, um, roll this [00:05:00] out, we did do a survey to see what percentage of our healthcare workforce would take. The vaccine is only about 40% and that compares to the surveys that were done in other parts of the country. However, now that it is out, there are many, many more people who want to get it. So I've been monitoring the vaccination rates among our faculty at open Newark and in new Brunswick and the overwhelming majority of the faculty are getting vaccinated. So at least [00:05:30] among the physicians, I'm not sure about, uh, nurses and other healthcare providers, but I think, you know, once something is available and it is adopted by a large number of people, I think a team in nature to sort of get online and say, you have something I want as well.

Speaker 2: Now I've been looking at the data from the department of health website on who's getting vaccinated, and this is not the healthcare workforce. This is the general population. And you mentioned, um, you know, uh, focus on those individuals who are higher [00:06:00] risk. And we have seen that in the population, those at higher risk for hospitalization and severe illness or those who are black or Hispanic. And yet when we're looking at some of this early vaccination data, the there are very low percentages reported of those communities getting vaccinated. And can you talk a little bit about that? And as if you see that as a problem,

Speaker 3: It is a big problem, big cause. Uh, one of the things that you have in the beginning is a mistrust [00:06:30] of health, the healthcare industry among, uh, black and Brown populations, and for good reason, because of the long history of mistreatment, long history of experimentation, all of those things. And so we go into this with that as a problem. The other thing is that there's a general public, uh, concern about what is this vaccine, because it's, it was suddenly not there. And then all of a sudden it was there

and it looks as if this is something that's done at the last minute. And there's a question of whether or not we can really trust [00:07:00] the administration that, uh, supervise the development of this vaccine. So all of those things are problems and, and part of the mistrust. The other thing is that, uh, in our black and Brown communities, there's less access to healthcare. Uh, and so if we have a system that is largely based on hospitals and with the hospitals are able to get outside of their walls and into the community, there, people are much, much less likely to, uh, to receive it. So there are lots of problems, [00:07:30] but it's clear that if we are going to turn the epidemic or pandemic around, we have to vaccinate all populations, especially those populations. They're at highest risk for the most, that first balcony.

Speaker 2: Um, I want to talk a little bit about how people can get access to the vaccine. We talked about this in my earlier podcasts, and I'm just going to talk through how to access the state information hub on the website. It's COVID nineteen.nj.gov, [00:08:00] or you can just Google COVID-19 and Jay and gov, and you can go to the link for the state information hub. At the very top of that website is a red alert for the vaccine update. And if you click on that, you will be able to read more about the vaccine to educate yourself as, as you were talking about, um, Dr. Johnson on some of the data that we're seeing answer some questions about the vaccine itself, side effects, things like that. And you're also be able to register with the state system. Now [00:08:30] I did this for myself, even though I'm not eligible yet.

Speaker 2: And I also recommend that you look at the whole list of locations across the state, because unfortunately this is not totally interconnected right now. And so individual locations for vaccination around the state have their own independent registration system. And so my parents who are eligible now, um, because of age, I went and looked at where they live. And I, um, went [00:09:00] to that County and I registered them with a few of the different locations nearby. They had a local health department that had its own registration system, and I even tried to get them into some of the ShopRite locations, but they were, they were booked. Um, things are changing every day and the supply is changing as well. We're hoping that we're going to get more and more supply right now. Um, the state is reporting that we're getting, uh, not as much supply as we thought we were going to get and not as much as people want [00:09:30] to receive.

Speaker 2: So it's important that you keep checking not to make yourself crazy, but at least look, um, maybe once a week to see if there are new locations for the vaccine in your area, and that you can continue to monitor what might be available. The registration system is supposed to let you know, one, if you're eligible for the vaccine and then two, when there's an available opportunity for you to schedule. So it's a way for them to communicate with you and we want to work to help [00:10:00] support access for all populations. And this is one of the ways that, um, you can, uh, get access to that vaccine. So I want to change the conversation just a little bit now and talk about what we have learned about the impact in the first wave, in particular, on our healthcare workers, in their families, and understanding that through this pandemic, they've been learning and experiencing a lot, but in part, um, this was one of the reasons they're [00:10:30] higher risk, that they were prioritized for the first distribution of the vaccine. Um, they were putting themselves at risk by going to work every day and through them,

their families as well. And that is one of the reasons that they were prioritized, Dr. Barrett, you and your team have done a lot of research on that has contributed to the science and understanding some of these risks for our healthcare workers and the paper that you recently published this spring. Talked about that. Can you tell me a little bit about what you studied?

Speaker 4: Sure. [00:11:00] Well, I want to start out by saying that I'm really lucky to have a fantastic team of collaborators who are forward-thinking and it's hard to believe that's been almost a year now, but I remember those very early conversations where we saw a data coming out of China, coming out of Italy, suggesting that this virus was coming towards us and we would soon be facing, um, the potential for our healthcare systems to be overrun. So our team quickly recognized that healthcare workers were a critical group in this [00:11:30] fight. Um, there were reports of overrun, hospitals, lack of personal protective equipment. There was uncertainty about routes of transmission. And we know at the same time that our healthcare workers are absolutely critical frontline defenders, we would be totally lost if we allowed the virus to overrun our healthcare worker communities. So, you know, you surely have seen internet memes about podiatrists staffing.

Speaker 4: ICU's about medical [00:12:00] staff being called out of retirement to deal with staffing shortages. There were the famous photographs of healthcare workers wearing garbage bags and ski goggles and plastic ponchos as personal protective equipment. And they're horrifying. And they really stick in our memories. So we set out to study COVID-19 infections among healthcare workers in our local New Jersey hospitals starting in late March of 2020, the early phases of the pandemic. And continuing over the subsequent six [00:12:30] months, we want to look at risk factors and protective factors who gets infected, who doesn't, who ends up with severe symptoms and who remains asymptomatic and what the antibody levels look like over time. And for me, this was, I had an interesting research question, but also a very personal issue as well. So my husband is a healthcare worker. Um, his day to day work is things like taking out gallbladders and fixing hernias.

Speaker 4: But as the pandemic hit New Jersey, he was called up to run a COVID positive [00:13:00] ICU. And he has training in that area. He knows how to manage an ICU. So there was no worry for the safety of his patients, but we really did worry about the safety of our family at home. So we have three small kids in the house and we literally had half of the house taped off. There was a masking tape lying on the floor with one side of the house for him. And once I have the house for us, because we were worried at that point and we didn't know a lot about transmission and how to protect ourselves. So, um, this is [00:13:30] definitely the strongest convergence of my research and personal life that I've ever encountered.

Speaker 2: Well, thank you for your husband's work and for your family's contribution to this. Cause it is a family experience, I think. Um, so thank you for that. Can you share a little bit about what you learned? What were some of the hospital workers that were most at risk, for example?

Speaker 4: Yeah, so it was really fascinating to us. I mean, as researchers we're often used [00:14:00] to, um, research taking very long time course. So the studies that we do today may not provide results for several years to come and they may require some complex statistics to tell us what's going on in this case, our results were immediately obvious. So in our first study, which was of about 800 Rutgers employees, 41 people tested positive at the start for the virus and 40 out of 41 were healthcare workers. So that tells you something without [00:14:30] calculating any statistics. And beyond that, we learned that the nurses were most likely to be impacted. And it made sense to us because we know that nurses tend to have very close and prolonged contact with patients. And so the results of that first project were actually enough to convince hospital management that we should test hospital employees, not just the ones who we had recruited into that study.

Speaker 4: So we ended up testing about 4,000 hospital employees at one of our [00:15:00] local New Jersey hospitals. So that includes everyone from the leadership folks like Dr. Johnson, um, to the janitorial staff, to technicians, food service workers, many of whom don't actually have direct patient contact. And this was a bit later in the spring. So more in the neighborhood of May, 2020. And the good news was that we actually saw that less than 1% of the staff we tested were positive for the virus, but we did see that about 10% had antibodies. [00:15:30] And what that tells us was that they had previously been infected. And when we dug into that data further, we learned that patient contact was a risk factor, of course, for testing positive, but we actually saw widespread infection among many support staffers. So these are folks like phlebotomists maintenance, housekeeping, dining, and food surfaces security, and it's really important.

Speaker 4: And going back to something Dr. Johnson said earlier, these roles are disproportionately filled by black and Latin [00:16:00] X workers. And even after we accounted for their job roles, statistically, we saw that these black and Latin X hospital workers were twice as likely to test positive for antibodies as white hospital workers. So it really fits in with what we're seeing in communities as well. Um, we don't know that they were infected in the hospital. They could have been infected in communities, but notably these are essential workers who are coming into work every day. Um, so I think it's really important to point [00:16:30] out that we're seeing what's observed in the con in the community recapitulated in the hospital setting.

Speaker 2: And that further talks to the need for all of our healthcare workers, from doctors to, uh, the people helping clean up the rooms that they need to get those vaccines. We need to help protect them exactly other than vaccines. What are some of the things that, uh, your research has shown that hospitals and the healthcare system healthcare system can learn about on [00:17:00] how to improve?

Speaker 4: Well, one of the things that's hard to believe now, but one of the things, um, at the beginning of our interview that we saw was that one of the hospitals actually didn't even have a mask mandate. And it's hard for us to believe now because masks have come become such a part of our daily lives, but at the time we just didn't know. And so as our results came out from these two, participating hospitals, one had clearly much

higher rates of infection than the other. And that was the hospital that at [00:17:30] the time wasn't requiring masks and had some, um, cross contamination, I guess, of COVID positive and negative patients and quickly the hospital changed policy to require masks and to ensure the total separation of those two populations, the COVID positive and negative.

Speaker 2: And so I think this is a great example of hospital practice, quickly responding to research, using the science to inform hospital policy in real [00:18:00] time. I think it's a really exciting time for research. Um, and I want to thank you also, you were generous enough before your research was published. Um, you will add me to share it with the state health department committee that was reviewing some of the prioritization, um, decisions around vaccination. And some of this research was used in those discussions, um, as part of how we came to prioritizing health care workers and how to define what a healthcare worker was. So thank you very much for that. Um, [00:18:30] it, it is, it is an exciting time from a research perspective because research is happening so quickly and it's being used immediately to affect change. And the mask mandate is a great example because it's one of the ways that we can protect ourselves in hospitals, but also at home and in our communities. So very, very interesting work. Um, Dr. Johnson, I want to turn back to you, um, when you're listening to Emily, talk about some of her, her research, um, you know, does [00:19:00] her, does it ring true to you in your experience?

Speaker 3: Oh, absolutely. And when we get to the point where we tell the story of what we've been through in these last 12 months, four months, one of the things that part important part of the story is how research of public health research bench research clinical research has so rapidly began to affect what we do. And it's been a wonderful relationship between these [00:19:30] two entities. It's amazing that in less than a year, we discovered what this disease was, figuring out a way to treat it and develop a vaccine and figured out the public health things to do. We've been great if the administration had followed all those things, but that science is really one of the reasons why this is so successful. And for science to work together with, uh, with political arms is, is really critical. So absolutely this are true. [00:20:00] And I think that you're gonna learn things that are gonna help us in the future, for example, with the vaccine, or we're already looking at ways where we develop vaccines for other disease like HIV, this, this the same. So, you know, they say that, uh, with every bad thing, there's some good things that happen, but this is maybe one of the good things. The other thing that is true and is maybe a better approach and appreciation for the social determinants of health [00:20:30] and see how all of those backgrounds there's ever a direct effect on an individual's experience with a mental illness to acquired as well as to suffered that, uh, knowledge that we're all gaining that I think will make us better as we move. One

Speaker 2: Of the things that I've been struck by is how, because of this research and knowledge, um, a number of healthcare providers that I've talked to across the street state really feel more prepared for the [00:21:00] second wave that they've been in now. I mean, hopefully we're on this, the downward slope of the second wave here in New Jersey. Um, but my sense is that they feel more prepared. They feel like they understand the disease more. They understand how to protect themselves. They understand how to clean their masks, um, and know that they'll continue to work for them. And so it really

makes the healthcare system safer for both them and their patients. Is that something that you feel, um, Bob is, is the case and [00:21:30] the hospitals that you're seeing?

Speaker 3: Absolutely. Our hospital, Martin Johnson first in Brunswick. So I'd meet every week with the, uh, director of each of the services to look at what's happening. And they are absolutely better able to make a guidance about treatment plans and giving them that it also may be some changes in the way the bars like the people [00:22:00] that maybe because people are more careful and getting the care on here, but the panic that we saw and I really mean really the attic and I saw in the spring of last year is not here this time. And so we're not being more, a matter of fact, remember that last year we closed down the hospital, but anything after the COVID, we're not doing that. And we're able to make the hospital function.

Speaker 2: And we, and that's really important for keeping [00:22:30] the entire population healthy. We don't want people to miss needed medical care. And so this is really, really important stuff.

Speaker 3: And at the same time, people need to remember 400,000 people have died more than 400,000 people and 25 million have been active, so it's not gone yet. And so there'll be more of a reason people who are careful, and I know it is new and not fun to wear that mask all the gun, um, and not to be able to go [00:23:00] out socially congregating with your friends.

Speaker 2: Yeah. I want to echo that, um, mask wearing is important. And I think, you know, I have three little boys at home and I was worried about their ability to keep the mask on and they do it. It's amazing. I think I don't want to Pat myself on the back, but I do think that leading by example, as a parent is important. Um, so I will Pat myself on the back a little, uh, but I do, you know, it's, it's shocking how quickly kids have been resilient to the mask wearing. And so I think in fact it's harder for [00:23:30] adults, um, and we really need to do it, um, because it is so effective. Um, one last question for you, Bob, I want to find out from your perspective, how has this affected medical education? I know that it's a tremendous learning for so many, but are you seeing the effect of more people dropping out or more people getting into it because of what they've observed?

Speaker 3: Couple of different, uh, one, you know, we stopped in-person medical education. [00:24:00] Uh, at the beginning I had parents, smaller country, all me worried about their sons and daughters, but guaranteed that they would take care of COVID patient until we went from in-classroom to remote education. And that, and that was, and our faculty at both schools were really remarkable ability to change things very, very rapidly and the teaching platform, as a matter of fact, that is something else we've learned about [00:24:30] that that made me very helpful. Our students, um, are getting used to it. Uh, they are now some back. And the other thing is that your other question is whether or not that's led to a decreased patient whose medical school interested in medicine, and some people have called us the bowtie effect we're seeing across the country to medic increases in the number of people applying to medical school, as well as nursing, uh, [00:25:00] without dentistry with other healthcare professions. Well, so a greater interest in healthcare than before now, whether or not that's due to Bouchie

because at least for medical school is the decision to make it up four years earlier than the time you apply. But certainly people aren't aren't, uh, avoiding the profession because so it's been a good thing, not well.

Speaker 4: And I'll echo from the public health side of things that I think epidemiology has received [00:25:30] unprecedented attention. You know, people used to say, are you a skin doctor? What is epidemiology? And now we're seeing, again, like Dr. Johnson said, record numbers of applicants applying to our programs. And our students are getting this really remarkable on the ground training, doing contact tracing and helping out in other ways. And so I think it actually, there are some bright spots in that. Um, our students have really stepped up to the challenge and we have the potential to train a really, [00:26:00] um, engaged set of public health professionals moving forward.

Speaker 2: Thank you Dr. Barrett for sharing that, because I think we really need a lot more public health workers out there. It's, it's a profession that doesn't get a lot of coverage and it certainly has now, um, Dr. Johnson, do you have something else

Speaker 3: To emphasize that? I think one of the reasons we are in bad shape is because we have not had enough public health professions, especially public health nursing and other things [00:26:30] that was very helpful in the other pandemics and the Spanish American and Spanish as well. And I think it's caused us to all step back and really have a better understanding of what public health is critical. It is to maintain the health of America. So I that's a, another, another one of the benefits. I think we have to keep pushing, pushing,

Speaker 2: Well, there you have it, this turned into an advertisement for anyone who's listening. If [00:27:00] you want to change careers or encourage a young person, tell them to go into public health or, uh, into, uh, physician nursing or other clinical clinical role, but also get that master's in public health as well. Um, because it is definitely a way to contribute to making the world a healthier and safer place. Um, I want to thank you both. We've learned a lot today, Dr. Johnson, Dr. Barrett, I appreciate your hard work, your dedication, um, for yourselves and your families throughout this past [00:27:30] year, appreciate, um, how much you have contributed to our efforts as a state and as a country to combat, um, this, this terrible virus in this experience. And, um, hope you will continue to research and work, um, as we continue in our effort and, and come to a close I hope soon. Um, thank you very much. And, um, uh, hopefully you will join me back here again.

Speaker 3: Thank you, Mary. Thank you, Mary.

Speaker 1: [00:28:00] You've been listening to on the pandemic, we'll be back soon with new guests and new information from the top minds in health, to learn more about how Rutgers is making a difference during the COVID 19 pandemic visit rutgers.edu/united.