Voiceover: Welcome to the Women In Government Podcast. Whether discussing important issues or policies of the day, this is the place where lawmakers and decision-makers unite to get the conversation started.

Dr. Denise Heaney: Hello, and welcome to today’s Women In Government podcast. My name is Dr. Denise Heaney, and I’m a Senior Scientific Affairs Manager at Roche Diagnostics. I want to first thank you for joining us today as we focus on “Pandemic Preparedness for State Public Health Labs.”

As you know, COVID-19 has been a game changer for the healthcare industry. The pandemic has engulfed our work streams and has highlighted both our collective successes and elevated our inefficiencies and how we can improve on those. As a community, it’s critical that we continue to address these challenges and adopt long-term key best practices that we have discovered and put them in place to support patient care in this critical time and any future preparedness needs.

Joining us today to discuss this is Dr. Jill Taylor, Ph.D. She is a Senior Advisor for Scientific Affairs for the Association of Public Health Laboratories. Until very recently, Dr. Taylor was the Director of the Wadsworth Center, New York State’s public health laboratory. In this role, she had oversight of all aspects of the Center’s response to the current COVID-19 pandemic. Her scientific interests are in the use of novel technologies and bioinformatic methods to improve the nation’s public health response to emergent pathogens. Thank you so much for joining us, Dr. Taylor.

Dr. Jill Taylor: Thank you for that introduction, Dr. Heaney. I’m really delighted to be here.

Dr. Denise Heaney: Excellent. We also have Dr. Jennifer Rakeman, joining us. She is Assistant Commissioner and Laboratory Director at the New York City Department of Health and Mental Hygiene. She recently spoke before the House of Representatives Committee on Oversight and Reform Subcommittee on Economic and Consumer Policy regarding “COVID-19 Antibody Testing: Uses, Abuses, Limitations, and the Federal Response.” It’s great to have you be a part of the conversation, Dr. Rakeman.

Dr. Jennifer Rakeman: Thank you so much for having me here today.
Dr. Denise Heaney: Finally, Dr. Wendi Kuhnert-Tallman is joining us in the panel discussion. She is the Senior Advisor for Laboratory Science to the Deputy Director for Infectious Diseases at the Center for Disease Control.

Dr. Wendi Kuhnert-Tallman: Thank you for including me today, Denise. I’ve very pleased to participate in this important discussion.

Dr. Denise Heaney: Excellent. Before we get started, I’d like to thank everyone for listening to the podcast today and to not forget to subscribe to, like, or share this podcast. You can also find out more by visiting https://www.womeningovernment.org/.

So, let’s get started with this discussion. The analysis that we have seen suggests that the COVID-19 transmission likely started in late January or early February of this year and really grew to a status of being out of control this past March. At last count, what we’ve seen is that more than 13 million Americans have actually tested positive for the virus, and more than 260,000 have died because of it.

About a year ago, one of our panelists, Dr. Rakeman, said our nation’s public health and health care infrastructure play a critical role in protecting people from a range of hazards, and this includes infectious diseases. She is quoted as saying, “Local public health departments and their partners are on the front lines and are often the first to detect and respond to disease outbreaks. What we do every day at the local level is backed by our partners at the federal level, such as the CDC and the Department of Homeland Security. For this system to work, each piece must be appropriately resourced and engaged in ongoing transparent communication and collaboration.”

Those are some wonderful words, and I’d like to ask both you and Jill where are we now with the public health lab’s capability to deal with the pandemic and how did we get here? Let’s start with you, Jen.

Dr. Jennifer Rakeman: Thanks, Denise, so much for the question. One of the underlying driving forces behind what we do at public health labs every day across the country is to be prepared to respond while we continue to do the important work that we do every day on a day-to-day basis.

One of our main jobs is to be prepared and be nimble and ready to respond when any potential public health emergency pops up that requires testing and our participation in the response. And one of the ways we look at achieving this is by using common test platforms that help us to ensure that our staff can be easily cross-trained.

If we use the same type of tests and instruments for an influenza test that we can use for an emerging virus test, like a SARS-COV-2 test, we already have the instruments in the labs, and we have staff who know how to use them. So, it makes it very easy to implement that new test very quickly in the context of a public health emergency.

But that paradigm didn’t work quite as well as it usually does with SARS-COV-2. Initially, a test was
developed by the CDC, and it was rolled out to labs across the country through the Laboratory Response Network, as is usually done in the context of a public health emergency. That worked really well during Zika responses and Ebola and things like that in the past. What happened with SARS-COV-2, though, is that very quickly the reagents and the supplies that we needed to run that test ran out – just literally ran out because of global demand and because of the impact of the pandemic across the globe.

So, in this case, we really needed to diversify to respond. We needed to add new platforms and quickly train our staff in the laboratory to be able to use those platforms. We also had to get creative in finding ways to procure and get the supplies that we needed in the lab – everything from reagents to lab supplies to specimen collection supplies like swabs and the tubes of media and the personal protective equipment or PPE that is really so critical not only in the lab but also to healthcare workers and was in such short supply to be able to continue to test in the lab.

And really, most importantly, our most precious resource in the lab that we need so desperately now and continue to desperately need are qualified, trained staff who can do the testing in the lab. Qualified staff are hard to find, and they’ve been working really hard for a really long time.

**Dr. Jill Taylor:** I’d like to jump in here and support what Jen said there. Generally, I think our public health labs are functioning very well, but they’re functioning at a capacity that they were simply not built for and they’ve never had to deal with before. Most infectious disease outbreaks last a couple of weeks or even a couple of months, and then you can return to normal operating conditions. But the scope of this pandemic is something we’ve never seen before. The staff in these labs have been working long hours – sometimes 24 hours a day since March – and so there certainly is fatigue and burnout. I think that it’s one of our greatest vulnerabilities, actually.

**Dr. Denise Heaney:** Thank you both for that perspective. So, Jen, I want to come back to you. The New York City Public Health Laboratory has been critically central to the city’s response to the pandemic. As you told the House of Representatives in June, the New York City Public Health Laboratory was one of the first laboratories to discover issues related to manufacturing the CDC’s COVID-19 diagnostic test kits. I understand that the lab then quickly worked with the New York State Wadsworth Center Laboratory to deploy a test that was not dependent on the specific reagents provided by the CDC test that were extremely scarce at the time.

You have been on the front line from the very beginning in one of the hardest hit cities. So, based on your experience, what steps can public health labs take now and in the future to improve their ability to respond to future pandemics?

**Dr. Jennifer Rakeman:** As I spoke about just before, public health laboratory preparation for a response is part of what we do, and we’ve become very efficient in using these shared platforms that really do create efficiencies and important redundancies. If we have multiple instruments that can do the same thing, if one breaks down because it’s been running 24 hours, we have other instruments in the lab to continue running so we’re not shut down. But these efficiencies and redundancies really came at a cost
of maybe resiliency, and we kind of need to rethink that going forward based on what we’ve learned in this particular response.

Many labs have diversified platforms to keep up with the supply shortages, so as one set of supplies might run out, we can move over to a different platform that uses a different type of reagent. And really, a lot of labs have been playing the lab version of “whack-a-mole” – kind of moving where we able to get reagents. But a question to think about going forward is what are we going to do with all of these instruments post-pandemic, these new platforms that we now have in the labs? How can we take that and that infrastructure that we’ve now built up and leverage that into public health programs going forward? And how do we plan for that new future? What will this mean for the Laboratory Response Network model and cross-training which is really built on this idea of efficiency and shared platforms?

We will need funding also to sustain these new instruments so we don’t end up with a whole lot of 1,600 lb. highly technical paperweights going forward. So, there’s going to need to be resources going forward to continue to use and build on the infrastructure that’s come into place as part of the response to this pandemic, and then we need to think about how that changes how we plan for future preparedness and readiness to respond to public health emergencies.

Dr. Denise Heaney: It sounds like there’s this need for having a diverse set of options but also having additional utility for those options for when the pandemic is over. I appreciate that very much.

So, just thinking about the July 2020 Democratic Staff Report, the lack of testing limited the entire country’s ability to respond to the pandemic. As a result, what we saw is that states were unable to quickly identify cases of COVID-19 in the community and isolate those that were infected with virus in order to reduce that spread. Some states estimated that errors might have delayed their response by up to six weeks.

I’m curious, Jill and Jen, what can state legislators do to help better prepare their states public health labs’ pandemic response? Jill, I’m going to put it over to you first.

Dr. Jill Taylor: That’s a great question, Denise. I think the critical requirement is to ensure that the infrastructure is in place. Remember that testing is not just wet bench work in the lab – it’s, as Jen referred to earlier, a really intricately connected system. You need logistics to support to make sure that the essential supplies are available. You need to train people to make sure the samples are collected correctly, and then they have to be transported to the lab in such a way that they don’t degrade. And at the other end, you need an IT system to support the communication of the results to both the patient and epidemiological staff.

So, all those three areas need trained staff with specific skills, and these staff have to be well practiced. Not only is there a physical infrastructure, but there’s a human infrastructure, and this all need to be in place and to work really without fail. This requires stable and sufficient funding, and that’s where the support of our legislatures becomes so important.
Dr. Denise Heaney: Jen, any additional thoughts?

Dr. Jennifer Rakeman: Yes, thank you. To really build on what Jill was just discussing, the funding for public health laboratories – for the testing and the infrastructure and the staffing – is really critical and needs to be there and needs to be consistent.

I think we also really need to think about building up our workforce really from the ground up. We need to get people interested in public health laboratory science, get them into the field, and keep them there. It starts by looking at high school and middle school kids and college programs, and then when staff get into the field, keeping them with salaries that are competitive and making sure that they have facilities to work in that allow them to do their work and do it well and really focus on the science.

I think workforce development is something that we haven’t talked about specifically when we talk about funding for public health laboratories, but that really is something that is critical.

Dr. Denise Heaney: Great, thanks for that additional insight. So, let’s talk about a national testing plan. We know that one was never implemented. What we do know is that states established their own which came with a certain set of barriers. For example, Wyoming Governor Mark Gordon was quoted as saying, “It’s a perilous set of circumstances trying to figure out how to make this work, and until we’ve got the testing up to speed—which has got to be part of the federal government stepping in and helping—we’re just not going to be there.”

“Being there” has clearly been a struggle not only for Wyoming but for all states. Jen, during the pandemic, the states and their public health departments have generally followed their own approaches to using testing as part of the strategy to limit the spread of disease and be able to diagnose viral cases. What are your thoughts on a national testing plan?

Dr. Jennifer Rakeman: I think a national testing plan is something that is really important and really would have helped us. The states and jurisdictions were left on their own, and the scenario turned into something a bit like “The Hunger Games.” I mean, we were bidding against each other – jurisdictions bidding against each other – just to get reagents into the lab in order to do testing.

From state to state and jurisdiction to jurisdiction, the testing guidance and the policies differed, which made things a little bit confusing and the messaging about testing confusing to the public. Overall, there was a less efficient use of resources, and that in some cases led to furthering health inequities that are part of what’s going on in our country due to some of the institutional racism that is present.

It got to a point where labs were literally bartering for test components. It was a little bit like – to borrow a metaphor used by one of my colleagues – labs were borrowing a cup of sugar to be able to bake cookies from the neighbor lab, and it got to the point where everybody needed sugar, and there was no more sugar left.
So, it became difficult, and I think that if there was a really organized, strong national testing plan, it would have mitigated some of these issues and allowed a more efficient use of the resources that were limited and continue to be limited.

Dr. Denise Heaney: So, Wendi, I’d like to bring you into the conversation. Can you provide some insights with regards to coordination?

Dr. Wendi Kuhnert-Tallman: Yes, thanks, Denise. And thanks for your comments, Jen. Overall, I think we would all agree the widespread and accessible testing is really a critical component of our nation’s response during this pandemic.

Ensuring that testing is available across the U.S. involves the development of diagnostics tests, engagement with diagnostics manufacturers, and also the deployment of a lot of these mobile test sites that we’ve seen to help with the surge capacity to reach the underserved communities. Given this complexity, the coordination across both federal and state governments is really at the core of what would be a cohesive and effective testing strategy.

Although testing has been expanding across the U.S. and continues to expand, as Jen stated, the laboratories continue to struggle with supply shortages that include testing supplies as well as other things like PPE. Some of these issues would exist regardless of the testing strategy being implemented due to the manufacturing and supply chain disruptions that have existed, but a testing strategy that would have prioritized the manufacturing of laboratory and testing supplies is needed.

As with every response, there are a number of lessons that need to be learned, and CDC will continue to engage with the states and public health partners to help gain additional insight into the various challenges that we’ve already heard on this podcast, as well as I’m sure others that we will hear to help inform our future approach to respond to this pandemic as well as be better prepared in the future.

Dr. Denise Heaney: Talking about response strategies, it has been said that testing is the cornerstone of a response strategy. As tests became more available to labs and health care providers, a number of challenges remained, as we’ve already sort of addressed, in procuring the supplies necessary to administer and process them. What we saw was there was a lack of swabs, reagents, extraction materials, and PPE. To your point, Jen, earlier, the sugar was all run out. There were also shortages of testing platforms.

So, for this question, maybe we can hear from Jill and Wendi. The network of labs in the U.S. currently consists of public health labs, commercial labs and hospital labs. In some states, research labs have also played a role. Is there a way that we can better coordinate and connect this network to provide a more robust and flexible testing system? I think, Wendi, you sort of alluded to that in your last response, but maybe we can start with Jill.
Dr. Jill Taylor: Thanks, Denise. I’m going to talk about New York State first and tell you about what we did. So, New York State is actually a CLIA exempt state, and we have our own lab regulatory system. This gave us an instant and very close connection to the clinical and commercial labs that normally do diagnostic testing for New York State citizens.

As we were setting up our own public health lab to get up to speed and scale, and Jen was working in the City Lab, we reached out to the commercial and hospital labs in the state - we have a communication system to do that – and talked to them about their supply challenges (do you have sugar and flour?) and how they could get up to speed very quickly. As an example, we had one particular Real-Time PCR machine in one of our labs that we were able to give to hospital lab to get them up quickly because that’s what they needed.

So, I’m definitely not suggesting that every state needs its own regulatory system, but that type of connectivity is an example of how you can connect quickly and talk quickly if we knew who to reach out to. And I do feel that we need some sort of emergency network connectivity at the national level so that you can make those communications very quickly.

Dr. Denise Heaney: Thanks, Jill. Wendi, any additional comments?

Dr. Wendi Kuhnert-Tallman: As you indicated earlier, I do feel like research laboratories can play a new and unique role here. As you’ve seen, there are many examples in the literature of research labs that have achieved an integration of a non-diagnostic testing workflow into an overall diagnostic testing plan that could then provide for patient care results.

In a recent MMWR publication, Duke University implemented a COVID-19 prevention strategy ahead of their Fall 2020 semester that included risk reduction behaviors and frequent testing using a pooled specimen testing plan as well as contact tracing. We have seen that pooled testing has proven to be an effective testing strategy as well as a reagent saving strategy in an area of low positivity that, when combined with risk reducing behavior, can result in limiting the spread of COVID-19.

In this study, Duke presented that they completed testing on almost 80,000 students between the months of August and October. This included testing student with and without symptoms. Their overall testing effort was able to identify 84 students with COVID-19. Half of these were in students who did not exhibit any symptoms. So, this really highlights the importance of this unique surveillance program that was put into place honestly rather quickly to help protect their students as well as keep their school open. And again, I would like to echo that this provides a nice example of how research laboratories can be integrated to support unique mitigation strategies on college campuses.

I did want to finish by saying that while the role of research laboratories is important, I want to emphasize that there are over 270,000 laboratories in the U.S. Most research laboratories are not qualified to perform diagnostic testing, so it’s a pretty unique situation when they achieve what Duke was able to do.
The testing challenge during this response in general has really been, as we’ve talked about here, a lack of testing supplies and, in many cases, a lack of qualified testing personnel. So, I really feel like what is most needed is a testing strategy again that prioritizes manufacturing of laboratory and testing supplies as well as resources for laboratory and testing personnel.

**Dr. Denise Heaney:** Thanks, Wendi, and thanks for sharing the learnings that came out of Duke. It sounds like it was very helpful, and I do believe that the laboratories are community of services, whether it be research, diagnostic, commercial, or hospital.

Let’s expand on the diagnostics testing. What we see now is that this world of diagnostics testing is expanding from a traditional lab-based setting to what we would identify as point-of-care testing in non-traditional settings or sites and even at-home testing.

How do we ensure that the samples and how they’re collected and tested is done correctly in this type of setting? Let’s start with you, Jill.

**Dr. Jill Taylor:** This is one of my favorite topics. It’s a really very interesting issue. It’s been clear to me for some time that point-of-care tests and home use tests are going to be part of our lives more and more. We’re used to them in our lives on some level - for example, over-the-counter pregnancy tests. And there are some tests available over the counter for things like urinary tract infections.

These are FDA reviewed and approved, but remember that FDA’s remit is to review medical devices, which includes diagnostic tests that are generally used in the lab certainly with well-trained people to ensure that the sample is collected properly, and the test performed according to the manufacturer’s instructions.

But when we go to the home, it’s a different world, and it presents different challenges. So, I think any test that’s used in the home needs to have good sensitivity and good specificity, and in particular, it needs to be very easy to use with not many decisions that need to be made by the user and easy to read the result. That’s a very different sort of device altogether and a different sort of use.

I think we actually in the post-pandemic area when we’re doing a hot wash and figuring out what we can do better, we need to work with the FDA to actually have a different sort of review process that makes these tests fit the purpose and the environment that they’re actually going to be used in. I think that’s a different environment to the normal diagnostic testing that the FDA considers.

**Dr. Denise Heaney:** Jen, what about “quickie” labs? Any thoughts or comments around that or any additional context to what Jill has just mentioned?

**Dr. Jennifer Rakeman:** Sure, one of the things that we’ve been able to do in New York City is to kind of reverse what Jill was just talking about. Instead of bringing the task or the specimen collection to the home, we actually brought the test to the specimen collection site. So, in New York City we were able to
leverage a system we had put in place around June of 2019 for sexual health testing and leveraged that for COVID-19 testing. We developed what we call our “quickie lab” – it’s a little bit cheeky, it’s to add one of our sexual health clinics in Chelsea in New York City – and it’s a place where there’s an express clinic where patients who are asymptomatic can come in for screening that collects specimens. The specimens go directly into a full laboratory that is co-located in the clinic and get a laboratory-based test, so a high complexity, very sensitive and specific laboratory-based test. We’d been using that for chlamydia and gonorrhea testing prior to the pandemic.

When the pandemic hit in March, those clinics closed, and that express clinic closed, and what we were able to do then was to reopen Chelsea and also build out new infrastructure in the rest of the sexual health clinics around the city to pivot this for COVID-19 testing. So, we have a system in place where clients can come in, they make an appointment, spend less than 15 minutes in the clinic, they get their specimen collected – and in some cases they can also get a flu shot, the specimens go directly to the on-site BSL-2 high complexity laboratory, and get a rapid lab-based test. It’s a PCR-based test, it takes about 40 minutes once the specimen is on the instrument, and they get the result the same day, generally within a few hours of being at the site, on a cell phone or on a computer or one a phone call if they don’t have the technology available.

Again, it enables rapid, same-day results, but it’s with one of the most sensitive and specific tests that’s available. It’s lab-based, so it takes out that uncertainty around a home collection or a home performed test. It also has allowed us to build up infrastructure that, after the pandemic, we can pivot back to sexual health testing. Then, for another public health emergency large or small in the future where we need rapid testing in the community, we can pivot one or all of these sites to that public health response.

The other important piece is that sites are at Health Department clinics in a community. They are trusted sites that people are used to going to for health needs and health care needs, so they’ve been hugely successful, and we’re really quite proud of them. Again, it allows us to have this rapid but lab-based testing available to people.

**Dr. Denise Heaney:** I appreciate all those insights about the potential future at-home testing, hearing more and more about that and what that might look like, and Jill, your comments were well said in terms of fit for purpose. Jen, I love that concept of the “quickie lab” – that’s a great way to still be able to provide a sensitive and specific test to a larger range of potential patients, so thank you both for that insight.

Let’s now focus on a little bit on messaging and education, if you will. One would think that now most people know how to actually protect themselves as well as their loved ones from exposure to COVID-19. What I’m really referring to is about the concepts of social distancing, washing your hands for the appropriate amount of time, and the importance of wearing masks or face coverings. However, some people we know are still not responding to this and not following these important live-saving steps.
What we know is that these challenges that we’ve faced during this uncertain time has been this messaging that testing alone is not going to get us out of this pandemic and that the messaging that we’ve done has not necessarily been as successful as we would have hoped, specifically speaking to the social distancing and wearing the face coverings. So, I’m curious from everyone’s perspective - how do you think that we can improve that from a public health approach? Let’s start with you, Wendi.

**Dr. Wendi Kuhnert-Tallman:** Thanks, Denise. I agree this is a really important question. It’s my belief that CDC does remain a trusted source of public health messaging, but clearly we’re not reaching all the populations. CDC has consistently tried to emphasize, as you have said, that testing alone is not sufficient to control this pandemic without additional precautions. With those precautions we’re talking about physical distancing, hand washing, and wearing a mask.

I understand it appears with rising case numbers that our messages have not had an impact, but I do believe that may of the efforts have been successful. We have seen on our COVID-19 home page that messages related to the masking and quarantine and travel and other measures to protect oneself as well as the community have been popular, so we do believe that people or some components of the population are regularly seeking out CDC’s recommendations.

However, I think, as pointed out, there are some individuals who are not adhering to CDC recommendations for, I’m sure, a variety of reasons. So, we continue to listen and evolve our messaging to try and better connect with the public and with a variety of different aspects of the public. We have worked to improve the channels that we use to disseminate our messages, and we’re also working closely with local and national collaborators as well as in a new and different way trying to utilize some of these social networking campaigns and platforms.

Our focus has really been developing new platforms and campaigns to reach a wider breadth within the community. So, as the response to the pandemic continues and we enter different phases, CDC is going to continue to attempt to evolve its messaging and its campaigns to really ensure that our communications are affecting the communities that need it most.

**Dr. Denise Heaney:** Jen, what about you?

**Dr. Jennifer Rakeman:** At the local level, we really very much appreciate the strong messaging coming from CDC as a national level messaging. At a local jurisdiction, we have the opportunity to really get into communities quite literally and work through messaging and ensure that the messaging is accessible to those communities and also that those communities have the resources that they need in order to do what we’re asking them to do.

In New York City, we call our messaging the “Core Four,” so it’s wearing a mask, washing your hands, staying six feet apart, and staying home if you’re sick. There is some tension, though, in that messaging because there’s also messaging about going out and getting tested. How do you stay home and go out and get tested at the same time?
There’s also been some tension in the messaging in local, state, and national levels. There’s a message that everyone can get a test, and there’s some tension in there with the reality of what the national and local testing capacity is as well as the capacity for the critical follow-up to a test, meaning the contact tracing and providing resources to people who need to isolate and quarantine. These things are all very important.

A positive test is at the point where it’s too late – it means that the transmission already happened. Testing is really important, but these other mitigation measures are really needed in order to stop the spread.

**Dr. Denise Heaney:** Agreed. Jill, what about you?

**Dr. Jill Taylor:** This is such an important question. I think that in the communities that are not hearing or not responding to the “Core Four” as Jen said – I think perhaps it goes along with the general distrust of both government and science in these communities at the moment.

I was listening to a webcast yesterday of a woman who is an expert in this area, and she said instead of using the word “messaging,” she uses the word “communication” so that we’re not talking at people but we’re talking with people so that it’s a dialogue, not a one-way discourse. I think, as Jen said, we need as remote scientists to actually get out in the field, get our boots on the ground, and have the conversations and figure out why the messages aren’t getting out there. I think it needs a change in our thinking.

**Dr. Denise Heaney:** Thank you all for that insight. I really love that mindset change to communication vs. messaging. I think that’s great.

I want to shift focus again and talk about reporting and tracking information in regards to testing. Where we same some definite impediment through scarce testing was our ability to really track the spread of the virus, which some have been said to say caused irreversible damage. One thing that we would like clarity from is how the states wanted to understand from the federal government, but many have looked at how the reports were muddled, decentralized, and there was really not a lot of reliability, which contributed to a lack of communication and coordination.

One thing I would like to get everybody’s thoughts on is how we build an interoperable and flexible national reporting system that connects commercial, hospital and state laboratories with the state and federal government and that is also accessible for reporting from non-traditional testing sites like we’ve already spoken about?

**Dr. Wendi Kuhnert-Tallman:** It’s actually really a complicated question. The response to COVID-19 has exposed a number of weaknesses, as you’ve pointed out, in the system of reporting laboratory test results to the states as well as to the federal public health system.
One gap is that not all clinical laboratories have an electronic interface with their state public health laboratory. Without this interface, how do they order tests as well as report results? Another challenge is that reporting requirements vary from state to state, so as you can imagine, this presents some very unique challenges for laboratories as well as the testing sites that then need to report these results to perhaps more than one state under more than one set of rules.

At this time, there are also very limited options for national data platforms that can receive this national laboratory testing data from anywhere and then transport it to whichever state it needs to go to. A factor that we’ve talked about a little bit throughout this discussion is that a compounding factor is a lack of funding, and in this case it’s limited funding for the standardization of laboratory data reporting.

Finally, it’s really important to realize that states also have variable technological capacity to receive laboratory testing data, and in many cases, modernization and upgrades are urgently needed. We’ve been able to make significant strides in the standardization of the use of laboratory codes that link to specific assay results for SARS-COV-2 testing, and this is good. It has improved the ability of the states to send test results data to the federal government, but much more work is needed.

To summarize, building this comprehensive infrastructure for laboratory test reporting to states as well as to the federal government will require a number of things including a significant level of technical effort, financial investment, and policy engagement. We’re hopeful that the recognition of these weaknesses will help to lead to new initiatives that can then strengthen national reporting of test results for public health purposes.

Dr. Denise Heaney: We’ve covered a wide range of topics, and before we close, I would like to discuss lessons learned over the past few months. Many in the health care community say it’s important to follow state and local guidelines. Others said there’s a need to be flexible while adapting to the changing circumstances that we are exposed to. Almost everyone agrees that we must plan for what’s next.

Jill, what would you say are the top three lessons we take away from our experience with COVID-19?

Dr. Jill Taylor: I think there’s a lot more than three, Denise, but let me confine myself to three.

One, I think we need realistic and truthful communication from a trusted voice rather than constantly conflicting messages. We need the facts in order to decide as individuals how to act and how to make difficult decisions. I think there also needs to be an awareness. People are worried because over the course of the pandemic, the facts keep changing, but that’s reality. The fact that the facts keep changing doesn’t mean that we were wrong. It means that we have learned more. So, I think an understanding of that is important.

Two, as Jen has very wisely and clearly elucidated, we desperately need a stable supply chain of PPE, hospital equipment, and testing supplies as well as the infrastructure – the support, the logistical, the manufacturing needs - that support that supply chain.
Three, this is going to happen again. Remember we had SARS in 2003, we had MERS in 2012, and now we’ve got SARS-COV-2 in 2019. And that’s just the coronaviruses. We had flu in 2009 and Zika in 2016. This is going to happen again, and we need to prepare. So, maybe my number three lesson is the most important one.

Dr. Denise Heaney: Very well said. Thank you so much. Jen, I’d like to offer some time for additional closing remarks. Let’s start with you. Anything you’d like to close out with in terms of comments?

Dr. Jennifer Rakeman: In this pandemic and in this response, testing is critically important, and public health laboratories along with our other laboratory partners in the clinical world are really just so critical to this response. But testing is not a magic bullet, and it’s not a magic shield. The communication about the “Core Four” and in general going on needs to be very consistent and very transparent.

Public health labs in general need consistent and reliable funding. Public health laboratory preparedness is something that is a 24/7, 365 endeavor, and we need it to be funded that way now and going forward. Really, we will rely on that. We can’t be banking on the next public health emergency to be able to, for example, replace our 10-year-old broken-down safety cabinets that are critical to our work.

We need to be able to have funding that is stable and not lots of funding when there’s a public health emergency and then no funding in between. That doesn’t allow of to remain prepared and be nimble and ready to respond as soon as the next public health emergency happens. As Jill said, the next one will happen. It will happen again.

Thanks so much for having me today, Denise.

Dr. Denise Heaney: Thanks for being here. And we’ll go over to Wendi. Do you have anything you’d like to leave our listeners with today?

Dr. Wendi Kuhner-Tallman: Thanks, Denise, and thanks to Jen and Jill. I think this is a really important and engaging conversation. I sincerely believe that by working together as local and federal and commercial partners that we can have a positive impact on the future of public health preparedness.

In closing, I’d like to thank Women In Government and Roche Diagnostics for including all of us in this important podcast. I appreciate greatly the opportunity to speak. Thank you.

Dr. Denise Heaney: Thank you so much. And Jill, one more opportunity – anything else you would like to share with the audience?

Dr. Jill Taylor: I’d like to finish on a little bit more positive note. It’s really, really hard to find anything good about a pandemic given the lives that we’ve lost and the cost to our economy, but as a scientist there is one thing that I think has been good, and it’s not just as a scientist but in our whole healthcare
community. It’s been wonderful to see the innovative approaches, both technical and procedural, that have been taken to improve both patient care and save lives.

I think that innovation, always based on good science as it needs to be, is something that our government should always promote and invest in, not just at the invention stage but at the implementation stage so that these advances actually get into our community and make us all healthier.

Just to echo my colleagues’ words, this has been a really wonderful conversation, and thank you so much to Women In Government for hosting it. It’s been fun.

Dr. Denise Heaney: I just want to say thank you to all of you – Jen, Jill, and Wendi - for taking the time to share your insights, your experiences, and your knowledge. It’s been wonderful for me, and I’ve learned quite a bit.

I want to close and highlight that over the past several months, it’s really become quite clear where we succeeded and where we have room for improvement with regards to testing and communicating about the COVID-19 pandemic. You all definitely highlighted that substantially well, and what I do want to highlight from my point of view is that it’s the local public health departments and their partners that came through for us during these challenging times, and we need to recognize those efforts and continue to support them as the fight continues. As we have discussed today, these are individuals that are on the front lines that need a public health infrastructure that helps deliver the ability to save lives in a very timely manner.

I do want to once again give our panelists a heartfelt thank you for providing their knowledge today, and I would also like to thank all of you for taking the time to hear this important discussion. Don’t forget to subscribe to, like or share our podcast. You can also email us by visiting www.womeningovernment.org.

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