Call Date
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Call Agenda
Welcome
Sean Courtney, CDC Division of Laboratory Systems

SARS-CoV-2 Variants Update
Clint Paden, CDC Coronavirus and Other Respiratory Viruses Division

Respiratory Virus Response Update
Eduardo Azziz-Baumgartner, CDC Influenza Division

Wisconsin Clinical Laboratory Network – A Public-Private Laboratory Collaborative Network for Emergency Response and So Much More!
Erin Bowles, Wisconsin State Laboratory of Hygiene

Call Transcript
Sean Courtney: All right. Good afternoon, everybody. Thanks for joining today's call. My name is Sean Courtney, and I'm a Health Scientist in CDC's Division of Laboratory Systems. On the screen is the agenda for today's call, but before we get started, I want to cover a few announcements and some general housekeeping items.

So as you may have heard on previous calls, DLS is the CDC division that works closely with clinical and public health laboratories across the country to support laboratory emergency preparedness and response activities. And we've been hosting these calls since March of 2020. So DLS supports this work across four main goal areas, quality, workforce and training, preparedness and response, and informatics.

As always, we'll be sharing the slides from today's call along with the audio and transcript, and we'll post them online by the end of next week. You can find them on CDC's Laboratory Outreach Communication System, LOCS, page at the link shown on this slide.

And as always, we want to hear from you. So our Training and Workforce Development Branch is interested in hearing more about the education and training gaps that you're currently experiencing. And we invite you to send your feedback via email to labtrainingneeds@cdc.gov so that we can continue providing you with good information on these calls.

So DLS also launched the ECHO Biosafety Program in January of 2023 to develop and engage a biosafety community of practice to address biosafety challenges in clinical and public health laboratories. The DLS ECHO Biosafety Program is based on the Extension for Community Health Outcomes (ECHO) Model developed by the University of New Mexico Health Sciences Center.

The ECHO Program builds upon the DLS Pilot ECHO Project, A Model for Diagnostic Excellence, which was launched in 2020. Different from the webinars, the main feature of the ECHO Biosafety sessions is the discussion of cases or clinical laboratory challenges. Our subject matter experts aim to share applicable solutions for implementation in your laboratories, and our goal with the ECHO Biosafety Program is to bridge gaps, build a community of practice, and enhance biosafety.

The ECHO Biosafety sessions are designed for laboratory biosafety professionals and continue with 12 monthly sessions in this year. They're typically scheduled on the last Tuesday of each month, and the first session this year is on Tuesday, January 30. And it will focus on Laboratory Biorisk Management. You can access audio recording slides and transcripts on our website, and the link is on the slide and will be posted in the chat. And for inquiries about these sessions, please contact dlsbiosafety@cdc.gov.

And for today, whenever you have a question, we'd like to ask that you please use the Q&A function in Zoom so that we can address it during the call and not use the chat function. Please, also include your email so that we can follow it up if we're not able to answer it during the call.

And if you're from the media and have questions about the presentation or would like to follow up with the speaker, we'd like you to please contact CDC media relations at media@cdc.gov. And if you're a patient, please direct any questions to your health care provider.

And with that, I'd like to remind everyone that the slide decks may contain presentation material from panelists who are not affiliated with the CDC, and that presentation content from external panelists may not necessarily reflect CDC's official position. Please keep that in mind when you go back and look at some of the slides that we post on our website.

And with that, I'd like to introduce our first speaker today Dr. Clint Paden from CDC's Coronavirus and Other Respiratory Viruses Division. He'll be providing us with an update on the SARS-CoV-2 variants. And Clint, I will stop sharing my screen so that I can hand it over to you.

Clint Paden: All right. Thanks, Sean.

Sean Courtney: There you go. You should be good to go.

Clint Paden: All right, does that look good, Sean?

Sean Courtney: Yep. You're good.

Clint Paden: Well, good afternoon. My name is Clint Paden, and I'm from CDC's CORVD Lab Branch. And Sean said I'm filling in for Natalie today. So we'll start here with the variant proportions. So CDC sequences and funds sequencing of SARS-CoV-2 viruses in order to track what's circulating, we display these various virus strains by lineage. Sequencing takes a couple of weeks to turn around. So we also

use modeling to project growth of these lineages into the present, what we call Nowcast. And these are all binned by 2-week periods.

So looking at the variant proportions gathered by the strain surveillance program, we can see that by percentage, the lineage JN.1 here in purple is now projected to be responsible for 83% to 88% of COVID-19 infections during the two weeks ending January 20.

Nearly all the other variants on this chart are direct descendants of the lineage called XBB.1.5, the virus that the 2023 vaccine was based on. Now, JN.1 is related to a parent of XBB.1.5, but it has a number of mutations in the spike protein, which likely provides it an immunological advantage in our context. And this is on the COVID data tracker site for those who want to follow up on this. This is also in the COVID data tracker. So looking at the effects of COVID-19 disease, we can see that weekly COVID-19 hospital visits here in the blue bars have been increasing in the fall heading into the winter as in previous years, but recently, we're seeing a decline.

So nationally, like I said, COVID-19-associated hospitalizations and ED visits are decreasing, but the number of hospitalizations does remain elevated in many areas around the country. Now, the orange line shows the weekly percent positivity of nucleic acid tests for SARS-CoV-2. Percent positivity is declining and is at about 11.8% for the most recent data that we have.

And I should also note that-- not shown here, but you can find elsewhere-- is that hospitalizations for COVID-19 are elevated both for infants and young children and highest, though, among older adults. And moving on to some data on RSV and other respiratory viruses, the respiratory viruses' page here, which hopefully you can see the URL, you can see both emergency department visits and also percent of test positive for the respiratory viruses, RSV in red, SARS-CoV-2 in orange, and flu in blue.

And briefly, RSV activity remains elevated in many areas of the country, though, decreases have been observed. And RSV-associated ED visits have decreased, and laboratory positivity has decreased for RSV to 8.4%. And rates are highest still among young children. And that concludes my update.

Sean Courtney: All right. Thank you for that, Clint. I appreciate you joining us today. I do not see any questions at this time in the Q&A box, but if you could hang out with us on the call while you have time. And if anything pops up while we've moved on that are relevant to your talk today, if you could just please answer them for us. But I do not see anything else right now. So again, I'm just going to say thank you for joining and providing this update on SARS-CoV-2 variants. So thank you, Clint.

Clint Paden: All right.

Sean Courtney: All right. Up next-- I'm going to start sharing my screen again. If I can find it quickly. All right. Up next, we have Dr. Eduardo Azziz-Baumgartner. And hope you can correct me if I mispronounce your name. So I apologize. But he's from CDC's Influenza Division, and he will be providing us with an update from the Respiratory Virus Response. So, Eduardo?

Eduardo Azziz-Baumgartner: Great. Thank you, Sean. Next slide, please. All right. I'm going to talk a little bit about the surveillance data that's coming in and then why it is that we really value contribution to these surveillance systems. Next slide. One more time. All right.

Here in these maps, you can visualize last week and this week's percentage of visits to emergency departments and primary care clinics for fever and cough or sore throat caused by any respiratory pathogen, pathogens in general really.

States that are closer to the green have lower activity, and states that are closer to the violet have higher activity. Note that the amount of health care seeking for respiratory illnesses is elevated across most of the country, although we do note some decreases.

For example, this week, the week ending on the 13th, there were 25 jurisdictions that experienced high or very high activity compared to 37 jurisdictions the week before. Sean, next slide.

All right. In this figure, you see the number of emergency department visits per week for all age groups that are attributed to influenza, COVID-19, and RSV illnesses. That series is in black in the figure. The blue is for flu, the green is for COVID, and the purple is for RSV. Again, the black is for the combined of all three viruses.

Note that if you look at the right side of that graph, the emergency department visits diagnosed with flu, COVID-19, and RSV remain elevated, but recent decreases have been reported from jurisdictions. Next slide.

Now, in this figure, you see similar data from outpatient and emergency department activity, but not just from this year, which is in the red line, dotted line there, but from previous years as well. And this is to put it into context. I want you to note that in previous years, there was often a dip in reporting during this time of the year, that gray bar there of uncertainty that is from the end of December to the beginning of January.

And we believe that this is attributable to changes in health utilization and testing practices and reporting during the winter holidays. So we will continue to monitor for a second period of increasing influenza and other respiratory virus activity that may occur after the winter holidays. And we'll know more, particularly when we get past this gray area there of greatest uncertainty. Next slide.

All right. In this map, you see the changes in hospital admissions attributed to COVID-19. Green means that there's been a decrease compared to previous weeks and orange means that there has been an increase in admissions, again, attributed to COVID-19. Not much greener the map is on the January 13 cut. So that's good news. That's compared to January 6 hospitalizations. But they seem to have stabilized pretty much.

And we had to be careful, though, about making too many inferences about that because we could see an uptick again of cases as adults return to work after the holidays and children return to school after the winter holidays. We had to wait and see. Next slide, please.

All right. Let's see. Here you see a steep flu, COVID, and RSV hospitalization rate that curves up per 100,000 population in December. And that seems to have come to a halt in those gray boxes. It seems to have stalled and halted. So it may be trending down. That inflection point, however, is within the gray bars, that gray box, again, of uncertainty.

We have to wait to see if that pattern continues, whether it continues to trend down or if there is backfilling of information that suggests that we're creeping up again after a little notch or a divot in the curve. Next slide, please.

This map, you can visualize 8% of counties across the nation of have high COVID hospital admissions as of January 6. Now, of course, there's much heterogeneity across the country. And so countries that-- excuse me-- counties that are in green have less than 10% of admissions attributable to COVID-19, but those are in orange have more than 20% admissions attributed to COVID-19. So hopefully, you're not in the latter jurisdictions. Next slide, please.

Here on the table on the left and on the figure on the right, you'll notice that the percentage of available inpatient beds in ICU beds that are occupied, the incumbent beds. You can see in the purple line in that figure the inpatient ward beds that are occupied by adults that is close to 78% and with really little room for additional admissions.

Similarly, you see in the green line the inpatient beds that are occupied by children is at 69%. Again, not a lot of room for additional admissions. And we're hearing from some jurisdictions in New England, for example, in Massachusetts that they really having a hard time with using all their bed capacity.
Now, this is after a drop in the holidays in bed occupancy. This is not uncommon during the holidays for the bed occupancy to go down a little bit, again, because of health utilization patterns.

But we don't know if this is going to be a-- where the trend is going, where the pattern is going to go beyond the gray box of uncertainty. Again, what we know is that it has increased in the wards for both adults and children and among adults in ICU beds, although the pediatric ICU admissions currently remain stable. Next slide, please.

All right. In this slide here, and-- I see that there's hands up for questions. I think we'll take them after perhaps. Sean, you let me know if you want me to pause. But in this figure here on the left, you see that there's a continued increase in the percentage of all deaths attributed to COVID-19, influenza, and RSV nationally.

Now, I want you to remember when interpreting these data-- you know this data well, but just as a reminder, that viral detections from infection often precede those of medically attended illness, for

example, in clinics or outpatient clinics and later by emergency department visits, hospitalizations, subsequently death. And this is, of course, because there's a lag between the time of infection to progression of illness to actually to finally death.

And so if you or your staff or your family members had not gotten vaccinated against the virus, it's not too late, because we probably can still anticipate that there will be months-- sorry-- weeks of continued activity, and we'd like to see this starting to blunt and trend down again. Next slide, please.

All right. So now I'm going to talk a little bit about why we really value your partnership in generating these data. These data come from you largely. Next slide.

So the U.S. has really excellent surveillance systems, one of the best surveillance systems in the world. And it has three different components to it, one might argue. It has virological surveillance component, and morbidity surveillance component, and mortality.

And morbidity and mortality is a lot of what I've been presenting thus far, which is that the number of, for example, syndromic COVID-19, or respiratory illnesses that end up in the ER, the mortality, of course, is COVID attributed mortality. But today I want to focus mainly on the virologic surveillance, which you're a key contributor of. Next slide, please.

All right. We really depend on biologic surveillance during the season to guide response, not only from week to week to really tailor messages to the community, to fine tune how we respond to the viruses, not only at the local jurisdictions that you do with your own leadership but here also at CDC and in other parts of HHS.

Now, it is important to note that one of the key measures that we track is, for example, percent positivity and percent of laboratory testing that turns out to be positive. We look for detection of novel viruses. You heard, of course, the JN.1 presentation from my colleague.

And then we also look for information that will help us with strain selection for what goes into the vaccines from these viral systems and also surveillance systems. And then we also look for antiviral resistance so that we can guide-- help our clinicians stay informed about what antivirals work for which viruses and when they stop working as has happened historically for flu, for example. Next slide, please.

Now, all of you know this, I'm sure, but again as a reminder for context, all these three viruses, they cause a lot of morbidity and mortality, a lot of morbidity mortality, certainly during the past three years. But for flu and RSV for year in, year out, they cause hundreds of thousands of deaths globally.

And so it is imperative that we continue high-quality surveillance. It is almost impossible-- it is impossible, as a clinician, I can tell you it is impossible to distinguish between the viruses for the most part on a typical health care encounter to be able to say, oh, you clearly have flu or RSV or SARS-CoV-2.

It's almost impossible by clinical standards alone. We need the laboratory tests for these encounters. And that's where you come in, because the response to each of the viruses is tailored to what is circulating out there, if it's co-circulation and whatnot. And so you are critical to guiding that information by generating the lab data that informs the system in the U.S. Next slide, please.

And I know you know this, but I state this because I want to continue to encourage you to participate in these surveillance systems. Please, do continue to provide your colleagues and your jurisdictions with education about the importance of these respiratory viruses for the health indices of your jurisdictions to explain how these viruses affect people, the pathophysiology, how we have to manage them.

All that information, that context for people who are not steeped in virology I think is really valuable for your colleagues. I can tell you as an epidemiologist that working closely with virologists and laboratorians is key to my ability to be able to do my job. And so please, be generous with your time when you can and do try to educate your peers as much as you can on these respiratory viruses.

Please continue to share data and specimens through the channels, through the networks that feed the system, the surveillance system, the data that I just showed you, and to use the diagnostic capacity that we have built as a country for multiplex testing of SARS-CoV-2 and influenza and other viruses so we can stay abreast of what is circulating.

Do utilize those algorithms that you have established in your laboratory networks and do please continue to communicate that we cannot stay laser-focused on one virus or another. We do need to start-- we do need to continue-- sorry-- to respond to respiratory viruses in a more comprehensive way because clinicians and others in the community will be making decisions depending on what is co-circulating.

You may offer one antiviral if there's only one thing circulating, but if there are several things co-circulating, you have to take a different approach. It really does guide clinical management. It guides testing all sorts of things. Let me stop there and send it back to Sean. Thank you.

Sean Courtney: All right. Eduardo, thank you so much for that great update today. There were a few questions that popped up. So I'm going to read a few of them to you. Actually, I'm going to work through a couple of them myself, though.

The first one was actually, I think, in regards to Clint's presentation, and I just want to remind everybody that we provided some of the links during his presentation so that you should be able to go to that page and identify which lines in that graph associated to which. So the legend should be available on that page.

The next one I just want to mention that if you're having any health care considerations, that you contact your health care provider and bring those up with them. But one question for you Eduardo and maybe you can address this is whether or not the symptoms with the new variant seem to be more severe or not.

Eduardo Azziz-Baumgartner: That's a really important question. And it looks like from the deep surveillance systems that are going, that these electronic medical record cohorts and whatnot, they are early signals that that may not be the case, but we don't know yet.

And so we're going to have increased-- the data is going to accrue during the next couple of weeks, and hopefully we'll be able to get a better information out to our colleagues about the severity of JN.1. It doesn't look like it. It doesn't look like it.

Now, it's important to remember that how a virus affects an individual is an N of 1. It could be very severe. People could die from a virus that to the general population may be milder, but it can still-- these viruses can kill. It's important to remember. So please do contact medical providers if you need to and take care of your people, please. Over.

Sean Courtney: Great. Thank you for that. The next question was the steep increase in COVID. Is there data to know whether that is among the vaccinated, so those with a booster dose and without a booster dose, or the unvaccinated, so with and without herd immunity?

Eduardo Azziz-Baumgartner: It's an excellent question. As a greater proportion of the population gets vaccinated, ever vaccinated, then we're going to see, of course, that ever vaccinated people increasingly get sick with the respiratory viruses. That's a given. That's the mathematics of the baseline. The baseline has shifted. There's an increased proportion of people out there who have gotten at least one shot.

Nevertheless, there is interim data also that suggests that if you're up to date in your boosters, the probability of getting severe disease is lower, including for the JN.1. And so our messaging is the same-- sorry-- what we can do to protect ourselves is the same, that we need to stay up on our vaccines, that is the best way to prevent getting severe illness from these respiratory viruses. Over.

Sean Courtney: Great. Thank you. I guess kind of following up on that was, are there any unusual or new symptoms associated with these new variants or is it pretty consistently what they've shown?

Eduardo Azziz-Baumgartner: I'm not aware of a different clinical syndrome. Again, I want to underscore for our laboratory colleagues, that your clinician colleagues like myself cannot tell apart between respiratory viruses by looking at a patient. That is not feasible.

One can create stories in retrospect that, oh, well, this patient had this and that, but if you look, even the things that are pathognomonic of COVID-19, for example, can also occur with the other respiratory viruses. And so we ought to be very cautious about clinical diagnoses, and we have to rely on the laboratory testing. And that's why you are key to the response.

Clint Paden: And if I could just add in to that. Just to note that the collection of symptoms for COVID-19 is very broad ever since 2020. So it's hard to narrow in on something new early on like that, that statistical analysis on symptoms.

Sean Courtney: Great. Thank you. That makes a lot of sense. Thank you both. All right. The next question I see is, how common are true respiratory co-infections? They've observed flu A and B at low CT values together with SARS-CoV-2 near those break points for those calls. And so, are these likely co-infections or what?

Eduardo Azziz-Baumgartner: In our international surveillance systems, we see this around 2%, 3%, 4% of the specimens. But let me defer to Clint, who may know the U.S. data better than I do.

Clint Paden: That's a good question. I don't have that statistic off the top of my head here or at hand.

Eduardo Azziz-Baumgartner: Let's get back to you. There is some preliminary data that suggests that co-infections may be associated with more severe disease. But the data is inconclusive. And I think we're still trying to understand this.

And part of the reason that is complicated is because we rely a lot on observational data for these findings, because it's not a common occurrence. But let's get back to you on that, please.

Sean Courtney: All right, great. Thank you, guys. All right, so one last question if you're available, is what is the percent of - if you know - the percent of vaccinated flu, among the positive cases. I guess, do we have numbers on vaccinations and cases combined?

Eduardo Azziz-Baumgartner: We have that information, but don't have it at my fingertips. Let's get back to you on that.

Sean Courtney: OK.

Eduardo Azziz-Baumgartner: And of course, we know, because what we do know, however, is that because the vaccine is effective, the proportion of people who are vaccinated, the proportion of people who become cases with flu is typically about half the number of the proportion of people who do not become cases.

So in other words, those who become cases are less likely to be vaccinated than those who become cases. So vaccination is good for you. By about 50% effectiveness on average.

Sean Courtney: All right, great. Thank you. I really appreciate you joining our call today, Eduardo. If additional questions pop up in the Q&A box, if you're still available, would you be able to take a look at those and you can type in the answer right there for us. That'd be great. But with that, we will move on to our next speaker. And here we go. All right.

So next we have Erin Bowles from the Wisconsin State Laboratory of Hygiene. She'll be discussing the Wisconsin Clinical Laboratory Network, which is a public-private laboratory collaborative network for emergency response. And so Erin, I will turn it over to you.

Erin Bowles: Thank you, Sean, for asking me to speak about the wonderful public-private laboratory collaborative network we've developed and maintained in Wisconsin for over 20 years now.

Our public health laboratory partnership with the Wisconsin Clinical Laboratory Network, or the WCLN, as I will now refer to it, has served the residents of Wisconsin very well over the years through each emerging public health threat. Next slide, please.

There are roughly 135 hospital and large clinic diagnostic laboratories, along with local and state public health laboratories that comprise the WCLN. All who work in these laboratories are considered WCLN members.

Due to the consolidation of hospitals into health care systems, where microbiology is frequently centralized in one laboratory within the system, there are only about 45 laboratories that perform rule-out testing.

The Wisconsin Laboratory of Hygiene, which I will refer to as the WSLH, coordinates the WCLN. But the premise of the network is very much one of collaboration and partnership. It is important for the WSLH be able to reach out and communicate with all the clinical laboratories in emergency situations.

To ensure that communication can also be initiated by the clinical laboratories, we have a WCLN listserv that all WCLN members can choose to become a member of. We have a formal statement of purpose that defines the WCLN and the expectations of its members. We also have a laboratory advisory group that is critical to the success of the network. Next slide, please.

I want to provide a few more details about LabTAG. When LabTAG was created, the state was divided into seven emergency response regions. And there is a laboratory, or there is a LabTAG number from each of these seven regions.

We also have additional at large members. LabTAG members reflect the diversity of the laboratories in the state. LabTAG members also have diverse educational decrees and workplace titles. We meet in person once a year for an entire day to discuss the needs of the WCLN members, and to plan WCLN educational activities.

Beyond that meeting, we have Zoom calls once a month, or as needed. LabTAG also has a formal written mission, objectives, and member expectations. Next slide, please

It's easy to see the value of LabTAG for the WSLH. They provide valuable insight into the capabilities, challenges and needs of the clinical laboratories. They provide support for public health initiatives. They

provide incredible help with WCLN educational events. Not only by helping to determine the educational topics, but also by serving as speakers at our events.

When we ask the members what benefits they receive from serving on LabTAG, they responded that they enjoyed networking with each other and serving as a focus group. They understand and want to support the role of the clinical laboratories in the larger public health picture.

They felt that LabTAG meetings were very fruitful, and their time was well spent. Additionally, some members really enjoyed the opportunity to teach and provide presentations, while others were able to use their membership for their personal benefit. Next slide, please.

Building and maintaining partnerships for all these years with WCLN members has developed a strong bond that is based on mutual respect and trust. This is essential when you need a coordinated response to a public health threat, as we've all experienced recently during the COVID-19 pandemic response. If you had trusted partners, whom you communicated and collaborated with regularly before the pandemic, if you supported each other, honored diversity and helped each other to grow and become better and stronger, then it was much easier working together throughout the pandemic response.

As Dr. Michael Pentella of the Iowa State Hygienic Laboratory once told me, an emergency is not the time to exchange business cards. However, this is a continuous process. People come and go in laboratories and there are always new relationships to build and old relationships that need attention and maintenance. Next slide, please.

Providing free education for the clinical laboratories on topics that those of us in public health want and need them to understand, is essential for every state. The difference in Wisconsin is that we also provide training on topics the clinical laboratories need and want to learn more about, through our collaboration with LabTAG.

This slide shows some of the many ways we provide education. And because there are constantly new WCLN members due to staff turnover and laboratories, education is a continuous process. Next slide, please.

I spent quite a bit of time discussing the value of our WCLN and LabTAG, in particular. So how does that help me with my outreach regarding recognize, rule-out and refer skills? It is all about the relationships and the trust we've worked to build with the clinical laboratories.

As I mentioned at the beginning of my talk, there are about 45 laboratories that are certified to perform high complexity testing under CLIA, and that perform in-house Gram stains, along with full culture workup of specimens from either the lower respiratory tract, wounds, or blood.

These laboratories must be prepared to recognize and perform rule-out testing on suspect bioterrorism agents. They must also be prepared to refer those specimens to us at the WSLH by packaging and shipping them correctly as suspect category A specimens. Next slide, please.

One of the ways clinical laboratories can ensure that staff are able to recognize, rule-out and refer suspect organisms on patient cultures, is to have staff practice their skills.

They can do this by participating in bioterrorism agent educational challenge exercises, such as the College of American Pathologists LPX exercise, or in Wisconsin, we utilize the WSLH Bioterrorism Preparedness Exercise, available through our Proficiency Testing Division.

This slide is from a presentation that I gave at regional meetings this past September for WCLN members. It discusses how clinical laboratories should use the exercises to prepare staff to handle patient specimens that may contain bioterrorism agents.

Prior to receiving the exercise samples, I send participating labs an email telling them when the specimens are shipping. I remind them that this is an exercise to help them, and not a proficiency test. And I ask them to make sure the person performing the exercise gets the email, as it also contains links to resources to help them with the exercise.

Finally, I suggest they save unused specimens to be used for training new hires and students after they receive their results. Next slide, please.

I used this slide to provide some specific information on how to complete the WSLH bioterrorism exercises to get the most benefit from them. Keep in mind, these directions may not be applicable to the cap LPX or other challenge exercises.

One of the things those of us in public health need to keep in mind, is that advances in technologies have changed the workflow in clinical microbiology laboratories.

Speed is essential in identifying organisms so clinicians can provide appropriate treatment faster. Use of rapid methods and automated identification systems is common, and that isn't going to change. Additionally, the relative infrequency of clinical laboratories encountering a bioterrorism agent, along with the cost of purchasing biochemical media and performing quality control on the media, has led laboratories to discontinue keeping traditional rule-out testing biochemicals on hand.

Therefore, many clinical laboratories do not have available to them all of the rule-out biochemicals listed in current rule-out flow charts. Because of this, some laboratories may develop their own rule-out flowcharts based on the testing they are able to perform in house.

Public health needs to partner with the clinical laboratories to develop useful rule-out flowcharts that reflect the changes to their testing capabilities. This slide emphasizes that at a minimum, clinical laboratories must be able to perform Gram stain, catalase, and oxidase testing.

We understand that they may not have the other rule-out biochemicals, and that means they may need to refer more suspect isolates that they are unable to rule-out to their public health laboratory.
One of the issues we have with our WSLH challenge exercise concerns the use of surrogate organisms to mimic bioterrorism agents. Surrogate organisms often grow more rapidly, or their Gram stain and/or colony morphology doesn't look like that of a bioterrorism agent.

We run into problems with laboratories reporting that they have ruled out all of the bioterrorism agents based on growth rate, Gram stain, and colony morphology, without ever performing a single rule-out biochemical test. And that isn't helpful when they run into a true bioterrorism agent on a patient culture.

They need to use the exercise to practice performing actual rule-out testing. These exercises can also be very difficult to score, so we ask the WCLN laboratories to use comments to help us follow their thought process and understand their thinking. That's the only way we can determine whether they really understand the recognized rule-out and refer process. Next slide, please.

As we've already mentioned on a previous slide, once the clinical laboratories receive their exercise results and review the results with all staff, we encourage them to use any residual swabs for teaching purposes. Bioterrorism challenge exercises are meant to teach and to practice the testing skills needed for rule-out testing.

So to prevent exposures from real patient isolates they may encounter in the laboratory. You don't want your staff to perform rule-out testing for the first time on an actual suspect patient specimen. Next slide, please.

Given the widespread use of rapid methods and automated identification systems by the clinical laboratories, it becomes more important to remind WCLN members of the stopping points that may indicate they have a potential bioterrorism agent growing on a patient culture.

When working up a culture, always be cognizant of the source, the age of the culture, the media it's growing on and the rate of growth. If there is anything suspicious, move all work into a biosafety cabinet. Perform a Gram stain and any appropriate rule-out biochemical testing.

When a clinical laboratory calls to notify me of a possible exposure, it is frequently because someone missed one of these indicators and performed some rapid method testing or an automated identification system outside of a biosafety cabinet before they realized that they might be working with a suspect bioterrorism agent. Next slide, please.

This slide walks the WCLN on members through the steps they should follow if they recognize a possible bioterrorism agent growing on a culture. An important step for them to take in addition to notifying us, is to contact the patient's clinician to discuss whether or not a bioterrorism agent infection fits the clinical picture. Next slide, please.

We are fortunate in Wisconsin that because of the relationships we've built with our WCLN members and the trust we've established, they are very comfortable contacting us and asking for our guidance when they suspect they have isolated a bioterrorism agent. We do make it easy for them to contact us by providing a 24/7 emergency pager number for them to call.

I'm often the one who has the privilege to follow up with these laboratories. I encourage them to stay calm and assure them that we will help them work through identifying exposures and determining any next steps.

After things have settled down, I will also follow up with the laboratory and ask if they have performed a root cause analysis and identified any gaps they can correct to try to prevent future occurrences. Next slide, please.

In summary, the key points that I would like clinical laboratorians to take away from my presentation are partner with your local and state public health laboratories. They are a valuable resource that can provide guidance in recognizing, identifying, and ruling out bioterrorism agents or other suspect public health threats.

They can also provide assistance in determining whether or not there were laboratory exposures, and help with appropriate follow-up. Know how to contact your public health laboratory. Save and submit suspect isolates as appropriate to your public health laboratory.

Practice your recognize, rule-out, and refer testing skills by participating in challenge exercises. And finally, encouraging your public health laboratory to develop an advisory group of clinical laboratory representatives and volunteer to be a member. Next slide, please.

This is a slide that I developed during the COVID-19 pandemic that I like to close with. It reminds our WCLN members that they are superheroes. And when we all work together, we really do have superpowers.

Now just imagine that all states have strong clinical laboratory networks. And we are all working together across the nation as a truly integrated laboratory response network. How amazing would our superpowers be? Next slide, please.

And with that, I will take any questions.

Sean Courtney: All right. Thank you so much for that, Erin. Really appreciate you joining our call and providing that presentation today. We had one question that came in. And that was if you're aware of any other states that have developed any similar, really well-coordinated public private networks?

Erin Bowles: I think there are other states that have networks. I am not aware of any that function exactly the way ours does.

Sean Courtney: OK. All right, great. Well, I saw somebody mentioned that Georgia has actually a really good relationship there with CAP and CDC, APHL and LRN, so it's good to see that a couple of states are, and I'm sure there's others involved, as well.

So I do not see any other additional questions at this time. So if any do come up, hopefully they'll include their email so that we can share them with you so that you can get those answered at a later time. But again, I just want to thank you for providing this presentation and joining us today. So thank you.

Erin Bowles: You're welcome.

Sean Courtney: All right. And with that, I want to thank all of our speakers today. As a reminder, we typically hold these calls on the third Monday of each month. And they're scheduled for one hour. And our next call is going to be moved to Monday, February 26th from 3:00 to 4:00 PM.

Please let us know if you have any suggestions for topics for future calls, as we look forward to continuing to discuss any of these hot topics and to answer your community and laboratory testing needs. As we mentioned, we'll post the audio, the transcript, and the slides from today's call on our website. And hopefully, that will be available to you by the end of next week. You can find us on CDC on Facebook, Instagram, LinkedIn, and X or Twitter.

So please follow those to stay up to date with the latest news and recommendations. And as always, we thank you all for joining us today, and we continue to be grateful for your work. And we'll talk to you again on Monday, February 26th. So thank you, everybody, and have a great one.