

# Clinical Laboratory COVID-19 Response Call

## October 4, 2021

### Agenda

- **Welcome**
  - Jasmine Chaitram, CDC Division of Laboratory Systems (DLS)
- **Daily Testing vs. Self-Isolation for School-Based COVID-19 Contacts**
  - Bernadette Young, University of Oxford
- **“Test to Stay” Studies**
  - Ebony Thomas, CDC State, Tribal, Local, and Territorial Support Task Force
- **CMS Update**
  - Felicidad (Faye) Valcarcel, Centers for Medicare and Medicaid Services (CMS)
- **FDA Update**
  - Toby Lowe, U.S. Food and Drug Administration (FDA)

**JASMINE CHAITRAM:** Hey, everyone. I'm Jasmine Chaitram with the Division of Laboratory Systems. I'm the Associate Director for Laboratory Preparedness. And thank you for joining us. This is a clinical laboratory COVID-19 response call. We've been having these calls since March of 2020. We host them every other week, and we're glad you're here with us again today.

I'm showing our agenda. We got some really good topics to cover today and an update from CMS and FDA on a similar topic, so it might be a joint update. We'll see how that goes. Before we get into our speakers, though, as usual, I want to do a couple of just background information and some reminders.

So a reminder for those of you that have been with us since the beginning, we are the Division of Laboratory Systems. And our focus has been on assisting clinical and public health laboratories. And we do that in four specific areas-- quality and safety, laboratory training and workforce development, informatics and data science, and safe and prepared laboratories, so preparedness of response.

And so in the area of preparedness and response, we have been working before COVID with laboratories to prepare for an event like this. And we are continuing to serve in this role as a liaison to the CDC Emergency Operations Center, the Laboratory and Testing Task Force. We work to identify any issues. We help with developing guidance.

We're hosting these calls and we put out emails to our LOCS, Laboratory Outreach Communication System. And I will show you an email address for that at the end of the call. If you're not already signed up, you can send us a note, and we will add you to our distribution list.

I also wanted to announce that we have new [self-testing videos](#). So as I mentioned, DLS does do a lot in the area of testing guidance. And that also includes self-testing guidance. We've worked with the Laboratory and Testing Task Force to develop these really great videos, two of them, and they are. The intended audience for these videos is the public.

The [first video](#) is "How to Use a Self-Test". Those are the tests that are sold over the counter. And then the [second video](#) is "How to Interpret Self-Tests Results" because it can be confusing sometimes with the results and versus symptoms or previous history of exposure or things like that. So these two videos are really helpful. I know that I have mentioned before that we also have a [COVID Viral Testing Tool](#), which is helpful to providers and health care-- sorry, health care providers and patients.

Our [CDC Preparedness Portal](#) is a one-stop shop, where you can get links to other information, as well as find the archives of our clinical lab call. So our transcripts can be found [here](#) for these calls, the slides, any previous presentations. And just a reminder that those presentations are sometimes outside of CDC and do not represent CDC's official position. We have our emails archived here, or anything that we've sent out through LOCS can also be found [here](#). And we have links to that testing guidance that I just mentioned on the CDC website pages.

So the next call will be on Monday, October 18 from 3:00 to 4:00 PM. And we do want to hear from you on various topics. You can send suggestions for these calls, agenda items, to [locs@cdc.gov](mailto:locs@cdc.gov). You can also send any questions or needs about education and training to the [labtrainingneeds@cdc.gov](mailto:labtrainingneeds@cdc.gov). And I wanted to quickly go over how to ask a question. This is really important. We do have a lot of people on these calls. We cannot always answer every single question. Sometimes we get questions that we don't have subject matter experts on the call to answer. And so we may have to come back and answer those offline or in a future call.

It's very helpful for you to include your email address and your name so that we can try to get back to you if we don't answer your question during the call today. And I do want you to use that Q&A box, as I mentioned, and not the chat for that reason, so that we can record your question as well as your name. And I've already mentioned this about the slide decks and not necessarily CDC's position. So with that, I am going to turn it over to Dr. Bernadette Young from the University of Oxford. And she's going to be talking about a study that was recently published, and I will leave it at that and let her take it from here.

**BERNADETTE YOUNG:** Thank you, Jasmine. A real pleasure to be with you today. So I'm presenting on behalf of all the investigators. My background is clinical academics, as well as being trained in clinical infectious diseases and medical microbiology. So I've got mainly a laboratory and clinical background. Could I have the next slide?

In March this year, I got involved in this [study](#), which set out to understand how daily testing of people who have been in contact with the case of COVID-19 might compare with self-isolation. And the prompt for this study really came out of our Scientific Influenza Pandemic Group on Modeling, SPI-M, who

advises to the UK government. And they produced mathematical modeling of the potential impact of serial testing.

And their models suggested that if you could test contact serially, as well as do mass sort of frequent testing of people in education, you may get better disease control than if you did just isolation of contacts. And part of the reasoning behind that, or the hypotheses in the model was that if the offer of testing rather than isolation was on offer, you may get better uptake of the mass testing, improve your case finding, and therefore be isolating your positive cases with more efficacy. There have been some pilot testing, which suggested this daily testing with lateral flow devices was feasible and acceptable. And at the beginning of 2021, these devices really became quite widely available in the UK. May I have the next slide, please?

And in particular, we wanted to do this study in schools. And that motivation came from observational data. So this is a study by Leonard Lee and others which was in CID in, I think, May of this year. They looked at about a million cases in the UK. And they're named contacts. And they looked at those contacts who went on to test positive, and they looked at the probability of named contacts testing positive based on a number of factors, and that included the age of the index case and also where the contact took place.

Now, these two panels, one represents the sort of wild type original COVID variant. And then the one on the left is likely the alpha variant because the S gene was not detected. And you can see in green traced here-- sorry, purple is education settings or work settings. But for people under 18, that's going to be education.

And the proportion of contacts who tested positive within 10 days of a contact in an educational setting of the under-18s was well under 5%. And it was almost under 2% for some. And this raised the question of, how many contacts we actually needed to quarantine to prevent one transmission? So it was based on this that this study was designed. May I have the next slide, please?

And we undertook it in pretty short order, actually. We had ethics approval from the Public Health England Research Ethics Governance Group in March 2021. And we had-- our findings were shared in July. It was a cluster randomized controlled trial. And the institutions-- so these are schools or colleges of further education-- were randomized at the institution level. And they were randomized to a policy that was either a policy of following national guidance of isolating contacts or a policy of offering testing.

And the consent to join was given by a representative of the school or college. But then individuals gave their own individual consent to participate in any study-related testing. Throughout the study, we also had local directors of public health and public health officials retaining oversight of public health actions in their area. So there were policy or steps taken that were guided by those local directors rather than just national policy. And because of the importance of the safety in this study, we had an independent data monitoring committee who had open weekly oversight of the data for review, looking for evidence of safety concerns, and investigators who were blind to the aggregate data during the study. May I have the next slide?

So the trial procedures were relatively straightforward. All secondary schools and colleges in the UK had started doing on-site asymptomatic testing in March of 2021 with the return to in-person schooling, following our winter lockdown. And so it was these testing sites that we leveraged for the trial procedures. For schools and colleges in the control group, all individuals who were found to be a close contact of a case of COVID-19 had to isolate as per the legal requirements. They were also invited to do two swabs for research purpose PCRs, one on day two and one on day seven. And these were run retrospectively because they were in addition to any clinically indicated swabs. And the reason for doing them retrospectively was so that the results couldn't influence individuals' behavior.

In the intervention group, the identification of contacts followed the same procedures, and that was being done by schools following national guidance. But in schools or colleges randomized to the intervention group, those contacts could be offered to undertake daily testing instead of isolation. And that meant they would return to school or college on a daily basis, and they would have a rapid lateral flow test first thing on presenting to school or college. And so long as that wasn't positive, they could be released from quarantine to engage in school or college activities.

They were asked to isolate in the evenings and on weekends because we were most particularly testing the impact of this on transmission in an educational setting. We used the Orient Gene lateral flow device. And this gives a result in 15 minutes, which did help with the logistics of doing this in the morning. And these contacts were likewise asked to do two research PCRs during the testing period. And these were run retrospectively. And all of this testing was administered within the schools. There was a large amount of obviously data capture to be done by the schools as well. And that was managed by the trial team. Can I have the next slide, please?

So we ended up with 201 schools and colleges. And they were randomized in strata to get a balance of the types and size and some representative features of the school. We ended up with 99 randomized to the control arm and 102 to the intervention arm. And there were two co-primary outcomes here, one around safety and one around efficacy on attendance.

So we looked at the impact on symptomatic PCR-positive infections in each arm of the study. And we looked at the number of COVID-19-related school absences among those eligible to attend. We have a large number of secondary outcomes. And some of the most important are the proportion of close contacts testing positive, people's willingness to participate in this scheme, and how well the tests performed. Can I have the next slide?

To look briefly at the baseline characteristics, we were pretty satisfied that we had a representative, so a balance across the two groups. And we had representation of the most common educational institutions in the UK. So the majority of participating schools were government funded, either those serving 11-year-olds to 16-year-olds or 11-year-olds up to 18-year-olds. And we then stratified based on the proportion of students eligible for free meals. And this is a marker of socioeconomics and deprivations in the area.

We also had a group of residential schools in smaller numbers, those schools providing for special needs or alternate provision, further education colleges, which are mainly older students, and then independent, i.e. private schools. In total, there are over 200,000 students and 20,000 staff included. And we had a small amount of missing data on these characteristics. The average school size was of 1,000 students. May I have the next slide?

So to understand the impact, we asked schools to report about the cases and also the contacts taking part. And what became really apparent as soon as we began the study was that this is difficult for some schools to do. And we had a lack of participation from 23% of the control schools and 16% of the intervention schools.

Among those who did report cases, we had-- so who did participate and give us their information, we had 52 schools in the control arm reporting at least one case and 63 in the intervention arm. So there were schools who had no reported cases during the period of the study. And there were in total 463 contacts identified in the control arm and 5,763 identified in the intervention arm. May I have the next slide?

The problem-- so this is looking at participation of those who were eligible for daily contact testing in the intervention arm. And on a per-day basis, we had about 50% of eligible contacts taking part. And those who took part or had already completed a cycle of testing on a given day were marked in blue. Those who chose not to, marked in orange, and that represented about 20% of possible contact days. Those who had given their consent but then didn't turn up at school were marked in red. So we take that as they withdrew their consent for testing.

And then in turquoise is marked days where a whole cohort of contact was moved to isolation. And the majority of these were public health actions. We kept close contact with the directors of public health. And many of those actions were taken because they were concerned about rising transmission in their area. Or in a number of cases, the schools said they had so many contacts they couldn't actually test them all on site. And the logistics of it became untenable, and they moved to isolation. And that became particularly an issue towards the end of the study.

In this final week of May, you can see there are a lot of groups who didn't participate in testing at all. That was when the Delta variant became clearly recognized as dominant in the UK. And we had a revision of-- [AUDIO OUT] week, which was the half-term break. And following that, contacts of possible Delta cases were eligible for inclusion in the study. Can I have the next slide, please?

So to understand the impact on symptomatic infection, obviously it's important in a trial like this to do an intention to treat analysis. And the biggest barrier to that was missing information about who was actually in the schools and who was a contact. So the way we addressed this problem was to get information actually from the Department of Education, who held this information about the identifiable information about students in the school.

And we were able to match that information to test results in the national database, the NHS Test and Trace data set. And so we were able to identify anyone named within one of these studies schools who had a positive PCR test during the period of the study. And so we had less information about staff. But for students, we had near complete information. May I have the next slide?

And when we took those identities and checked them against the NHS Test and Trace database, we were able to identify all the positive symptomatic-- PCR-positive symptomatic individuals, both students, in the panel on the left, and staff, the panel on the right. And then the dotted line in each panel represents the age-adjusted community rates looking at lower-tier local authorities, so these are sort of local council areas. And what we found was that there was really no detectable difference between the arms of the study and that the infection rates in both arms of the study very closely mirrored that of the local community.

Overall rates of infection were lower in staff than students. But we found absolutely no evidence of a difference between the groups. If we pass on to the next slide, I think that presents some of the multivariate analysis that we did looking at the range of uncertainty around those estimates.

So if we looked just at a univariate analysis, the rate of cases was slightly higher in the intervention schools. But when we adjusted for the stratification variables and for the community counts in the prior week, our incidence rate ratio point estimate is actually 0.96 in the intervention school compared with the control school. And the upper limit of the 95% confidence interval was 1.22, which would be a 22% higher rate.

However, we have to recognize that only about half of eligible contacts took part. So was this absence of effect due to not enough people taking part? To answer that question, we did a complier adjusted causal effects analysis. And when we take into account actually the results in people taking part, our point estimate drops. And we got a point estimate of 0.86 incident rate ratio in intervention schools compared with control arm, although there was a wider range of uncertainty around that estimate. We didn't find any evidence of difference in the impact of the intervention on staff versus students. May I have the next slide, please?

So then we looked at attendance. Here, again, we had some missing information. But the Department for Education were able to supplement some of the missing information about school attendance. May I have the next slide?

In total, there were 55,000 absences in the control schools and 48,000 in the intervention schools, an absolute difference of 0.3% compared with the number of person school days eligible. They're plotted here for students. The top panel is people who were isolating for suspected COVID themselves. And the bottom panel was isolating contacts.

And you can see that the blue bars, the control arm, had on most days more isolating contacts. But that effect was lost towards the end of the study when many more intervention schools were not able to

logistically continue with on-site daily testing. And then the next slide, please, will show a similar panel but for staff. And you can see that overall there were fewer staff isolating except right at the end. May I have the next slide?

So when we do our multivariate analysis looking at absence, we find our point estimate is of a reduction in absence of 0.8% incident rate ratio for absence in the intervention compared with control arm. But because of the rate of range of variability, there's quite a bit of uncertainty about that estimate. And we weren't able to demonstrate a statistically significant reduction in school absence.

Again, when we look at the effects estimated with good compliance, our point estimate drops to a 0.6 incident rate ratio for absence in the intervention schools. But that's not statistically significant with the 95% confidence interval encompassing 1. May I have the next slide, please?

And then I mentioned a number of secondary endpoints. And one of these is, how common was infection in contacts? And I was pretty surprised to find that in the context of this study, at least with the mitigations in place in the schools and colleges taking part, 98% of school-based contacts with close contacts with a case of COVID-19 did not become infected in the following period of time. And there was no evidence that the rate of this differed between the intervention and control groups.

And we were able to look at this in two ways. First it was asymptomatic testing in contacts identified who agreed to take part. [COUGHS] Beg your pardon. So in our control schools, we had nearly 1,000 of these asymptomatic contacts who took part in day two and day seven testing. It was difficult to get isolating teenagers to take part in voluntary testing.

But of those who did, 1.6% tested positive. Compare that to those tested in the intervention group, where 1.5% tested positive, with an adjusted odds ratio of 0.73, not statistically significantly different. That was just the smaller group of those who took part in the asymptomatic testing. When we looked at the bigger group of named contacts and looked specifically in the Test and Trace database for positive tests in these individuals within 10 days, we found about 0.9% in the control group and 1.3% in the intervention group.

It's important to note that in the control schools, those schools with the most cases were least likely to participate. So we're probably-- participate in naming the contacts. So we're probably missing more contacts from schools with a higher burden of infection. But even with that problem of missingness, there was no statistically significant difference between these rates. These two groups obviously overlap. And we estimate in total 2% of the contacts became infected in the following 10 days. May I have the next slide, please?

So in summary, we've concluded that infection in school and college settings following contact occurs in less than 2% of people and that there was no evidence that switching from a policy of isolation at home of contacts to daily contact testing increased the rates of symptomatic COVID in students and staff in the wider school community. And therefore this promise as a safe alternative to home isolation following school-based exposures. And that's the end of my presentation.

**JASMINE CHAITRAM:** Thank you so much, Dr. Young. We are going to take some questions now, if you're good with that.

**BERNADETTE YOUNG:** Yeah, absolutely.

**JASMINE CHAITRAM:** OK. So I'm reading the questions now. Dr. Young, what are the interventions, masks or distancing, the primary, secondary schools implement during your study period?

**BERNADETTE YOUNG:** So schools were asked to consider all the risks in their school and how these could be mitigated, and that included considering ventilation, considering spacing. All schools were asked to place students in what were called bubbles, so non-overlapping contact groups. And these needed to be as small as logistically possible. But for secondary school, because students move around between different classes, that typically meant that the year level group did not interact with other year level groups.

Masks in the school setting were mandatory or recommended policy until the 17th of March. But then that mandate was removed during the course of the study. So they became voluntary on the 17th of May, which was before most of the cases in this study took place. And they remain not mandatory in the UK at the moment.

The-- yeah, so they were very much school based. This was my first experience working in schools. But it's clear that they are a very variable type of organization. So it was very hard to have hard and fast rules across them. So we asked individual schools to do their own risk assessments.

**JASMINE CHAITRAM:** OK. Great. What anatomic sample was tested by PCR? Was it the NP, anterior nasal, or saliva?

**BERNADETTE YOUNG:** So it was anterior nasal, and it was a self-swab. The swabbing here was all done by the students unless they asked for assistance. And then the actual lateral flow tests were performed by a staff member at school.

**JASMINE CHAITRAM:** And let's see. Mass asymptomatic testing generates an increase in biological false positives, which is even more elevated in low-prevalence populations. How is this incorporated into your study?

**BERNADETTE YOUNG:** Yeah. So national policy at the time of this study was that if someone tested positive by a lateral flow device or an antigen test, it was considered positive until proven otherwise but that they would then go on to have a PCR test to establish whether it was a true positive or a false positive. Of the 60 individuals who tested positive by a lateral flow test as a contact-- sorry, I got that wrong. Of 36 who tested positive by lateral flows as a contact, 34 out of those were confirmed positive by

PCR. So we had a very high rate of confirmation by PCR in the context of this study. But, yes, it was subject to confirmation.

**JASMINE CHAITRAM:** Thank you. Another question, your paper also was not able to conclude that serial antigen testing instead of quarantine actually reduced school absences. Is that correct?

**BERNADETTE YOUNG:** Yeah. So our point estimate showed a reduction. It wasn't a statistically significant reduction when we took all the variables into account. And partly that's because the prespecified analysis required us to adjust for a lot of variability within which we saw a lot of variance. We did some post-hoc analysis where we adjusted for fewer variables because we didn't see much variation in the others. But that wasn't the pre-specified analysis.

**JASMINE CHAITRAM:** Great. And how was close contact defined during the study?

**BERNADETTE YOUNG:** Yeah. So we have national guidelines in there. They included-- I'll put link up to the paper. They're included in the supplementary information. But it included being within at least 2 meters for 15 minutes or more of an identified case or face-to-face conversation or 5 minutes within 1 meter. So they were relatively stringent definitions.

**JASMINE CHAITRAM:** Great. Here's another one, what data, if any was, collected on COVID-19 PCR test results on the context of the COVID-19-positive school children?

**BERNADETTE YOUNG:** So we looked-- all the contacts were offered asymptomatic testing. The take up of that was fairly variable. But then all the identified contacts we looked specifically in the National Testing Results Service to identify any who tested positive. And it was from that we found about 1% who developed symptoms and went on to present for testing within 10 days of being named as contact.

**JASMINE CHAITRAM:** Lots of interest in this topic. What was the extra total cost of intervention testing that produced a non-significant difference from quarantining the students?

**BERNADETTE YOUNG:** That's a good question. The cost of the study weren't specific to the cost of the testing because the majority of the cost of the study were to support the data collection and the analysis. But we did 20,000 tests, lateral flow tests, as part of this study.

And so I guess you can infer from a unit cost there the cost of rolling that out in 100 schools-- or 110, sorry, because that included our 10 pilot schools. And yeah, it's in terms of the intensiveness of the intervention, particularly if the testing is done by the school-based professionals, plus the cost of the tests, it was a fairly costly intervention. And you're right. We didn't show a statistically significant difference.

I think probably personally, I think the most actionable outcome here is to show that if you have at least some mitigations in place in an educational setting, the type of contact that happens there is not a high risk of transmitting COVID. And so if you're in a low, moderate prevalence setting, there's a reason to sit

back and ask, what's the benefits to the costs of your isolating? Or should you simply let people return to school and just test those who are symptomatic?

**JASMINE CHAITRAM:** Thanks so much for answering all these questions. I've just got a couple more for you. Was vaccination rate a covariate that was examined in the study?

**BERNADETTE YOUNG:** No, it wasn't. We didn't take that degree of individual personal information. But for students in the UK, only clinically extremely vulnerable students would have been offered vaccination at the time of this study.

**JASMINE CHAITRAM:** And I think there's another one here, which you may have kind of answered already. Can you extrapolate the infection rate if only implementing mitigation measures, such as masking and distancing without testing?

**BERNADETTE YOUNG:** Yeah, so I think given that in the control arm and the intervention arm we saw very similar rates of infection in the close contacts, I would extrapolate to say that if you have masking and distancing, then you're going to expect 2% or fewer of close contacts to test positive.

**JASMINE CHAITRAM:** Great. And then I think this is the last question that I'm showing right now. And somebody is asking for clarification on the context of school children data, whether that's parents or family?

**BERNADETTE YOUNG:** So, no--

**JASMINE CHAITRAM:** I'm not sure if you can see.

**BERNADETTE YOUNG:** Yeah, I can see the question. So it was just the in-school contact. We didn't look at their household contacts. But I'll put up a link to the paper because the supplement has quite a bit of information about how contacts were defined and how they were included. And to answer that final question, the lateral flow device used was the Orient Gene device. It was one single brand. And we provided specific instructions to the schools for use.

**JASMINE CHAITRAM:** Great. Thank you so much, Dr. Young, for joining us today.

**BERNADETTE YOUNG:** My pleasure.

**JASMINE CHAITRAM:** I'm going to end there because we have some other speakers on the agenda today. And I did want to mention to everyone that we put the link to your paper in the chat so they can check it out there. But thank you so much for your time, really interesting data. Thank you for presenting.

**BERNADETTE YOUNG:** Thank you for your interest.

**JASMINE CHAITRAM:** Next up is actually going to be Dr. Ebony Thomas from CDC. She is currently with the CDC State, Tribal, Local, and Territorial Support Task Force. And I think she's going to be talking about some of the studies that CDC is doing related to the subject that we just discussed. Ebony?

**EBONY THOMAS:** Good afternoon, everyone. And thank you for having me on the call today. So today I'll be discussing some of CDC's test-to-stay activities. I do want to preface this by saying that CDC does not currently recommend tests to stay. We are currently working with states who have decided to implement test to stay.

And we are currently working with four locations throughout the United States. And as we just heard, test to stay is a strategy that several states and school districts have decided to take to allow students close contacts to remain in the classroom setting after they have been identified as a close contact. Across the US, we are seeing states and jurisdictions implement this in several different ways.

So one of the ways that we are seeing states implement this differently is through the testing cadence that they're implementing once a close contact has been identified. So a few of the locations that we are working with have decided that once the student is identified as a close contact, they have to be tested every other day, which is testing on day one, day three, day five, and day seven, up to day seven, or they are required to test every single day up to day seven. The locations that we are working with all have on-site testing at the school. So close contacts are able to come to the school every single day and be tested prior to going to class.

The four locations that we are currently working with are also using various tests. So a lot are using point-of-care rapid antigen tests. And a few are using PCR test to test students daily or every other day. One of the other differences that we're starting to notice among test to stay among the projects that we're working with is who's eligible for test to stay. Some of our locations are allowing teachers and staff to be eligible for test to stay. And others are only allowing students to be eligible.

Another difference is extracurriculars. Some locations are allowing students to continue participating in extracurriculars. And other students are not allowed to participate in extracurriculars if they are placed on test to stay.

One thing that is consistent across all of the projects that we are currently working on is in order to be eligible for test to stay, both the case and contact had to be properly wearing masks during the time of exposure. If the student is not properly masked when the exposure happens, then they are no longer eligible for test to stay. We are currently working with two sites in Illinois. We are currently also working with a location in Kentucky and a location in Georgia.

Our location in Illinois has been collecting data since August the 9<sup>th</sup>. And there are approximately 121 schools participating in test to stay at this location. Since the beginning of the school year, approximately 350 students have been placed on test to stay.

And when we're looking at secondary transmission, we have approximately seven students who have become secondary cases after they were participating in modified quaran-- or sorry-- test to stay. Our second location, which is in Georgia, serves approximately 8,900 students across 11 schools. And our project with them will start on Wednesday, and we will begin collecting data.

Our third project location is in Kentucky. And it's in one school district. And it will involve eight schools. This particular school district has decided to focus on elementary school and middle school for their test-to-stay pilot. Our last location is also a location in Illinois. And we are currently working through the details of which school district we will target.

One of the things that is coming out pretty early on from some of our projects is that test to stay is very resource intensive. And it may contribute to educational inequities. What we are seeing is that schools that do not have the resources to implement test to stay, such as the proper nursing staff and access to testing, are not able to implement it and are continuing to quarantine a large number of students, teachers, and staff.

One thing that we are doing with our investigations, we are looking at tertiary spread. So we are doing follow-up interviews with all close contacts. And then we're looking at whether or not close contacts become cases and then whether or not there's any spread to household members or additional contacts. So I think that is all I have as an overview for all of our projects. And once again, it's not something we're currently recommending but something that we're hoping to have data on early to mid-November so that we can hopefully make some recommendations in the future.

**JASMINE CHAITRAM:** Thank you so much, Dr. Thomas. Don't see any questions for you in the box. There is one, but I think you-- I'm not really-- the question is, Dr. Thomas, why hasn't CDC endorsed test to stay? And I think at this point in time, CDC is doing these studies to better understand. I don't know if you want to comment.

**EBONY THOMAS:** One comment I will make is that we've done several test to stay-- or at that time we were calling it modified quarantine evaluations back in the spring. However, I think, as we all know, Delta changed that a little bit. And we felt pretty strongly about recollecting the data, re-examining test to stay with Delta being the primary circulating variant at this time.

**JASMINE CHAITRAM:** And then do you have any information at this point in time about the percentage of false positives that we're seeing in the test-to-stay study?

**EBONY THOMAS:** No, at this time, I don't have any information on the number of false positives that we are seeing.

**JASMINE CHAITRAM:** Great. I'm not showing any other questions for you at this time. I do want to thank you again for joining us this afternoon. And I apologize. I should have told everyone that there were no slides for that update from Dr. Thomas.

Next up, we don't have slides. Just let me go ahead and say that right now. There are no more slides for the rest of the call except for a couple of reminders that I show at the end. Next up we are going to have CMS talk about a reminder around point of care and over-the-counter tests and how CLIA regulations apply. So Faye Valcarcel, probably butchered that, even though I talk to her all the time, is going to be our speaker today from CMS, the Centers for Medicare and Medicaid Services. Faye, are you ready?

**FAYE VALCARCEL:** Yes, thank you Jasmine. Hi. Good afternoon. My name is Faye Valcarcel. And I would like to thank you for the opportunity to speak this afternoon about over-the-counter testing. Lately, CMS received inquiries if over-the-counter testing falls under the oversight. So we hope the information we will give you this afternoon would be helpful.

So generally, CLIA does not regulate self-testing performed using a test product that has been authorized or cleared specifically for over-the-counter home use by the FDA. However, if these tests are performed in a point-of-care setting and will be performed by the point-of-care personnel, then a CLIA certificate would be required. In addition, if the over-the-counter test is performed in a setting other than the home, for example, in a workplace, in schools, in homeless shelters, or a prison by someone other than the individual that is by another staff or by an employee health personnel and/or the results are interpreted and would be reported by someone other than the individual, then a CLIA certificate would be required.

For CLIA purposes, if the individual performs and interprets their own tests and then shows it to someone else, for example, an employer in a workplace setting as proof of their results, CMS does not consider this to be interpretation or reporting since the individual has performed and interpreted their own tests in accordance with instructions for use of that particular test. If a facility performs testing with test kits that have been authorized for use in settings other than over the counter, that is self-testing, a CLIA certificate is required. These test kits are not authorized to be used as an over-the-counter test kit.

There are separate instructions for use designated for over-the-counter home use that is self-testing and for testing performed in another setting by someone other than the individual. Under CLIA, we would expect the facility to follow the appropriate instructions for use. There are a few manufacturers that make both over-the-counter and point-of-care versions of a test kit. So facilities must use the appropriate test kit for the type of testing being performed.

We also suggest to please contact the appropriate state agency to inquire about state requirements. Some states have laboratory requirements that are more stringent than CLIA. So laboratories in those states must meet the more stringent requirements. And that's all I have. We hope this information provided some clarification on the use of over-the-counter tests. Now I would like to turn you over to Sarah to answer any questions that may be coming from the Q&A box, if there are any, Sarah (Bennett).

**SARAH BENNETT:** Thanks, Faye. Jasmine, do we have any questions?

**JASMINE CHAITRAM:** Yeah. I'm just sorting through them. Some of them are for you and some of them are not for you. One question is, which brands test kits would be covered under CMS CLIA?

**SARAH BENNETT:** The best place to find the test kits and whether they're OK for home use or point of care is to go to the [FDA EUA website](#) and look up the test kit. We can send that. I don't have that website at the tip of my fingers. But I can certainly send it to you, Jasmine, so it can be distributed.

**JASMINE CHAITRAM:** Thank you. And what type of CLIA certificate is required for point-of-care testing?

**SARAH BENNETT:** For the most part, when you look at the emergency use authorization, it will tell you what types of laboratories can perform those tests. Most of the point-of-care tests can fall under Certificate of Waiver. But you really need to look at the EUA tests as to see where they are authorized, what settings they are authorized for.

**JASMINE CHAITRAM:** What if an over-the-counter test is performed under the guidance of a telemed provider?

**SARAH BENNETT:** So if the test is being performed while-- if a telemedicine-- telehealth-- sorry. If a telehealth individual is overseeing the performance and interpretation of the test, then CLIA would apply.

**JASMINE CHAITRAM:** What about an at-home test being performed by a family member on their child?

**SARAH BENNETT:** I think we're going to have to make sure we give you the correct answer on that. So if you have the question, and Jasmine if you submit it to us, we'll respond in writing.

**JASMINE CHAITRAM:** Hang on one second. I'm just scrolling through here. If a laboratory has a CLIA license, do they still need to apply for COVID testing for both CLIA waived or non-waived?

**SARAH BENNETT:** I'm not sure I understand the question.

**JASMINE CHAITRAM:** So I think the question is, the facility already has a CLIA. But they want to know maybe you can clarify is CLIA specific to a test? So let's say they're a facility that has been doing point-of-care testing and now they've added COVID to their menu. Does anything change? Do they need to do anything? Do they need to notify CMS, or is there anything more they need to do?

**SARAH BENNETT:** Oh, thank you. So if a laboratory already has a CLIA certificate, as long as their CLIA certificate covers the type of testing, whether it's been authorized in waived, moderate, or high, then they do not need to do anything with their CLIA certificate or get a new certificate. If they do not have a certificate, or their certificate does not cover the test setting that is authorized in the EUA, then they will need to either upgrade their CLIA certificate or get a certificate. With regards to waived testing, CLIA does not have any notification requirement about adding a test.

However, with moderate and high complexity, they do have to notify when they are adding a test or a specialty. And the entity that would be notified is the state agency. And this also goes back to what Faye said. While that's the CLIA requirement, states may have more stringent requirements about notifications for adding tests. So you will need to reach out to the appropriate state agency to see if there's any kind of notification requirements.

**JASMINE CHAITRAM:** Does an entity need a CLIA certificate for each individual site or building? Or does that entity certificate cover all sites?

**SARAH BENNETT:** Again, that would depend on the level of CLIA certificate that you have. We have allowed enforcement discretion to extend your CLIA certificate, as long as the testing is covered under the current CLIA certificate and the laboratory director at the home site is willing to take responsibility for that testing at the temporary testing site. And under CLIA there is no limit to the number of temporary testing sites that can fall under a single CLIA certificate. But again, I'm going to put the disclaimer here about checking with your state agencies because there may be some states that have more stringent requirements.

**JASMINE CHAITRAM:** And maybe this is something somebody from CMS can put in the chat, but the question is, what is the best rapid contact for a CLIA certificate update or reapplication?

**SARAH BENNETT:** When Toby is doing her update, I will put the information in the chat for the state agency contacts.

**JASMINE CHAITRAM:** If your facility administrator changes, do you need a new CLIA certificate?

**SARAH BENNETT:** No, generally you do not. You can just submit the change to the state. And let me go back to the mother or the parent performing the over-the-counter test on her own child. CLIA would not apply in that instance, as long as the parent is doing the testing and interpreting.

**JASMINE CHAITRAM:** Great. Thank you for providing an answer to that question. Do all CLIA certificates, including PPM, cover waived tests? Oh, go ahead.

**SARAH BENNETT:** Yeah, sorry. Yeah, if a test is cleared or approved as a certificate-- I mean, as a waived test or is authorized under the EUA to be able to be performed in a waived setting, then any level of CLIA certificate can perform that test.

**JASMINE CHAITRAM:** And there's several questions here, and I'm trying to sort through some of them. I'll just say that when Toby is giving her update, if you want to go in through the Q&A box and answer some of these questions live, you can type in the answer and respond to them.

**SARAH BENNETT:** Sure.

**JASMINE CHAITRAM:** So let's see. What info on emergency pandemic extensions of a CLIA certificate contact info to reach-- I guess they're looking for an extension on their CLIA certificate? And so again, this is related to that getting the contact information, which you're going to put in the chat.

**SARAH BENNETT:** Yes, I'll put the state agency contact in the chat.

**JASMINE CHAITRAM:** Let's see. Hang on one second. I'm going to-- sorry, Sarah, I'm going to pause here for a second to try to sort through a lot of these questions because some of them are very similar. I'm going to ask Toby Lowe from FDA to-- because I think she wanted to talk about this subject as well for just a few minutes. So Toby, are you on?

**TOBY LOWE:** Hi. I am. So I did. I can address this a little bit. And then I think you had-- Jasmine, I think you had also asked us to talk about the updates that we made to address test performance related to viral mutations. So first on the CLIA topic, I think Faye and Sarah pretty much covered it all.

From the FDA perspective-- and you guys touched on this already-- the authorizations that FDA puts out specify the authorized setting. So they're authorized for use in a specific setting, being either high-complexity labs, moderate-complexity labs, or point of care, which we specify is a setting that's operating under a CLIA certificate of waiver. And then other tests are-- or some tests are authorized for use at home, so outside of a lab.

And when we authorize a test for use at home, we consider that to be any place that's not a lab, as long as it is self-testing, as Faye and Sarah talked about. So if someone takes their test and brings it to their office or to their school or to a parking lot somewhere, that's fine, as long as it's self-testing so that it does not implicate CMS and CLIA.

But from the FDA perspective, we would not-- a test that it is authorized for point of care should not be used at home because it's not authorized that way. Even if there is a very similar test that is authorized for use at home, often there are differences in the tests, and in particular in the labeling. And then Jasmine, did you want to get through some more of the questions on this? Or did you also want me to touch on the variant question or issue?

**JASMINE CHAITRAM:** Go ahead and talk about the variant question because there were a couple of questions in the Q&A about variants and FDA requirements.

**TOBY LOWE:** Great. So we did issue, I guess, maybe a week or two ago now a revision to most of the EUAs for COVID tests to add conditions of authorization related to monitoring of variants. So the letter addresses specific requirements that developers need to do, which include updates to their labeling, to add information regarding viral mutations, as well as ongoing monitoring that we expect the test developers to do and submit records to FDA if they're requested. So that update went out on September 23 and is posted on our website. And the letters went out to all of the affected test developers.

**JASMINE CHAITRAM:** Toby, just real quick on that-- sorry, I was reading the questions. I'm a little distracted. So is it the requirement for them to also notify their-- [AUDIO OUT]

**TOBY LOWE:** Oh, sorry, you cut out a little bit, Jasmine. What was that?

**JASMINE CHAITRAM:** Sorry. Because one of the questions is with so many variants arising, can the FDA and CMS mandate companies that have sold point-of-care platforms to communicate to us, whether their test is affected by the variant rather than us having to call them to find out?

**TOBY LOWE:** Yeah. So that's part of what this is getting at. So FDA, we're doing our own monitoring. And we work with the developers any time we see something that may be concerning. We have communicated publicly about the impact of mutations on specific tests when we have discovered that there's an issue.

If we have not communicated on a specific test, that is generally because we have not identified any concerns there. This update is to make it clear that we also expect the test developers to do their own monitoring, as well as to include in their labeling a notice that their test is not validated in all variants, but only in the variants that were circulating at the time of authorization, or, sorry, at the time of the clinical study. But that does not mean that the test doesn't work on all variants because we are doing the monitoring to make sure that there's no concern. If there ever is a concern, we would expect that both FDA and the test developer would communicate that publicly and the test developer to their clients.

**JASMINE CHAITRAM:** Thanks, Toby. We're almost out of time. So I'm going to actually stop here because I know folks need to transition to other meetings, myself included. And so there is a lot of questions today in the Q&A box for both CMS and FDA. And so I probably will invite you both to come back again next week and maybe address some of these questions that we got during today's call because there are several. And to me it seems like there's a lot of confusion out there around the regulation. So we probably need to do some clarification.

But I do want to thank all of our speakers for joining us today. Great presentations. Great updates. And I also want to just quickly remind you that-- oh, I don't have my slide. But if you do want to get on our email list, if you're not already on there, then please contact us at [locs@cdc.gov](mailto:locs@cdc.gov). And our next call will be on Monday, October 18. And so we will see you then. Thanks, everyone.