Transcript for Friday Open House for Providers July 31, 2020 12:30-1:30 pm

#### Presenters:

Betsey Tilson, MD, MPH, State Health Director, Chief Medical Officer, NC DHHS Zack Moore, MD, MPH, State Epidemiologist and Epidemiology Section Chief, DPH, NC DHHS

### **Hugh Tilson**

All right, it's 1230 let's go ahead and get started. Good afternoon everyone and thank you for participating in today's office hours for providers. The prior forums we ever cancelled for a variety reasons but as COVID-19 continues, maintaining these communication channels is important, we're going to try this approach, office hours to facilitate communication between DHHS leaders and providers about what's going on with COVID-19. We've got the scheduled every other week through August and then we'll assess if this continues to be value add, in the meantime please let us know of any feedback yeah but how we can make this even better.

Next slide. My name is Hugh Tilson I'm the director of the North Carolina AHEC program I'll be moderating today I think everybody knows but just to be sure our panelists are Dr. Tilson and Dr. Moore. Thank you both very much for making time in your crazy busy schedules to be here. Really appreciate it. I'll turn it over to Dr Tilson in just a couple of seconds but first let me thank everybody for making time in your busy schedules to participate in today's webinar. We know how important your work is. And we hope the information provided today will help you do that work and we'll help make navigating these trying times a little easier. Next slide. After you hear from Dr Tilson and Dr. Moore, we'll turn to questions, just wanted you to know that all participants are muted to submit a question please use the q&a feature on the black bar at the bottom of the screen it's a q&a feature. We will record these office hours and make that recording available to the public as soon as possible on the AHEC website. And before I turn it over to Dr Tilson during our last office hours we talked about a number of useful links and so thought would make those available we'll keep those up during our presentation today. So, Betsey. Let me turn it over to you.

#### Dr. Betsey Tilson

Thank you. And thank you all for joining us on a, on a Friday. I am going to upfront make a disclaimer and an apology that I got a little double booked today so I will only be able to join you for the first half hour or first 25 minutes, and then but will leave you in good hands with Dr. Moore for the second half and I will try not to get my scheduled double booked going forward so I apologize for that. We got some of your questions ahead of time so I do want to proactively kind of high level of touch on some of the some of the concepts. And then we can drill into some of the more specific questions. But a couple of things just to highlight so one the question was about our trends. What we've been seeing lately and what, what can we make of that. So the first thing to say that when we look at our trends, it's not just one specific trend that we look at. No, no specific data point or metric is perfect. They all have their limitations. So what we try to be very mindful of is looking at all our trends together, to kind of get an idea of our picture, and also look at our capacity to respond as well so we have a kind of a whole dashboard as of what we look at much of that is represented on our public facing dashboard which I hope that you have seen.

But, having said that, I am I'm going to probably jinx it, but for the first time in a while we may have started, have mercy in the early signs of some stabilization, which, which may be good news so I'm, I'm encouraged but certainly not you know not we're not out of the woods, but we are starting to see some encouraging signs in our metrics. So our new cases, our new daily cases have started to stabilize a little bit, which is great, we really were in acceleration phase for much of June and July, but we're starting to stabilize we still haven't seen that decrease that we really want to see but at least we're starting to stabilize, which is, which could be good news. Also our percent positive it's still higher than we want we want it to be less than 5% but we're trending down so we were kind of averaging nine to 10%. Now we're averaging about seven to 8% so still higher than we want but at least going in the right direction that present positive helps us correct for our lab confirmed cases and then the number of total tests, it's a kind of a nice metric to help us, adjust for just the cases that would be reflective of the testing.

We also look at as part of our we have statewide surveillance we adopted our flu surveillance to COVID surveillance and so one of our early signals, early signs that we look at as a number of people going to the emergency department for COVID like illness. We had been seeing increases over the past couple of weeks but this week was the first week that we saw a decline in all but one of our flu regions. So that's, that's all. Really good. Our hospitalizations, we are still seeing a slow uptick in hospitalizations in fact yesterday I think was our highest day of hospitalizations. We still have not had a huge surge like we've seen in other states and we still have plenty of healthcare hospital capacity, which is good. That is a little bit of a concerning metric of hospitalization because that one can surge on a dime. So we're watching that really closely. So, we have seen an uptick we definitely have capacity but our hospitals are what we call a lagging indicator. And what we see in our hospitals, it's usually reflective of what was going on about maybe two or three weeks ago because someone has to get exposed. Then there's incubation period, and then they get sick, and then they have to get sick enough through the course of their disease and usually it takes a couple days for them to need the hospital. So, we're watching that hospitalizations we're hoping that maybe next week we could see maybe a decrease in hospitalizations if it's again that lagging indicator but but we're not sure, and our ICU beds have have remained pretty stable.

So one of the questions was, what do you what do you make just the percent positive so I don't look just the percent positive we have to look at everything. I think it is potentially good news that we are stabilizing our whole if you remember a lot of our points was, we really needed to stabilize and decrease community transmission because as we head into school schools opening back up colleges opening up we needed our state to be in the best position that could be to hopefully allow the success of those educational settings and really prioritizing educational settings. So we're gonna have to follow them we're gonna have to keep doubling down everything that we're doing double triple down on trying to get those those numbers down, especially to make sure that our schools have the best chance of being able to stay open one of the pivots that we have done which I implore you all to do with us is what I think has really made a big difference in some of our stabilizations was our lean into prevention, I know a lot of the questions are about testing and tracing. And when you have widespread community transmission and right now we're seeing transmission throughout the community through young people, it's not just in nursing homes, it's not it's not just an outbreak and clusters. Those are becoming much less of our data. We're seeing widespread community transmission you cannot test and trace your way out of community transmission, especially when almost 50% of your people do not have symptoms. And so that means prevention prevention prevention prevention which we talked about last week, and really doubling down on that if we can get people from not getting the infection in the first place. That helps us so much more and really helps us with the testing and the tracing and especially decreasing the demand for testing and tracing which I know you all are acutely aware of the lag time still in tracing and testing because of the surge of of tests.

So those are the three W's and as simple as they found there is really really good science behind those three W's. If we can get people six feet away it can reduce our absolute risk of spread anywhere from 17% down to less than 1% that succeed is really good. It actually got a lot of protection from three feet succeed is even better. Wearing face coverings if we just push that message use your leadership use your role modeling. Wearing face coverings we're now seeing more and more and more data from other states and other countries that can make a huge effect on a population level. And there's some really interesting and good data on an individual level as well of decreasing risk, and then washing hands. In looking at a respiratory virus about 20% decrease rates of washing hands so you layer all those together, hugely powerful, and that's where we need to lean into and you'll be hearing a lot of our, our emphasis and messaging on prevention so please carry that forward so we can continue to see good trends, so that we can be successful as our kids and our students go back to school and we can hopefully continue to eat restrictions. Right. That's trends.

And then another question was reporting requirements. And this is a little bit confusing. I know when we do have the guidance on reporting requirements but just to be really really clear physicians are special. So, physicians have to report positive to their health departments have to report positives, no matter what. Physicians, don't let me take a step back. So physicians have to report positives physicians, do not have to report negatives if they know if they're sending their test to a lab and they know that their lab is submitting to the state lab, they do not need to then submit negatives to their to their health departments, they still need to submit positive because that was a predated state law, other health care providers nurse practitioners, PAs If they are submitting their lab, their test to a lab that is reporting to the, to the state they do not need to then also report positives and negatives as long as they can confirm the lab is reporting positive and negative. So physicians are special because they do need to report kind of double report their positive but they don't have to report negatives, and other healthcare providers don't have to report positive negatives if they're sure their lab is is submitted to the state. If they're doing point of care testing or they're submitting to a lab that they can't confirm as submitted to the state and they do need to support positives and negatives in that case. I know that's a little bit confusing and it's written on that guidance, but that's the that's the skinny on reporting.

So next we get a lot of questions about quarantining as well and can I test, can I test someone out of quarantine. We got a lot of questions like, well if someone's been exposed I'm testing them I guess at three days and then seven days and, and if they're negative can I have them come back? And the sad thing is you cannot test someone out of quarantine. Just if they have a negative test that three day or seven day, you can't test yourself out of quarantine you have to do that 14 days quarantine because people can continue to become positive, up until 13 or 14 days. So what we are, what we are having for our contact tracers for our exposures is, it is if you're exposed, it's good to have a test because if it's positive, then you then need to trace all the context of that person. We are suggesting waiting about six days after the last after the last known contact because most people will turn positive at about five or six days. So test at six days. If they're positive then that helps us because then we can do contact tracing but if it's negative, it doesn't change any rules, you still need to quarantine for the 14 days so again you can't test your way out of quarantine but testing still is good again because a positive helps us to do the continual contact tracing.

And then the left one oh masks and face coverings. Yay. So, there is again more and more especially population level data on the power of face coverings and really changing the course and the trajectory of a pandemic. So that's great. We're really pushing that forward. There was a really cool case study from the CDC from Missouri that there was some two hairstylists that were positive, they continued to work with about 140 clients, but both the clients and the stylist, or math, and not a single person tested positive so it can be really really powerful. Yes, a lot of the masking is what we call source control, it is to prevent those respiratory droplets from coming out of infected person. But yes, there was a study very recently that also showed it could be protective of the of the receiving person, and we think about in a healthcare setting right in a healthcare setting when you're wearing a surgical or medical grade mask health care provider that both of the patient and the provider wearing that mask does help protect both of them the wearer and the, then the source control. What, what the date is still a little bit out is the effectiveness of cloth face covering for the protection of the person. And so that's where I think we're starting to see some more data on on that I think there's more strength of data in the healthcare setting when you're wearing actual PPE and medical grade PPE. But I think we're still learning about the effectiveness of a cloth face covering for protecting the wear. But if both aware if everybody is wearing them, then, then we will get that that kind of full population protection, so we'll be following that data, too. So that was some high level concepts that I wanted to glean from some of the questions that we got. Zach I'm not sure if there's any kind of high level topics you want to talk about and then we can drill down into some more of the, of the questions.

#### Dr. Zack Moore

Hey, thanks. No, I mean, I guess, just to, you know, maybe reiterate your statements about where we are now and where we're trying to get to, I think, the way I see it, and I'm not this is not an original idea but I think it's a good way to think about things is we, we have a bit of a window that we really need to try to capitalize on before we get into respiratory virus season. And, as Dr Tilson said we, it does look like there's been stabilization back actually not just in North Carolina, but in the southeast elsewhere. But we, what we really need is to get a dramatic decrease. We need to actually get out of our first wave which we are still very much, never left. And, you know, really bring that down as low as we possibly can

before respiratory virus season starts and before you know or maybe not before but as schools are coming back in to, to being you know students are coming back, because that's really the, that's what will stand us in the in the in the best stead as if we're starting from a point of lower transmission where we can actually use some of these tools like contact tracing more effectively. That, that really aren't as workable during periods of widespread transmission. That's kind of how I'm looking at this like the clock is ticking, and we need to have as Dr. Tilson said kind of really maximize our, our prevention and what we would consider our community mitigation strategies to try to see if we can definitively end the, the first wave, recognizing that there is going to be an increase in activity in the, in the fall, and that is going to be concomitant with other respiratory viruses. And so that's, that's kind of the mid term goal that I think we should all have in mind.

And they only. I can't remember when we last had what what was happening when we had the last one of these, but maybe just a point of emphasis on CDCs and DHHS guidance around ending isolation. And basically, the strong recommendations against requiring negative tests for people to discontinue isolation, and particularly to return to work or to end isolation precautions in healthcare settings. I think that's a really important development that, hopefully, again I'm sorry if this is old news from something we talked about last time but I think it was fairly recent that that actually finally saw the light of day, just recognizing that despite the fact that there can be prolonged PCR positivity. There's very increasingly solid evidence that viable infectious virus is not detectable beyond nine or 10 days after symptom onset for people with mild to moderate illness and. And that we really aren't doing ourselves, any favors with requiring negative test results for, for people in that situation. So I hope that's a message that's getting out there and resonating and it'll help with testing capacity and it will help with healthcare capacity and it'll make people's lives a little easier. So I hope that's something that's gotten out there and circulated.

Ad then I'll just mention there's more stuff coming out in terms of guidance around testing and different modalities and at this point we still do not have an our reporting requirements to. We still do not have a reporting requirement for antibody testing but that's being being worked on. But we do have guidance on antigen testing and there's more that Dr Tilson has been hard at work on. That's going to be coming out with a little more detail around where those tests are useful and where they're not. And so just to, maybe, highlight that is something to keep an eye out for probably about it. I think the idea with these is to answer questions so we can do that.

## Hugh Tilson

Sounds great, thank you both very much. We got a question following up at the PPE. If you're wearing PPE is a provider and have exposure, you can continue working as long as you're closely monitoring for symptoms, don't have to automatically quarantine is that correct.

Dr. Zack Moore

Yes, that's correct there's specific guidance for healthcare worker exposures and it does key off, whether you were wearing appropriate PPE during the exposure. So, yeah, if you were wearing appropriate PPE during an encounter with someone who's COVID positive you are not considered exposed or required to quarantine.

# Hugh Tilson

So kind of follow up to that you have masked co worker who test positive has several close worker contacts, all wearing masks consistently tested on day five and all contacts were negative, do they still need to stay out 14 days.

# Dr. Zack Moore

Thank you for clarifying because that is a whole different situation and a big can of worms, like most of these questions seem to be. But yeah, for face covering use so for a co worker exposure where you're not, presumably, we're talking about that the exposed person was not wearing full PPE, but was just exposed to a positive coworker when the coworker was wearing a mask or maybe both people were wearing a mask. If that's the case, those are considered exposures, and that's. And so the exposed person, if they were met the usual criteria within 6 feet for at least 15 minutes, would be considered exposed and should quarantine and be off work for 14 days. This is a area of a lot of interest as to whether, not just in healthcare settings but coworkers or contacts out there in the world, whether the use of face coverings should be considered in deciding whether someone is exposed current CDC guidance says that it should not be. Although there's great evidence that Dr. Tilson said for the effectiveness. There are still concerns about on a, you know, when you have an individual exposure whether you know whether those should be considered protective where they weren't appropriately etc etc.

I will say there's a lot of people who believe that that should be that face covering should be factored in. And that includes face masks for if you're wearing an actual surgical mask or cloth mask it's really considered equivalent for this purpose. But as of right now you'd still be considered exposed and the only way in which healthcare worker would get to return to work. In that situation, is if you were in a crisis staffing situation where you didn't have sufficient staff to operate to function. Then there's crisis, healthcare staffing guidance that allows exposed people to return to work under specific criteria, but that the default and the baseline should be a quarantine. Sorry, that was really long answer.

## Hugh Tilson

It's complicated. Betsey I know you gotta jump off for just a couple seconds is there anything you want to chime in before you gotta go.

#### Dr. Betsey Tilson

Oh, let me see about some of these questions. So that was a question about schools and some people serving on local school boards I really hope that you're aware of the really robust k 12 guidance that we have on our website, not just the K 12 guidance, but also kind of protocols and implementation for what to do if there's a presumptive case. So making sure that you're aware of all that, all those documents we've been having a series lots of series of webinars with our local superintendents and our local health departments to make sure they're aware of all those, those toolkits and guidances and on our websites that might be a really good link as well we can make sure people are aware of that. There was a question specifically about what what specifically are there specific metrics that the status is holding out as to make decisions on Plan B and C and no is the question. The answer to that and there's been some floating around I've been hearing that kind of nationally it's all about the percent positive and if the percent positive in your community is less than five that's what you need to go on. Again we at the very beginning I talked about that not one metric is perfect. So just your percent positive is probably not gonna be sufficient looking at the whole, the whole picture. And looking at the. Okay. I just got distracted by the secretary. Look, looking at we have our square from of our statewide metrics which is again what I went over, there's some regional metrics and our surveillance and that was also county level metrics looking at the numbers of cases and and and the rate and what your viral transmission is on the county so looking at all those metrics as a whole image Gestalt is what i would i would be recommending. And with that, I need to drop off. And I thank you all, and we will, I'll be with you again in two weeks from now. Thank you.

## Hugh Tilson

So follow up question is, what should providers, what advice do we have in terms of talking to families and patients about returning to school, do you have any recommendations or thoughts about that.

#### Dr. Zack Moore

I mean not specifically, I get that, returning to school in the general sense not, not for a person who's had symptoms returning to school. Yeah, I'm wrestling with this myself with a new college freshmen and, you know, I think it's very much dependent obviously on on what's happening out there in the world, which is why we're Betsey said so focused on prevention and trying to reduce community transmission to reduce introductions into schools but I know that all the, you know, at the state level and at the districts and has been intensive work, and also at the higher education college university level to try to identify the practices that can be put in place to allow for some level of in person and reduced transmission so I don't have anything. Anything specific beyond you know just reiterating that this to me really drives home the importance of lowering community transmission so that we can lower the number of potential introductions into school settings into university settings.

#### **Hugh Tilson**

Got a follow up to the conversation we were just having earlier about providers. If a provider test positive. They need to notify the patients, the last patients I've seen and how far back should they go with notifications.

### Dr. Zack Moore

Yeah. Yes, they should, and it would be 48 hours before symptom onset if it was a symptomatic illness or 48 hours before collection of the first positive specimen if it was an asymptomatic infection. Great.

### Hugh Tilson

Got some questions about testing and reporting is DHHS currently accepting negative Covid test results from any of the current point of care test sites antigen or others.

### Dr. Zack Moore

Yeah, so we are accepting them and all positive and negative results are are reportable, including from point of care, or what I think Dr Schoen or lab director more accurately refers to his near patient tests, which include antigen tests and some of the some of the molecular tests. So those are all reportable to the state. However, for those point of care or near patient tests. They do have lower sensitivity. And so, if you have a negative results in a person who's got clinical illness and in whom COVID-19 is suspected that result should be confirmed with FDA authorized molecular assay because there's a high likelihood of false negative results with point of care near patient tests.

## Hugh Tilson

Thank you. My office plans to start in house point of care testing with an antigen system. This will be independent of any reference lab we will be notifying our county health department with positive results. How do we set up providing documentation to the state for the negative test results.

#### Dr. Zack Moore

Yeah. So, you are required, this is too bad bet he dropped off does such a nice job with this, there's some nuance there there there is a requirement yes the positive results should be immediately notified to public health. But it is also required if you're using a point of care test and not working with a laboratory that's reporting that you submit those negative test results. And those can be. Those can be sent to your local health department and there's I don't know if the link is on that slide I think it might be somewhere. Information about we're certainly on our website. Under the guidance healthcare piece about how to report, how and where to report negative test results if you're using a point of care or some sort of testing that's not going through a reporting laboratory.

### Hugh Tilson

Got another follow up question. Are you saying that if providers wearing appropriate PPE during an encounter test positive the provider still need to notify patients despite the fact that they were wearing appropriate PPE during all the counters.

### Dr. Zack Moore

Yeah, so I am saying that that is CDC guidance. And I don't think it's the best CDC guidance around Covid but that is the current guidance and we talked with them about that. But yes, currently, although the PPE is considered protective to the provider. It is still recommended that patients who were cared for by a by a positive health care provider within, you know, during the infectious period, should be notified those patients should be notified even if the provider was wearing appropriate PPE. So, yeah, all I can tell you is, unless something changed while I was on vacation last week that is the current CDC guidance.

## Hugh Tilson

Getting some questions about timing of testing. So if patients are having a hard time getting an appointment for testing, two or three days. And then it takes three to five to longer days to get the test results back. Does it make sense to test or does it make sense just to quarantine for 14 days. And how do you reconcile that timing with practicality and shortage of equipment and those types of things.

## Dr. Zack Moore

Yeah. Um. Let me just make sure I understand it, this was one that we have received before, but I mean the isolation is obviously the key. But we do still recommend testing primarily as was said earlier because if we find that somebody, we don't we don't do any sort of efforts to do contact tracing or control measures for contacts of contacts, but if we find that a contact if that person gets tested and was positive, then, then we then we would take those additional steps of identifying other people who were potentially exposed to that person that's pretty much the basis for recommending that instead of just, just having them quarantine for 14 days but it is definitely a concern as we have issues with turnaround times, etc. that there's a, there's some diminishing utility there but the intent of testing those those contacts is to identify if there were other exposures that we find through that, that we can identify through that testing.

## Hugh Tilson

Remind reminder if you have questions please use the q&a feature in the black bar at the bottom of the screen. We had a question earlier about vaccines and with the update on how we're progressing with vaccines, do you have any information about that.

### Dr. Zack Moore

Not much, you know there's phase three trials that are beginning including in North Carolina. I think with a couple of vaccines, probably there's others on the phone who are more knowledgeable than me about the specifics there but you know we are entering phase three trials, which is, which is great. It means that they've identified vaccine candidates that did induce immunity and were tolerated in phase two phase one and two trials. But you know the whole purpose of a phase three trial is to determine whether there's effectiveness. So, you know, I'm definitely reserving judgment until we till we start getting those results back, and then there's efforts to try to capitalize on the unfortunate situation that we're in now with high transmission and try to really ramp those trials up quickly so that we can get into get data back on effectiveness as quickly as possible. But I, you know, don't have any crystal ball or idea whether whether the vaccines that are going into phase three will end up proving proving effective. I will say to steal another quote that vaccines don't save lives vaccinations save lives. so I think the efforts right now, both for us at the state, local, and federal levels and for people out there and practice should be on thinking about how we will go about getting getting vaccines out once we do have an effective vaccine available. Because, you know, anyone who's involved with vaccines regularly or with was involved with H1N1 and 2009, or any previous efforts knows that's an incredibly difficult complex undertaking. And so there's a lot of advanced planning happening now to make sure that we are ready when there is an effective vaccine so that we can make sure we're maximizing that that resource.

#### **Hugh Tilson**

Changing to environmental types of questions, how needed or effective are filters in exam rooms to keep providers and patient safe to other rooms to know quickly how to balance whatever benefit there is with additional noise, droplets spreading and those things.

#### Dr. Zack Moore

Yeah, I don't know that I have anything, very sort of definitive to say on that. I'm sure that people have been following the debates, particularly in the public press about the significance of aerosol airborne transmission. For SARS CoV2 and, you know, I think there's a clear recognition that there can be airborne transmission. That's also true for some other viruses that that still end up being predominantly spread by droplet transmission. But, you know, I think there's still a lot being learned about that and it's certainly, certainly prudent to be thinking about ventilation and thinking about steps that could be taken to reduce the potential for for airborne transmission. Even though at this point, it appears that the predominant mode of transmission is more from droplet and close contact.

**Hugh Tilson** 

Thank you. We got a follow up question to some of the testing conversation. We're still unsure about who we should be testing symptomatic children especially those younger ones at daycares when they do not have a known exposure.

# Dr. Zack Moore

Yeah, I think. I'm sure question is about symptomatic kids and of course our guidance is pretty broad in terms of testing people with with symptoms, where covid's being considered and we all recognize that already, but particularly as we get into the fall, we're going to be seeing a lot more unrelated respiratory and GI illnesses, and it's not going to be. Well, maybe, probably probably not gonna be possible to test all those kids so I think it's at this point. Still prudent to have a low, low threshold for covid testing. In, even in young kids if there's if there's not another identified cause, but, but that's, you know, one of those places where there's some art with the science. And also, you know, probably depends on the particular situation if it's a situation where, you know, either a child who themselves would be at higher risk for severe illness, for some reason, or in a setting where there's a higher risk of transmission, then again I think that would even warrant a lower threshold for testing than than in a, you know, otherwise healthy child who's not in a childcare or congregate setting.

# Hugh Tilson

I don't, we don't have any additional questions that have come in to the q&a. I guess the last question that came in in advance that we might have touched on, is the rapid tests, and your thoughts or guidance on rapid test and then we touched on it briefly but that was the only other kind of specified question we haven't touched on.

## Dr. Zack Moore

Yeah, I think the key there is that, particularly the antigen tests are intended to be used and this is actually now spelled out in the, in the, in the materials from the, from the manufacturer intended to be used for symptomatic people and for the like the Sofia antigen tests, within five days of symptom onset that's, that's how those are intended to be used. So, or for testing in a setting where there's an outbreak or a, you know, known transmission and high risk, because in those settings, getting that positive antigen and result quickly can, can be helpful, where we have concerns or run into problems is when they're used for more sort of widespread screening of asymptomatic people. And that's a situation where you know depending what you're going to do with those results you're got a very good risk of having, you know, false negative results for people who are actually positive so I think it's just important to keep in mind that they're in some ways similar to rapid flu test in that way, that the guidance that we always give can never rule out flu, based on a negative rapid flu test applies equally well to the, to the point of care tests that are currently available for COVID.

## Hugh Tilson

Zack we don't have any more questions so since you're just now emerging from vacation I know having an extra free 20 minutes on your calendar will be welcomed. Let me thank you so much for carving out time, really appreciate all that you do every day I really appreciate you making time to do this. I look forward to talking to you again in a couple weeks, and if you have anything you want to say before we hang up.

# Dr. Zack Moore

No, thank you for hosting and thanks to everybody for sending in the questions and for participating. Take care.