

**Minutes of the Meeting of the Academic Council held via Zoom  
Thursday, November 19, 2020**

**Kerry Haynie (Academic Council Chair / Political Science & African and African American Studies):** Good afternoon, everyone. I'll call the meeting to order. Welcome to our November meeting of the Academic Council. I hope you all continue to be well. We're almost there. Just another week and it will be Thanksgiving. So hang in there. I have a few announcements to share before we move on to our agenda items.

First, I want to acknowledge the passing of Professor James Siedow. Jim, a former Chair of the Academic Council and a longtime Biology professor, died on November 15<sup>th</sup>. Jim served as Chair of the Academic Council from 1994 to 1996, and went on to other administrative roles at Duke before becoming Vice Provost for Research in 2001 until his retirement from that role in 2014. While serving as Chair of the Academic Council, he gave Duke's then-President Nan Keohane a plaque that remained on her desk throughout her presidency. The plaque read: "Have you consulted the faculty?" We have one of those plaques in the Academic Council office still and it resides on our conference table where ECAC meetings are held in normal times. Our deepest condolences to Jim's family and may his memory be a blessing.

There will be no Academic Council meeting on December 3<sup>rd</sup>. The December meeting is typically a light meeting as it follows just two weeks after the November meeting. Since there are no pressing items for discussion or anything that requires our approval before the Board of Trustees meeting in December, ECAC and I decided we would cancel this meeting and give us all a much-needed break.

Next, I'm pleased to share the names of the students selected to receive the Academic Council's Faculty Scholars award. The Faculty Scholars award is the highest award given by the faculty to undergraduate students. The selection committee completed its work and its interviews on November 13<sup>th</sup> and selected three recipients for this award, all from the class of 2021.

The recipients are:

**Ce'Ondra Ellison**, majoring in Psychology, who intends to pursue a joint J.D./Ph.D. program so she can continue to develop her current scholarship within Black Studies while learning more about law and social order;

**Jamal Burns**, majoring in History with a concentration in Business & Economic Cultures; Jamal's future academic plans include obtaining a PhD in History; and **Xiaochen Du**, majoring in Chemistry and Computer Science and who intends to pursue graduate studies at MIT.

Please join me in congratulating each of our scholars for earning this very high honor. And thanks also to our colleagues on the Faculty Scholars Committee for their good work.

My next announcement is about another committee that is hard at work. The nominating committee for the next Chair of the Academic Council started its work a couple of weeks ago. You see my smile? This is a five-person committee appointed by ECAC that is working to secure two candidates to stand for election for Chair of this body. It's a wonderful position. It's been a great experience and I'm sure the committee

will bring us two excellent choices. My term will end June 30<sup>th</sup>, 2021 and our bylaws state that the next Chair is elected and announced by the February Council meeting and then takes office on July 1<sup>st</sup>. The five members of the nominating committee are:

**Victoria Szabo**, research professor in Art, Art History & Visual Studies, and an immediate past member of ECAC and the past Vice Chair of ECAC – Victoria is serving as the chair of the committee;

**Thea Portier-Young**, associate professor in Divinity and an alternate representative on the Council currently;

**Joseph Winters**, current member of the Academic Council and associate professor in African and African-American Studies and Religion;

**Claudia Gunsch**, a former member of ECAC, current member of the Council, associate professor in Civil & Environmental Engineering and an Associate Vice Provost in the Office of Faculty Advancement;

and **Manoj Mohanan**; current member of ECAC and associate professor in the Sanford School.

As I mentioned, the committee will bring forth two names to our January 21<sup>st</sup> Council meeting. The election will take place shortly after, via Qualtrics. Only the current members of the Academic Council are eligible to vote for the Chair. So look out for that in late January.

All faculty should have received, just a few minutes ago, an email from Allyson Duncan, a member of our Board of Trustees, inviting faculty to participate in the review of President Price. Following past practice, the Board of Trustees has initiated a review of the performance of President Price who is in his fourth year of his initial five-year term. Please read that email and take an opportunity to send whatever comments you have to the review committee. In addition to trustees and two student reps, there are four faculty on the review committee. Those faculty are:

**Jim Coleman** (Law School);

**Ted Pappas** (School of Medicine / Vice Dean for Medical Affairs);

**Charlotte Sussman** (English);

and **Don Taylor** (Sanford School of Public Policy and former Chair of this Council).

ECAC worked with the trustees to select these faculty representatives. Also, last January, ECAC met with Board Chair Jack Bovender to discuss the goals and the procedures for the review. So the faculty has been involved in this from the beginning. The review committee welcomes and encourages feedback from all members of the community. The deadline for feedback is December 18<sup>th</sup>.

### ***APPROVAL OF THE MINUTES OF THE OCTOBER 15<sup>TH</sup> ACADEMIC COUNCIL MEETING***

**Haynie:** Moving right along, our next item of business is to approve the minutes from our October 15<sup>th</sup> meeting. The minutes were posted with our agenda on our website. Are there any corrections or questions regarding the minutes?

*[Minutes approved without dissent]*

### ***DISCUSSION AND VOTE ON PROPOSED REVISIONS TO DUKE'S DATA LICENSING POLICY***

**Haynie:** The next item on our agenda is an item we took up in our October meeting. This is the consideration for approval of some changes to Duke's Data Licensing Policy. The document that was provided in advance of the presentation by Vice President for Research Larry Carin at last month's meeting was posted again for today's meeting. Before we vote, Larry is here to address some questions and suggestions that we received from our Council colleagues in the School of Nursing. Those were shared with Larry and he agreed to address those before the vote.

**Larry Carin (Vice President, Research):** These are the questions, and these came, as

Kerry said, from the School of Nursing. [refers to slide] I'm going to try to go through these quickly. They are important questions so I'm happy to discuss these as much as anybody wishes to. There were four questions that I have bulleted here. Remember, the policy is about the possible licensing of data from Duke Health. The first bullet concerns the fact that there should be full transparency to possible participants about the possibility that their data may be licensed. We agree about that. Colleen Shannon [Chief Compliance and Privacy Officer, DUHS], who works in the Health System and is responsible for the security of health data, is currently working through the process of that. But we completely agree with that suggestion. We intend to do exactly as stated there. The second bullet concerns the potential to use revenue from the licensing of Duke Health data to support the community. We agree with that as well. We have talked about that in our group. I'm going to remind you of the people who are implementing this policy in a moment so you can see who they are. We do not believe there is a necessity for a fourth category for the community because, remember, a substantial fraction of the revenue will go to Duke University and to the Duke University Health System. How those resources are used is to be determined, but supporting the community is certainly something that people support. Third bullet: with regard to the development of the policy, there was the thought that we should have had a third party or a non-Duke person be a part of the process of developing the policy, as well as that person should have some expertise in bioethics. We actually did that. We had outside counsel who helped us develop this policy with that expertise. Finally, a reviewer should be familiar with the NIH Open Science Initiative. Adrian Hernandez is the co-chair of this process and Adrian is very much involved in the NIH Open Science Initiative. I can point you to some details on that. The last bullet: the recommendation that members of the patient community should be part of the implementation of the policy. We don't

disagree with that either. That's not explicit in the policy, but that's something we can certainly do. Let me just remind you of the people who are executing this policy. Also, these people participated in drafting the policy:

**Jeff Ferranti** (Co-Chair) is the Chief Information Officer in Duke Health;  
**Adrian Hernandez** (Co-Chair) is a Vice Dean in the School of Medicine. He's also the executive director of DCRI. They are the two Chairs of this committee. I won't list all the names but I purposely put the titles of some of them so that you can see what they do.  
**Colleen Shannon** is the Chief Privacy Officer at Duke Health. All she does is worry about patients' privacy.  
[Other committee members shown:  
**Alicia Gilleskie** (Associate General Counsel);  
**Ann Bradley** (Associate General Counsel);  
**Denise Snyder** (Associate Dean for Clinical Research);  
**Dinesh Divakaran** (Director, Digital Innovations, Duke OLV);  
**Eric Perakslis** (Rubenstein Fellow);  
**Susanna Naggie** (Infectious Diseases);  
**Gavin Foltz** (Associate Dean and Executive Director, Office of Research Contracts);  
**Greg Samsa** (Chair, Conflict of Interest);  
**Joseph Rogers** (Chief Medical Officer);  
**Michael Pencina** (Vice Dean for Data Science and Information Technology);  
**Randy Arvay** (Chief Information Security Officer, Duke Health);  
**Robin Rasor** (Executive Director, Duke Office of Licensing Board);  
**Scott Elengold** (Associate General Counsel);  
**Shamyla Lando** (Assistant Vice President and Chief Technology Officer, Duke Health);  
**Susan Hayden** (Office of Research Contracts);  
**Larry Carin** (Vice President, Research)]

I talked to Jeff Ferranti after getting these questions from the School of Nursing and so I will say that there is a belief that we should add somebody from the School of Nursing to this committee. We will do that. Secondly, the recommendation about adding somebody from the community, we agree with that as

well, so we can pursue that. Finally, there was a recommendation of possibly adding somebody with some expertise in bioethics. No argument with that either. Those are details about the execution of the policy. Let me just stop and see if there are any other questions.

**AnnMarie Walton (School of Nursing):** I'm happy to speak on behalf of the School of Nursing simply because I put these notes together after talking to our community about what was happening and what we were hearing here and making sure that we were representing our entire school. I very much appreciate the time and effort that you have taken in responding to our concerns. I think it's important to contextualize for the rest of the Council the piece that we wrote before these four bullet points, which is that, the reason that we're asking for this caution has to do with the fact that many of the participants will come from communities that aren't setting these agendas and aren't setting the questions that are going to be asked with this data. We want to be sure that this is done as fairly as possible. I just thought that that context might be important for those who were only seeing the bullets. We appreciate your time and attention to all of our concerns.

**Carin:** Yes, AnnMarie, thank you, and you're quite right about that first paragraph and the importance of it (which he then showed). We agree. We really felt that way all along, but it's good to be reminded of that.

**Haynie:** Any additional questions for Larry? Thank you, Larry. It looks like we're ready to vote. The question has been called and seconded. We'll proceed as follows with the vote. If you wish to vote no or to abstain, please send a private chat to Sandra Walton so stating. If we don't receive a no or abstention vote from you, yes will be recorded and counted as your vote. I will announce the results before we adjourn. Thank you, Larry, thank you, AnnMarie and our colleagues in the School of Nursing for

raising some important questions. And Larry, thank you for being attentive to those.

### ***ANTI-RACISM INITIATIVE AT DUKE***

**Haynie:** Next, I want to welcome to the screen President Price to talk more about the recently announced anti-racism initiatives at Duke. He touched on this last month at our meeting but ECAC and I thought it was important for him to come before us and give us some more details so we can learn more about where we are heading in this space.

**Vince Price (President):** Thank you very much, Kerry. Thanks to all of you here as part of this Council meeting for your work throughout this semester. As Kerry said, we're just days away, but I know this has been enormously hard work and I just want to thank you for that hard work and adaptability, creativity, and sacrifice over these past eight months. I appreciate this opportunity to provide a brief update on our anti-racism and equity efforts. As you know, I sent a message to the community on October 15<sup>th</sup> outlining the university-wide commitments and a number of actions that we've taken in this highly important space. We also launched [anti-racism.duke.edu](https://anti-racism.duke.edu) as a central repository for what we've been doing and all the work that remains. Now, success in moving forward with these initiatives will depend on sustained, focused efforts across the university. So, we're turning our attention to ensuring that as we implement various actions moving forward, we have just that: sustained and focused efforts across the university. Vice President for Institutional Equity Kim Hewitt and Vice Provost for Faculty Advancement Abbas Benmamoun have been leading the way on these efforts. I've asked them to give a brief update today. Abbas will discuss the programming and educational activities we're putting together for faculty. Kim will focus on the ongoing work we've taken to produce climate assessments, including a survey of staff this spring, as well as plans to develop programs for our staff, and our offices will be

coordinating and accepting feedback on the website and guidance around programs intended to increase racial diversity. Her office, going forward, will be the keeper of that website, [anti-racism.duke.edu](http://anti-racism.duke.edu), and more generally responsible for coordination across the university.

Looking forward, I foresee four principal challenges that we intend to meet. The first has to do with communication. The need to keep the university community informed about our efforts and well informed about the need to move forward, and finally the extraordinary contributions of our black students, faculty, staff, and alumni. A second major challenge for us will be coordination across very diverse units and departments across the university. I've been very pleased to see a myriad of programs already launched, activities already undertaken, educational programs developed across the university. We need to have a coordination of those efforts across the university. Again, I'm looking to Kim's office for assistance there. A third major challenge and a goal going forward will be data gathering and assessment. It's vital to our transparency intentions and we are moving forward with both existing data gathering and new assessments. There's a working group put together to do just that. Finally, accountability throughout the organization. The data that we gather is useful, not just to index where we are, and not only to inform the community about where we are, but to hold leaders throughout the organization and throughout the university accountable for progress. That's where we are. Let me turn things over now to Kim and Abbas and then we can take some questions.

**Kim Hewitt (Vice President, Institutional Equity & Chief Diversity Officer):** Good afternoon. In light of those objectives that President Price has outlined, I'm going to start with some guiding questions that Abbas and I have been thinking about as we work towards advancing the anti-racism agenda, and then we're going to focus on some of the

accomplishments and the work that we are both doing in our offices and overlapping. So how do we develop structures around the plan in order to sustain these efforts over time? How do we secure broad-based support and buy-in for these anti-racism efforts? How can we assure accountability at all levels of the institution? And what can we do to make sure that our commitments are connected to individual experiences at Duke? I will now turn it over to Abbas to talk about faculty.

**Abbas Benmamoun (Vice Provost, Faculty Advancement):** Thanks, Kim. Thanks everyone. As you know, the mission of our office is focused on faculty at the university and their academic homes. So faculty and their academic programs are our main stakeholders and our efforts are aimed at supporting them. Since our work also overlaps or depends critically on collaboration with other units, some of this work is coordinated with OIE, Duke Research, Learning Innovation, Graduate School, and HR, among many others. In my office, Faculty Advancement, we are focusing on three main intersecting areas. One is diversifying the faculty, faculty hiring for inclusive excellence, and the other area is faculty and leadership development. So we recruit faculty but we have to make sure we retain them and we support them while they are here so that they can thrive here in an equitable and supportive climate. The last one is about climate, culture, and community. So these are the three critical areas. But of course, for us to succeed in those areas, we need to make sure that we are responsive to the needs of the academic units and to the faculty, and we need to be transparent and build that accountability.

So I will share with you some concrete things we are doing or that we are planning. For example, I'll start with the second one, hiring for inclusive excellence. As you know, we have an initiative in place to hire underrepresented faculty. We are in the fourth year of that program. We are making some progress. We have a long way to go, but

I can share with you, just for example, over the last three years, we managed to increase the number of Black faculty at the university from 66 or 67 to over 80 now. That's progress, but again, as you know, in this area, it is slow. So we need to sustain this and continuing working on it. We got some money from the Duke Endowment to continue that work, and we are working with academic units. While we are doing faculty hiring, we are also working with search committees on how to make sure that the searches are inclusive. We also have programs in place that you may have seen to support academic leaders. In order for us to support faculty, we need to support their leaders, particularly Chairs, DGs, DUSs, and others. So we have been offering a number of programs and workshops like "Leading an Academic Unit at Duke," a workshop series we offer on a regular basis. This fall, we started programs with the Ivy-plus consortium. So we offer a number of workshops and we'll be developing more programs. These are for all the Ivy-plus institutions to support our Chairs. And also, there will be programs for faculty.

The third area is support for faculty. We have a series of workshops in place and then we are also doing some work with the Ivy-plus consortium to support faculty. The work that we do touches on lots of things, for example, how to deal with difficult situations, how to thrive as a faculty member, how to navigate promotion and tenure, and many other things. The second area is faculty and leadership development. Here, I would like to share with you some good news. My colleague, Associate Vice Provost for Faculty Advancement Sherilynn Black, and Professor Charmaine Royal [African & African American Studies / Biology / Global Health / Family Medicine & Community Health], will be leading a new curriculum on anti-racism for faculty. This will be launched in January, I think it's around January 11<sup>th</sup> through 14<sup>th</sup>. An announcement will be sent to all the faculty tomorrow in our newsletter. So we welcome faculty to participate in this new curriculum

on anti-racism. We are also working on highlighting the work of our faculty and making sure they are nominated for awards and they get the recognition they deserve, because one area that we see, for example, if you look at APT dossiers, you see that faculty of color, for example, they might not be receiving invitations to speak as frequently as others. They might not get cited as often. So we need to make sure that we work with them and support them to elevate their research and get the word out and support them in those efforts. Also, as you know, we launched an initiative for research on race and racism in the American South with support from the Duke Endowment. So we have been working with the schools. As you know, all the schools are working on their plans or have already developed some plans. So we are working with them. We look at all their plans and provide them with feedback. And we are reaching out to some units to work with them further and see how we can implement those plans. Professor Claudia Gunsch in my office is also working to develop toolkits, policies, guidelines, and reviewing all the policies of the academic units to make sure that they are equitable. So you will be seeing more focus on the templates for faculty evaluation, templates for bylaws. These are important things, practices that we have in academic units, and we need to make sure that they are equitable, transparent, and inclusive.

Another thing we are doing, for example, is with promotion and tenure. We are looking at the guidelines that we give to APT committees to make sure that they pay attention to the biases that we see sometimes in APT dossiers, particularly with research, by faculty of color, or research on underrepresented communities. All these things, of course, need to be transparent and to have built-in accountability. So we are working on developing some review instruments, survey instruments for academic units. This is in collaboration with OIE that we will be sharing with departments and schools and centers.

As President Price mentioned, we launched the website. That will be populated also with data on faculty demographics and other data that we have from surveys and others. All the teams in my office and in OIE, we work intensively with academic units to work on issues within those units. For example, if there are issues with individuals or groups, we make sure that they are addressed and that they put practices and guidelines in place to deal with them over the long term. These are some of the things we are doing in our office. Again, this is work for faculty, so we welcome your input about what we are doing, what we are not doing well, where we need to improve, what we are not doing that we should be doing. We very much welcome that from you. I'm going to give it back to Kim.

**Hewitt:** So in the area of assessment and accountability, President Price mentioned the climate assessment that will include staff. We've put together a Climate Assessment Steering Committee and two working groups to think about how we can create an assessment that will focus on racial equity, diversity and inclusion, and be able to be consistent across staff, faculty, and students. Then we have identified two working groups, one that will be focused on developing a tool that we can use to measure ourselves going forward, help us establish a baseline, think about at what level we will be able to extract data to provide to departments, and then the second working group is focused on education and support around the information we will learn for the assessment so that once we have this information, we also have some deliverables along with it to say, "Here is what you can do with that data to support the goals in your department or area."

And then President Price mentioned our work on the coordination and feedback on the anti-racism website. Right now, I've been working with Communications. I also just hired a new Assistant Vice President for Diversity, Equity and Inclusion. She accepted yesterday, she starts on January 4<sup>th</sup>. Her name

is Leigh-Anne Royster, she's currently the Director of the Center for Inclusive Excellence at Elon University and she's been in that role for about eight years and was the founding director, and has a background in public health, which brings some nice connection to health sciences and the health system. We'll be working together on a structure and a plan to think about how we make that website a place where people can go to get information, see themselves in it, understand the changes, and be a real mechanism for accountability.

Abbas also mentioned some work with Institutional Research on developing some dashboards and OIE is also working with David Jamieson-Drake [Assistant Vice Provost and Director, Institutional Research] to similarly create some dashboards where we can look at staff diversity. We've been working with units on strategic planning for administrative units and want to think about how we can do that more consistently and bring more connection with all of the administrative units. Then to fit in with the anti-racism curriculum that will be announced in Faculty Advancement, together, with this new Assistant Vice President, we hope to launch a curriculum out of OIE in the spring and also to be thinking, in relationship to the climate assessment, how we can better support professional development and advancement for staff, particularly staff of color, based on what we think we may find. This is a conversation that is also happening with the PCOBA [President's Council on Black Affairs] Staff Committee.

And then I also have been working to create some guidance, so a lot of good work is happening focused on how to increase diversity in certain areas. But we want to be able to do that in a way that isn't problematic in terms of some of our legal limits or challenges. So we met with the Deans last week to talk about that guidance that we'll be distributing, and then I've been working with various groups who are doing fellowship programs or other programs to think about creative language to manage any legal

concerns, but also help to accomplish the goals. We've been hosting regular meetings of the D&I [Diversity and Inclusion] leaders group, and in those meetings we have showcased some individual diversity and inclusion committees and different efforts across the university. Similarly, last week we had an OIE breakfast and we showcased three local efforts around diversity and inclusion, as well as having a panel discussion. From those last two things that I mentioned, we are finding that there is a lot of interest in hearing what people are doing in a way to inspire others. So we're going to be thinking about more ways to feature units and areas that are doing creative things to support the anti-racism agenda as a way to inform and support these grassroots efforts that are happening at the university. With that we will turn now to questions.

**Laura Lieber (Religious Studies / Divinity / German Studies / Classical Studies / Member of ECAC):** I was just wondering if you could articulate how your work coordinates with the anti-racism committees and task forces that all the different schools have set up, as well as I know there is the Committee on Campus Climate... I feel like there are a lot of committees going on. I am just wondering if this is the clearinghouse for them, or how they're being coordinated.

**Hewitt:** In terms of the anti-racism plans that were generated by the schools, Abbas' office, together with me, we looked at those collectively to provide some feedback to the Provost to then provide to the Deans. That's one of the challenges, I think, of a very diverse community: there are a lot of efforts happening around the university and so not every anti-racism committee necessarily has coordinated with us in this effort, so that's one of the things I think we want to move more towards, to be able to provide a menu of ways to support these different efforts that are happening on the ground.

**Benmamoun:** I would just add to that that some committees and schools have reached

out to ask, for example, for us to meet with them and we have done that to talk with them about their plans and vision and what they are working on. For example, I know that Sherilynn Black in our office has been working closely with some units. I have done the same thing and I know that Kim has been doing that as well.

**Price:** Laura, I would also say, it is our intention to both coordinate activities to the extent that we can, but also to serve as a clearinghouse. One of the frustrations, of course, in a large institution with so much happening, is that it's difficult to know where to go for that information. We'll be using the anti-racism website as a clearinghouse for activities and programs as those are developed. That's our intention. The new AVP in Kim's office will be a big assist to those efforts.

**Nicole Larrier (School of Medicine):** The anti-racism programming in January, is that open to all faculty members, in particular, including School of Medicine? I guess it's along some of the similar lines of the last question. Are there going to be individual schools' anti-racism programming for faculty? How is that working?

**Benmamoun:** If you are talking about the curriculum I mentioned for faculty in general, I don't know if Sherilynn is on the call, but maybe she can talk more about it, but this is open to all faculty at Duke.

**Sherilynn Black (Associate Vice Provost for Faculty Advancement):** It's open to all faculty, and Charmaine and I are collaborating on this. The idea is that it's going to be a two-part curriculum where one aspect of it will be about the practical skills that are required to become anti-racist in your practices as a faculty member. The second piece will be more about the historical structures and policies that have led to some of the racism issues that we've had. The two will be coordinated and at the end of it, the



faculty who complete both components will get a certification at the end.

**Larrier:** Thank you.

**Chris Shreve (Biology / Duke Faculty Union President):** Thank you. You mentioned the inclusion of staff in the steering committee. I was wondering if those staff would be drawn from all levels, including groups of historically underrepresented minorities at Duke, like the housekeeping and the bus drivers groups.

**Hewitt:** Yes. We had actually talked about that in our PCOBA committee, that we want to really think about how we can access all staff, even those who perhaps don't use email or aren't typically engaged with the university in that way. The plan is to be able to incorporate all staff in the climate assessment, and then be able to look across staff, faculty, and students, and demographic groups to understand the experiences of people at the university.

**Haynie:** Thank you, Vince, Kim, and Abbas for this update. It's very helpful and very informative. I'm sure you'll be hearing from folks from time to time as you continue in this work.

#### ***UPDATE ON SPRING SEMESTER PLANNING***

**Haynie:** The next item on our agenda is to have an update about the upcoming spring semester from Vice President Kyle Cavanaugh and Executive Vice Provost Jennifer Francis. Before I turn the floor over to them, let me first congratulate them and the entire team for the successes that we've had in the fall semester. It's been a tremendous success. Let's keep our fingers crossed, again, one more week, let's hold on for next week and hope we leave healthy and come back healthy.

**Kyle Cavanaugh (Vice President, Administration):** Kerry, thank you. Good afternoon, everyone. I hope you're doing as

well as you can. We're going to try to roll through this pretty quickly. Jennifer and I will lay the foundation and then I want to also publically extend my thanks to Steve Haase [Biology] and Tom Denny [Medicine / Human Vaccine Institute] who will follow us, who have been attached to my hips through the last six months, at least.

This first slide is just a level-set. This organizational structure has really grown organically over the last five months and I want to run through this very quickly because it sets the stage for the spring as well. I want to highlight on the right side of this, the modeling team is one that Steve is heading up, and we'll talk about that. That has been an invaluable component to our efforts throughout the semester and has had some very unique data and real-time adjustments that has allowed us to focus our efforts. Behind each of these boxes are literally dozens of people who have worked tirelessly through the semester to bring us to this point.

I want to highlight a couple pieces in here. When we look at our testing components, we're very fortunate to not only have the Vaccine Institute connected to us, but also ongoing access to the way that we've set up our symptomatic testing as well as our asymptomatic testing. In the surveillance space, I will show you in just a minute how we have structured that and we believe that that structure has led to the success that we've had to date. For example, every single week when our students are being tested once, and sometimes twice, per week, that compliance is nearly 99 percent of those students who show up on a regular basis. A lot of that is because of the data management, the operations. We'll have Tom wrap up on some of the lab operations. Thanks to our work in the technology space, especially with Tracy Futhey's team [OIT], the symptom monitoring app and the unique aspect here for Duke is when someone does express a symptom, there is actually medical follow-up, whether that's a student, faculty, or staff member. I want to jump over and give a shout

out to Mary Pat McMahon [Vice President / Vice Provost, Student Affairs] and her team, especially a young man by the name of Chris Rossi [Assistant Vice President, Student Affairs, Strategic Engagement] who joined us during the summer in the isolation and quarantine activity. This has also been a key ingredient in terms of keeping us very safe. The last two things I want to mention here is in the contact tracing and also our interface with Durham Public Health. That has not been the case nationally around the other universities that you've seen. We have very strong relationships with the county and our contact tracing has been incredibly robust.

This next slide is going to simply show you the structure that we've had in place as it relates to the site management for our surveillance testing throughout the semester. We actually had 15 sites and we even created a mobile testing van to help with some of our off-site testing. We've had about 30 FTEs [full time equivalent employees] deployed to do this. This will be in place again, not that we're counting, in 46 days when we start up again for the spring.

We're going to move through some data elements very quickly that I thought the Council might be interested in. This is data going into last weekend through the beginning of August. [refers to slide] We've now been north of 166,000 tests that have been completed through the 17<sup>th</sup> of this month. We've had 142 [positive] student cases, 78 positive [faculty and staff] cases. I will tell you that all of those, except for now approximately 20, have moved through their disease state in terms of full recovery. We're very excited about that. A little bit of a highlight and breakdown here. Of those just in the student world, when we look at that 142 number, 98 of those were undergraduates, 44 of those were graduate students. Of the undergraduates, the majority of those were off campus. When you take a look at the level of virus that we had on the campus through the fall, it was actually quite small, only having 41. I should also say, which

Steve will highlight, we are not aware, and we are talking to all our AAU peers, our Ivy-plus peers, certainly schools around the state, we've not had a single incident of classroom transmission that's been identified. If we look at the off-campus [cases] and we look at the breakdown of those 101 [cases], you'll see that the majority of those were undergraduates. We only had, through the semester, knock on wood, one cluster. I think it was a very strong win in terms of how it was handled. I'll ask Steve to highlight some of the work that went on there.

As we're looking at wrapping up the last couple of days here for this semester, we're continuing the surveillance testing through the end of this week and then, different than we've done through the semester, as we're having students get ready to leave, we will continue surveillance testing on Saturday and Sunday of this upcoming weekend and then we'll wrap up on Monday as well. As you well know, we will have a good cohort of students that will continue to be here, especially our graduate students and laboratories, on the other side of Thanksgiving, so we will pick up surveillance testing starting on the 30<sup>th</sup> and we will do that twice a week going through the end of December. We also have had very strong communication and coordination with those students who will be in isolation and quarantine. We expect that we will have some small number of those who will be with us through the Thanksgiving holiday.

As we look at January, I'm just going through this very quickly. [refers to slide] Some of the learnings that we had from the fall, if you recall, if you were close to this, that we did gateway testing for all of our undergraduate and graduate students coming in, but then we had a little bit of a gap before we started surveillance testing. That gap won't be there, so we'll bookend this. Every graduate student, every undergraduate student, will be gateway tested upon arrival, and then we will abut against that the new surveillance testing. We won't have to go through a ramp-up period. We have hit a high-water stabilization mark

of doing about 16,000 tests per week. That will start up again in January.

Here are a couple of highlights, some concerns we had back in the summer. [refers to slide] We navigated our way through, for example, on some supply chain issues. We will have approximately 120,000 masks that will be delivered here in about two weeks, so we will refresh that distribution for our faculty, staff and students. The last two things I would mention here is that we will continue to have robust relationships with Durham County Public Health and we will plan on refreshing all of these aspects that we had through the fall, getting ready to go into the spring. With that, I'll transfer over to Jennifer.

**Jennifer Francis (Executive Vice Provost):**

Thanks, Kyle. I just wanted to remind people that these were the factors, just generally speaking, that we were very concerned about from the summer and going into the fall. [refers to slide] None of those has really left us except that we've managed to control them to some extent, certainly by the surveillance testing and some other decisions we made, noticeably to keep students in single rooms. The new things for spring are listed in red on the right. It seems implausible to us that we won't see a higher rate of positive baseline tests in January than we did in August. I think it's definitely fair to say people are quite tired. So the advances we've made in positive behaviors, we're going to have to be extra encouraging and forceful in getting more of that in spring. As you know, we're going to face colder months for us here in the South. It's generally January and February and that could create some issues because there will be fewer events that we can do outside. We certainly benefited a great deal this past fall from pretty warm weather for us, even in fall. Last, but not least, there are certainly a lot of external factors that we want to keep in mind. I'll highlight a few things that I think are positives that we've done. We have more campus housing that we expected, so even maintaining single occupancy and a four-to-one bathroom ratio, we're going to be able to

expand the number of students that we can invite to live on campus. The increased housing does not reduce our quarantine or isolation space, but it also doesn't increase it. I'll come back to that in a little bit. As Kyle has mentioned to you, I think our testing procedures are about as efficient and comprehensive as we can be going into spring.

Our plan for spring: as you know from an email that President Price sent out, we have invited those students who are already living in Duke housing to return and we extended Duke housing to juniors and seniors who wanted it. We're looking at slightly more undergraduates being able to be back and on campus. As I mentioned before, this does not affect our quarantine or isolation space. It neither decreases it, nor does it increase it. But we have done two things. We've added the JB Duke [Hotel] for the spring term, and we expect that we will have full use of the Lodge [at Duke Medical Center], otherwise known as the Cambria [Hotel]. We had previously been using only the back part of the Lodge and continuing to rent out the front part. We'll transform all of that into useable space. We're certainly looking at nontraditional spaces as well on campus.

I wanted to give the Academic Council a quick look at what we're seeing in terms of in-person classes for the spring registration. [refers to slide] This was done very early on in the registration. It's probably close, except for Fuqua and Law, which are on slightly different calendars and don't necessarily go through this registration system. The main thing I'll point out to folks here is, if you look down at the percent of in-person classes, particularly for the undergraduate space and the general graduate space, both of those numbers are up to around 20 percent. That's about five percent higher than it was. It was around 15 percent before, and it's up to around 20 percent there. I think most of that came out of the hybrid category, where I think faculty realized just how difficult it was to try to do both of these at once, but we're

still looking at about one-third, 35 percent of our classes being taught either in person or hybrid. As we did for fall, we will be inviting those faculty who are teaching in person or hybrid to participate in testing. We will be getting out that information to those faculty very soon.

As you know, Kyle and I are working with the 2021 Planning Committee, and we have thought about our contingency planning for spring. The first three parts of the plan, Plans A, B, and C, are all predicated in some way, shape or form, on students returning to campus as scheduled in January and having baseline tests. Plan A is that everything proceeds well, such that we can continue as we have planned to start classes on the 20<sup>th</sup> of January. Plan B has a slight sequester period if those baseline rates seem a bit higher and a little bit less comfortable for us, in which case we would start classes remotely for the first three days of the semester and then transition to on-campus classes on Monday, January 24<sup>th</sup>. Plan C is just a little bit extreme view of Plan B in terms of if our positive rates are even higher. We would think about a little bit longer period of sequestering and being remote, about ten to 14 days, which would be the full, if you will, quarantine and isolation period. Plan D is the one that is much more predicated on what is happening in local, state, regional areas. We will need to be monitoring and seeing what those rates look like to determine whether there is a scenario that arises that would not have us try to bring the students to campus in January but rather to start classes remotely. At that point, I think I'll end. Kerry, I'll send this back to you for how you want to do the rest of the time.

**Haynie:** We'll open it up for a few questions at this point.

**Steffen Bass (Physics):** Could you share with us, perhaps, a preview on your plans on how to roll out the vaccination for the entire Duke community, since that will be instrumental for resuming normal campus activities in the summer or fall?

**Cavanaugh:** I assume you're talking about the Covid vaccination. I've had the opportunity to sit on a number of committees in the system. You may be very aware that this will be coordinated at a federal and a state level, so there is very close work going on with the State of North Carolina. There is a straw structure of the prioritization of this. As you might imagine, the first priority there is going to be to frontline healthcare workers that are working with positive Covid patients. And then it cascades down from there. There is a distribution process that is being worked out right now, both in terms of the level of positions and exactly how that will be deployed. Honestly, at this point in time, we are not anticipating that there will be sufficient vaccination available during the first six months of 2021, that it will actually cascade into our faculty, staff, or our students. But we are starting to turn our attention to both the summer and the fall of 2021. So that's where that stands at the moment.

**David Schanzer (Sanford School of Public Policy):** Hi, thank you to everyone. I have two quick questions. The first is a comment in terms of faculty who are teaching in person. I just wanted to say that having what seemed like unlimited access to the testing was very important and very reassuring to have that available. I was wondering if that would continue to be available for those faculty who are planning on teaching in person in the spring, if that testing was going to continue through November, December, early January. Would we continue to have access to that? The second question is, do we have any data on mental health visits and things like that for students? My interactions with students were generally positive, but it was a pretty grim semester in a lot of ways, despite all of our successes. So I'm just wondering what we know about the mental health impacts on students from this semester?

**Cavanaugh:** Kerry, would you like me to address the testing question first, and then I could ask Mary Pat to address the mental health issue?

**Haynie:** That's great, thanks.

**Cavanaugh:** David, first, great to see you. I couldn't agree more about the testing component. Yes, first, certainly the surveillance testing will be available through November 30<sup>th</sup> and going through the end of December. So if there is a faculty member who is still coming to campus who wanted to continue participating in that surveillance piece, that will be available. We certainly will be making that available through the spring semester. I should also say that later today, we've coordinated with the health system, there will be a communication that goes out to our entire population that if there are folks that wanted to take advantage of clinical testing in advance of the holidays, there will be options to do that. We have some folks that are traveling and will be fielding some questions about that. So it's a yes, yes, yes on the testing piece. Now I'll let Mary Pat respond to the mental health question.

**Mary Pat McMahon (Vice President / Vice Provost, Student Affairs):** Hi, everybody, thanks for all everybody is doing on this particular topic in so many ways with supporting students, undergraduate and graduate and professional. Our data shows that our CAPS [Counseling and Psychological Services] visits are not necessarily up. We have a lot of students who are living off campus who are still accessing CAPS, students accessing our remote clinical care that we've added, I think we added it in the summer, we've had it going for a while. But we don't see huge spikes in use of mental health clinicians. We do see DukeReach and the acuity of the cases, intervening with students in crisis, some of those having to do with students having family members impacted by Covid and a lot of disruption. And then more broadly, your point about the wellbeing of our students, distinct from any specific diagnosable mental health component, there is lots that we are working on there. We have been partnering with faculty, thinking about ways to broaden everyone's awareness of how our students

are doing, how we're all doing. And then thinking about continuous opportunities to help students connect, take care of themselves. We can't answer when the pandemic is going to end, we can't answer what to make of it all, and we're trying to partner with students and student support groups to create a supportive community. I don't know if that's the best answer but there are a couple different levels there. I just want to say I appreciate all the faculty in the ways that they've been partnering with us to support the students. It's been a team effort for sure.

**Patrick Charbonneau (Chemistry):** I had a question for Jennifer. First, in the fall, if I remember well, the students who were showing symptoms at home were asked to stay home and delay their arrival to campus. Is the same thing planned in the spring? That's part one. The second part it, I think that the rate of infection, the baseline, was something like 100 times smaller than the community testing in North Carolina. Is that what you call the expected baseline? What are our thresholds for A, B, and C?

**Francis:** I'll try to address the former first. Yes, we will absolutely tell our students that if they are showing symptoms, they should wait to come back for that purpose, no question. In terms of the baseline test, no, I think what we're all thinking is that we are expecting that we are going to see a higher rate than what we saw in August, for sure, because of what we're seeing across the country. Patrick, your last question is the most difficult, because we don't have, if you will, specific positivity rates. A couple things that we have done that have given us a lot more flexibility and bandwidth in the system is, remember, all of our students that are at least living in Duke housing are in single rooms. That means we have an immediate way that, if we needed to, we could sequester, quarantine, quite a few students very quickly. Frankly, I would say, and Kyle can comment on this, that the two factors that we look at, number one, is our work with the medical center and the

health system to understand how they are experiencing, and what capacity they are at. That is key and probably number one. And then number two is to look at what our flexibility and capacity is and what we're reserving as isolation and quarantine space. I'll also add that we have looked into, if we need to go beyond the capacity that we have right now, could we pick up some? And we are very confident that we could, should we reach that point. Kyle, do you want to add anything to what I just said?

**Cavanaugh:** The only thing I would say, it's really a good lead-in to Steve, I don't want to steal any of his thunder, but some of the amazing lessons learned that we had during the semester about things that we learned that really allowed us to get to the point that we are now, we're going to apply all of those learnings as we go to the spring.

**Don Taylor (Sanford School of Public Policy):** Hey Kyle, how are you doing? Good to see you. I look forward to seeing you in person someday soon again. With the success of the program and the MMWR [Morbidity and Mortality Weekly Report]—by the way, getting an MMWR without it being a train wreck is really hard to do, so congratulations to all of you on that. But my question is, how much has all of this cost? I say that because I've had a couple of journalists ask me, well, how much does it cost, what would it look like to do this for the State of North Carolina, for the country, et cetera? I just think, as a university, I think we should really try to wrestle with that and see if we can communicate some information of that sort.

**Cavanaugh:** Don, great question. I will tell you the transparent, honest, 100 percent answer is we don't have firm numbers. I would say it's certainly in the millions. We certainly have our arms around the cost of the testing issues, working with Tom and those people. But that org chart that I showed you, as you push behind those org charts, there are dozens of FTEs in there and we've pulled from a variety of different places, and

those are some of the unique aspects, as we've talked to other people around the country, some of the compliance issues that we've had here, I would argue that's what we've made in terms of the difference. We have had huge discussions with literally dozens of peer institutions across the country. The last comment I would make is, and maybe either Steve or Tom want to say something about this, I do believe that the CDC is actually intending on using that article as a way of propelling other schools to try to replicate as very close to what we did here over the last couple of months [as possible].

**Haynie:** Great. Thank you, Kyle, Jennifer, and Mary Pat for presenting this information. Again, thank you for all that you've done all semester long. It's been a great success.

#### ***BRIEFING ON COVID TESTING AT DUKE***

**Haynie:** It's a good segue into our next guests. Since we've started in the fall, I've gotten a number of questions from faculty and others about our testing protocols. Who's in the pool, who gets Covid tests, if people reject the test or don't show up for the test, what happens? So we've invited a couple of colleagues who are directly involved to come and talk to us about our testing protocols. We have Tom Denny and Steve Haase with us. Thank you for coming and thank you for all you've done to get our testing up and running and with such a great success.

**Steve Haase (Biology):** Thanks, Kerry. Thanks, everybody, for inviting us to come and share a few things. I'm going to say a few words about some lessons that we've learned. We've published a lot of data on our dashboard and the question I get from my own Biology faculty most often is, what does that data actually mean? So I want to say a few words about that and then turn it over to Tom to tell you about the testing program itself, and then hopefully have some time for questions. I'm going to start with Patrick's question early on about what we're expecting to see in terms of the number of infections

when we start baseline testing in the spring. The modeling team is working right now to try and understand where our students come from, and use the county health data from those areas where they're coming from to try and make predictions about what we're going to see for incident rates when the students come, so hopefully we won't be surprised. I'm going to start here. [refers to slide] Thanks, Don, for pointing this out [the MMWR]. I will point people to this publication that came out on Tuesday for additional details about the testing program. What I want to highlight here is the author list. It's huge, and it should be bigger, but the way this mechanism has come together so rapidly, we had a huge integration of faculty from the School of Medicine, from Arts and Sciences. We have staff from all units across the university. We have administration all working together as a single unit here. It's a very unique mechanism that was put together. I just want to thank Kyle, whose energy has been unbelievable, and leadership to keep that team going as well. We've had regular meetings with Vince and Sally and they've been fully committed to what we're doing and supportive, and none of this could happen without them.

With that, I want to talk a little bit about interpreting the data. One of the things that came out in this MMWR publication is that Duke was actually quite unique in the approach it took in that only six percent of universities, I think with—I can't remember the cutoff for student population—around 5,000—only six percent of those universities were actually doing regular surveillance testing of students. Most of them focused only on symptomatic testing and what we found as we started to pull the data together over the semester is that if we look at the combination of entry testing, which is mostly asymptomatic, our pool testing, which is aimed at asymptomatic cases, and the contact tracing that we have done, which identifies people who have been exposed, and puts them into quarantine so they're not transmitting within our populations, if you take the combination of things that many

universities weren't doing, that accounted for about 73 percent of the cases that we were able to identify. I think this is part of the success of the testing program, which also goes together with everything that everybody else has done: student behaviors and adherence to social distancing, masking. All of these things really contributed to the low incidence on campus. I was looking at data last week and if you look at a number that is not the positivity rate that you hear expressed a lot which is the number of positives per test, but the actual per capita, the number of new infections per student per week, that per capita incidence was conservatively about half of what we're seeing in the local Durham community. And that's probably a large underestimate, because at the county health level people are not testing as deeply and as regularly as Duke is. It's mostly that per capita incidence is estimated from a subset of symptomatic testing. So we're probably much lower in our student population—and that includes our off-campus student population—much lower incidence level than we're seeing in the surrounding communities.

So what does that actually mean? Well, we've spent a lot of time talking about the idea that we're seeing very low transmission rates on campus. As Kyle brought up, we're not seeing any evidence for in-class transmission. When people are wearing masks and social distancing we're not seeing transmission. And this is the message we're getting from the discussions we're having with many of our sister institutions as well. So this is something that was, I'm sure, of great concern going into this semester and I'm very happy to report that we're just not seeing it. Another conclusion that one might draw from the data, and one of our concerns going in, was that our Duke students living off campus might be contributing to transmission in the local community. The fact that we're actually seeing lower levels of incidence in that student population suggests that they are not contributing substantially to the spread within the Durham community.

Alright, a couple lessons learned. Kyle alluded to this earlier. We did have one cluster. It was at an off-campus apartment complex and the initial case was identified by asymptomatic testing and our contact tracing team, which has been doing an amazing job, had eight students immediately into quarantine and the seven more students that turned positive were already isolated in quarantine by the time they showed positivity. And so this goes to the idea that surveillance testing, in concert with contact tracing, was able to identify this cluster rapidly and isolate the students from the rest of the population so they're not transmitting. So this is a success story, I think, for Duke. As well, we had a number of small, I would call them sub-clusters, and they were less than five, associated with various apartment complexes. They were often roommates off campus where we would see transmission. But again, everything that we've been doing with really deep surveillance testing and good contact tracing has limited spread in all of these cases. I already mentioned that we don't see the evidence for in-class transmission. I think that contact tracing group had some evidence that was published that the one place on campus that we might be seeing transmission is in dining establishments, and this has been seen in other organizations, that when the masks come down to eat then transmission can occur. This is one of the reasons we went to takeout-only dining on campus near the end of the semester.

I'll talk a little bit more about this, there's been a real interest in an environment of collaboration that extends beyond the walls of Duke. We've spent a lot of time talking to our colleagues at a number of different schools and one of my colleagues at Harvard used some of the aggregate data—so this is data like you see on the dashboard—to think about new policies for quarantine. Currently the policies for quarantine are if you are exposed to go into quarantine for 14 days. There are many folks looking at the data they were collecting for quarantine, not seeing

students become positive late in that quarantine, with the idea that maybe we can start to shorten the duration of quarantine. So that data that we've been collecting at Duke went together with data from a number of schools in Boston to try and push for a new policy change and really have data-driven policies that drive what we're doing in terms of quarantine.

Before I turn it over to Tom, I just want to say something about what we're going to do going forward. A lot of the success we've had in this surveillance testing program comes from super innovative technologies and creativity by Tom Denny and his group and pool testing, you're going to hear about that, and I think going forward the intent is to continue to focus on innovation. I want to point out a couple of efforts on campus that are innovating in this space. GCB [Duke Center for Genomic and Computational Biology] and the Genome Center are working on a new next gen sequencing platform for SARS-CoV-2 testing, which may increase our capabilities in terms of testing on campus and beyond. There is a new pilot effort going on in Pratt and Global Health for testing wastewater and this is something that's happening at a number of universities across the country and there's going to be some examination of the efficacy of wastewater testing for identification of SARS-CoV-2 cases at Duke. And as well there's a couple of efforts within the Nicholas School, also the School of Medicine Global Health to try and understand better the aerosol transmission of SARS-CoV-2. Finally, I want to say something about the sharing that's going on in the Ivy and Ivy-plus consortiums. There is now an effort that began two weeks ago to share aggregate data from our testing programs with the Ivy schools so that we can all learn from each other and that's been a really interesting exercise, and trying to share data has its own interesting challenges. But we're going forward with that and I think that will increase our abilities and our capabilities at Duke to understand how to do what we're doing and do it better. And with that I'm



going to hand it over to Tom before we take questions to tell you about the pool testing everybody's been hearing about. Tom.

**Tom Denny (Medicine / Chief Operating Officer, Duke Human Vaccine Institute):** Thanks, Steve. And I want to just convey my thanks also to Kerry and the Council for the opportunity to present today and also acknowledge upfront that none of this would have been possible without the incredible support of the President, the Provost, and Tallman Trask [Executive Vice President] and Kyle for all the resources that were made available to make it happen. And then also, for me, the Dean of the School of Medicine. I needed space to encroach on some friends and some neighbors to rapidly expand and the School of Medicine came through to help us very quickly.

So I'm going to walk you through some of the basics about the testing process. We're based in the Vaccine Institute. My laboratory has a lot of accreditation. We operate as a CAP- and CLIA-accredited laboratory. We do a lot of clinical research. So the way that our process works from a day-to-day is consistent with a clinical laboratory operation, even though most of the things that we do are research-based. I come out of about 35 years of working in HIV world, and with HIV, viral load, the amount of virus, matters. So early in this pandemic we started developing a quantitative viral load assay. All of the clinical assays that are used today in clinical laboratories give you a yes or no answer. We thought there would be value with developing an assay that you could quantitate the virus. We also were starting to hear early on about shortages of testing reagents and systems, so we developed an assay on a platform of reagents—it's a two-step PCR process—that are not typically used in clinical laboratories because most clinical laboratories want to have a fast result. So our results take a little bit longer to develop but what we learned through this process is, we did not have the same supply chain issues that the clinical laboratories were having

with testing supplies. And what you will see in this slide here is basically, we ran 70 validation panels of different copy numbers of a viral standard to show that we had incredible sensitivity down to about 15 copies, 100 percent at 62 copies for our platform. For pool testing we developed this assay for supporting clinical research and we worked with the pediatric group, with Matt Kelly [Pediatrics], the Pediatric ID [Infectious Diseases] group, we helped characterize a pediatric cohort of children that were HIV infected. This work is in press now at Clinical Infectious Diseases.

We also have been working with the ICU team led by Brian Kraft [Medicine], and one of the issues with Covid is that [we don't know whether it's] the virus or it's the host response to virus that causes a lot of the side effects. In HIV, viral load and viral burden do matter. So we started looking at ICU patients, both their endotracheal aspirates and plasma, to see how much virus was present. This study has not been published yet but it's in the process of being put together for publication. And what we were able to show with the ICU team is that those individuals that went on to end organ failure and many who did not survive had those high viral load concentrations in their plasma.

So now we're going to come to pool testing. So one of the first challenges we had to do was show what the appropriate pool size is to use. Pool testing goes back to the 1990s in the early days of HIV when we faced many of the same challenges we have today, more testing needs and reagents and supplies and laboratories to perform in. So we started looking at—we have two platforms: the one that we developed that was quantitative, and then a clinical platform, the Abbott m2000. And basically we made different pools down to 200 or 150 copies and we ran them in replicates on each platform. We essentially showed in the clinical platform we could use either a pool of five or a pool of ten and, down to 100 copy, we would have 100 percent detection. In our in-house LDT assay that we

built we showed that we could go all way down to 50 copies and we would get 100 percent detection in a pool of up to one to 20. For our program that we ran this semester we used a pool of one to five.

So what is a pool? Well in this case we take five individual samples, we take an aliquot, we make our sample collection vials, they are two milliliters of saline, the student does the self-administered swab, they put the swab in the vessel, that comes over to us with a barcode, we take .2 milliliters from each of the individual vials and we put that into one vial, that becomes the pool. We test that in the system. If there is a positive pool that lights up, we then go back to the original samples from the student that are held in a refrigerator at that point and then put them in for what we call a de-convolution process or individual sample testing. This is how we do it at the volume we need to do. [refers to slide] So as I think Kyle mentioned, we're currently doing about 2,200 samples per day, five days a week. So the samples come over from the test sites to our laboratory, they're all barcoded, we have a robot at the Vaccine Institute that we repositioned to support this program. It can take 1,500 samples and convert them into pools of five within about a three hour period. Those samples then come over into my laboratory. We're using a Qiagen robot-assisted PCR process. It is a two-step PCR process so it's slower. We do the testing. If there is a negative result then there is no more follow-up. If it is a positive pool we come back, we de-convolute the pool, and then we partner with our clinical laboratories, so that sample goes over and it's run in the clinical laboratory. A result is then generated and then from that result that is generated, we have a medically actionable result. It goes back to Student Health electronically or if it's a faculty or staff member it goes back to Employee Health. And then that is what would trigger contact to the individual or contact tracing, all the other appropriate follow-ups that need to be done based on a positive. So the important point here is that the pool testing that we're doing,

surveillance testing and pool testing are not considered diagnostic in itself. But we are operating in a highly regulated environment being CAP and being CLIA. We're able to set standards for that process. We're able to assure the custody of the sample, that it has good quality. We then we can take that sample, de-convolute it, send it into the laboratory, and then that is handled in the same way as the symptomatic sample that was coming from Student Health, Employee Health, or one of the test centers set up around a dorm as part of the health system. So at the end of the day, through either process we have actionable results.

How did we scale up? Well, we were able to order additional equipment and our platforms that we use for automated PCR extraction and our automated equipment. So what you can see here, one platform on the top, you would be able to get 320 individual samples in a twelve hour period. [refers to slide] We basically have five platforms running in parallel. We run the laboratory currently at three shifts a day, five days a week, and with a Saturday day coverage to finish up the late afternoon samples that come in on Friday. We have a total capacity at this point of about 3,200 per day. We've tried to stay below that in what we do because we want to have some redundancy if we have equipment failure, that we're not out of the day of function. We have some backup capacity there. We don't have as much backup capacity as we would love to but we were able to get through this semester I think with only one weekend that we had some challenges where we were just working instruments too hard.

Quality control. We do a lot of QC. We have standards that we measure and QC reagents with every run that we do. Typically for PCR-driven viral load type of assays, a half log variability is considered extremely good and tight. This is some data over 171 runs that we've done. [refers to slide] You can see it's clustering very well. What we look for, if we have two consecutive or three consecutive

days of an outlier, then that becomes something that we have to start looking at root cause analysis and say, do we have any issues with reagents? But basically the point here is that the assay has been performing very well over time.

The comprehensive plan. Steve talked about it, the modeling and who is part of the test pool for the day. You know about the SymMon app that students are notified [through]. That app is used to barcode the sample as it comes into our laboratory. It comes in, it's pooled, we do the testing, if it has to be de-convoluted in clinical testing, that's done, and then that goes off to the Student Health or Employee Health for contact tracing. I get a lot of questions about sensitivity and specificity. I want to call your attention to sensitivity and specificity rates here. [refers to slide] we've been monitoring this over time. When you do surveillance testing, what you want to have is an assay that is as sensitive as you can. What we're doing is almost a two-part process. So you want a very sensitive assay that may pick up and give you some false positives, that you then go on and use a confirmatory test such as what we're doing in the clinical testing process to resolve that. So the system that we've developed, we have, if you will, weighted this to getting any little signal and make sure that we're picking that up and then taking it through the process. As we go through these day-to-days, there are numbers, and we've talked about setting thresholds, or where would you not de-convolute a pool. Well I can tell you, if I remember correctly, we had a pool that came up that had one copy that we detected in this assay and under most systems people would say throw it away, don't pay attention to that, it's noise. Well, we de-convoluted it, put it through the system, and in fact that developed a positive individual that then went on to be contact traced and part of the system. So it's our feeling, and I think for the CDC, it reviewed all this, as Don mentioned earlier, you make it through this MMWR process standing, it's a good feeling. And I

think they've confirmed that we have a system in place that is meeting the needs of the Duke community and I think there's some take-home messages that parts of it can be exported to other groups that may want to try to reproduce it. I'd be happy to take any questions on the process. Thank you all for supporting the program and helping to keep the campus safe this semester.

**Haynie:** Thank you both for that.

**Craig Henriquez (Biomedical Engineering):** I have a question about how many of the positive cases have been identified using the SymMon app.

**Denny:** Independent of testing?

**Henriquez:** Yes.

**Denny:** I would not have that information. That would come through Student Health, maybe, or other groups.

**Cavanaugh:** It's been a relatively small number that has gone through a process like this where we've had someone who's reported symptoms that then we don't go through surveillance testing, we're immediately getting them in for clinical testing, and that's been the smaller number of positives that we've had through this semester.

**Denny:** The other point I would mention, I didn't focus on but it's in the MMWR article, about 51 percent of the positives that we picked up in our testing program were truly asymptomatic when they were reached and contact traced, they had zero symptoms.

**Haase:** That's fully consistent for this age cohort with what other studies have been showing and one of the really important parts about doing asymptomatic surveillance testing is that there is such a high potential for transmission that's asymptomatic.

**Haynie:** Great. Thank you both and I think you mentioned, John Harer in the Math Department is part of your group as well who's been one of the principles and we want to thank him as well, and everyone who's contributed. Let me just alert Council that we are going to go over today about ten minutes.

***CLOSING REMARKS FROM THE CHAIR /  
RECOGNITION OF EVP TALLMAN TRASK III***

**Haynie:** This last item on the agenda is something that is quite important and it's listed as comments from the Chair. What I want to do is, my comments will be to recognize Executive Vice President Tallman Trask, who is attending his last Academic Council meeting as a university officer. I'm sure you all know that Tallman is retiring from Duke at the end of this calendar year after 25 years of service. Tallman, by our calculations, we estimate that this Council meeting is roughly your 200<sup>th</sup> meeting. Tallman has served three university Presidents in his tenure here at Duke: Nan Keohane who hired him from the University of Washington in 1995, Richard Brodhead, and now of course Vince Price. He will retire as the longest serving Chief Financial and Administrative Officer in the history of our university. Tallman has been a great partner to the faculty over his time here at the university. One example of that is that when West Union was being renovated and it was under discussion where the Academic Council office would be, we had been there for about 30 years in West Union Tower. Tallman was the driving force behind the decision to have the Academic Council office remain somewhere on West Campus. And as you know, this is prime real estate and people go to war over space on West Campus. But Tallman ensured that we had space on West Campus. If you came to the open house that was held in December of 2018 in the new Council offices in Flowers Building, you saw the space and you know that it's really a wonderful space. I sometimes joke with Vince that the view from the Chair's office is better than the view from the President's office.

Vince, don't get any ideas, we recently signed a long-term lease with Tallman, a 200-year lease for that space, one year for each of the meetings he has attended at Academic Council. So that's going to remain Academic Council space.

Tallman has been a wonderful partner with the faculty on a number of different fronts. Some of you have heard me say that he's been a champion for the benefits package, the tuition package, and making sure that those who need to understand, understand how that works and the value of those to us and the university. Perhaps what's unique about Tallman among his peers is that whenever there is a project, say Duke is going to do a building project or a major renovation, Tallman has been guided by this mantra: how will it serve our core academic purpose? He begins with the question and he ends with that question in the planning stages and as things are being done. How will it serve our core academic purpose? Those of you who served on ECAC or UPC over the years know Tallman leads with the academic mission of the university whenever there's a project to be done. Tallman, thank you, best wishes for whatever is coming next. And now I'm going to call on Don Taylor, a former Chair of the Academic Council, to say a few words.

**Taylor:** Hey, Tallman, congratulations, good to see you. I know you, me and Kerry had a lunch scheduled late last March that got canceled, so we need to get that back on once we are through the pandemic. When I first met you about a decade ago, I knew you of reputation, and so I was joining the UPC committee and I was uncertain about what I was going to find. And what I found was a leader who, if a faculty member was willing to dig in and try to learn and understand the finances of the university, that you were willing to teach and help and answer questions directly. And so I've always appreciated that. I know, with Kyle Cavanaugh and Tim Walsh, they also had that ethic of being very open with the faculty and I know that that, in large part, came from you.

That was your willingness and understanding of wanting the faculty to join with the administration and understanding the finances. The last thing I would say is, Kerry is so right. Tallman, I think, is very unusual and there are not very many people or faculty who understand the degree to which he takes financial acumen, but an acknowledgement and an understanding that a university is a super weird enterprise. It has to be thought of as a business in some ways but in other ways every product line we have loses money. And that's because we're trying to do something that's good for society as a whole. And Tallman, I think, through good times and bad times, always said here's the money, here's the academic mission, they've got to be put together. So I really appreciate that and I would just say peace, blessings, and Godspeed in retirement, Tallman.

**Price:** Thank you, Kerry, and on behalf of the administrative leadership team I want to echo your appreciation of Tallman and second Don's remarks. In a quarter of a century of service at Duke, Tallman has transformed the university. In fact it's hard, maybe impossible, to find a space on our campus where his hand has not shaped our experience at Duke. He is probably the only executive vice president in higher education who is a member of the American Institute of Architects. But his most profound mark has been less on our buildings than on our people. As Don said, he has hired and mentored an extraordinary leadership team. He's always kept our academic mission foremost in everything that he's done and he's been a fabulous partner to me as he has to two Presidents who preceded me, and supports our leadership team, including the Provost and the Chancellor for Health Affairs, enormously well. I'll be personally forever grateful for the three and a half years that we've been working together and for all he's done for our University. So we will have some other occasions to celebrate Tallman when Covid permits us to be together in person, but again, Tallman, from the bottom of our hearts, thank you so very much.

**Tallman Trask III (Executive Vice President):** I thank you all very much for those comments. It's been a magical 25 years for me. As I said to someone, before Nan called me up out of the blue, if you had asked me where was Duke, I couldn't have told you. I took a gamble and am forever grateful I did. It's been a wonderful place, primarily because of its people. So thank you very much.

**Haynie:** Thank you, Tallman.

***RESULTS OF THE VOTE ON PROPOSED REVISIONS TO DUKE'S DATA LICENSING POLICY***

**Haynie:** Before we adjourn, let me announce the vote. The policy changes passed with just two abstentions.

But Tallman, thank you, good luck, and I want to be on that invitation list whatever the celebration is when we are able to gather. Would the Council, before we adjourn, join me in giving Tallman a round of applause with gratitude? [Applause] Thank you so much. With that, we are adjourned until January 21<sup>st</sup> when we return for our next meeting. Have a safe break, a safe holiday period, enjoy Thanksgiving in small numbers, very small numbers, enjoy the rest of the holidays. Get some rest, please, everyone. Kyle, get some sleep, unplug, everyone please get some rest and come back safely and well-rested in January.