

VDH COVID Partner Call
Friday, April 30, 2021

- **Introduction/Vaccination Unit Update, Suzi Silverstein, VDH Office of Emergency Preparedness:**
 - <https://www.vdh.virginia.gov/coronavirus/covid-19-in-virginia/>
 - Thank you and welcome everybody to the Partner Call on Friday, April 30th. As usual, I'll begin with case counts. We have 659,590 cases in Virginia. Deaths were at 10,770. We have 43.9% of the population or 57% of the adult population that have received at least one dose of vaccine, and 29.9% are fully vaccinated. That works out to just over 6 million doses that have been administered so far in Virginia. Our ICU occupancy is at 80% and ventilator use at 29%.
 - First I want to share that the CDC updated its guidance on April 28th on what people can do when they're fully vaccinated. Fully vaccinated is two weeks after their final vaccine dose. And what they're saying is people no longer need to wear masks outdoors if they're fully vaccinated. So, the Governor amended Executive Order 72 yesterday afternoon and aligned the mask requirements in Virginia with the CDC guidance.
 - In addition, the Governor also revised Executive Order 72 to allow for up to 1,000 spectators for outdoor recreational sports. And this is effective immediately. Originally it was scheduled to go into effect May 15th, but by moving it up early, it allows spectators to participate in the final games of the current high school sports season and some of the summer sports season.
 - The Governor is still moving forward with the other previously announced changes, and those include increasing social gatherings indoors from 50 to 100, indoor entertainment and public amusement venues able to operate at 50% or 1,000 people, recreational sporting events indoor will be able to increase from 100 to 250, and alcohol sales, restaurants can resume selling alcohol after midnight and dining room closures will no longer be required between midnight and 5:00 a.m. So, those are the changes that are going to go into effect on May 15th. So, back to vaccination.
 - Everyone in Virginia that's age 16 or older is eligible to be vaccinated. Everybody that had preregistered in Phase 1 has been contacted already and offered a vaccine. Not everybody has got one yet, and we're still giving priority to those folks to get vaccine appointments, but Phase 2, or everybody is now eligible to get the vaccine. So, we encourage people to either call 877-VAXINVA or go to [vaccinate.virginia.gov](https://www.vdh.virginia.gov) to schedule an appointment.
 - Another thing that is new since our last call is Virginia has resumed the use of the Johnson & Johnson vaccine following recommendations from CDC. The pause is no longer in effect. Another thing that's happening is we are expecting vaccine approval for ages 12 and up some time in May. So we're working on plans in Virginia to vaccinate this age group, so we're just waiting for the approvals and recommendations, and we hope to be ready to go when they come through.
 - The last thing that I want to share is a bot or a virtual assistant that we have on the Vaccinate Virginia web page, and it's also on a lot of local health department pages. So when you logon, you get a little pop-up box, and it says, "Hi, I'm the Virginia Virtual Assistant." And it can answer a lot of general questions for people so they don't have to wait to talk to someone. They can just type in their question and get an answer. And we're

finding that people are getting their answers about 80% of the time, which is pretty good. Most of the calls we get are during the day, so if it can't be answered, the caller is referred over to the call center to get their question answered. And we have that in both English and in Spanish.

- **Variant Update, Dr. Brandy Darby, VDH:**

- There's a new variant classification scheme that's now in place since the last time I spoke on this call. And we can also talk a little bit about what we know about the risks that are posed by particular variants of concern that we're monitoring. And then I've also got some updates on what we know about the variants here in Virginia.
- For those of you following along with the slide deck, I'm on Slide 3. For those of you just dialed in on the phone, totally fine. We'll take our time and just talk through these things. So, the Variant Classification Scheme is a U.S. Government interagency group that worked together to develop this scheme. And what they did is they defined three different levels of variants that we're monitoring.
- It's easy to hear a lot in the news about very specific viral mutations that happen and whether or not that's associated with something that might be concerning or not can easily get confusing, and even just looking at the different variant lineages, you know. Part of what viruses do are they mutate and they change constantly over time. And which of these changes that we're seeing are ones that we really need to be paying attention to because they're concerning, versus other just kind of natural changes that are happening in that viral genome?
- What this classification scheme did is it's got now three levels of these variants. So these variants can be classified now as variants of interest, variants of concern, or as variants of high consequence. And we'll go through each of these in turn. So, starting with the variants of interest. These are variants with some genetic markers that may have been associated with changes that we could find concerning. And these might be changes to the way that the virus is able to attach to the host cell. They might impact the level of immune protection that people have after vaccination or after previous infection. These changes might reduce the efficacy of different antibody therapies that we have available. They could potentially impact the ability of diagnostic tests to be able to detect the virus in people who are infected. And it could potentially change the level of transmissibility of that virus person to person, or perhaps, the level of severity of disease that people experienced.
- So, kind of wrapping all of that up in a nutshell, we have some evidence that we would maybe be concerned about these but not enough to, like, get overly cautious yet. And we right now have four variants of interest that have been identified. And I don't think reading out kind of the numbers there helps people much, because it just kind of gets scrambled in your brain, but just know there are four variants of interest that we're currently monitoring.
- Where I really want to focus our time today is talking about variants of concern. So, with the variants of interest, we have some evidence that there could be an association, whereas with the variants of concern, these are variants for which we have good evidence that they have attributes that are, indeed, concerning. And these could be concerning on a number of levels. So, this could be a change in transmissibility of the virus. It could be that they have the potential to cause more severe illness. It could be concerning because

there is reduced immune protection after vaccination or creates infection. They could reduce the efficacy of antibody therapies. Or they could lead to diagnostic detection failures. And just to be clear, to be categorized as a variant of concern -- you know, I listed off all of these traits that we use to tell us if a variant is concerning or not, and to be a variant of concern, you do not have to check all of those boxes.

- You could be listed as a variant of concern because you just checked one or two of those criteria. So, there are currently five variants of concern that we're monitoring, and we'll go through each of these in turn. The first variant of concern that I'm sure all of you have heard about in the news is the B. 1.1.7 variant, and this is the one that was initially identified in the United Kingdom in November of 2020.
- We know that this variant spreads more quickly and easily than other variants, and it's estimated to spread -- estimated to be about 50% more transmissible than previous versions of the SARS-CoV-2 virus that we were seeing. We do have some evidence that B.1.1.7 is associated with an increased risk of hospitalization and death. We are aware of at least three reports that B.1.1.7 is associated with an increased risk for severe illness. There have been a couple of reports that when they run the analysis have not found an association with increased illness.
- Definitely some mixed evidence and more to learn through further study there. However, it's important to recognize that while B.1.1.7 might be associated with an increased risk for severe illness, the absolute risk of death per infection remains low. And then this is a variant that we were monitoring very closely earlier this year because we thought that that might go ahead and become the dominant strain in the U.S. soon, and it is now the dominant strain that we are seeing here at home. The second variant of concern is B.1.351, and this is the variant that was first identified in South Africa in October 2020. Just like B.1.1.7, this variant does spread more quickly and easily and is also estimated to be about 50% more transmissible than other variants.
- There are some studies that suggest that the antibodies generated through either vaccination or natural infection might provide reduced protection against B.1.351. And just to be clear, what that means is not that our vaccines are ineffective. We do believe that the vaccines available for use in the U.S. will continue to protect the American public from the currently circulating variant strains. It just means that perhaps the level of protection afforded against B.1.351 might not be as robust as we see with other variants. And to date, there is no evidence that B.1.351 causes more severe illness, but of course, that's something we're continuing to monitor.
- The third variant of concern is P.1. This is the one that was first identified in travelers who were coming from Brazil, and it was actually identified when they arrived in Japan in January of this year. And this variant also spreads more quickly and easily than other variants. We do need some additional study to see how much more transmissible this particular variant might be. Just like with B.1.351, there is some evidence that perhaps the level of antibody protection afforded through vaccination or natural infection might not be quite as robust against P.1 as it is with other variants, but again, that's something we're monitoring.
- It's important to note that we feel like all available vaccines are going to keep us protected against these variants at this time. And to date, there is no evidence that P.1 is associated with more serious illness. And then the last two variants of concern I'm going to talk about together because they're very similar. So, these variants are B.1.427 and B.1.429, and they both first were identified in California and share many similar

mutations and characteristics. Both of these variants spread more quickly and easily. They're about 20% more transmissible than other variants. You know, that increased transmissibility is important for us, because if we end up with more cases of illness, then that can lead to more people who need to seek medical care and potentially more hospitalizations and deaths.

- We don't want to be overwhelming the system, so we do want to keep a close eye on these particular variants that spread more easily. These two variants, there's preliminary data to show that they might be associated with an increased risk for serious illness. And these particular variants are just very, very common. They've been identified in pretty much every state in the U.S. at this point in time.
- Given how common they are, these variants are not reportable to the CDC when they are identified. And then the last category that I mentioned to you at the start of the call and on the variant classification scheme are these variants of high consequence. And so, these are variants for which we would have very clear evidence that our existing prevention measures or medical countermeasures have significantly reduced effectiveness against these variants.
- To be clear, there are currently no SARS-CoV-2 variants that rise to the level of being categorized as variants of high consequence, but this interagency group was very forward thinking, and they created this category, in case that was ever needed in the future, because a variant of high consequence would massively change the game for us with our response efforts.
- Going forward to look at what we know about variants in Virginia. We've been spending a lot of time in conversation looking at what are the best ways we can present the data that we do have about variants for people. So you can see what we know. And we have a new variant dashboard that we launched last week Friday, and I've got the link to that dashboard in the slide set.
- This dashboard will be updated weekly on Fridays. And so, a couple of things to note about the data when it comes to variants. One is that, you know, just because a person tests positive for COVID-19 doesn't mean that that sample is necessarily going to go through the process of whole genome sequencing to be able to identify what variant type it is.
- The U.S. just didn't have the capacity and the resources to be able to do a lot of genomic surveillance earlier on, although there's a lot of funding and resources coming to states to expand our capabilities in this area now. And two, some samples are just not of a high enough quality. There's not enough of a viral load within that sample to be able to produce meaningful results, if it was to undergo whole genome sequencing. So, there's a subset of samples that we sequenced. Our state public health lab DCLS sequences at least 10% of their positive samples, and then they also reach out and request 1% of positive samples from other private labs, and they also -- there's a particular pattern that can be seen with some PCR tests called an S-gene dropout.
- We think there's a potential that sample could be B.1.1.7, the one first identified in the UK. So they ask that labs who see that particular pattern on PCR testing also forward those samples for whole genome sequencing. And then in addition to those genomic surveillance efforts, here at VDH, if they ever see a particular event here on the ground that's concerning, they can request that those samples be sequenced as well, to tell whether or not there is a variant at play.

- I put a snippet screen shot of the dashboard here into the slide, and it will show you the total number of infections that have been identified with variants of concern in Virginia as well as the total number of hospitalizations and deaths known to be associated with those variant cases. And you can kind of toggle between looking at this on a health district level or as a regional level here in Virginia. And then there's a nice little kind of table underneath the map that will break down for each health district how many of those variant infections were each type, each variant of concern.
 - The CDC also has a website where they look at the proportions of variants that we're seeing. So, it's hard for us to capture with so many different labs helping with sequencing efforts what the denominator data is for the total number of positive samples that are being sequenced. So, what Virginia does is they take the available data that they've got and kind of break that into the proportions of variants that we see.
 - The latest CDC data that was posted to their website was for a four-week period that ended on April 10th. And when they looked at all of the samples that were sequenced for Virginia residents over that four-week period, they found that more than half, so 53.3%, were B.1.1.7. A little over 2% were B.1.351. Less than 1% of samples were P.1 variant. 6% of samples were B.1.427 or B.1.429. And 37.9% were other viral lineages that are not variants of concern. And then the last couple of slides are just kind of links to various VDH and CDC resources for additional information about the variants.
- **Modeling Update, Justin Crow VDH Office of Social Epidemiology:**
 - I'll go ahead through the slides and let you know when I'm moving ahead. To Slide 2, the COVID background. It's the model background, by the UVA Bio Complexity Institute. It thrives on more and better data, and we keep getting that, but things keep changing, as Brandy was talking about, with the variants, that we're still feeling our way in a lot of those areas.
 - Nationally, things are looking promising, more promising than they did a couple weeks ago. We only have two states in the surge trajectory, and both states look like they've turned the corner a bit, so that's Maine and Puerto Rico. Territory. Look like they've turned the corner and will hopefully move out of that surge scenario within the next few days or a week. Every other state is in decline or a plateau.
 - However, next slide, showing our neighboring states. We're still in most states at very high levels of case rates. In Virginia, we're hovering between that 13 and 17 cases per 100,000 on average per week.
 - Our neighbors all have high caseloads as well, from about 10 to 20 per 100,000. And then West Virginia has a high case load of just over 20 cases per 100,000 per day. Average for the week. And West Virginia's also kind of lagging now after a strong start with their vaccine rollout, is beginning to lag behind in their vaccination rates. So, the next slide. Throughout Virginia, the situation has really improved over the past couple of weeks.
 - Currently, 85% of counties have fewer than 20 cases per 100,000. And 41% have fewer than ten cases per 100,000. We do see some hotspots, particularly down, you know, near Southwest Virginia. And Caroline County is having a hotspot.
 - I'll talk a little bit more about that later. But for the most part, you know, it's a few hotspots every now and then, but generally declining rates throughout Virginia. The next slide shows basically the risk of exposure by group size. As you might imagine, it kind of follows the map on the previous page. You see down there, it looks like around 150 to

175 persons. That group size, we would expect that there's a 50% chance that at least one person is infected in that group size. If you look at Caroline County, it's, you know, much lower, group size of about 30, we would expect about 50% chance that one or more people would be infected in that group size. And you can see here this highlights the top ten zip codes, and you can see four of those are in Caroline County and a few more up in Northwest Virginia there. So, not quite sure what's going on in Caroline County.

- A few weeks ago, we saw a very high rate of cases among health care professionals in that area, so it might be associated with that. But without doing further research, we wouldn't be able to confirm that. So, the next slide just looking at our health districts in surge. The map is a little different.
- You see where Caroline is, Rappahannock is in a surge trajectory. Allegheny local health district's also in a surge trajectory. Then we have a 2 in slow growth trajectories, but every other local health district is either in plateau or declining, and that includes 22 and declining, which is good news.
- The next slide looking at our transmission rates. As you might expect, the transmission rates are below one in every region of Virginia. This has been a little sustained at that rate for the past couple of weeks, and we continue to see a decline, so we're pleased about that as well. In the age of variants and vaccines, we still track our usual methods to contain Coronavirus.
- We're tracking the days from symptom onset to diagnosis. It continues to creep down, so that indicates an availability of testing and turnaround time. So it was at 6.2 days last July, on average. Now we're down to 3.2 days, so about half of that. And of course, I'm sure you're all aware that our vaccine rollout has really picked up over the past several weeks.
- Currently, we're approach 'still not there yet, 50% of the population with at least one dose. Vaccine. This includes more than 78% of people over the age of 70, are at least partially vaccinated. And I believe around 71% from age 60 to 69. So, that group is getting close to saturation.
- We're still, of course, trying to get everyone vaccinated. I know there's a program now to focus on homebound folks. So, hopefully, those numbers will continue to go up. But we are seeing a reduction in the share of people in those age groups hospitalized. So, the share of people within that are being hospitalized continues to trend downward in age group.
- Vaccine acceptance or vaccine hesitancy is on everyone's mind. There's not too, too much data available at that. We're still trying to find good data and good ways to measure that. However, we have a few surveys that the UVA team is leveraging to make estimates. So, you can see here it varies quite widely throughout Virginia.
- In the northern Virginia region, it's close to 90% of vaccine acceptance. And these are people who we generally expect would get the vaccine once it's available without too much convincing, is a good way to kind of think about that. Eastern Virginia and the near Southwest are much lower, below 50%, we expect for that to happen.
- The next slide looks at population immunity and takes that into account and also takes into account the speed of the vaccine rollout. Administrations within each of our regions. So, this map is kind of odd. If you look at the colors, that is reverse to the date. So, the bright red is October 2021, and the light orange here is June 2021.
- What you're looking at is when the bars go out to when we would expect vaccine hesitancy to kind of affect our vaccine administration. So, if everyone who had a vaccine

wanted one, where would we stop at? So, you can see in northern, we get up to close to 100%, and this is for the adult population. And it also includes estimates of natural immunity due to previous infection as well. So, in Northern Virginia, we expect to be close to 100% by July. But if you look at far southwest Virginia or even Central Virginia, we would expect to hit a wall, you know, in October, but at a much lower rate, maybe about 65% of the population would have some protection from COVID. So, a lot of variation in what we would expect.

- We talk about herd immunity. A synonym is community immunity, and I started using that to emphasize the fact that a herd immunity is really a community-level achievement. Brandy mentioned the variants. I believe she showed a similar chart to this or perhaps the exact same one, but I want to point out just how quickly the variants can spread. If you see the B.1.1.7, on February 13th, the two weeks prior to February 13th, it was really just starting to take hold here in the United States. Just a short two months later, it was the dominant variant within the United States. So, B.1.1.7 is there now, but you do have to watch out for the other variants.
- I think it makes sense that once a greater proportion of the population is vaccinated that there's ones that have some vaccine escape will become more equipped and could become more common as well. Of course, everyone's watching that closely. So, onto the model projections. The UVA team is modeling three scenarios. So, one is what we're calling the adaptive-dominant B117. It's similar to the one before, it shows the current course of the pandemic, but it accepts the fact that B.1.1.7 and the transmission rate associated with that is becoming dominant.
- The other one is what we called the Adaptive-Best Past-Dominant B 117. That shows that if we became as vigilant as at any point during the pandemic, what effect would that have on transmission? Then we have the Adaptive-Fatigue Control-Dominant B117, which shows the opposite. If we became as less vigilant as we have been at any point in the pandemic, what would happen in that case? And of course, included that B.1.1.7 being dominant. So, next slide just showing what the B.1.1.7 Dominant-adaptive would look like.
- In that case, we've already hit our peak and we are still above summer levels, but it looks like we're starting a decline. We talked about the race between variants and vaccines. Our modeling has shown consistently that if we maintain our vigilance, keep wearing masks, keep up our social distancing, that the transmission rate associated with B.1.1.7 won't outrace our vaccination campaign, so that's good news. This next slide just shows the deviations from the model's expectations that kind of lets us know which counties are going off trend.
- Nothing really stands out here except for Caroline is that hotspot area. And then the next slide shows that fatigue control plus dominant B.1.1.7. You can see if we do relax our vigilance, we have a peak higher than what we had in winter. And I want to point out that they used rates that occurred over the summer.
- This would be a summertime estimate with B.1.1.7. I think this is consistent with what we've seen in other countries with these increased transmission variants, would loosen restrictions, particularly the United Kingdom. But the reason this happens is because the variant increases transmission rates, and it results in basically exponential growth if you add that on to the fatigue control.
- If the transmission rate is above 1 and you increase it by 40% that results in exponential growth, obviously. So, it could get very high, very fast, if we are not vigilant. So, just

slide just sums up the projections. We are as of the week ending April 25th, 17 cases per 100,000 in Virginia. If we hit that fatigue control scenario, we'll end up at 77 per 100,000 cases. We are still well above our peak of 13 cases per 100,000 from last summer, on the week ending August 2nd. And our highest peak so far, looking back, was 68 per 100,000. So good comparisons there. Even with the fatigue control plus B.1.1.7, we don't expect hospital capacity to be exceeded in any region of the state within the modeling projection area, so, that says a lot about, you know, lowering those hospitalizations by age group, and of course, the capacity work that we've done.

- Throughout the state, that you all have done. I do want to point out that the modeling unit has begun doing a Thursday update. So, this is presentations from RAND and the UVA bio-complexity institute talking about their work.

- **Question & Answer Session:**

- **QUESTION BROOKE:** I have two questions for the group. The first question is, with the ongoing vaccination campaign and as far as modeling goes, is there thought that with vaccination that with selective pressure, basically, the ongoing vaccination will select out variants that are resistant or can escape vaccination? And is that built into the model? That's the first question. The second question is, I see that the model goes to July. And we know that there's seasonality in the way coronaviruses, you know, when they appear. Is there thought about what's likely to happen for, say, the fall of 2021 or the winter of 2021 as we see more respiratory viruses sort of appear in general? Thanks.

- **RESPONSE: JUSTIN CROW:** Yes. So, I'd say that, this isn't really my area of expertise and what I know about the variants and what we're expecting is just from discussions with people who are, and particularly, the modeling team as well. And we are discussing the fact that as vaccines become, you know, more common, more prevalent, that the ones that are able to escape vaccine immunity or even natural immunity, you know, those variants will become more fit, and they are likely to become more common.
- So, that's what we're thinking about. I mean, the good news is the vaccines do seem to offer a great deal of protection, even, even to many or most of these variants. I'm not an expert on that. Brandy could probably talk about that. The second thing is the seasonality.
- Yes, we're aware of the seasonality. The model does take into account. They leverage transmission rates that we saw last summer, for the most part, in each of these scenarios so they don't use transmission rates from the winter months. And then, of course, COVID has shown to be seasonal, and we saw that, you know, last winter when we combined that with the holiday travel and gatherings, or at least what we think was caused by the holiday travel and gatherings on top of that. It can have a very big impact. And once that holiday travel stopped, we did see less mobility.
- So, following the Google on the phone, Apple Phone Mobility Reports, we did see mobility kind of drop off pretty quickly after the holidays, and we saw a quick decline in cases, too, which surprised many of us. So, something to keep in mind that there's two factors at work there, is the weather, the seasonality, and the holidays.

- **BROOKE:** Thank you.
 - **RESPONSE-BRANDY DARBY:** And this is Brandy. I can add on there, as far as the variants go and the pressure for selected variants over time. I mean, we do think that we're going to get good levels of protection against all of the circulating variants with our current vaccination strain, and we do expect some level of vaccine breakthrough, even with nonvariant of concern lineages as SARS-CoV-2. And I think there are people way smarter than me who are already forward thinking about this, and we've been looking at ways to potentially adapt or create boosters for these vaccines over time that will continue to keep people protected.
- **QUESTION: Steve Lambert:** Thank you. If it's been published, I apologize, but is there a -- I know the Governor expects to open things up a bit more in June with regard to requirements or restrictions. Is the calculus or what his decision matrix knowable? In other words, is there a threshold of the number of vaccines or are there a number of other variables that is in that decision? And this is for planning purposes. And that's question number one. My second question is, is there any movement on a vaccine passport for Virginia?
 - **RESPONSE: SUZI SILVERSTEIN:** This is Suzi. For question one, the only thing that's been published out of the governor's office is he expects to roll back remaining capacity limits in mid-June, as long as the commonwealth's health metrics remain stable and vaccination progress continues. So, they haven't really defined what that is for us, so I think it's just, you know, we're going to have to wait and see for that. And I have not heard anything about a passport for Virginia. Have any of the other speakers?
 - **RESPONSE: JUSTIN CROW:** I have not.
 - **RESPONSE: BRANDY DARBY:** This is Brandy again. It's certainly been brought up as a question several times, and I think it's something that's being discussed. But as far as, like, whether or not that's actually going to happen, I haven't heard any decision points whatsoever. So, I'm not sure that we're the best people to answer that question.
 - **RESPONSE: SUZI SILVERSTEIN:** Yeah, I think it's still in the policy group for discussion.
- **Closing Suzi Silverstein, VDH Office of Emergency Preparedness**
 - If there's no further questions, we'll go ahead and start wrapping up the call. I just want to let everybody know that starting in May, we're going to be going to just two calls a month. We're going to go May 7th and May 21st. And then we will re-evaluate and decide how we're going to proceed in June when we see how things go in May.
 - As always, if you have any comments, suggestions for these calls, please let me know. If you have any special topics you'd like to be addressed on the call, email me, Suzi Silverstein. And we can find the speakers to join us. Thank you all very much for your participation today. Hope you have a wonderful weekend. And this will conclude our call.