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Risha Gidwani: Hi everybody. Thanks for attending our Cyberseminar today. I am Risha Gidwani. I am one of the health economists here at the VA Health Economics Resource Center. It is my great pleasure to introduce Dr. Julia Prentice. She will be giving our Cyberseminar today. She comes to us as the Director of the Healthcare Financing & Economics Group at the VA Boston Healthcare System. She is also a faculty member at the Boston University School of Medicine as well as the Boston University School of Public Health.

In addition, she is co-principal investigator of the Partnered Evidence Based Resource Center that provides timely and rigorous data analysis that supports the development of high priority policy, planning, and management initiatives; as well as randomized program evaluations within VA. Dr. Prentice's research specializes in identifying the causal effects between access to care, medication options, quality metrics, and long-term patient level health outcomes. Dr. Prentice, can I turn it over to you?

Julia Prentice: Yes. Thank you. Okay. Good. I am Julia Prentice. I am here virtually to talk about our validation work of administrative access metrics in the VA that we have done over the years. As many of you are aware, ensuring access to care is probably the most critical issue that the agency is currently facing. I am just going to…. How do I.? There we go.

The access crisis of 2014, led to significant transformations in the VA. As a result of that\_\_\_\_\_ [00:01:40] crisis, the Choice Act was passed, which was allowing Veterans to go outside of the VA for their care. As well, there have been major initiatives on access such as the myVA Access Initiative that is aiming to provide a same day primary care and mental health access when medically necessary at all of the facilities.

These policies are going to require a comprehensive access definition that moves beyond face to face wait times for face to face encounters. It focuses more heavily on virtual health; and as well, it's going to require a significant focus on clinical practice transformation. For example, there is an initiative right now to implement nationally group practice manager model. These staff are focusing on monitoring outpatient care and access to outpatient care at all of the facilities nationwide. As we are rolling out all of these policies and programs, it raises the question of whether or not…. How do we that progress is being made?

The first\_\_\_\_\_ [00:02:47] what we know whether or not progress is being made is we need to have validated access metrics. Better access should increase both Veteran satisfaction and improve their health. In our previous work we have found a couple of metrics that is exactly that. Specifically, we have validated what we call the new patient create date metrics; which is really most relevant for new patients and primary care.

We have also validated a consult wait time metric, which is more relevant for returning patients and specialty care. We know that some administrative access metrics do in fact predict self-reported Veteran satisfaction and health outcomes. But the metrics we have are limited to a smaller population of Veterans. We need a validated metric that will reach a wider population of Veterans; for example, returning patients in primary care.

 One of the metrics that has been talked about frequently is the third next available appointment. Today, I'm going to be talking about the validation work we have done on third next available appointments. As well, as I said, as we are rolling out these new access initiatives, there's a large focus on moving beyond wait times for face to face encounters, and increasing virtual telehealth throughout the system. I am also going to talk about some validation work we have done on telephone metrics; and whether or not that impacts satisfaction with care.

I am going to start with our previous access metric validation work to give you an overview of the approach that we used; and to give you a sense of the results on new patient create dates and consult wait times. In all of this work, we are using the Survey of Healthcare Experiences of Patients, or the SHEP data. Essentially, Veterans visit facilities. They have a visit with the VA. Then, some of them are randomly selected to receive a follow-up survey that asks them a variety of questions about their satisfaction with VA care. They ask a variety of satisfaction questions.

From the SHEP survey, we are pulling out five different outcomes. The ability of the Veterans to get an appointment as soon as needed. Their ability to get test or treatments. Their ability to access VA specialists. Then, there are two more general satisfaction measures. They ask Veterans to rate their satisfaction with VA healthcare in the last 12 month; and to rate their satisfaction with VA care at the most recent visit.

All of these outcomes are dichotomized. We ended up writing logistic regression models to predict these outcomes. We controlled for standard individual facility risk adjusters that will control for case mix. For example, for individuals we are controlling for standard demographics and health status. Then we have controls in the models for facility level case mix.

As I said, the first metrics that we validated were new patient create date and consult wait times. Both of these metrics are really just the number of days between when an appointment is initiated in the system and an appointment gets completed. If an appointment is initiated in the system on January 1, 2015; and it is completed January 15th, they get the wait time of 15 days. The new patient create date focuses specifically on new patients. The standard definition for that is for patients that did not use that particular clinic stop in the previous 24 months. Consult wait times, not surprisingly, are really focused more on specialty care.

All of these administrative access metrics in our models are broken into quartiles because we wanted to look at the relationship throughout the distribution of the access metrics with satisfaction and how that might change. We also are using a lagged version. We use the lag to metric in the months before the previous – the SHEP response. The reason we do that is because Veterans are often contacting the system to obtain an appointment the months before they actually are able to get in for their appointment.

This slide here, I'm going to just walk you through the results to show you what we do. Because we are going to come back to this theme throughout the talk. Let me find my…. Okay. I am not sure what it did there.

Moderator: Your video card did not like that. Try going back to just a normal non-drawing mode.

Julia Prentice: Okay.

Moderator: There we go.

Julia Prentice: Can I…?

Moderator: We can give it another try.

Julia Prentice: \_\_\_\_\_ [00:07:53]. Can I try a pen? Well, let's try it. Okay.

Moderator: Yes. You have got a pen there.

Julia Prentice: Okay. Here is the pen. Across here, these are each of the five outcomes. Each column is an outcome; timely appointment, access to treatment, access to specialists, rating the VA in the last 12 months; and your satisfaction at the last visit. Let me go back to slide – okay. These are odds ratios. These numbers are odds ratios from the logistic regression models that are comparing Veterans who visit facilities in each of these categories with new patient create dates compared to the reference group of less than 15.6 days.

For example, Veterans who are visiting facilities where the new patient create date is between 15.6 and 17.5 days are 16 percent less likely to be satisfied in their ability to get an appointment as soon as they want compared to Veterans who are visiting facilities where the wait time is less than 15.6 days. The\_\_\_\_\_ [00:08:57] you can see, as the new patient create dates get longer, satisfaction decreases. Those Veterans who are visiting facilities where the new patient create date is more than 20 days are 34 percent less likely to report being able to obtain appointments as soon as they needed compared to those who are visiting facilities where the new patient create date is less than 15.6 days.

The other thing to note about these results is that there is this monotonic relationship between longer wait times and decreased satisfaction that is consistent among each of these outcomes. When we see relationships like that, we are fairly confident. This increases our confidence that this is a fairly valid measure of access because it is strongly related to satisfaction across several different outcomes. This slide gives – these are the results that we just saw for new patient create dates.

Down here are the results for our consult wait times; and again, focusing for example on timely appointments. You can see that those Veterans who are visiting facilities where the consult waits are between 23 to 27.1 days are about 15 percent less likely to report being able to get an appointment as soon as they wanted compared to those who are in the reference group of having visited facilities where the VA wait time is less than 23 days. Again, we see a very consistent pattern, which is one reason why still like consult wait times as a strong administrative access metric.

There is a monotonic decrease between longer wait times and decreased satisfaction across all five outcomes. The relationship is consistent. It's significant. Those two metrics are the ones that were most strongly validated in our previous work. But as I said, it is focused more on several specific populations within the Veterans. There has been an increased focus on developing a third next available appointment metric; which would be….

Risha Gidwani: \_\_\_\_\_ [00:11:06]. If you do not mind is whether for the results presented on the previous slide, what were the variables adjusted for in the regression?

Julia Prentice: We were controlling for individual risk adjusters such as demographics, health status, as well as facility random effects to control for case mix between facilities.

Risha Gidwani: In terms of the outcomes, the different categories of days, what were those informed by?

Julia Prentice: The outcomes, the satisfaction outcomes or the access metric out – or the\_\_\_\_\_ [00:11:51]….?

Risha Gidwani: I'm sorry. The different categories of the number of days of wait time; and those were put into I think four different categories?

Julia Prentice: Right. Those are just quartiles. It is just the data. We rely on the data to…. We just look at the distribution and split it into quartiles.

Risha Gidwani: Great, thank you.

Julia Prentice: Okay. The third next available appointment as I said, it might be a good metric for returning patients and primary care. The third next available appointment is widely used in the private sector. Any time in the rare cases, the wait times in the private sector are talked about, it's often a third next available appointment that is being used. That is being described. Because it is also seen as a standard in the private sector, for a long time, people have asked the VA to report as their next available appointment.

In August in 2015, VSSC started calculating and reporting a TNA metric. But there have always been concerns about how the VA scheduling system is set up and the reliability of TNA. The third next available appointment is the number of days between an appointment request date and the third open appointment in the scheduling system. It is a measure of available capacity. It is not rooted in patient experience or preferences. The Veteran may not want that third appointment that is actually available because it is not a good time for them. Or, because it is not a good day for them.

It also assumes that the scheduling system is accurately displaying capacity and open slots. But the concern with the VA scheduling system has always been that providers have multiple profiles in the scheduling system. Let's look at that a little bit further. Here is a simplified screenshot of profiles in the system. Provider one, so, the zeros mean that is a scheduled appointment. Ones are available slots. You can see provider one here only has one profile per day. It gives it a true measure of actual appointment availability.

However, a provider two has two profiles per day. Here on this Friday the 8th, if you're looking at this provider's first profile, their third next available appointment looks like it's here. But really, that provider is seeing a patient in their second profile. If you have multiple profiles, it may be overestimating availability. We knew multiple profiles were probably going to be problematic. But still, there was a lot of interest in TNA and validating it. We tried to link it to satisfaction. Now, as I said, VSSC started reporting a TNA metric in August of 2015. We had less than one year of data to link it to SHEP satisfaction data.

As I said with the SHEP data, it sometimes takes a while for the Veteran who will visit the VA's facility. Then they are randomly selected to receive SHEP. You have to contact the Veterans. You need to have the Veteran fill out the survey and return it. That process takes a little while. It takes a while for the satisfaction data to come in. Since we did not have enough of the satisfaction to validate the exact VSSC metric, we essentially ended up developing a different metric that should replicate the VSSC metric.

The VSSC metric looks through the third open slot in the schedule going forward. I am going to refer to that as a slot metric. It is real-time in nature. Our metric is actually historical in nature. I am referring to it as the appointment metric. But essentially, it comes along and looks at a certain time at each week at all appointments that were scheduled after that time. The third appointment that was scheduled after that time is used to calculate the TNA. If the scheduling system is accurate, these two metrics should be highly correlated. Because what the VSSC metric is looking for, the third open slot, it should be the third appointment that can get scheduled after a certain point in time.

The first thing we did was look to see the correlation between VSSC, the slot base and the appointment based metric. It was weaker than we would have liked. We found that multiple profiles are especially problematic. Among all providers, the correlation between our appointment based metric and the slot metric was 0.35. When you limit those to providers who only had a single profile, the correlation, it goes up to 0.39. But when you limit it to providers who have multiple profiles, the correlation drops to 0.28.

This started indicating multiple profiles were going to be a problem. We then looked to see how common multiple profiles were. It was fairly common. Among all providers, 42 percent of them had a multiple profile. It was more common in specialty care and those who are providing both primary and specialty care. If you only look at primary care providers who do not have any specialty care profiles, only 14 percent of them had multiple profiles. The strength as much as a strength of primary care mental health integration – as much of that is a strength behind that….

One of the issues may be that providers may feel that they need a primary care profile and a mental health profile. That could exacerbate this problem of multiple profiles in the system. We did go ahead and try to see though, if it linked patient – if the TNA, metrics we were able to build, could link to satisfaction. Again, we are using the 2012 SHEP data. We are using logistic regression models that are predicting the same outcomes that I have talked about before.

We split the sample into whether or not they had on the day of their SHEP visit, they visited primary care or specialty care clinic stops. We are controlling for the same individual and facility covariates that we have controlled for previously. Individual risk adjusters such as demographics, health status, as well as several facility covariates that are known controlling for case mix differences between facilities.

The appointment, we are hypothesizing that this appointment based TNA should predict SHEP satisfaction outcomes. Since we were worried about multiple profiles, we calculated a separate profile for providers. We calculated TNA, separately for providers with one profile compared to with more than one profile. We also calculated TNA separately for primary and specialty care. We limited it to providers who had a TNA of less than 120 days. Again, we are using a lagged TNA to predict satisfaction in the next month.

Here are some descriptive statistics of TNA. The mean TNA score\_\_\_\_\_ [00:19:33] providers with a single profile in primary care was 20.7. It is slightly longer at 22.5 for providers with a multiple profile in primary care. A similar pattern is seen with specialty care. A single profile specialty care of a mean TNA was 28.2. It was slightly longer at 30.5 for multiple profile specialty care TNA. The quartile, we think that the providers that had multiple profiles have a longer mean TNA. Because some profiles may have appointments infrequently, which is going to link into their TNA overall.

Again, they are in a quartile. The difference between the single profile and the multiple profile is more pronounced at 25 percent and 75 percent. Using that interquartile range as a rough guide, we ended up categorizing primary care TNA into less than equal two weeks. We will give the reference group two to three weeks, three to four weeks, and more than four weeks. Then, for specialty care, the reference group is less than or equal to three weeks. Then, the categories are three to four weeks, four to five weeks, and more than five weeks. How did the TNA do?

Let us give the big picture results. This is focused only on single profile TNA. We find the single profile TNA validates for primary care patients; specifically on the outcomes of timely appointments, ability to access treatments and satisfaction with VA at your last visit. There is no relationship between single profile specialty care TNA and any of the outcomes. When I say validate, let us dig into that a little further, and see what I mean by that.

This slide, the top of the slide here is the new patient create date data that you have seen before; just to remind you of the overall relationship between new patient create date and satisfaction; and the size of the effects. Down here is the single profile or primary care TNA results, odds ratios. You can see on timely appointment and on access to treatment, and on VA satisfaction, there is a monotonic relationship between longer primary care TNA and lower satisfaction. However, the effect sizes overall are smaller.

The results are not quite as consistent. Moving to multiple profile TNA, we find that multiple profile or primary care has no relationship with any of the satisfaction outcomes among primary care patients. For multiple profile specialty TNA among specialty care patients, however, there is a relationship between access to treatment – between a longer TNA, and access to treatment, access to specialists, and VA ratings.

Again, we are just going to dig in a little bit when I say validated, here. This slide are detailed results. Up here, is the consult wait time validation. But it is not the data you have seen before to remind you of the relationship and the effect sizes. Down here are the odd ratios from the multiple profile specialty care TNA. The reference group is less than or equal to 21 days.

On access to treatments, you do see a monotonic relationship as TNA gets longer. There is a decrease in satisfaction. The access to specialists is a weaker validation. The relationship is not as monotonic as one would like. On VA rating, you do get that monotonic decrease that you are expecting in satisfaction. But again, the effect sizes are not as strong – are not as big as that you see with consult wait times. When a VA's TNA does validate with some of the outcomes of self-reported patient satisfaction, this was an historical metric that we used. However, they cannot be captured in real-time, which is what the VSSC metric does.

The single profile version worked better for primary care. The multiple profile version worked better for specialty care probably because multiple profiles are more common in specialty care. That TNA does in fact capture capacity; or does in fact – may capture capacity better. However, overall, the TNA is less reliable than our other validated access metrics of new patient create data and consult wait times.

It is what is used in the private sector. There is a lot of interest in the VA having a good TNA metric. When the satisfaction data becomes available, the slot based metric should be tested. But no matter what you do, whenever you are getting into TNA; we are going to have to solve this problem of multiple profiles and create essentially a master profile for each physician in the scheduling system.

Also, we should consider other alternatives. Some validation work that we have going on right now is to validate what is called clinically indicated date or return to clinic date. That is what is also a requirement of the Choice Act. Providers are being asked to enter in the medical record now when they want a patient to return. We are looking to see if that might be a good metric that would be good for a wider population of Veterans. Okay. I will stop and take questions on that part. Because I am then going to move into telephone metrics.

Risha Gidwani: The first thing we have is a comment actually. This is from someone saying that the reason there are multiple profiles is because some providers need to have different clinics that have been\_\_\_\_\_ [00:25:58] because of the different stop codes for services. For example, in mental health, they need different clinics for group visits versus individual’s visits. Infectious disease physicians who have primary care versus specialty care clinics. Some clinics have only a few hours of clinic time each week. If it is less than two slots per day, in some definitions a TNA will always be long or unmeasurable.

Julia Prentice: Yes. It has been ongoing…. Right, providers do want multiple profiles. It does map to clinic stops some from what we have heard. I am going to quote my programmer who actually; Aaron Legler who tells me. Who did this validation? He tells me that programmatically, it should not be that difficult to create a master profile somehow that shows one schedule for each provider. Then, you may have subschedules under there that are mapped to specific clinic stops. But it feeds into one schedule. When an appointment is taken, that provider is really seen as busy and not open, which is a problem with multiple profiles.

Risha Gidwani: Another question is whether some PC-MHI providers have primary care profiles? The person is saying – I cannot see why that would occur unless there were also primary care providers.

Julia Prentice: Yes. I am not sure I know. I do not have a good answer to that question. We did not do an in depth analysis of the type of multiple profiles out there. Because we just did not have time to do that.

One of the things the GPMs are doing, the Group Practice Managers are doing is really working with facilities to talk about how many profiles their providers have. Whether that can be cut down. I cannot think of any reason off of the top of my head why you would have a primary care profile in PC-MH. But lots of things happen out there in the field.

Risha Gidwani: Another question is about the time that the clock starts. This person is saying that he believes that we start clock when the Veteran calls in for an appointment, even though they may not want an appointment on the same day that they are making the phone call. Is there a way to calculate the time from the desired date of the appointment rather than from the date that the request was made?

Julia Prentice: Right. This is why we still need one more – we need a slightly better metric than what we have. New patient create date works partly because we have this assumption that if you are a new patient to the VA or to the clinic, you have a reason to get in as soon as possible. It is capturing the date that the appointment is initially being requested. But that is a valid start point for that patient population. It is trickier with returning patients or follow-up care.

For a while, we actually…. Some of our other work that I have not talked about did validate the old version of desired date that was in use before the access crisis of 2014. It actually did validate fairly well with satisfaction. But there were so many issues with that measure in getting schedulers to enter it properly. That obviously, the VA has chosen to move away from it now. We are still working on a metric that has a right start date for some Veterans. That is when there is a\_\_\_\_\_ [00:30:12] validating return to clinic. They were also known as clinically indicated dates.

Risha Gidwani: One question is asking about mental health. Was the analysis for mental health as a part of the specialty care? Or, is that not included in this\_\_\_\_\_ [00:30:32]?

Julia Prentice: It was part of the specialty care, which may not be the best way to do it. Because I know mental health is different. But it was part of specialty care.

Risha Gidwani: Alright, one last question. Can the speaker speculate as to whether there is a positive correlation between multiple specialty care profiles in satisfactions, but not in primary care? Is there another variable interacting besides this simple map of the scheduling package?

Julia Prentice: We have not…. The best that I would come up is that specialty care profiles – specialty care has so many more multiple profiles, that is why it is more accurate. It is the scheduling system numbers. I don't have another great speculation on that.

Risha Gidwani: Okay.

Julia Prentice: Alright. Okay. We are going to switch gears a bit and talk about telephone metrics. As I said, part of the VA – myVA Access Initiative is that we are going to be increasing our virtual health and our telehealth; and move away from face to face encounters. To do that, you need to have…. Veterans need to be able to access the VA through the telephone. Telephone access was hypothesized to be important because it is often the first interaction that the Veteran has with the VA system. When they are calling in to schedule appointments. Because of this, there have been metrics that have been included in the SAIL report for a long time that senior leadership is supposed to be monitoring. As well, as I said, there is a bigger push to really understand telephone health because virtual health is emphasized as a way to meet the goals of the myVA Access Initiative.

We wanted to validate these telephone access metrics that are in the SAIL report. Essentially, it is data that is collected monthly. It is the average number of seconds. It is the average number of seconds it takes for the facility to pick up the phone. It is also the percentage of calls that are terminated before a staff person answers it. That is known as the abandonment rate.

We are using the combined metrics. Facilities can collect telephone data on specific clinical functions like phone calls that are just for scheduling; or phone calls simply to the pharmacy. But there is a combined metric that gets reported. That is what we are using. There was a lot of missing data in the telephone metric data. In most cases, however, it just specifies that another facility provides phone coverage for the facility with missing data. In those cases, we used the data from the covered facilities.

But there were some facilities that were missing data with no coverage facility listed. In those cases, we imputed with telephone metrics from the parent station. If data was missing between the months, we ended up doing a linear interpolation between the months to impute the data. Again, it is the same approach that I have been talking about throughout. Again, this is 2012 SHEP data. It is logistic regression models. The same outcomes, and the same individual, and facility covariates except we are also controlling for call volume in these models.

We are hypothesizing that there will be a relationship between better telephone access and the higher satisfaction. Speed of response and abandonment rate are in two separate models. Again, the metrics, the telephone metrics are broken into quartiles. We are using the lags telephone metric from the months before the SHEP visit.

These are just descriptive statistics. Not surprisingly, telephone abandonment rate and speed of response are highly correlated. Really facilities that have a longer speed of response also have a higher abandonment rate. The mean abandonment rate was about 13.5 percent, which gives us an interquartile range of seven percent to 18 percent. Then the speed of response, the mean was just under two minutes. That gives us an interquartile range of about 45 seconds to 141 seconds.

Here are the big picture results of these models. We find that abandonment rates validates with satisfaction on timely appointment, access to treatment, and access to specialists. But for our speed of response, we find that there is a consistent relationship with a longer speed of response and decreased satisfaction on all five of the outcomes. Again, we will look at the details of that. This is the new patient create date data that you have already seen. I would just like to remind you of effect sizes and relationships.

This is a speed of response data. You can see that there is a monotonic relationship that we like to see across all of the outcomes. It is also significant. For example, for timely appointments, those Veterans that are visiting facilities where it takes the facility more than 141 seconds to answer the phone – are 12 percent less satisfied in their ability to obtain an appointment as soon as they want.

That trend is seen throughout in access treatment and in access to specialists.

Both speed of response and abandonment rates do seem to predict Veteran satisfaction, although speed of response does have more consistent results. There is some evidence that the satisfaction is lower at facilities that do not monitor their phone metrics. There was a higher rate of waivers on these telephone metrics. Now that we have confirmed that telephone access is important to Veterans, the telephone resources that are out there should be considered at all facilities.

Then, we did one more telephone metric type validation, which moves more into providing care through a telephone. Here we will ask the question of whether or not Veterans who are visiting facilities where there is a higher proportion of primary care telephone visits are going to be more satisfied. This again is important. Because the myVA Access Initiative is focusing on virtual health and telehealth. It raises the question of whether or not that is something that Veterans want.

Yeah, and so the same approach that we have talked about before; the same outcomes and covariates as the telephone metric data. Again, this is 2012 SHEP's data. We are limiting it. In this case, since we are interested in the proportion of primary care visits that were done by phone, we are limiting it only to SHEP respondents that had a primary care visit. They now come in same covariates to control for individual case mix and facility level case mix.

We are identifying primary care visits by telephone based on stop codes, so 322, and 323, 348, and 350 are in face to face primary care; 338 and 326 are in telephone primary care. Overall, 27 percent of the primary care clinics were done by telephone. That gives us an interquartile range of about 21 percent to 34 percent. Here are the overall results on that metric. On this, you get validation between the percentage of primary care visits done by phone and increased satisfaction in this case because we are hypothesizing that Veterans will be happier if more of their primary care can be done by phone.

We get that validation on the access to specialists at the VA; then, the two general VA satisfaction metrics. Again, when I say validation, what does that mean? This again is the new patient create date and wait time data we have seen before. The bottom part of this slide has the percentage of primary care telephone clinic odds ratios. For the general satisfaction ratings, you are see this monotonic increase and significant consistent increases that we like to see that increases our confidences of validated metrics.

You do see a monotonic increase for access to specialists. But it is messier. It is not quite as consistent.

Risha Gidwani: This is primary care telephone visits that patients were perceiving that their access to specialists were having a satisfaction with access to specialists, when in fact, they were getting primary care?

Julia Prentice: Yes. The reason I think that is that it could be the primary care is viewed as a gatekeeper role sometimes. It could be that if you are able to call your primary care provider and get the specialist over the phone, you may be more satisfied with your ability to get to a specialist faster. It could be that these facilities that are doing more of their primary care telephone, more of their primary care by phone are better able to do that. It validates with general satisfaction. It really validates the general satisfaction metrics, which tells us that this is something that the Veterans are interested in and do want to do.

Then, as I just talked about since, that was a good question. That was a very good question you just gave me. We think that there is a weak validation with access to specialists. That it could be because of this gatekeeper in primary care. It does support this policy and this move to increase virtual and telehealth to improve the Veteran experience. But workload to do this – we need to capture workload appropriately within the VA system. The providers that are doing a lot of virtual and telehealth are given proper credit for that work that they are doing.

Back to the big picture results. These slides just summarize of all of these different metrics I have talked about. These just like give the final result on each of the metrics. This is the primary care slide and each of the outcomes. Again, new patient create date as you can see was a very strong validated metric. It has that consistent monotonic relationship across all five outcomes. The other metric that does that well was speed of response for telephones.

Single profile, and primary care TNA, and abandonment rates for telephones, and the percentage of primary care clinics done by phone, all are validating on three of the five outcomes. It depends on the metrics of the outcome. Specialty care, again consult wait times, it tends to validate strongly across all five outcomes. Multiple profiles, specialty care TNA, it validates on three of the five outcomes as does abandonment rate. But speed of response was again a strong and fairly, a pretty strong metric that validates in the consistent direction on all five metrics – all five outcomes.

Overall, we have learned several different things in doing this work over the years. We do need different metrics based on the type of access whether you are talking about face to face visits, or telephone, and based on the population. In primary care, new patient create dates, it still seems one of our strongest metrics for new patients. Then in primary care, consult wait times continues to be a very strong metric for specialty care, which is probably more relevant to returning patients.

There are advantages in minimizing the human input that occurs in some of the stated generations. Now both new patient create date and consult wait times are based on timestamps that are entered into the system when an appointment request is initiated and completed. Those timestamps are not modified. The telephone data in contrast is entered manually at some facilities. Providers historically have had a lot of power within the VA to create their own profiles in the scheduling system.

The metrics I have talked about today were telephone metrics and TNA. They do have a greater human input into the data generation. That raises a question of data fidelity sometimes. Metrics can be highly correlated. This is actually – a good example of this is the abandonment rate and state of response. This is a good thing. Because it may be a useful management strategy.

If you have two metrics and you know that they are highly correlated, you can be monitoring them. If one of them begins to diverge, then that may signal there is something that is going on at that facility that needs to be examined. Of course, the big lesson out of the access crisis of 2014 was that we need to think very carefully about the incentives that are used to meet performance metrics and to encourage meeting the performance metrics. Because these incentives can\_\_\_\_\_ [00:44:49] affect the data fidelity in the end.

I am happy to take questions, other questions.

Risha Gidwani: It looks like we have one other follow-up comment regarding the multiple primary care profiles. This person is saying that we have providers who were in geriatric and regular primary care; and providers who were in women's health and regular primary care. There are separate primary care clinics set up for telehealth and telephone calls. There are different stop codes, default\_\_\_\_\_ [00:45:26], and RVUs. That is just a comment. But I am wondering, if you have one provider in all of these different clinics? How you are handling that especially if there are different clinics set up for telehealth, and telephone, and for in-person visits?

Julia Prentice: Right. How we handle it in our analyses? Or, how we handle it to get to a master scheduling profile?

Risha Gidwani: I guess both, really.

Julia Prentice: Okay. We handled it in the analyses, which is what VSSC is doing as well; which is we just calculated TNA for each profile. No matter how many profiles that a provider had, we calculated the TNA for it; and then averaged it up together up to the facility level. That means that provider who has three profiles is really contributing three TNAs to the models. That was not ideal. But we ended up with that was the best way to approach it.

Again, these multiple profiles, there is a long history of them in the VA. There are good reasons in the field that they have them. But if you are trying to get an accurate display of your capacity and your supply – we need to somehow figure out how to link every provider to one profile. Because people can only be at one place at one time. We need to try to figure out a way to get master profile even if …. Again, I think that you can have a master profile on top that just accurately displays capacity. But you can have multiple profiles under that. That would be specific to different clinic stops and different clinic stop codes.

Risha Gidwani: Now, forgive me if I didn't pick up on this before. But for the new patient appointment, if somebody came in and wanted to see a provider. That provider was not available. But there was another provider within that same clinic that was available within the appropriate time frame. How would that characterize in the analysis?

Julia Prentice: The new patient create dates, right, is just the number of days between an appointment request and the actual completed appointment. If that patient got in with another provider, they will have a shorter wait time attributed to them.

Risha Gidwani: Okay. I got you. One other question, are there recommendations for which metrics people should be focusing on for reporting?

Julia Prentice: Well, yes, right, no, if it was me…. Now, if I was in control of everything which I am not, I would use new patient create date and consult wait times, and these telephone metrics, and likely speed of response. I would also be monitoring abandonment rate in the background because those two are so highly correlated. Those are not.

Again, there are reasons that people are interested in TNA. It is what the private sector does. I believe there is an interest with the GPMs and the monitoring of TNAs. My only concern with it is that those metrics may not validate and may not be able to predict satisfaction as well as we think they are. If we are really moving into this world of Veteran satisfaction being very important, it seems like we should be using access metrics that strongly and consistently predict satisfaction.

Risha Gidwani: We have this new Veterans Choice Act Initiative, which says that if the Veteran cannot get in to see their preferred provider within 30 days; or have some geographic challenges in accessing care, then they could go to the private sector. How do you see the metrics that you have presented here today interfacing with the Veterans of Choice Act?

Julia Prentice: That is a good question. That is tricky. First of all, all of the data I showed today is done in 2012, or 2000. The very first analyses were done using 2010 SHEP data. All of these metrics validated before the access crisis in 2014; which actually increases our validity. But yes, we are in this new world where Veterans can go outside of the VA for their care. It is also on our list to try to validate wait times for non-VA care. While we were told this for consult waits, for consult care; they were collecting how long that was taking Veterans to get their consult completed outside of the VA.

That data was being collected. It is on our list to go back and validate the non-VA consult wait time metric to see how that compares to the consult wait times that we felt – the VA consult times that we validated. From what I have heard from the Choice Act; and this is based on people in the field. It is that it has been a bit of a bumpy rollout. It has taken a long time, sometimes for these Veterans to be seen and for the data to come back to the VA. For the data that comes back to the VA, so that indicates that the appointment has been completed.

Risha Gidwani: Just one small question left, and that is what do you mean by waivers on the phone metric?

Julia Prentice: They can apply. Apparently facilities can apply to the national program offices that are monitoring phones and say they do not have the technology or the resources to monitor their phone access. They are granted a waiver to use that in some cases. That would be one of the things, if I was in control, that perhaps management could pay a little bit more attention to. Because telephone access does seem to be a fairly strong valid metric.

My guess, although we do not know for sure…. Well, based on some of the data in the models, there is the suggestion that those facilities that have waivers and that are not monitoring their own telephone satisfaction at those facilities was lower. That could be that those are more poorly managed facilities overall potentially. Or, it is just that those for whatever reasons, the phones at those facilities are not as – the infrastructure behind the phones at those facilities is not as strong as one would like. That is why they are getting the waiver.

That is just an area that management could potentially pay attention to. The other advantages about phone metrics is unlike face to face visits with the brick and mortar, you can move phones and resources around a little bit. There are call centers set up throughout the nation. If you have a facility that is really struggling with getting adequate phone access for their Veterans, you could perhaps have a call center handle some of that facility's phone, answering of phones for a while until they get better, more, a strong infrastructure.

Risha Gidwani: What proportion of facilities are actually receiving these waivers?

Julia Prentice: I would have to back and look. I want to say about 20 percent maybe. But I would need to…. If somebody wants some exact numbers, they should contact me. I will have our programmer look at it. We did look at it. But I do not want to be quoted on the exact number.

Risha Gidwani: Did you find for the other metrics that were available for those facilities that had waivers that they were performing differently than the ones that did not have waivers?

Julia Prentice: Yes. It included…. Let me. It is in here I think. We included – let me find the slide. Because we included, yes. In the models, which I did not get into because of time. We included these flag variables that denoted whether or not the data that was being used was by the covered facility? Or, whether or not it was by the parent facility; meaning the parent, remember, we imputed with the parent facility's telephone metrics in cases where there was no clear waiver.

No, I'm sorry. In cases where there was no clear coverage facility, they did not have their own telephone metrics. I think a lot of these facilities are the ones that have the waivers. We ended up just imputing with parent facility, which I am not entirely comfortable with that assumption. I would perhaps change it. I am in conversations with the policymakers on the better way to do this.

But we included flag variables in the models to control for that. These odds ratios show you the results from that variable. You can see that satisfaction is consistently lower at these facilities where we use this imputation of the parent facility. But they did not have their own data.

Risha Gidwani: Okay.

Julia Prentice: Those are probably the waiver facilities.

Risha Gidwani: I can see, of course, that they are lower here. That is significant. But these are still hovering around 90 percent, or in some cases a little bit higher. Do you have any sense of in the non-VA environment how satisfied people are with their access to care? Is it about 90 percent of patients\_\_\_\_\_ [00:56:38] at lower and non-VA situations?

Julia Prentice: Well, these are odds ratios.

Risha Gidwani: \_\_\_\_\_ [00:56:45]. Yes.

Julia Prentice: They were ten percent less satisfied.

Risha Gidwani: Right.

Julia Prentice: We do better, right. The VA actually does better on satisfaction though. The SHEP data; and I'm sure there are people on this call that are experts on the SHEP data more than I am. But the SHEP data is modeled after the CAPs data, the consumer – I'm not going to remember the exact title. But the CAPs data measures satisfaction on like Medicaid and Medicare plans. The VA, if I remember correctly actually does better than Medicare and Medicaid or at least the equivalent to those.

Risha Gidwani: On overall satisfaction or satisfaction to access?

Julia Prentice: I think on overall – well, I think on both. I'm sure there is somebody on the call that know this better than I do. But I think the last time we looked at the numbers, there was both.

Risha Gidwani: Okay. One question has come in while we were talking. It is – can you explain again what the non-VA consult wait time metric is? Is that still being collected?

Julia Prentice: It is supposed to be collected. Again, it is simply the number it takes for the consult. The number of days it takes for a consult to be initiated in the VA. For that consult to be completed outside of the VA; but this data is supposed to still be getting collected. I do not know how easily it is being collected. Part of the problem with Choice has been that the third party administrators were not getting paid as quickly as they wanted to.

These providers outside of the VA are not getting paid as quickly as they wanted to. There has just been a recent change in the roles. It used to be that you had to send your result back and show them that the consult was completed before you got paid. They just changed the rules that allows payment to happen before you get the completed consult report back. That is going to lengthen…. That may impact the data that is collected there.

Risha Gidwani: Okay.

Julia Prentice: But they are supposed to be collecting it.

Risha Gidwani: Alright. Well, I think that is all of the questions we have. Thank you Dr. Prentice. This was a wonderful presentation. We appreciate you sharing the results of your work with us.

Julia Prentice: Thank you, my pleasure.

Moderator: Yes, Julia, thank you very much for presenting today. We really do appreciate it. For the audience, HERC is actually July off from Cyberseminars. The next session in this series is scheduled in September. We will be sending more information out on that in August – keep an eye out for that. I will be closing the meeting in just a moment here. When I do, you will be prompted with a feedback form. Please take a few moments to fill that out. We really do read through all of your feedback. Thank you everyone for joining us. We look forward to seeing you at a future HSR&D Cyberseminar. Thank you.

[END OF TAPE]