OptumLabs Grand Rounds
The Pandemic-Related Transformation of Behavioral Health Care Delivery: 2022 and Beyond
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Dr. Rhonda Robinson Beale: Thank you so much. I appreciate it. What a great introduction and I'm really happy be able to make this presentation. We have all lived through, I would say, the last 18 months of a dramatic change in our lives. It's a change that affected us all. So what we're doing- what I've done with this presentation was to compile data from many sources that really looked at the effect of the COVID pandemic and really to try and understand the change- the significant changes in trends that have occurred, but also look at what are the possible opportunities that have sprung up because of these changes due to the pandemic itself. So in an overview, we'll go over the anticipated impact of COVID. COVID pandemic is a disaster. And so there's a lot of information about emotional and human responses to disasters. And we'll look at that in terms of looking at the basic cycle of emotional response to disasters. We'll also look at the components within the COVID pandemic that we're different than most disasters. We'll also take a look at self-reported survey responses and compare those where we can with actual claims data to verify the outcome from the surveys. And we'll look at the summary of the findings from all of these pieces. From there, we'll go on and review the changes that have occurred in the healthcare delivery system, including tele-health digital as well as types of interventions in some new science that is coming out that implies some great changes for us. And we'll also visit what we think the future issues we need to address going forward.

Okay. All right. So here is the common disaster cycle that you'll see in many publications and particularly as put together by FEMA. What you see is what happens to a population after a disaster has occurred, whether it is due the weather like Katrina or through other types of disaster that occurred from human in both disasters. But generally before the disaster, you have- you

may have warnings or threats. So that really has a lot to do with weather. But in the case of the pandemic, there was some hint of a threat, but I think many times people didn't believe that the COVID pandemic was going to spread as far as it did. So what happens is prior to the pandemic, there is an impact once it really hits an individual. And what generally happens is that you have individuals that will become heroic, or they will be more altruistic in the sense that they will feel very helpless, but they counteract that by becoming activists and heroes. One can also demonstrate hypervigilance in terms of being over aware of what's going on or have a lower threshold for stress. There are the common, emotional responses of fear, and that's your fight, flight and freeze, denial, grief, anger, withdrawal, depression. All of those pieces are possibilities, as one is going through this cycle.

With time, there becomes a honeymoon period. And it generally is with the hope that the changes that have occurred are going to start changing and life will get back to where it was before. When that doesn't happen, or if it doesn't happen at the timeframe that individuals are expecting, there's a deep dive into disillusionment. And this is where many times the fear, the anger, withdrawal, all those other types of feelings come up. And as you see in this cycle, there are times when there are events that can trigger a reaction, another reaction to and repeat kind of this whole syndrome of all these emotional changes. Generally, with a single event disaster, in about a year depending upon the severity of the event, people will start to resolve and start reconstructing their lives as they see that occurring. That also means emotionally they start coming back together. So what is different about the COVID-19 pandemic? Some of the things that is quite obvious to us all is that this affected a wide range of individuals. It was also known at the very beginning to be something that was deadly, invisible, and also could be easily transmitted, which created much fear and anxiety across the population. The severity of the illness and that it could lead to hospitalizations and deaths really for most, all of us raised our anxiety level. What was interesting was this pandemic because it was widespread, it caused massive disruption of everyone's lifestyle from the lockdown to also closing, crashing our economy. Many people lost their jobs. Schools were closed. So everyone was affected by this.

With that being the case, one would expect to have widespread emotional responses and definitely the onset of emotional disorders. So what did we see? This is from the Kaiser Family Foundation and also the CDC. As you can see on figure two, that there was a 41.1% prevalence of individuals with some type of symptom- behavioral health symptom. And this is different than pre-COVID, which was at 11%. And even what we typically see when we look at the prevalence of mental illness in health plans, those who have sought treatment is somewhere between 5% and 6%. So you can see this is a tremendous increase in the number of individuals who are experiencing some type of emotional distress. Figure three shows you with a weighted percentage of the respondents from the CDC survey, what type of symptoms were they experiencing? This was not just the self-reported, this is also woven into the survey with the use of a PHQ-2 and other validated tools, but the thresholds were much lower, so that one could get a sense that those types of symptoms in that individual, recognizing that everyone is going to have a condition, but will have some response. So you see that depression, anxiety was number one in terms of being the most prevalent next to trauma related stress disorder, and then substance use disorder was third. It's also important to remember that it's been theorized that the emotional response is more intense, the closer the individual is to the exposure of the disaster. So in this circle, what you see, for example, the A group of people who were actually injured by the disaster. So that in the case of COVID, those who had COVID, particularly those who've been hospitalized, nearly died, or had family members who have died. And that can go all the way out to the E population, which would be the general population who did not have any of those experiences immediately affecting them.

In the CDC survey, they took a look at this particular issue in terms of the degree of exposure to COVID to understand that it has some type of impact on the prevalence of reported symptoms. In this graph figure four, what you see is the blue column is those who have known someone who was treated for COVID. The gray is those who've known someone who died. And on the other axes, these are people who were in the group of their depression, anxiety, for example, and also

the trauma stress group, as well as the group that scored higher as it relates to substance use disorder. And those that also scored higher in terms of considering substance- I'm sorry, suicide. So what you see, and I want you to take a look at the height of the columns. What you see is that those who knew someone who had COVID, the blue in comparison to the orange shows very little difference as it relates to those who tested out to have anxiety and depression and trauma stress disorder. You see some differentiation when it comes to suicide, but generally you see very little difference. It was concluded that the pandemic had a wide range of effect on the population and that in this time and this survey was done June, 2020, that there didn't seem to be any difference in the prevalence of symptoms in the population that had direct exposure versus those that did not. What we did see, which had been expected, that there was a higher prevalence of symptoms among those who've been treated before for behavioral health disorders. And so you see you have here, the comparison of those who were treated for anxiety, for example, and those who were not treated for anxiety. You see a vast difference in the prevalence of disorders that were presented through the survey itself.

Looking at the subpopulations, it seemed to be most effective. We pulled out of the survey, two areas, one, looking at those who felt because of the pandemic that they were starting to use substances or had increased their use of substance. And also those that were seriously considering suicide. When we look at figure six, which has to do with the use of substance, you find that the population, which was a little bit surprising that had a higher prevalence of this, where those who are unpaid caregivers. This would include a single parents taking care of children or families that were taking care of elder, family or extended families. These are people who take care of others and assuming responsibility for others. Certainly, the other higher population is, which is expected the less- the people who have less than a high school education, that's commonly seen when you look at statistics, as it relates to respond to behavioral health. As we would expect, our essential workers were high in the sense that they're the ones who were found to be most impacted. And we looked at some of the early studies that were done in China since it started there. And they had done some studies very soon after the spread of the

pandemic and their studies showed exactly the same thing in the sense that it includes their essential workers. They didn't have unpaid caregivers, but they did have- they did fair out in their research, those who had pre-existing, behavioral health disorders, and also those that have symptoms.

Symptoms could be myalgia, could be upper respiratory infections. When someone had an actual symptom, there was a higher incidence of symptoms that were seen. They also noticed that the population that was vulnerable were women, particularly in the essential workers, nurses, which were predominant female, had a higher incidence of reported stress, also anxiety and depression. Want to take note of the 18 to 24 year old population, because that became very interesting. And I'll show you in a couple of slides about that. You see, looking at figure seven, in terms of suicidal ideation, it seems to follow along the line of those who also were experiencing the need to need to cope by using substances. One of our vendors, AbleTo did do some work in looking at the burnout rate among hospital employees. So what they were able to demonstrate by administering the Copenhagen Burnout Inventory that pre-COVID to COVID experience, they saw a higher incidents of individuals scoring very high on the burnout inventory. And this is something that was expected and certainly was verified with the work that they had done. What was interesting as this phenomenon was going on, it was not only hospital workers that we were being asked to review, but also those who worked in stores, teachers, and what was a little more surprising, but certainly makes sense, funeral directors, those who have to deal with the number of people who are dying and having to actually manage the funerals and the families that were grieving those situations.

So let's look at it by ethnic groups. I think here it clearly denotes that the black non-Hispanic, as well as the Hispanic population were greatly affected by the COVID. On figure eight, we're looking at what I would say, probably the mildest level of identifying those who had those mental health symptoms. So if they had at least one, so that would mean those who had maybe just one versus those that had several. And what you see again, is black, non-Hispanic and Hispanic

population is the highest one. What was interesting is that Asian population was lowest. And that was true not only as it relates to them having those mental health symptoms, but also in terms of considering suicide. How did it impact the age group? This is what I thought was very fascinating. This again comes from the CDC. The lines, just in case they're hard to see, the blue population is our 18 to 24 year olds. And this is interesting because you see they're leading in terms of the prevalence of symptoms in their age group and the age group where it seemed to be least affected is those that are over the age of 65. That clear why that is other than it was speculated that those who were over the age of 65 have lived several different experiences, may have had trauma in their life and has learned at this point how to resolve and be in resolve as it relates to that. It does raise a big question.

When we look at gender, let's look at this particular one. If you look on the left side of the slide, that is looking at anxiety disorders, and you're looking at the 13 to 17 year old versus the 18 to 24 year old. And again, I keep stressing that 18 to 24 year old, which is the gen X population. Here, we're looking at the differences between males and females, and this is over 2018 to 2020. The green shaded area was actually considered the onset of COVID at that time. And what you see pre-COVID, certainly there was less males than females, but certainly post-COVID, the start of COVID, that difference widened tremendously. When you look at the next two sets of graphs looking at the male, 13 to 17, you see very little difference between pre-COVID and COVID. And when you look at the male 18 to 24 for anxiety, again, you see very little difference between pre-COVID and COVID, but however, that's in contrast to female, where you see a higher incidents of anxiety disorders or symptomatology pre-COVID, but definitely was escalated with the onset of COVID. And this slide shows you, and this is from our own data, that really the onset of these types of symptoms predated COVID in the sense that we look at 2018 to 2019, you see in the age band of 13 to 17, you're already starting to see an increase in the prevalence of behavioral health diagnoses.

This is taken from outpatient visits. You see the same thing occurring in the age band of 18 to 24. So these are things that were going on prior to COVID, but certainly were escalated by the onset of COVID. When we look at the baseline rates for self-reported behavior and symptoms in children, I wanted to put this slide in just to show you two things. One that there's a difference between the age group 3 to 17 versus our adolescent group that was 12 to 17, where you see the largest increase in the prevalence of anxiety, depression, and ADHD. With that being the case, it really starts pinpointing that there's certain age groups that are more susceptible to the emotional effects or the pressures of the pandemic, but also the prevalence of anxiety and depression in this population is much higher to begin with. The graph at the bottom really looked at individuals who are identified as lesbian, gay, or bisexual, and there, this again is pre-COVID, really illustrates that there's a higher level of anxiety and emotional disorders among that population pre-COVID. And certainly, I don't have data specifically post-COVID, but we can imagine that it has increased. Well, what do we know? What we experienced and what we learned is that there's certain subpopulations that are more impacted by the experience of living through the COVID pandemic, essential workers, unpaid caregivers, those with pre-existing mental disorders, young adults, 18 to 24, and the adolescents from 13 to 17, certain ethnic groups, as well as those that are on the low end, in terms of high school education, but also we found that with those who have low income, particularly in our Medicaid population. What did we not expect to learn? I'm not sure that we expected to find that are those who're least affected by the COVID would be those who are greater than 65 years of age and also as we illustrated earlier, male.

It looks like the depth of the COVID exposure may not have made a difference in the prevalence of symptoms. Certainly, that's something that needs to be researched further, but this preliminary research that was done kind of indicates that. We saw that the prevalence of females was much higher than males, but using a self-report methodology, they seem very similar, but however, when you looked at claims, there was a vast difference between male and female. So males are not accessing behavioral health treatment as females are. It raises the question whether or not A, are the methodologies that we're using to identify our populations appropriate, given that there

may be different triggers or maybe different methodologies that need to be used to engage certain subpopulations? And I think it certainly stands out with males versus females. What was also interesting is that with the males, you saw a difference in certain areas, certainly in terms of an increase in start or use of substance is one of the ways of coping and the other was the suicide ideation rate was much higher with males than females. What were the changes in the behavioral health care delivery system that we experienced? So this slide illustrates dividing up the delivery system into five areas, acute care system that generally includes visits to the ER, inpatient and even sometimes residential treatment or emergency in urgent involvement in outpatient therapy. Then there's stabilization systems.

So generally once one is through the acute phase, one gets into a stabilization phase, which is the idea of returning that individual to some level of functionality in their lives. The third area is rehabilitation and habilitation. That's generally for those who are needing to change their lifestyle, their habits. So that really speaks to things like substance use disorder, eating disorder, those where there's a true rehabilitation or habilitation. It's also includes things like autism or developmentally disabled, where there are new skills that need to be taught. The integrated system is one very exciting, and that's where we have medical and behavioral integration where the primary care physician works collaboratively with behavioral health providers to deliver care. There's also another area of integrated system, and that is school and behavior health, which is something that has been started and certainly is being alive and well in many of the areas within Optum. The fifth is primary prevention or early intervention and self-help. That's an area that I think in terms of COVID really escalated, but it's also the area in comparison to the others that is the most [inaudible] in terms of our delivery system. I would say that we as an industry have got our toes into this area, but this is an area that definitely due to the pandemic is one that greatly is needed. Let's look at where care occurred. In these slides, you have the green is commercial population, the gold is Medicare and the blue is Medicaid. And what we're looking at are claims information.

This is from a Millman study that looked at claims, the volumes of claims between 2019 and 2020 and looking at them across the board. When you see the chart or the bars going below the zero line, that means that there was less services delivered in 2020 in comparison to 2019. And those bars above the zero line indicates higher incidents of visits or treatment over 2019. So we see as expected in the ER, there was a dimunition of visits with behavioral health diagnoses with some early return in the latter part of 2020. In inpatient, we also saw a diminution in inpatient admissions. What is interesting is that it was with the Medicaid population, as well as commercial, where it started to rebound early. Professional visits, as we expected, became the major form of treatment, and that was definitely the case as it relates to the commercial population and the Medicaid population and again, with the Medicare, with some delay, in terms of accessing that level of care. We looked at our own medical claims. This is a graph that illustrates the volume of claims that have, as a primary diagnosis, a behavioral health diagnosis, and this is under anxiety, the scope of anxiety diagnoses. In looking at that, we looked at the claims that were rendered to the medical system and the behavioral health system. What was astonishing to that is the volume of claims that are on the medical side, and those are the blue lines versus the orange lines at the bottom with the behavioral health claims. It really implies that majority of the population does access care through the medical system and much less through the behavioral health system, and this is important.

There was a recent article that just came out in JAMA that attempted to look at the perception of those who have commercial insurance as it relates to behavioral health treatment or the behavioral health network. And it seems as though those who have come to the system are being treated for their behavioral health disorder by their primary care physician with behavioral health secondary, but they had a better concept or perception of the adequacy of a behavioral health network versus those that were being treated separately in the behavioral health sector than their medical doctors. So it implies that there's something about coming through the primary care that brings and perhaps allows our members, commercial members to have a more positive attitude about the network. Most of the issues that were in the study was that- the complaints

were that their providers left the plan. Their providers were no longer seeing patients, but it seems as though those that were coming through the primary care, that these were less of the complaints that were rendered. Well, this slide is looking at the difference in the visit type, whether it's in-person versus virtual. I think we all are quite aware that the pandemic really escalated the use of tele-behavioral health. I think those who've been involved in the system has known that tele-behavioral health has been around for at least four or five years with very limited uptake. And during the pandemic, there was a tremendous shift, as you can see, looking at the columns comparing the left, which is the in-person visits versus the virtual visits that are seeing on the right. And again, this was taken from claims and it's comparing 2019 to 2020.

With that being the case and with virtual communication visits starting to be accepted by our population, we look at AbleTo, which has been a digital offering prior to the pandemic, which was geared to identify patients by using claims that were [inaudible] outreach to those individuals and engage them in a psychotherapy in a virtual situation. These are generally patients who have medical and behavioral comorbidities. And as you can see, these rates are showing you the engagement rates of those individuals pre-pandemic during the stay at home, which seemed to be the starter escalation and after reopening it increased tremendously. The kind of gold color is denoting a slightly different population. What they experienced is that generally again, they did outreach by finding patients by using the claims, but the gold population are those who did not have comorbidities and who were accessing AbleTo for the services that psychotherapy that could be rendered through virtual means. We all know that the population turns to the internet to learn about medical illnesses that's been present for quite a long time. This slide was put together by the actuarial team at Optum Behavioral Health. And looking at this, what they learned is that as COVID proceeded, there was certainly a dramatic increase in the Google searches for let's say the common condition anxiety, which means that individuals were looking to find answers and were self-motivated to pursue those answers.

With that being the case, one of the other offerings that we had here through Optum Behavioral Health is Sanvello. Sanvello is quite unique in the sense that it was focused on helping individuals to render self-care, self-assessment and supplying them with supporting services that can help them to be able to manage themselves. So it involved a CBT based guided journeys where one could begin to learn about the principles of CBT and do their own assessments. It also involved them with coping tools, such as guided meditations, teaching them how to relax, and also peer-to-peer support. Those peer-to-peer supports were very, very important in the sense that Sanvello was able to customize those peer-to-peer groups, such that they were able to, during the pandemic, to customize groups that were for specific people who are more vulnerable to the changes that were going on. For example, single women with children, who were definitely greatly affected by the closure of schools and the inability to work. Also those with different ethnic groups. So there is a Black Lives Matter group that met together. Again, with COVID, everyone is affected, but then we also had the tragic death of George Floyd, which also brought heated and increased anxiety amongst the African-American population, the tool also allowed members or people to track their progress. They started off with a certain assessment, but they were able to track how well they're doing and all of this was being used by the cell phone. And again, this was new, this was something that existed prior to the pandemic and certainly was accessed and continued to be accessed post pandemic. These are the numbers of new registrations for the use of Sanvello during the pandemic and stay at home.

So what have we learned from this remarkable increase in the prevalence of behavioral health symptoms? Although [inaudible] there was increased access to primary care and behavioral health providers, or access to the medical door, tremendous shifts to tele-behavioral health visits and access to digital tools approaches and approaches were increased. There was an engagement rates improved such that not only with face-to-face, but mostly with digital that there were less no-show rates that were reported repeatedly with all those different vehicles. And there was a participation in self-assessment and self-guidance, which again, showed through Sanvello where people were able to navigate their way through, and they were also able through Sanvello

assessment tools to be able to demonstrate progress using the tools. I think it was PHQ-9 in GAD. What else have we learned from the remarkable increase in the prevalence of behavioral health symptoms? So the movement to virtual health visit is certainly significant, and it appears that it's going to stay. We're looking at the data just recently and the prevalence of the use of virtual visits is remaining quite steady at this point. As I mentioned before, there's a decrease in no-show rates. So there's more people completing treatment and that means increased number of visits per person. The expansion to digital and the apps self-guided therapeutic approaches were accepted.

Again, prior to the pandemic, very little use on the part of members, as well as providers. Now, there's a tremendous interest as well as many, many providers have joined as well as members are literally expecting this to occur. The use of digital coaching and community intervention is also something that demonstrated to be effective as well as has the ability to engage the population and to deal with them. One of the things about AbleTo, as well as Sanvello, they offer kind of a bite-size intervention, you know, on the telephone as well as over audio-visual. Many times those sessions or their communications are short, to the point, particularly as it relates to followup sessions and reinforcement of activities during therapy, such as homework and other things that one needs to work on outside of the therapeutic hour. What are the implications for change in the future? Well, I think one thing we know for sure, with the pandemic, we- prior to the pandemic, there was a shortage, a very severe shortage of the behavioral health workforce, but it was exceptionally painful as we went into the pandemic. These are just graphs to show you the geographic distribution of psychiatry on the left side and psychologists on the right side. Was not able to find the same kind of geographic distribution for social workers, as well as licensed family therapist, but the notations are very much the same, that there's a lack of sufficient numbers of providers. I want to bring close attention to the one area of figure two on the left-hand side, that is the number of child psychiatrists.

And so you can see that is the entity that is the least available and certainly with the age groups that we noted, where there is an increase in anxiety and depression, this becomes an issue. So I asked the question, is the model that we all trained on, who've been in behavioral health and you see on the right, that is Freud and the famous couch. Is this the right model that we can go forward with? Is this one that works? The Freud model is a therapist with one patient, 45 minutes, 60 minutes, which means there's a limitation to the number of patients that can be treated in this regard. With a shortage of all these providers, we need to think about other ways to address the needs for behavioral health. One that we know of that is operating and in play right now is collaborative care. And we look at that as an expander of access to a behavioral health. In this graphic, you see the usual care where the PCP will have some relationship with the patient. They may refer the patient to a psychiatrist, or they may refer them to a therapist, or they may even refer them to support groups in the community, but there's no interactions, so to speak or regular interaction, or accountability between those two walls as to the outcome of those patients.

In collaborative care, we have a different model, where the primary care physician will get engaged with a team on the behavioral health side. The behavioral health side team would be centered around a care manager, which is a social worker or a licensed family marriage therapist, and the psychiatrist, where we have very limited supply, will become involved part-time or as a consultant. They would rarely have to see the patient and would advise not only with the care manager, but also with the PCP in terms of consultation, as it relates to diagnosis, as well as the use of medication. This allows psychiatrist to be able to handle at least 50% more cases than they could in the model that is on the left side of this slide. I've had conversations with [inaudible] out of university of Washington, who was kind of considered the granddaddy of collaborative care. And he actually feels that that estimation is low and that we can actually increase the access to psychiatric services by using psychiatrist as a consultant, rather than always a direct care provider. So let's take that concept a little bit further, and let's look at it under the guise of what is called a last mile model. The last mile model is one that has been used in other countries, Africa, as well as India, where there is a scarcity of resources, as well as professionals

to be able to care for large populations. The concept of the last mile is to have an integrated team that is headed-, that is led by the professionals, usually the doctor, and the doctor has geographically in an area that they're responsible for and under team, they will have nurses, nurse practitioners, PAs, medical assistants, but also will have lay persons who live in the remote areas of these geographic areas and who are the ones who directly get involved with a patient.

Through guided supervision and in some cases, the use of decision support tools, they are able to assist the population, but more importantly, work in collaboration with the professionals. And so one is always practicing to the top of their skill. And those who work in the communities are gathering a skill that they did not have before, again, under supervision. In this particular slide, I'm showing you all the various components that have been seen in some of these models. When the patient is working with a therapist, the therapist works is supported by a care manager or a psychiatric consultant, or even a medical consultant. But they also, during the therapeutic process, can use other tools so that a visit in the office is not always necessary or a visit even virtually is not always necessary. One can include in the therapeutic process, the use of digital self-guided therapy, homework, which is common to be used in CBT, also supplement one's emotional growth with the use of peer support for coaching, also using specialized community support groups, which I'll talk about a little bit later. Using virtual assessments, so the patient can assess themselves periodically. And that information gets reported into the therapist. And also using virtual monitoring, which is real important where a patient can see how well they're doing and can chart their progress.

The use of community based therapeutic interventions is one that has been around a long time, as we all know about Alcoholic Anonymous, Narcotics Anonymous, Overeaters, and Weight Watchers. There's also a growing number of groups that are specific to others that are led by people who have been trained as a peer to deliver, I wouldn't call, therapy, but interventions and support. One of them is called the Mankind Project. I bring it up because it's very interesting. This is one that is specifically for men. And when you look at the advertisements and the

description, the phraseology and the language that's being used to attract men into this group is very different than what we use in the delivery system. So instead of medicalizing or creating a condition where you have depression or anxiety, what they are focusing on is building skills, resilience. So they call part of the engagement in the project is warrior training, or enhancing your manhood. All of these are kinds of phraseology that rings well or resonates well with males and therefore allows this group to continue. This group is present all over the country, all over the world and has been existence for over 17 years. And again, this is just an example of groups, community groups that help individuals to improve their life style, their functionality, and their quality of life. Again, these are not individuals with chronic mental illnesses. These are individuals that have difficulties with living their life. And if we look at the prevalence within the behavioral health sector, that's a high predominant- high number of individuals that are seeking help.

The other thing that's real important is being able to bring the strength of our practitioners, our behavioral health practitioners in alignment with one another. So we have growing out there, what's called aggregators. On the medical side, they're called management service organizations. And these are organizations that take single practices and link them together by using platform, which allows the use of electronic medical records, also linked to other providers that are in these particular aggregator networks. And so it becomes the beginning of an integrated network that can work in collaboration with one another. These are also entities that can contract with insurers or with ACOs in order to manage a population. The other piece that's important is the platform itself. With the aggregator, many of them that only have the tele-health capabilities, but they also have the electronic medical records in which they have embedded measurement based care tools. This is important because this is one area where there has been continuously, despite COVID, didn't propel this at all, but we still have a lagging of providers measuring the outcome of their therapeutic process. If you can imagine, it would be like the primary care physician treating diabetes without ever doing a blood sugar or hemoglobin A1C. And that's what it's like to treat behavioral health patients without ever measuring their baseline

and measuring their progress with time. Studies have shown that when one uses outcome and form processes where you're measuring and the patient is aware of the measurement and how they're progressing, the therapy goes a lot quicker, faster, and it's far more efficient.

With the pandemic, we know that we had an expansion of interventions, we've talked about them, and many of those approaches were already present, but had increased in terms of use and certainly, it allowed us to expand our capabilities to reach the large number of individuals who were seeking some type of emotional relief to what they're experiencing as they're going to the pandemic. In this circle, there's many things here that we have instituted since the pandemic, some before the pandemic. And certainly, these are the types of things that had been helpful in terms of trying to ease the pain that was experienced by our populations. What is known when we have a widespread pandemic that affects a large- I'm sorry, a widespread disaster that affects a large population. When you look at FEMA and other agencies, one of the things that's very key is communication and using those communications as a therapeutic tool. We all experienced that with COVID, we learned- we went from not knowing anything about COVID to learning more and more and learning how we can begin to protect ourselves by using mask, the social distancing, washing our hands. All of those pieces became very important in terms of our feeling less vulnerable and more protected. In behavioral health, it's also important that we be able to use these tools and because these are tools that can communicate and reach several different populations, and this is particularly popular with our 18 to 24 year olds, as well as our adolescents.

One of the things that has been seen by some of the vendors is that they actually go after individuals who have large followings of individuals in their demographic target area and recruit them into their digital application as a way of driving in that population, and also that population begins to accept the therapeutic interventions that are offered through the digital means. Question, are we measuring the right things? We certainly are very astute in labeling disorders, depression, anxiety, PTSD, but are those the things that we really should be looking at? It raised

this question, because there's a whole body of literature that talks about the use of enhancing resiliency skills. And looking at that, one would need to assess different things. Rather than looking at the amount of symptoms, the longevity of symptoms and severity, you're looking at, does this individual have self-belief? Are they emotionally aware? Are they able to solve problems? Have they ever solved a problem? Do they have social support? Do they demonstrate self-control? Do they have a sense of humor? These are all components that are important in terms of resiliency. These are not the things that we typically in our assessments of our populations use in order to determine or to put together a treatment plan or intervention plan. There's an area within Optum called healthcare transformation who has done some work on this, and they have done the work to be able to identify a set of characteristics that have to do with resilience.

The studies that they performed were with the Medicare plus population as the MedSup population. What they did was to devise a tool that is able to assess the degree of resilience skills that the individuals have, and they call this assessment, looking at the personal determinants of health. So along with social determinants of health, we have personal determinants of health. In doing that, we've been able to identify those who had higher levels of resiliency skills had lower costs in medical costs, even though they had chronic medical illnesses. So what does that say? Does that say that those with high resiliency capabilities perhaps take better care of themselves? Or is there something else that's operating there? Is it something that we should be looking at as a way of predicting how well people will do? The last piece that I want to bring is how do we make all these changes? And this is something I think we still need to explore. We're going on the verge of using pay for performance as well as value based contracting. I just want to bring two examples of that have demonstrated two historical ways of causing change. One was Leapfrog.

For those who have been around for awhile, Leapfrog was a employer collaboration that worked with health plans to begin to measure the performance of surgeons with very complicated

surgeries. One of them is esophageal cancer. The death rate from those procedures was quite high. So what they did was they began to identify and collect data on the number of procedures that the surgeons had done as it related to these complicated surgeries and the outcomes and began to pay- so there was transparency around that. And then those systems that had those surgeons became accountable, and that allowed for referrals of patients being referred to those particular centers with the highly skilled surgeons. Let's look at CMS with the MIPS program, where they started with pay for performance and quickly put in a payment reform process where those who were engaging in pay for performance in measuring quality factors, would begin to be paid higher, and those that were not, will get paid less. Again, that also builds accountability and transparency as it relates to one's success. We need to think about this as we go forward with all the changes in trends that have occurred with the pandemic and COVID. Thank you so much. I appreciate your time.

Dr. Jaime Murillo: Well, Dr. Robinson Beale, this was absolutely fascinating and we really look forward to enough material for the next year. We have quite a few questions from the audience. So let me start with one that was related to what you found in there, older than 65. Do you think the availability of the vaccine could have affected people in the over 65 population since they got access to it earlier?

Rhonda Robinson Beale: You know, that's an excellent question. There has not been- well, there's been a few studies that started looking at this since the vaccine has been available for just about a year. Again, you have to understand that the advent of the vaccine has occurred at least a year or a year and a half after the start of COVID. So if you go back to that disaster cycle, there's an emotional change that was going on as one gathered more and more information. Only thing I can say, if you look at the population, even when the vaccine came to play, many people didn't want to get the vaccine, even though they were highly stressed and concerned and fearful of COVID. Now, I don't know what that says, but I think that it kind of implies that the vaccine itself came along at a time when people were already starting to resolve their anxiety, their fears, and

their perception of their own safety and capabilities as it relates to the COVID itself. So it's a little hard to say, but I think the advent of the vaccine probably helped a great deal, but I'm not sure that it helped the population because of the timing of it occurring after the initial start of the disaster.

Dr. Murillo: Great. Thank you. And again, thank you to all those who've asked us questions. We're going to try to answer them offline, given the time constraints. Thank you, Dr. Robinson Beale for a fascinating, fascinating conversation. We already had messages thanking you for that from the audience, and I'm going to pass it for closing remarks.

Rebecca Gleason: Thank you, Dr. Morello, and thank you Dr. Robinson Beale. That was an excellent presentation. This concludes today's webcast.