'Closer to Home: Improving Specialty Access and Decreasing Hospital Transfers with Inpatient Telehealth Services'

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ARIA JAVIDAN:
Hello! My name is Aria Javidan and I'm the Project Manager for the National court soon

Of Telehealth Resource Center welcome to the latest presentation and the webinar series. Today's session is on Closer to Home Improving Specialty Access and Decreasing Hospital Transfers with Inpatient Telehealth Services.

Today is hosted by the Southeastern Telehealth Resource Center. It's designed to provide timely information and demonstrations to support and guide the development of your Telehealth programs.

Just provide a little background on the consortium, located throughout the country there are 12 regional Telehealth Resource Centers and two National, one focused on Telehealth Policy and the other on Telehealth Policy assessment. Advancing the effective use of Telehealth and supporting access to health services in rural and underserved communities.

A few tips before we get started today, your audio has been muted. Please use the Q&A function to ask questions. Questions will be answered at the end of the presentation. Please only use the chat feature for communicating issues with technology or communication access issues. Please refrain using chat to ask questions or make comments.

Please note that closed captioning is also available and that is located at the bottom of your screen. Today's webinar is also being recorded and you will be able to access today's and past webinars on the NCTRC YouTube channel and the website at Telehealth Resource Center.org.

With that I will pass it over to Lloyd Sirmons.

LLOYD SIRMONS:
It's an honor to have joining us today and presenting Mr Peter Cardella. Peter works with MUSC and the center of excellence there and the Telehealth department. They have been a partner of ours for a number of years. He's the director of Telehealth Operations and Nursing at the Medical University of South Carolina, which is one of the designated centers of excellence.

He's very accomplished and so we were joking a little bit earlier, I didn't want to cut him short on all of his

accomplishments, he completed his nursing school at James Madison University, but then he also completed a Masters in business administration in healthcare management from Liberty University.

He completed nursing school and worked as an emergency department RN. He was accepted to MUSC administrative Fellowship program, working closely with the chief quality officer and chief nursing officer and the chief operating officer.

Once he completed his fellowship in 2017, he worked as an assistant nurse manager for the MUSC adult emergency department level I trauma center. And then later became the nurse manager of the MUSC pediatric emergency level I trauma center. In the neonatal pediatric team, before moving over to MUSC's center of Telehealth as a director of operations in 2021.

Peter, it's an honor to have you with us today sharing with us. And I'm going to just turn the floor over to you.

PETER GARDELLA:
Sounds great! Thanks for having me. As we go through this, a lot of the work and a lot of the services that we will see as a result of an amazing team with lots of people, physicians and our team at the Center for Telehealth. And so, hopefully we will capture some of that work as we move through it.

So, our goal is that in the short time we have is to talk a little bit about what type of Telehealth Services are deployed in the Inpatient Settings, specifically in the MUSC use case, Medical University of South Carolina, but this is not always unique to our setting and in many cases you will recognize services that either yourselves deploy, or have seen deployed by other healthcare facilities.

We will try to touch a little bit on how we deploy the services, a little bit of the operations behind it, and then some of the why we choose to develop and implement these inpatient Telehealth Services because the varying use cases are what drive them. The different reasons for supporting the strategic areas are why we support these services.

And then understanding that as we talk, Telehealth is not meant to replace in person care but to strengthen it. Also under the services that have different use cases and how we deploy them.

You will see a couple icons as we go and I might not be able to touch on everything, but I try to summarize how we do it, and that includes some of the technology. You might recognize some names and platforms, and how we maintain it. A little bit about our operational support instructional, and how we sustain some of the objective criteria we -- look for achieving quality outcomes and return on investment. There are different value cases as we move through.

Important for setting the stage of these inpatient services, especially in the context of critical needs, it's important to understand a little bit of the background of our state in South Carolina and our health needs assessment that was recently published through 2023.

Some related findings that came from this, and the links are there for you all to see the South Carolina example, perhaps no surprise access to healthcare is the number one issue. What I highlighted was something that was a surprise to me, Health System mergers. They are affecting physical localities, especially in rural areas, it will come up a lot.

As MUSC and a lot of your facilities perhaps are expanding and merging with other Health Systems, even if it's meant to improve access, that is showing up in our areas as a possible inhibitor of access. It's something that we keep in mind and that I'm hoping to fix.

10% of South Carolina house holds have no internet access. We do have a robust team in South Carolina that has some funding and plans over the next several years to improve that. And some barriers to improving access and to healthcare is not just the availability of health insurance, but also the ongoing healthcare workforce shortages, and the lack of healthcare facilities. Another reason that Telehealth for inpatient services has become high demand.

Rural areas have a higher overall death rate than urban areas, and ultimately 27% of South Carolinians live in rural areas.

In addition to that, a little bit about us, Medical University of South Carolina is the University hospitals in Charleston South Carolina. We are an academic medical center serving all 46 counties within the state. We do have 16 hospitals, 12 of which are tertiary care centers, and 2700 licensed beds. I refer to hospitals as internal hospitals, we do deploy Telehealth Services to non-MUSC hospitals as well.

Specifically our Center for Telehealth is one of our two National Telehealth centers of excellence, the University of Mississippi be being the other one, who is charged with deploying Telehealth services to rural areas, and studying the research impact of it.

I will have a link at the end for all of you to see the website to learn from UNM RC and ourselves. We do have an alliance held quartered with 27 sites across the state and and specifically we have over 85 clinical care team members supported to drive our services, not just impatient, and most providers at MUSC participate, but we have 45 funded providers with various dedicated time and paid for to complete the services.

Our history might not look different from other areas, but has gone back to early 2000's, the early years primarily being some of those inpatient use cases, tele-stroke tele-ICU and tele-psych. Our Government decided to invest in expanding healthcare access through Telemedicine in 2013 and that's when the MUSC Center for Telehealth was born. And a year later, the SCTA alliance was founded. We do have some level of state funding supporting the services.

I talked about the center of excellence designated by Health Resources and Services Administration established in 2017, and like most people in 2020, we saw a massive expansion of Telehealth adoption and utilization. For a while, that's where the timeline ended, and so trying to update that to move into the next phase of healthcare redesign, and our trends as I put up there are not any different from others. But we do see them leveling off because I think we are seeing the right uses for Telehealth in the right areas and deploying them.

So, specifically moving into Inpatient Telehealth Services, I hope to show a little bit about our structure to show how the services are deployed. And then we have two main buckets of inpatient services: consultative and branding and monitoring.

Our structure from a high level on the inpatient side, we have an executive medical director, Doctor (Name), and our administrator Emily. Under them is myself and we have acute services nurse manager Shane MacLeod who oversees these services and their deployment. We have an excellent team that involves tele-registration, Clinical Support nurses, and four-person RN outreach coordinator team that does the bulk of the background work and keep these services moving and maturing.

Recently, we have two on-site fellow presenters to look at the impact of having support for the services. And then we have cross functional support, including our technology team and business development team to help us with some of those business functions and technology functions.

Me today, we are looking at supporting physician scheduling contracting, same at the hospital. We are looking at the same things that people are looking at inpatient services. Like note routing and professional billing. In the background is continuing quality monitoring and KPI tracking. And having regular reviews and touch points with internal and external hospital leadership so that they see the outcomes that are being delivered and the return on investment.

The quality monitoring, I do want to say, is not passive and is very active with ongoing data-gathering and tracking. It's not all the numbers and sometimes our outreach coordinator's are calling patients who have received (unknown term) after having a stroke. At 90 days to get there modified rank and score.

So, that was one example that happened recently. When our outreach coordinator's had called the

patient who had a stroke and who had received (unknown term), called at the 90 day mark in the patient picked up. The patient had a bunch of wind in the background. Our outreach coordinator asked where they were exactly.

It turned out this patient was on a cruise three months after receiving this therapy to save their life after having a stroke. So, improved quality of life, I think so. This is a feel-good story that we are certainly proud of and happy to see.

Again, not a story unlike ones that you will have or are able to share as well. But for us, seeing where it came from and how this program grew, I think what is fun to see.

The tele-stroke program, specifically starting in 2008, and then growing to where it is today in 2024. Delivering services across the state and continuing to change as we are able to help spread the services even further.

Moving from there, it's not just about spreading across state utilization but starting to mature in look at our quality impact. Over the years, 75% of our partners are now certified by joint commission or DMV in primary stroke center and certifications as supported by tele-stroke. Hundred percent of citizens over the years are now within at least one hour of expert stroke care, many times within 30 minutes, making it possible for patients to receive the targets of thrombolytic therapy within 30 minutes and -- 60 minutes.

The median door to needle time is 56 minutes, the median outcome of treating patients and that is statewide. Despite growing from the four hospitals to the one you see today, still an upward trend across the state. Something we are really excited to continue to mature in and develop is a statewide collaboration of improving door to needle times.

And so, having the stroke coordinators and leaders from those various hospitals come together to talk about, and share best practices, so that we can work together to continue to drive statewide improvements.

Moving on from stroke, that may have been what helped us kick it off but we have certainly expanded and continue to develop and deploy additional services. We also offer consultative models and services in neurology, psychiatry, and we have tele-EEG as well. And then some smaller services that we are continuing to grow like cardiology, tele-EMS, where patients can get in contact with our stroke neurologists from within the ambulance. And some other services and use cases like PED has critical care, support and ED virtual provider triage to support patients left waiting in the waiting rooms.

In general, this is a synchronous video that occurs and our current vendors are (Name). We do have

MUSC providers providing this care and acute services are 24/7, operationally supported by the Center for Telehealth.

And the goal here is to improve access to specialists within the local hospitals, both in their ED and Inpatient Settings, reducing transfers, which reduces costs for care to keep the care local, and having an impact on their quality measures and hospital outcome measures as well.

The volumes for some of the bigger services that we have been providing are continuing to grow and we are looking for to expand them further.

Our consultative services can be emergent, but also acute neurology. These are available 24/7/365, always having a provider available to respond with current response time average of six minutes across the state for each of these acute and urgent needs.

The general process and workflow is that a site will have a patient and request this consult through our admit transfer center, who pages it out to an on-call provider based on the schedule and call coverage that we help provide. And the provider then joins the video with the patient at the distant site, using a cart similar to the one you see there. In many cases the same one.

On the other side of that screen is another screen that you don't see. The direction we are looking at is for the Clinical Teams to be able to see and document as the patient is cared for. On the back of that, the patient will see the provider and the camera, and be able to act as though they are speaking with the provider there in person.

We do also have what we call scheduled consults. It's in quotes because the site will calls for consultation request that are not emergent, so similar to an outpatient type model, we will schedule these patients on paper for a date and time that works for both the site and the providers, and have that patient be seen.

This happens now through our tele-registration team that we've recently centralized within our own team inside Telehealth. And providers are able to view their schedules in Epic and have that continuity that way.

Some efficient wins, we have not yet figured it all out, but the patient list is moving from a scheduled type model to more of a list type model. And so, continuing to remove some of that waste and open slots that are not filled in a typical outpatient basis, and moved to a list where provider can move to patient to patient.

Because of this, that's where our Clinical Team will come in and schedulers to tee those patients up so that providers are able to move officially through their list. They have been shown to reduce weight cancellations, meaning the patient was supposed be seen out of certain time and for various reasons was not able to be seen. This prevents a time where we can see another patient. Major wins in this area.

Something we are continuing to focus on his communication and sharing information via the EMRs. We are looking into leveraging health information exchanges through them to be able to have immediate access to patient records and consultation note transfers.

Looking at some of the monitoring services, still synchronous videos at times when renting or monitoring the patient directly, but also infusing some phone calls and chart review to be able to essentially keep track of the patient and offer insights throughout their inpatient stay.

Because this is a more of a monitoring model, it definitely leverages and requires on-site support of both Clinical Teams, but also providers. In many of these cases, our team will work with a advanced practice provider to round on these patients -- daily, but in some cases the provider is able to leverage peripheral devices.

Some services that we have deployed in this area include very recently inpatient geriatric psychiatry units, Tele Neo ontology, Tele ICU that's been around for a long time for us in partnership with high acuity, and also expanding Virtual Nursing in partnership with (Name), and that includes their virtual sitting program as well.

Some big wins out of the gate, showing early promises but still lots to learn on, but being able to support geriatric psychiatry attending coverage and help them reduce 800,000 in locum coverage and of already seen 75% reduction in length of stay over the locum coverage.

In Tele-ontology, as we continue to mature, and early win was when 77 moms were able to deliver at home because they were able to be close by. And then additionally, tele-hospital coverage has seen in the last fiscal year June ~July over 5000 patients, helping them stay close to home to their local hospitals.

For tele-ICU program, it's an partnership with High Acuity Health, it is a very robust ICU level monitoring, and some ways Virtual Nursing before it was a thing. It does involve 24/7 continuous monitoring by the high acuity staff. It does involve synchronous videos at time to support the bedside. And it does what tele-ICU provides and what MUSC contributes to. Critical care nurses and respiratory therapists, monitoring patients across over 110 locations across the globe for high acuity.

In South Carolina, we are located in eight ICUs, with in the last year I hundred and 21 lives saved as compared to predicted mortality. Major improvements that come out of this is improved like the stay, adherence to best practices, and hoping to make improvements on sepsis and mortality.

This is in partnership with High Acuity and we've seen almost 78,000 patients in the tele-ICU in South Carolina sets alone since 2015. We do also operate one of their 11 operational hubs and that is a picture of the hub just a few doors down from my office. They provide coverage and support in partnership with High Acuity Health.

It allows South Carolina hospitals allow Kerby delivered locally in our state, but we also contribute to the needs of High Acuity and see patients across the country.

In partnership with them and our sites, we also offer ICU innovations that are meant to be an interdisciplinary team that will travel and take the outcome measures, the quality improvements, whether verbalized by the local teams about questions or areas of education that you would like to see. And our intensive nurses will meet with them and do presentations, some webinars and some in person, but the intent is not only build relationships, but also improve competencies with ICU patients in areas that are covered with a tele-ICU provider.

They have a robust and sophisticated quantitative reporting and quality tracking system, and this is shared in executive reviews with each site accordingly.

Coming up very recently with a lot of popularity with not much surprise as to why, with the increasing nursing shortages, burnouts, and need for coverage, it has certainly become popular. In partnership With Virtue Ally that helps deliver this service, this is a synchronous video chart review and sometimes phone support. This is 24/7 with the virtual RN, looking to improve the areas of nursing workforce economics, decreasing over time, and decreasing the need for travelers, as well as reducing turnover.

Also heavily focused on nursing core measures and improving best practices, ultimately improving patient throughput, and hopefully -- decreasing length of stay.

So far to date, less than a year, over 6200 patients have been served in 11 hospitals in South Carolina. We've determined 113 days worth of time has been given back to bedside nurses thanks to support a virtual nurses. And also performed through almost 9000 sessions being conducted.

A lot of the effort is done through chart review and in asynchronous review, and only 62% involve or require video. They look in areas to support admissions. A new patient is admitted in the Virtual Nursing

either in ED or on the unit is able to help that patient check-in, removing a significant burden from inpatient teams that are trying to perform the intakes of newly admitted patients.

Supporting processes and doing a lot of quality surveillance to reduce possible hospital acquired conditions and improve patient safety.

Some early data, because this is also moving target, would like to show some of the data we have found. One hospital has experience right off the bad in the admission area of the age gaps, highest scores achieved in four years. Also nine point increase from the year prior on the areas of admission. And contributed by the virtual nurse.

Looking at the time-based metrics of the time given back to the nurse and being able to calculate things like and 11.2 percent increase, come by leveraging Epics nursing efficiency assessment tool, where we can see where the bedside nurses have been in Epic and how long they have been spending there. And being able to measure the difference as we see the Virtual Nursing time in the record increase. We are hoping to see that the bedside nurse, at least in the areas where we are supporting, that time goes down and they're able to spend more time with patients across the units.

Also at 37.5% improvement in discharge timeliness and some hospital expenses and our focus over the next year is to continue to improve in driving that connection between the Virtual Nursing support and improvement in these areas. That's in the area of quality surveillance, and that's one of the largest areas of service units as we are calling them, that the virtual nurses doing followed closely by education, and that admission support and care planning.

That car is a part of the tool that is used, wheeled to the bedside were the virtual nurse is able to speak with the patient. And we did opt for rolling carts instead of fixed room equipment for various reasons. Cost being the primary one, but also as we are learning, 22% of these assessments require video, and so trying to balance out the need versus the cost.

Finally, Closer to Home. These are the services we are delivering and how we are delivering them, but there are various ways that this maintains the care Closer to Home. It has to be sustainable and safe. And so some of the use cases we've seen in these areas.

One of them is in disasters. This is something that we in South Carolina and in other areas nearby have experienced recently. And so, in this case hurricane Helene had an unexpected impact on the upstate in Charleston, and we all know the impact it's having in areas like Asheville and in Florida and Georgia areas as well.

In one of our partner hospitals that we have part-time contracted psychiatry support for, we were able to get in touch with that site and that hospital who told us that one of our stroke neurologist cannot make it to the hospital because of the storm. Without missing a beat, we were able to say it's fine and we've got it. We communicated with the ED teens to immediately flip to tele-stroke coverage where we did receive several consultations and able to keep those patients safe during that time.

Reduce patient expenses. It's very important in being able to provide the services. We want to be able to show the patients are staying close to home and that this has an impact.

This was published in 2021 by our team members at MUSC, but still true and still data that we see today, that as over the years, as we have expanded services and TPA has been recommended for patients, presenting to local hospitals with stroke, not only have those transfers gone down, but especially combining inpatient services like tele-stroke with tele-neurology, being able to keep those patients in a local hospital and can continue to care, we saw that the Hospital Transfers went down despite the numbers of tPA recommendations and administrations going up.

Reducing the cost on average of almost $5000 per patient, which is a safety benefit, as well as a cost savings for the patient. In addition to that, there is an ROI for the hospital as well. They are able to in some cases look at typical DRG patients, DRGs for maintaining and admitting tele-stroke patients to the inpatient units. That has an ROI based on what they are paying for the coverage.

These are reviews that we share with our hospitals in South Carolina. Almost $1 million in return on investment. And the very high return on investment for the other hospitals as well, based on their numbers and local DRG payments.

We started to track patients retained locally and that is a success metric for us. Not to provide coverage in a way that helps them transfer to the hub in downtown Charleston. You can see 96 or 97% of patients stay locally in that hospital. Compared to research and things like DRG payments, it can also return, help the hospital have savings and return on investment in other areas like palliative care also.

It's also about quality. In biannual reports that we try to share, it is meant to bring transparency, not just to the utilization and return, but also on the quality. We are looking for opportunities to improve as we support them, but also opportunities to partner to continue to improve other areas as well. Our goal is to help drive those outcomes and we do that through tracking the data and presenting it in partnership with our sites.

So, ultimately Telehealth is not meant to replace in person care, it's meant to strengthen it. It's meant to find areas of need in unique areas across the state, rural and urban, and sulfur that need. Strategic

virtual support for those hospitals is really what's needed and what helps keeps those patients close to home.

Two resources that I'm happy to share if you are not able to click here but our South Carolina Telehealth Association has a website and I invite you to comb through it to see the resource guides, resource overviews. And also the Telehealth centers of excellence website, you will see some of the work and some of the literature and research published and shared throughout our work.

Not all of it is successful, lots of learning opportunities, but that's exactly what we hope to study and continue to share. Happy to take any questions.

LLOYD SIRMONS:
Thank you for that. If you have questions, you are more than welcome to post those now into the chat. We will monitor that. And try to get those answered as best as possible.

I'm not seeing anything in the chat. Aria, I don't know if you are seeing anything?

ARIA JAVIDAN:
I don't see any questions. I did get a couple questions that I already answered. The recording and slides will be posted to the consortium website within 24 hours.

LLOYD SIRMONS:
Great! Any questions for Peter before we allow Aria to close things out? Are you, I think it's safe to say if you want to take the floor, it says we just have a comment coming. I'd say go ahead, Aria. If it pops up I will let you know.

ARIA JAVIDAN:
Just a reminder that our next webinar will be held on November 14, that is been rescheduled from our regular third Thursday schedule due to the holidays. It will be on Federal cybersecurity resources for Telehealth and be hosted by the Northwest regional Telehealth Resource Center.

And lastly we do ask that you take a few short minutes to complete the survey that will pop up at the conclusion of this webinar. Your feedback is very valuable to us. Thank you again to the Southeastern Telehealth Resource Center for hosting today's webinar and to Peter for his presentation.

Think you would have a great day everyone!

LLOYD SIRMONS:

Goodbye, guys!

(Recording stopped)

(Webinar ends)

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