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MISSION

Improve the health of all South Carolinians through telehealth.

VALUES

- Patient Centered
- Quality
- Collaboration
- Sustainability
- Accountability

STRATEGIES



Open-Access

Deploy a coordinated, open-access telehealth network in South Carolina.



Rural Focus

Understand and effectively respond to the health needs of SC citizens with an emphasis on those living in underserved and rural areas.



Service Development

Build and scale telehealth clinical services and programs that expand access to care.



Mental Health

Broaden mental health and related telehealth clinical services and programs to increase access to care.



Education and Training

Conduct statewide education and training to providers and the public to accelerate and spread adoption of telehealth.

VISION

Telehealth will grow to support delivery of health care to all South Carolinians with an emphasis on underserved and rural communities. It will facilitate, coordinate, and make more accessible quality care, education, and research that are patient-centered, reliable and timely. Our state will become recognized nationally for telehealth that is uniquely collaborative, valuable, and cost effective.

VALUE PROPOSITION

Telehealth in South Carolina will deliver high value through productive collaboration.



Collaboration

Develop a telehealth organization structure that encourages and facilitates statewide collaboration among providers in the delivery of health care, education, and research.



Outcomes

Establish the value case for telehealth through robust assessment and rigorous analysis of telehealth outcomes.



Promotions and Sustainability

Demonstrate to legislators, payers, providers, and the public the impact of telehealth on improving access, quality, and affordability.

FROM THE SCTA LEADERSHIP

We welcome you to join us as we reflect on the distinguished work of the South Carolina Telehealth Alliance (SCTA) during the past year. Through statewide partnerships and collaboration, SCTA partner organizations have provided expansive telehealth services and impacted thousands of lives. In this 2019 South Carolina Telehealth Alliance annual report, you will see that every workgroup meeting, provider training, and broadband assessment was centered on our shared mission of “improving the lives of South Carolinians through telehealth.”

Collaboration is paramount to any alliance, and the SCTA would not be possible without partner organizations actively sharing their expertise for the advancement of telehealth across South Carolina. In 2019, the SCTA was awarded the American Telemedicine Association’s President’s Award for the Transformation of Healthcare Delivery, a testament to the ongoing success of the SCTA’s collaborative statewide partnerships.

Look back with us to reflect and learn more about the telehealth programs and infrastructure that were developed over the past year. Thanks to the continued support of the South Carolina Legislature, and the engagement from statewide partners, telehealth is happening every day across South Carolina.



James T. McElligott, M.D., MSCR

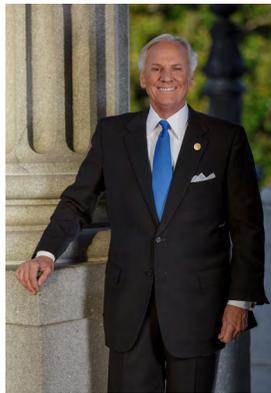
*Telehealth Executive Medical Director
Medical University of South Carolina
SCTA Advisory Council Co-Chair*



Kathy Schwarting, MHA

*Chief Executive Officer
Palmetto Care Connections
SCTA Advisory Council Co-Chair*





Dear Friends,

It is with great pleasure that I introduce this review of the advancements in telehealth that have been accomplished by the South Carolina Telehealth Alliance (SCTA). The Medical University of South Carolina (MUSC), in its third year as one of two federally designated National Telehealth Centers of Excellence, has become an example for the nation. McLeod Health, Prisma Health, the South Carolina Department of Mental Health (SC DMH), Beaufort Memorial, Spartanburg Regional Healthcare System, and many others have made considerable contributions in the field in order to truly make access to care possible in every county in the state.

Palmetto Care Connections, the South Carolina Area Health Education Consortium (SC AHEC), and South Carolina ETV have spent endless hours supporting rural connections, training, and education and spreading awareness about telehealth's capabilities.

The contributions made by these collaborators through the SCTA have resulted in some highly-favorable outcomes. Today, every South Carolinian is within one hour of time-sensitive, expert stroke care. In 2019 alone, thousands of our citizens were remotely treated with the highest quality stroke care in the country, leading to more patients receiving appropriate care and increasing their chances of survival and recovery. Our school-based telehealth network has also become a national model with local pediatricians, FQHCs, and academic medical centers teaming up to provide world class care for our children. This care is associated with a 35% reduction in emergency room utilization for children with asthma. Furthermore, SC DMH has established one of the most robust telepsychiatry networks in the country, and tele-ICU has saved hundreds of lives in our state!

These achievements could not have occurred without a deep commitment to collaboration. Our South Carolina health care providers have made such a commitment to working together to improve care for our patients that the SCTA was awarded the 2019 American Telemedicine Association's President's Award for the Transformation of Healthcare Delivery. This award is given to only one organization in the entire nation and further validates that South Carolina is leading the country in telehealth!

I invite you to read through this annual report to learn more about how our state is invested in supporting the expansion of telehealth.

Yours very truly,

Henry McMaster



AWARD-WINNING COLLABORATIONS

The American Telemedicine Association (ATA) President's Award for the Transformation of Healthcare Delivery was made possible by the incredible collaborative work of all SCTA partners.



SCTA Partners receive the ATA President's Award in New Orleans

President's Award for Transformation of Healthcare Delivery

In 2019, the South Carolina Telehealth Alliance (SCTA) was presented the 2019 American Telemedicine Association (ATA) President's Award for Transformation of Healthcare Delivery. This award is a testament to the collaboration that takes place every day to expand telehealth in South Carolina. Several SCTA partner representatives traveled to New Orleans where they accepted the award during the annual conference held April 14-16 at the Ernest N. Morial Convention Center.

"The ATA President's Award for the Transformation of Healthcare Delivery Award recognizes the leadership of an organization that incorporates virtual healthcare services as part of an initiative resulting in improved healthcare

COLLABORATIVE CLINICAL & WORKGROUP PARTNERS



quality and value for a large population of patients. This year's winner is the South Carolina Telehealth Alliance (SCTA), a statewide collaboration of organizations that have joined forces to expand telehealth services across the state, giving all South Carolina residents access to quality healthcare, while effectively managing the cost of providing care." -American Telemedicine Association

Like many healthcare services, telehealth requires a multi-pronged approach to be successful, and this award is the result of the hard work put in by representatives from over 25 organizations. Representatives from partner organizations participate in numerous SCTA workgroups to build an aligned strategic approach to telehealth service and infrastructure expansion across South Carolina, and to work collaboratively to meet the milestones outlined in the SCTA Strategic Plan each year.

2019 SCTA WORKGROUPS

- Information Technology
- Education & Training
- Telehealth Clinical Service Development
 - Telestroke
 - Regional Hubs
 - School-Based Telehealth
 - Tele-Mentoring/Project ECHO
 - Children's Telehealth Collaborative
 - Tele-MAT
- Research & Outcomes
- Promotions
- Sustainability



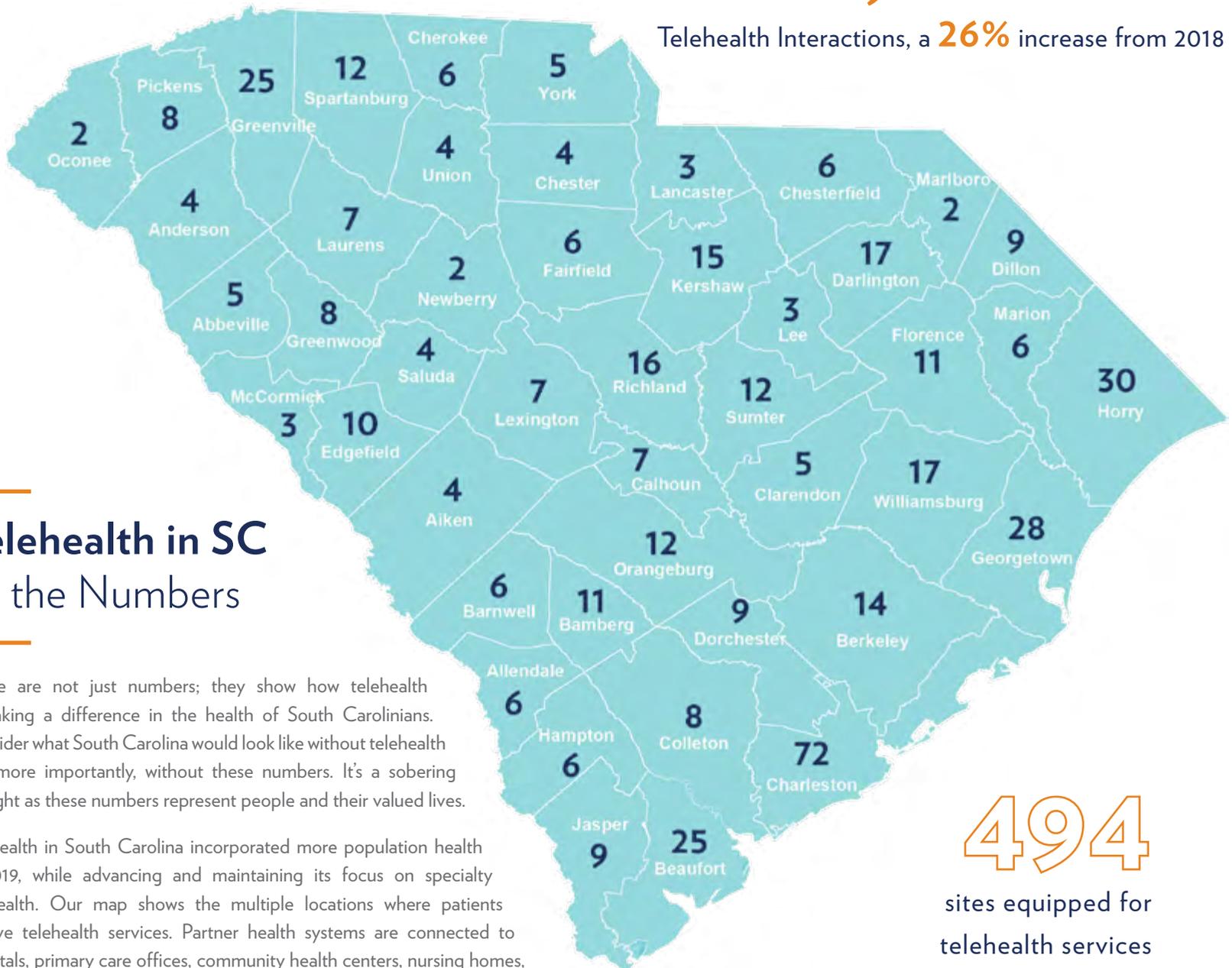
WATCH THE VIDEO

TELEHEALTH SERVICES

SC conducted almost

435,000

Telehealth Interactions, a **26%** increase from 2018



Telehealth in SC by the Numbers

These are not just numbers; they show how telehealth is making a difference in the health of South Carolinians. Consider what South Carolina would look like without telehealth and more importantly, without these numbers. It's a sobering thought as these numbers represent people and their valued lives.

Telehealth in South Carolina incorporated more population health in 2019, while advancing and maintaining its focus on specialty telehealth. Our map shows the multiple locations where patients receive telehealth services. Partner health systems are connected to hospitals, primary care offices, community health centers, nursing homes, schools, and correctional facilities.

494

sites equipped for
telehealth services

114,000+

Real-time video interactions

42,000+

Asynchronous telehealth interactions

Asynchronous interactions are provider/patient online interactions that can include adaptive interview styled assessments, recorded video messages or still images, online visit texting, or audio files that are transmitted between provider and patient.

205,000+

Remote patient monitoring (RPM) interactions

RPM is continuous tracking of a patient's clinical conditions. The patient can be located in a clinical setting or at home.

69,000+

Tele-ICU monitoring interactions

A multi-disciplinary team of specialists in the Tele-ICU program connects with partner hospitals to assist in the care of the sickest patients. Interactions include audio-video evaluations, direct patient interventions, and clinical communication.

3,000+

Remote specialty interpretations

Patient information is transferred securely to a specialist for interpretation (EEG or diabetic retinopathy).

Hospital-Based Telehealth Services

- Acute and follow-up stroke care (telestroke)
- Antimicrobial stewardship
- Continuous virtual monitoring (telesitter)
- EEG
- Infection control
- Infectious disease consults
- Intensive care unit patient monitoring (tele-ICU)
- Neonatology
- Neurology
- Neurosurgery intensive care consults
- Palliative care
- Pediatric critical care
- Pediatric gastroenterology
- Psychiatric consultations to the emergency room
- Psychiatric consultations to inpatient facility
- Sickle cell consultations

Outpatient Clinic Telehealth Services

- Cardiology consults
- Diabetes education
- Ear, nose and throat (adult and pediatric)
- Endocrinology (pediatric)
- Epilepsy
- General neurology
- General surgery (adult and pediatric)
- Genetics counseling
- Interventional radiology
- Infectious disease for obstetrics
- Lactation support to clinics
- Maternal fetal genetics
- Maternal fetal medicine
- Movement disorders
- Neuro psychology
- Nutrition (adult and pediatric)
- Opioid addiction management
- Ophthalmology – diabetic retinopathy
- Pediatric GI
- Pediatric pulmonary
- Pharmacy services
- Pulmonology consultations
- Post-stroke follow-up

- Psychiatric consults (adult and pediatric)
- Sickle cell (pediatric)
- Social work
- Sports medicine
- Transcranial doppler (TCD Ultrasound)
- Transplant nephrology post-transplant
- Urology (pediatric)
- Vascular surgery
- Virtual tumor board
- Weight management group visits

Services to Other Population-based Settings

- School-based telehealth services
 - Acute sick care
 - Chronic disease management (asthma)
 - Health education
 - Mental health counseling (general & trauma focused)
- Correctional institutions and jails
 - Intake health assessments
 - Acute sick care
 - Chronic disease management
- Skilled nursing facilities
 - Acute sick care
 - Mental health

Direct-to-Patient Services

- Asynchronous virtual visits for acute conditions
- Asthma monitoring
- Congestive heart failure monitoring
- Heart valve app & monitoring
- Diabetes home monitoring
- Pediatric burn app
- Post-trauma mental health symptom monitoring & video visits
- Tobacco cessation
- Video visits for acute and chronic conditions
- Video visits for mental health counseling
- Video visits for lactation support
- Video visits for ostomy and wound care
- Video visits for pediatric development
- Video visits for prenatal visits
- Weight management monitoring & video visits

COMMUNITY HOSPITALS

STROKE & NEUROLOGY

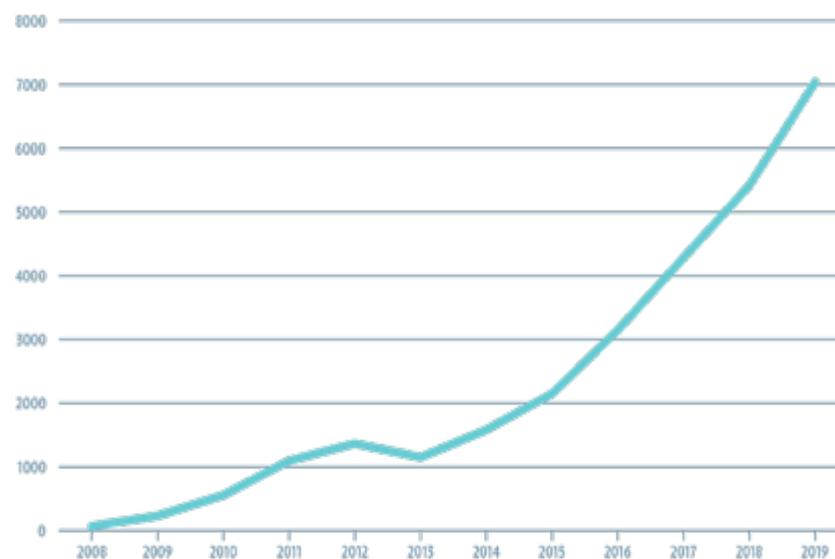
Stroke

The South Carolina Telestroke Network continues to be a national model for how hospitals can provide expert stroke care to patients regardless of where they live. Four hospitals joined the network in 2019, for a total of 51 hospitals with increased access to patients presenting with stroke symptoms. **Due to this growth, all South Carolinians are now within 60 minutes of expert stroke care**, and patients can be evaluated and treated by a stroke expert without having to leave their communities. Also in 2019, **MUSC demonstrated that patients living in a county with a telestroke program have a 25% higher likelihood of receiving the clot-busting medication tPA and a 9% greater chance of survival** (*Telemedicine and e-Health*).

Neurology

Access to high quality neurology consultations is also essential to comprehensive stroke care. MUSC Health neurologists connected to 21 hospitals across the state and continue to be available for scheduled teleneurology consultations and 24/7 urgent consultations. They partnered with local hospital providers to treat a number of conditions including migraines, altered mental status, seizures, multiple sclerosis, and Parkinson's disease. Establishing a teleneurology network has led to a significant reduction in transfer rates, in addition to significant cost reduction. The total cost reduction (including transportation cost and higher cost at the tertiary medical center) for each avoided transfer is almost \$5,000. In 2019, MUSC Health provided more than 3,200 neurology consults via telehealth.

Telestroke Consults by Year across SCTA Partners



EEG

Diagnostic imaging rounds out comprehensive stroke care. MUSC neurologists provided support in this aspect by partnering with several hospitals in the state to interpret EEGs. While hospitals can perform the EEGs, many do not have specially trained neurophysiologists on staff to adequately interpret these crucial images. MUSC connected to 7 hospitals in 2019 to provide tele-EEG services.

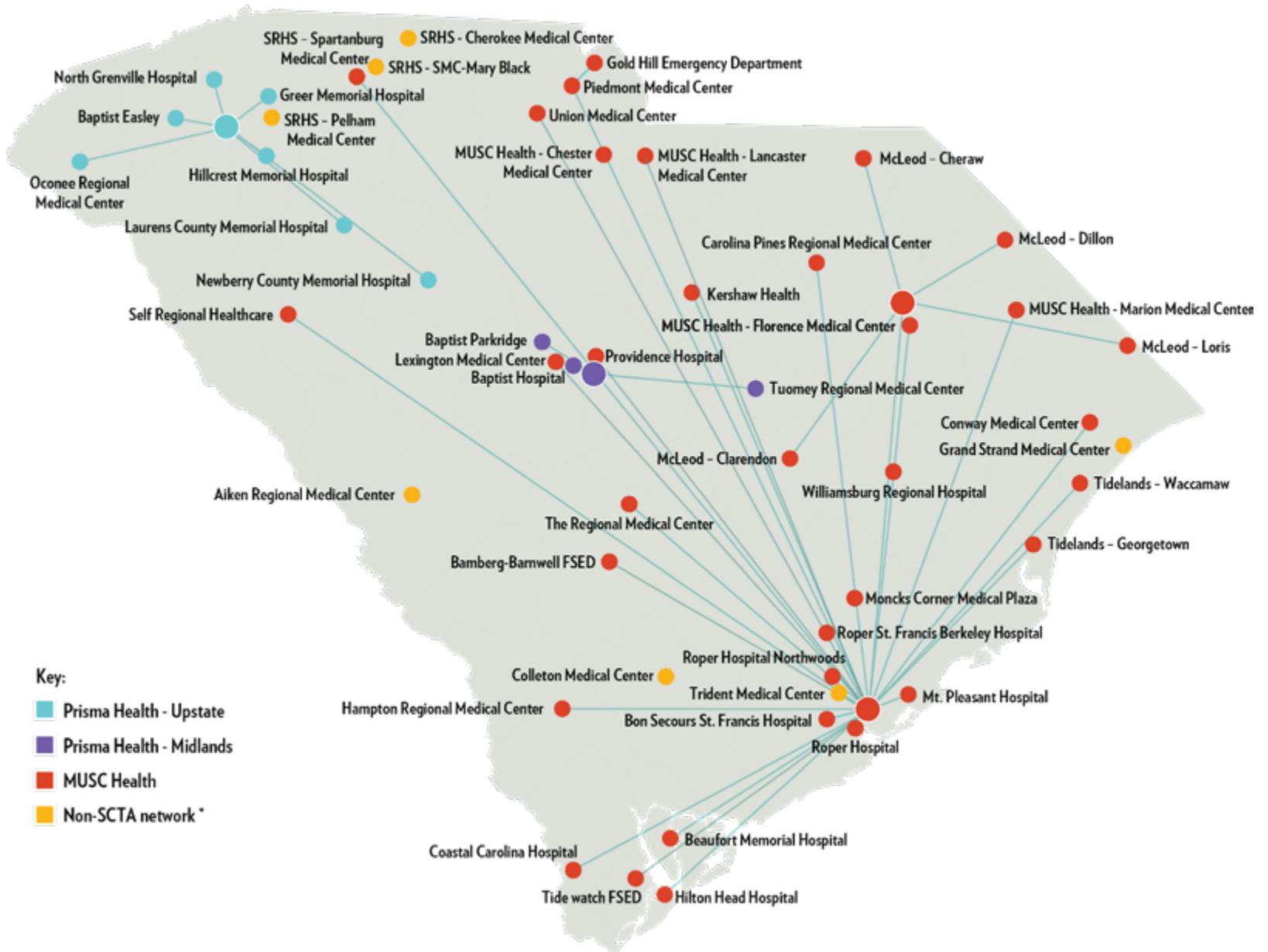


Neurosciences Education

Information sharing is another beneficial component available for network hospitals receiving teleneurology services. MUSC hosts an annual boot-camp where nearly 40 partner hospital clinicians participate in day-long training and discussions to document and share best practices of teleneurology. There are also online partner education resources in the following areas:

- Neuroscience Patient Selection Guidelines
- Consult Request Processes
- Telestroke Protocols
- National Institute on Health Stroke Scales
- Telemedicine Cart User Guides

The SC Telehealth Alliance telestroke networks are providing expert stroke care coverage throughout the state



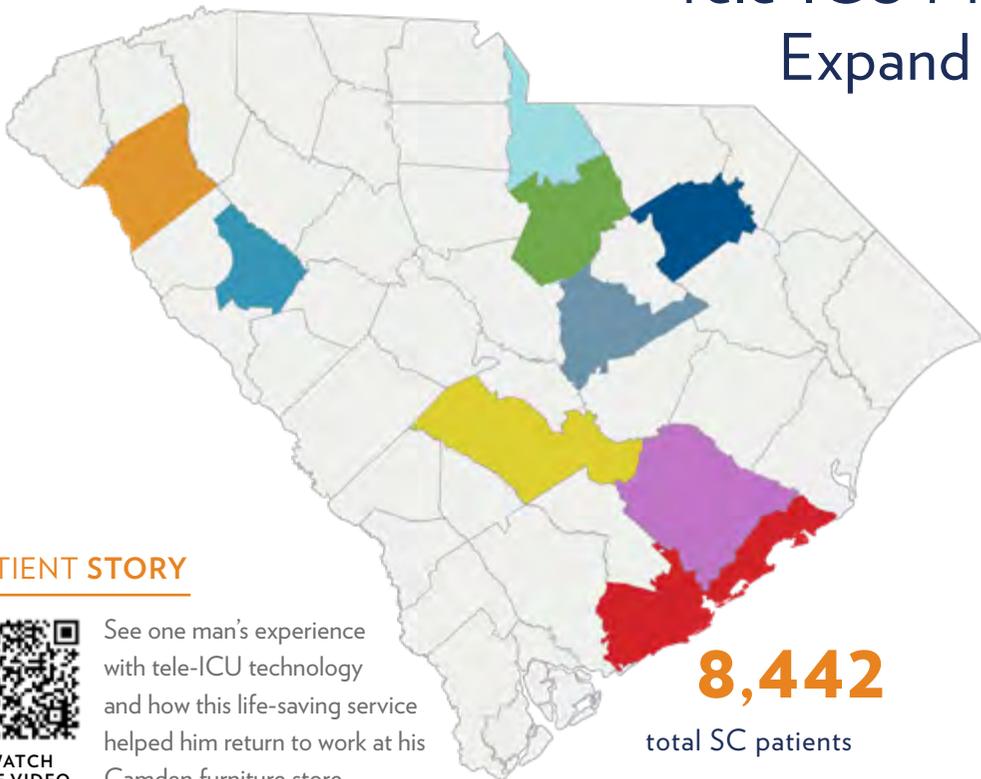


Tele-ICU

MUSC Health's critical care physicians continue to partner with community hospitals to provide an extra level of expert care to intensive care patients. There are 10 connected hospitals receiving round-the-clock remote ICU monitoring, allowing patients to remain in their home communities and still receive care from a multi-disciplinary team of board-certified intensivists and critical care nurses. Within the last two years, **more than 15,000 South Carolina patients have been monitored, with 320 lives saved in 2019.**

Like other telehealth services, Tele-ICU is transforming the way community hospitals are able to provide care to their patients. With the use of two-way audiovisual communication, MUSC Health intensivists can consult with providers at community hospitals regarding their patients' care. The program also employs a sophisticated alert system that notifies MUSC intensivists of a patient's vital condition, allowing for quick identification of potential problems and proactive decision-making regarding care.

Tele-ICU Monitoring Continues to Expand Across South Carolina



MUSC Connected Hospitals

- AnMed Health: Anderson County
- Carolina Pines: Darlington County
- Kershaw Health: Kershaw County
- MUSC Health - Lancaster: Lancaster County
- Prisma Health Tuomey: Sumter County
- Regional Medical Center: Orangeburg County
- Roper St. Francis: Berkeley County
- Roper St. Francis: Charleston County
- Roper St. Francis - Mount Pleasant: Charleston
- Self Regional: Greenwood County

PATIENT STORY



WATCH THE VIDEO

See one man's experience with tele-ICU technology and how this life-saving service helped him return to work at his Camden furniture store.

8,442

total SC patients
monitored in 2019

MENTAL HEALTH



Prisma Health-Upstate Telepsychiatry

Prisma Health-Upstate continued delivering telepsychiatry into six emergency departments and five urgent care centers, having conducted 229 assessments in 2019. Their dedicated team of psychiatrists are providing front-line innovative psychiatric care to assist in the triage of patients to the most appropriate type of treatment in the most appropriate setting. The program also includes psychiatric social workers who provide the initial screening evaluations and advanced practice providers present around the clock, thus creating a true team approach to patient assessment, treatment, and discharge.

In 2019, Prisma Health-Upstate conducted

229 assessments

In 2019, MUSC Health partnered with five hospitals to provide inpatient telepsychiatry services, for a total of

270 consults

MUSC Inpatient Telepsychiatry

Through partnerships with hospitals, MUSC psychiatrists provide scheduled consultative care for inpatient medical, obstetric, and surgical units. Consultations include psychiatric evaluations and medication management, and these assessments often allow medical treatment to continue in the local community hospital without the need to transfer to a psychiatric hospital.

Consultations address a wide array of conditions and have a dramatic impact on patient quality, safety, and even length of stay. Some noted benefits include:

- Availability of scheduled consults within 24 hours, Monday through Friday
- Diagnosis and treatment of patients with delirium and dementia
- Management of substance use disorders, detoxification, and withdrawal
- Safety and risk assessments for agitated, violent, or suicidal patients
- Medication recommendations
- Diagnosis and treatment of chronic mental health conditions

In 2019 MUSC Health partnered with five hospitals to provide inpatient telepsychiatry services, for a total of 270 consultations last year.



SCDMH Emergency Department Telepsychiatry

As the state's largest provider of mental health services and a pioneer in telehealth with more than 20 years of experience, the South Carolina Department of Mental Health (SCDMH) continues to provide telepsychiatry to patients in emergency departments around the state. SCDMH psychiatrists conducted 8,986 comprehensive assessments into 23 emergency departments during 2019. These comprehensive assessments are critical to emergency clinicians in assisting with triage and individualized treatment plans.

Leveraging this model, the first of its kind in the nation, SCDMH has partnered with emergency departments since 2009 to provide this innovative solution for patients experiencing emergent psychiatric crises. The program has been evaluated by the University of South Carolina-School of Medicine and has demonstrated the following:

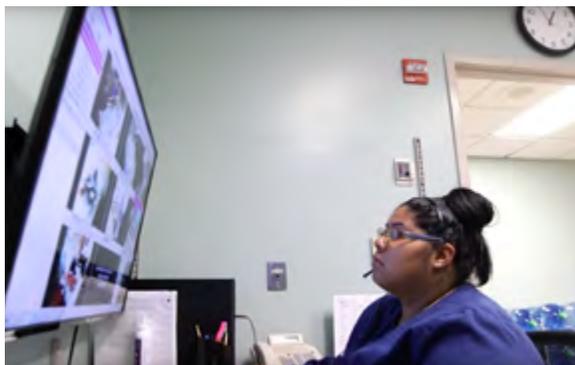
- Provides patients with a quality psychiatric assessment as soon as possible
- Assists in initiation of medication and/or other treatment as prescribed
- Reduces the length of stay in the hospital
- Accrues savings to the hospital
- Facilitates comprehensive planning for continuity of care upon discharge

ED TELEPSYCH
PROGRAM

In 2019, the SCDMH psychiatrists conducted
8,986 assessments

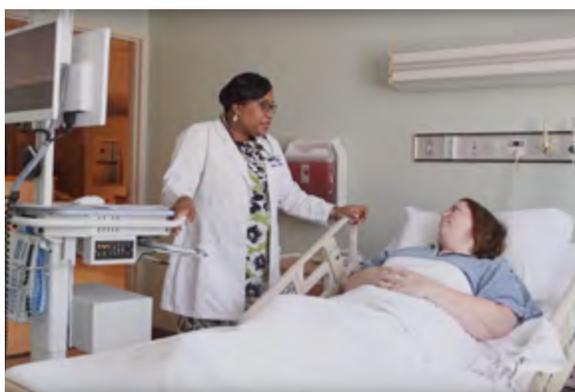
This program saves an average of
\$2,434 per emergency room visit.

OTHER PROGRAM HIGHLIGHTS



Continuous Virtual Monitoring

Patient safety is an extremely important issue, which hospitals sometimes address by hiring sitters to monitor patients who are at-risk for falls and other safety hazards in their rooms. Continuous Virtual Monitoring (CVM) is a cost-effective way to add this extra level of staffing and provide 24/7 monitoring, while increasing patient observability from 1 in-person sitter monitoring 1 patient to 1 virtual monitoring tech (VMT) monitoring up to 10 patients via telehealth. Both Prisma Health and MUSC Health have implemented CVM programs that have proven impactful. In 2019, MUSC Health's CVM program actively monitored 20 units at MUSC Charleston, an increase of 12 units from the previous year.



Palliative Care

MUSC Health began partnering with community hospitals to help treat patients with life-limiting and life-threatening illnesses by offering palliative care tele-consultations. This service is available to any facility with palliative care patients of any age, and may also pair with curative treatment. Palliative care tele-consultations can assist patients with conditions such as kidney disease and complex brain injuries to provide pain and symptom management, advanced care planning, and supportive care. The goal of the palliative care teleconsultations is to improve the quality of life for the patient and family by reducing depression and anxiety, and increasing patient and family satisfaction.



SCAN TO
LEARN MORE



Infectious Disease

Prisma Health-Upstate offers infectious disease (ID) teleconsultations to their network of hospitals, with services including evaluations and medical management for patients. In 2019, MUSC Health joined Prisma Health in providing ID teleconsultations.

Prisma Health and MUSC Health together conducted a total of **315 infectious disease teleconsultations** in 2019.



Hospital-Based Telehealth Services at McLeod Health

A basic guiding principle of telehealth is extending healthcare expertise outside of the walls where expert practitioners provide care. McLeod Health is providing this service to their network of hospitals by treating patients with pulmonary and cardiac related illnesses. McLeod also delivers inpatient nutrition teleconsultations. In 2019, they delivered 145 consultations through these three programs.

In 2019, McLeod Health provided **145** hospital-based **teleconsults** across its pulmonary, cardiac, and nutrition programs.

Pediatric Critical Care

The Children's Telehealth Collaborative (CTC), operating under the SC Children's Hospital Collaborative, continues to partner with South Carolina's children's hospitals to build innovative telehealth solutions to care for their sickest and youngest patients. A focus of the children's hospitals across SC is pediatric emergency care, critical care, and neonatal intensive care consultation programs across SC's children's hospitals. Through these programs, community hospitals across the state have an extra layer of support when a critically ill child arrives at their facility. **These pediatric critical care specialists or intensivists provided 110 consultations in 2019.**



WATCH THE VIDEO

PATIENT STORY

See why one family credits their daughter's survival to the telehealth connection made between Tideland's Waccamaw and an MUSC Health pediatric intensivist.



Delivery Buddy

Every second counts when a life-threatening newborn delivery occurs. Delivery Buddy at Prisma Health-Upstate continues to provide critical support to community hospitals when a newborn is distressed due to a complicated delivery. Staff at community hospitals can initiate a consultation with a neonatal nurse practitioner while simultaneously alerting the on-call pediatrician, allowing the neonatal nurse practitioner to care for the baby until the pediatrician arrives. This innovative telehealth service saves precious time for treatment, and decisions about whether or not the baby requires transportation to Prisma Health – Upstate. If the baby is transferred, providers receiving the baby already have a history of the delivery and complications, giving them an advantage to proactive treatment. Last year, 24 babies were helped through the use of this innovative telehealth service.



SPECIALTY CONSULTATION

MUSC Health continues to fill gaps in the availability of specialty care in South Carolina. There are two models: Outpatient Telehealth Consultations and Regional Specialty Clinics.

Outpatient Telehealth Consultations

In the Outpatient Telehealth (OT) Consultative model, MUSC specialists are connected to pediatric, primary care, and OB/GYN practices, allowing patients to receive specialty consults in the same location. Current types of consultations in this model are maternal fetal medicine, nutrition and psychiatry.

One program of note within this model, is the Women's Reproductive Behavioral Health program. Pregnancy and motherhood can be a wonderful but also stressful or difficult time in a woman's life if she is simultaneously coping with mental health issues. In 2019, MUSC Health psychiatrists offered teleconsultations to women at their OB/GYN or pediatric clinic rather than having them drive to MUSC Health for their psychiatry visit. The program provides mental health treatment for pregnant and postpartum women, and offers expertise for a number of conditions including mood and anxiety disorders, trauma, grief, psychosis, and substance use disorder.

Regional Specialty Clinics

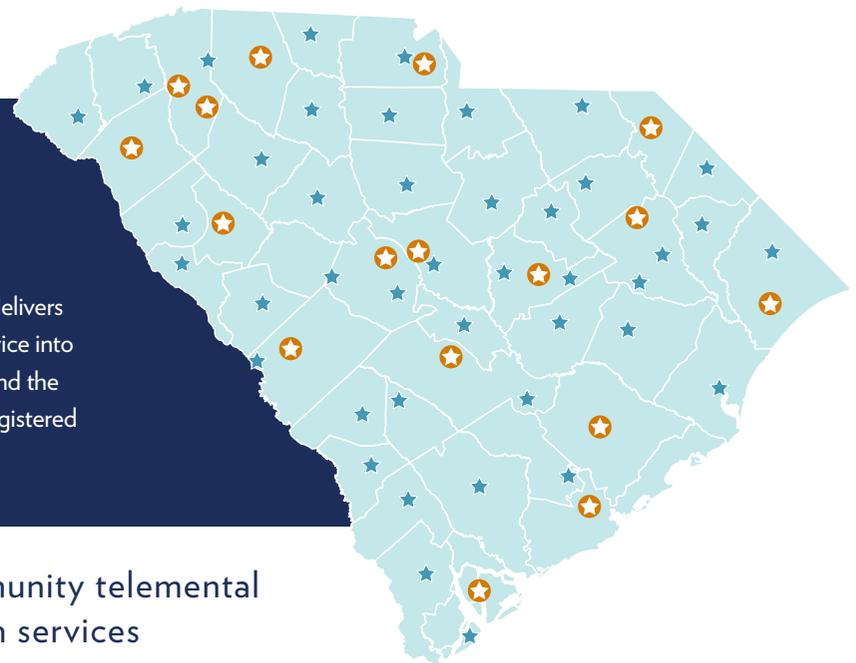
The standalone regional specialty clinic allows patients to access multiple specialty services from one convenient location. This model is being deployed at the MUSC Health at Tidelands in Murrells Inlet, which provides telehealth consultations for:

- Stroke, epilepsy, neuro-psychiatry, movement disorders, & ALS
- Aneurysm
- Cardiology
- Endocrinology
- ENT
- Transplant
- Peds GI, pulmonary, & surgery

COMMUNITY TELEPSYCHIATRY

The South Carolina Department of Mental Health (SCDMH) not only delivers telepsychiatry into emergency departments, it also has deployed this service into its 16 community mental health centers and 48 mental health clinics around the state since 2013. In 2019, SCDMH psychiatrists and advanced practice registered nurses conducted 24,125 telemental health services in this program.

24,125 community telemental health services

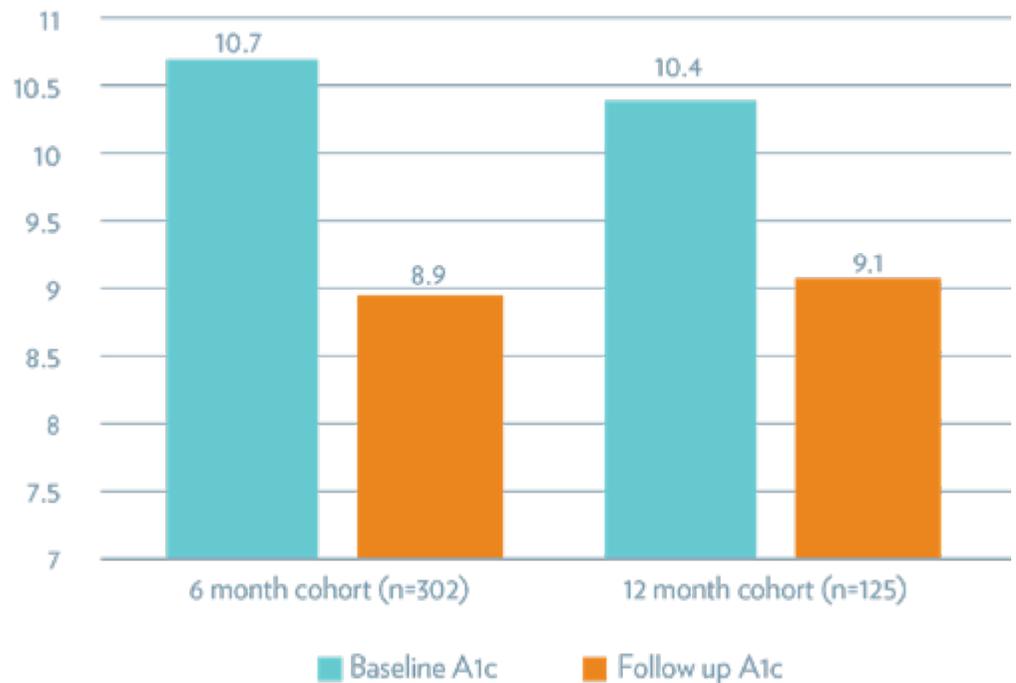




TECHNOLOGY ASSISTED CASE MANAGEMENT (TACM-2) FOR DIABETES

Entering its 5th year, MUSC Health's Technology Assisted Case Management (TACM-2) program continues to provide support to primary care practices across the state, improving the health of patients with diabetes and hypertension through Remote Patient Monitoring (RPM). One in eight people in South Carolina has diabetes. Through MUSC Health's programs, local primary care providers are supported in managing their patients with diabetes through RPM. As a result, patients are able to better manage their own conditions and prevent long-term consequences. In 2019, TACM-2 monitored 895 patients at 19 participating sites with well over 10,000 data transmissions per month. Outcomes data show a 1.8 drop in A1C (or blood sugar) readings at 6 months and 1.3 drop at 12 months.

Hemoglobin A1c reduction with TACM-2



MEDICALLY ASSISTED TREATMENT (MAT)

Substance Abuse Treatment

Multiple organizations—including MUSC Health and CareSouth Carolina—are using telehealth in SC to help patients diagnosed with opioid use disorder (OUD). Addiction and pain management specialists partner with the South Carolina Department of Alcohol and Other Drug Abuse Services (DAODAS) and the Behavioral Health Services Association of South Carolina to deliver medication-assisted treatment (MAT) to patients in the County Alcohol and Drug Abuse Authorities. Known as tele-MAT, this innovative treatment method allows specialists to treat more patients in more locations.

In 2019, TACM-2 monitored **895 patients** at 19 participating sites with well over **10,000 data transmissions per month**. Outcomes data show a 1.8 drop in A1C readings at 6 months and 1.3 drop at 12 months.



TELEMENTORING

Telementoring is a program in which specialists at MUSC Health, Prisma Health-Upstate, and the University of South Carolina School of Medicine connect to primary care providers across the state to share knowledge and provide specialty expertise so that primary care providers can better care for their patients. During telementoring sessions, specialty and primary care providers log on to a private online site to participate in didactic sessions and case review of complex patients. In South Carolina, some of these programs are Project ECHO (Extension for Community Healthcare Outcomes), while others operate within a similar telementoring model. Current offerings include:

Behavioral Health Care Management ECHO (Prisma Health-Upstate)

Provides ongoing support and training in brief, evidence-based psychotherapies and skills required to work in the collaborative care model, providing access to mental health services in the context of primary care.

SC Hepatitis C Initiative (USC School of Medicine)

Offers education, consultative support, and patient co-management for healthcare providers that are screening, testing, and treating HCV mono-infected and HIV/HCV co-infected patients.

Pregnancy Wellness in South Carolina (MUSC Health, Prisma Health)

Provides telementoring using the ECHO model to support current and future providers in the area of maternal fetal medicine.

Project ECHO for Opioid Use Disorder (MUSC Health)

Leverages the ECHO model to provide continued mentoring and consultation using evidence-based best practices in the treatment of opioid use disorder.

76 telementoring sessions were provided in 2019,
with **608** unique individuals participating.

187 patient cases were reviewed
and received expert consultation.



LEARN MORE

Scan to learn more about telementoring
from these mentoring specialists.



South Carolina conducted **almost 435,000**
telehealth interactions in 2019,
a **26% increase from 2018.**

SCTAFACFS

POPULATION HEALTH



SCHOOL-BASED TELEHEALTH

School-Based Telehealth continued to expand in 2019, adding 20 schools in four new counties. The program now operates in approximately 120 schools around the state bringing high quality healthcare into the school setting. Several SCTA partners provide this care making it easier for students to get healthcare without their families having to take off work and travel to appointments.

Some school districts also began offering online consent forms in 2019, which helped to increase enrollment in the programs. Paper enrollment is still available in the districts that have online enrollment.

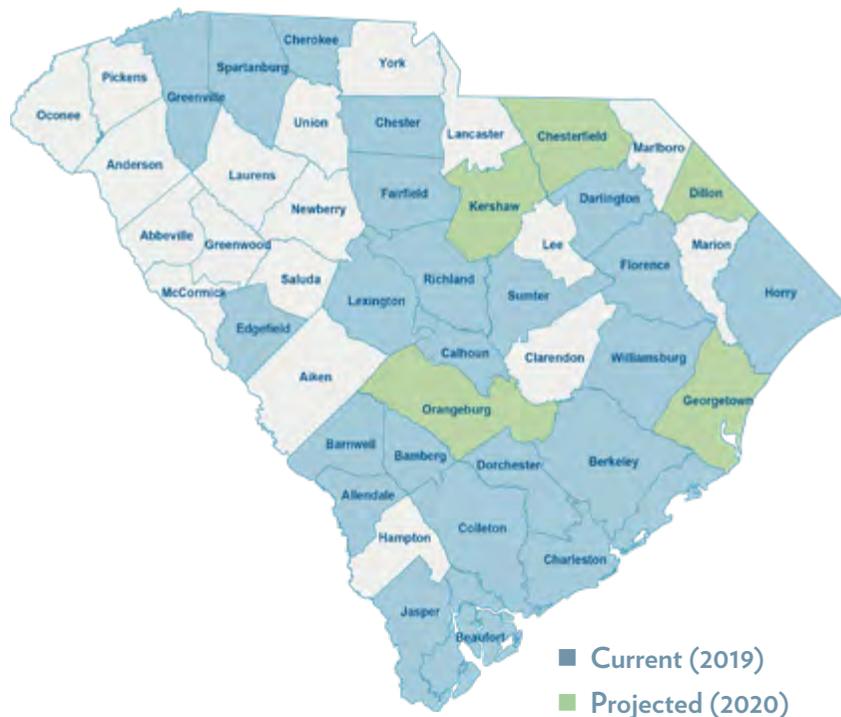
The program treats common childhood illnesses including sore throat, rashes, and chronic diseases such as asthma. If the student's condition is not able to be diagnosed via telehealth, the provider will work with the family to connect them to an in-person provider.

MUSC Health demonstrated that its school-based telehealth program was associated with a **35% reduction in ED visits among asthmatic students in Williamsburg County** (*JAMA Pediatrics*).

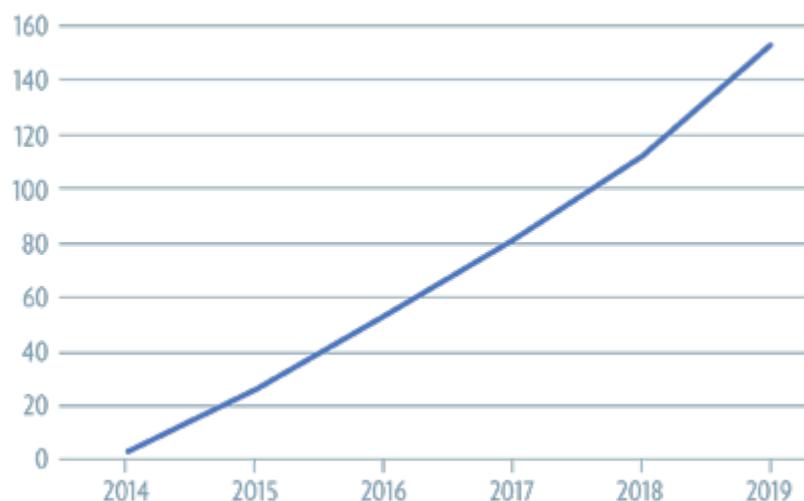


Prisma Health's school-based tele-nutrition education program helped students increase their physical activity by **10 minutes per week**, and **94%** of students reported knowing how to prepare a healthy snack, a **7% increase** from the prior year.

Counties with School-Based Telehealth



Number of South Carolina schools with telehealth capability*



*Services vary by county to include acute care, chronic disease management, mental health, group health education, and individual education plan consultation.

MCLEOD HEALTH'S SCHOOL-BASED HEALTH CONCUSSION PROGRAM

McLeod Health is using telehealth to treat athletic concussions in the school setting. If an athlete suffers a concussion, the initial consultation is done in-person in a clinical setting. The follow-up visits are done via telehealth with a certified athletic trainer present with the patient at school.

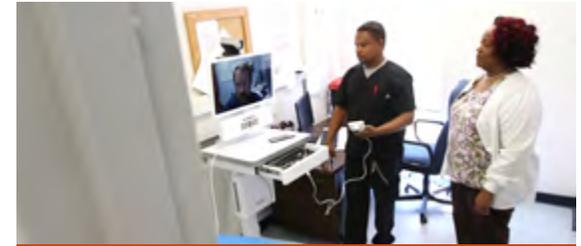
Before connecting with the provider, the trainer runs a series of assessments on the student athlete, then uses an iPad to connect with the provider. With the aid of a high-definition camera with otoscope and a pen light, the provider goes through a series of tests with the student (balance, pupil dilation, mental clarity, motor function, etc.), and determines if the student is ready to return to physical activities. This program allows the students to stay in school while still complying with post-concussion treatment guidance as well as reduces the need for parents to take time off from work to drive their children to the doctor for these follow-up visits. **Listen to a radio story about this program produced by SCETV.**



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READ MORE

SCHOOL-BASED TELEMENTAL HEALTH

MUSC psychologists and social workers continued providing trauma-focused therapy to students in schools. According to the Substance Abuse and Mental Health Services Administration (2015), more than two-thirds of children experience traumatic events prior to age 16. Telehealth interventions can provide students with academically proven therapies that helps them live full, productive lives. Additionally, the SC Department of Mental Health is piloting telemental health services in additional school districts.



CORRECTIONAL FACILITIES

MUSC Health continues to use telehealth to reduce the transportation of patients for non-emergent care. Through its partnership with the South Carolina Department of Corrections (SCDC) and local county jails, MUSC providers can connect to facilities with telehealth technologies to treat patients with acute and urgent conditions. Services were expanded to offer specialty care including urology consults and follow-up treatment for HIV. Telehealth into correctional facilities not only prevents costly transportation to emergency departments, but also provides a safer option for SCDC staff, providers, and patients.



SKILLED NURSING FACILITIES

As skilled nursing facilities (SNFs) care for some of the most vulnerable patients, telehealth becomes a necessary way of providing care to the ill and elderly. Using telehealth, two-way live video, MUSC Health providers connect to the nurse who is with the patient in the SNF to provide urgent and acute care. Services into SNFs also include scheduled psychiatric consultations. This program prevents unnecessary trips to emergency departments for non-emergency cases. **Learn more about telehealth in the skilled nursing setting**



WATCH THE
VIDEO

DIRECT-TO-PATIENT SERVICES



VIRTUAL URGENT CARE

Demand for online access to high quality healthcare providers is growing, and SCTA partners continue to answer the call. AnMed Health, Beaufort Memorial Health, McLeod Health, MUSC Health, Prisma Health, and Spartanburg Regional Healthcare System all deliver high-quality care to patients for urgent care conditions 24/7 from anywhere via mobile devices. The functionality includes secure messaging/texting, image uploading, and live, two-way video for more in-depth exams.

Virtual urgent care is not only convenient but in some cases, such as flu, it is safer than sitting in a waiting room possibly spreading germs or being exposed to other illnesses. It is available for treating urgent, non-emergent conditions including flu, colds, ear infections, urinary tract infections, rashes and insect bites. SCTA partner providers conducted over 28,000 virtual urgent care visits in 2019.

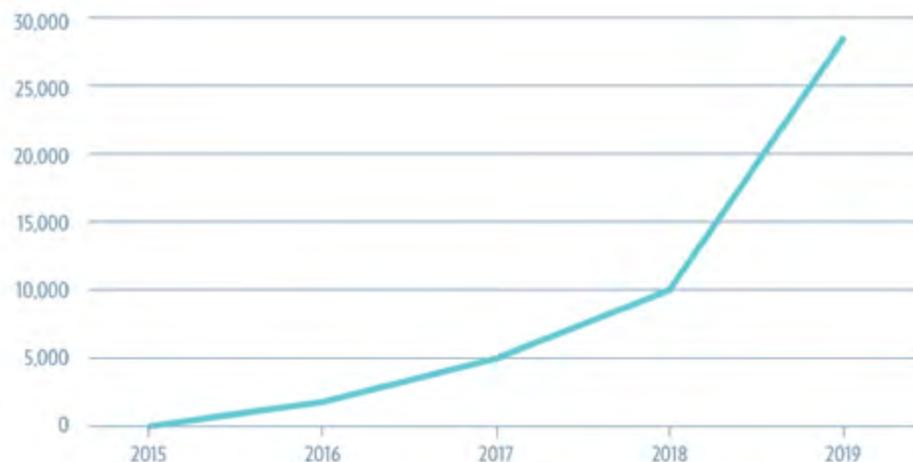


FIND OUT MORE!

Learn about how McLeod Health used its virtual urgent care program to assist during Hurricane Florence.

WATCH THE VIDEO

South Carolina Direct to Consumer Visits



SCTA partner providers conducted over **28,000 virtual urgent care visits** in 2019.

“

As a direct result of discussions with and detailed data from several members of the MUSC Telehealth and IT teams, Spartanburg Regional was able to accelerate our Asynchronous eVisit project significantly. Our project effort was reduced by at least 200 hours due to this collaboration, and we really appreciate their support and assistance!

- Marc Bingham, MD, Spartanburg Regional Healthcare System



REMOTE PATIENT MONITORING

Remote Patient Monitoring (RPM) technology continues to assist providers and patients with managing their care. Prisma Health-Upstate offers a free app called Babyscripts to pregnant mothers. This convenient app not only includes RPM for weight and blood pressure monitoring, it also sends individualized weekly goals, reminders, and prenatal education and resources. In 2019, over 2,500 patients were enrolled in the Babyscripts remote patient monitoring program.

MUSC Health continues to offer RPM for patients who have had heart valve surgery. Patients take their vital signs, including their weight, blood pressure, heart rate, and oxygen saturation, and these data are transmitted directly into their electronic health record. Providers receive an alert if the patient is out of normal range. If necessary, the patient is instructed to return to the hospital for care.

Prisma Health-Upstate and Spartanburg Regional Healthcare System (SRHS) continue to leverage RPM to monitor patients diagnosed with congestive heart failure (CHF) and Chronic Obstructive Pulmonary Disease (COPD) in their homes. In the CHF program, patients receive a scale, blood pressure cuff, and a device to check oxygen levels. The data collected are automatically sent to a nurse, who monitors the information for abnormalities to prevent complications such as fluid retention

In 2019, **over 2,500 patients** were enrolled in the Babyscripts remote patient monitoring program.

SPECIALIZED CARE

MUSC Health is leveraging telehealth to provide specialty care directly to patients via telehealth with the following services:

- Tele-nutrition services for patients receiving bariatric surgery
- Trauma Resilience and Recovery Program (TRRP), for patients who have experienced trauma-related injuries and illnesses
- Pediatric burn patients
- Patients who have had skull-based surgery, the first of its kind in the nation.

The direct-to-patient tele-nutrition program began in 2019 and was cited in recent American Academy of Pediatric best practice guidelines showing how it is removing obstacles that prevent eligible adolescents from undergoing metabolic and bariatric surgery. The visits have proven to decrease racial and socioeconomic barriers effectively doubling the number of adolescents who had access to treatment at MUSC in 2019, as compared to 2018.



WATCH MORE!

Learn about one child's experience using MUSC's burn app

SCTAFACTS



The SCTA now includes more than **494 sites**

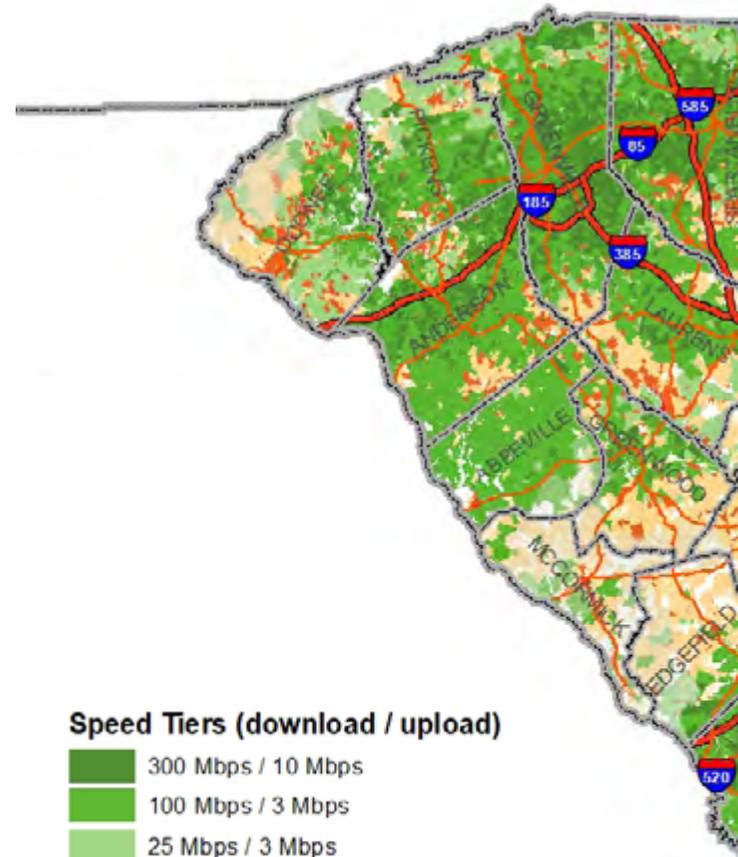
BROADBAND INFRASTRUCTURE

PALMETTO CARE CONNECTIONS BROADBAND ACCESS PROJECT

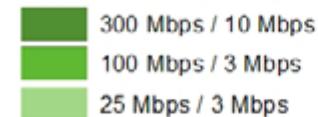
Palmetto Care Connections (PCC) continues to be a leading partner in ensuring strategies have a rural focus. Part of those efforts include leading the charge to improve access to broadband in rural South Carolina. With telehealth requiring high speed connections, it is imperative that health care facilities as well as patient homes have affordable access.

In 2019, PCC partnered with the South Carolina Hospital Association (SCHA) and the South Carolina Office of Rural Health (SCORH) to map the state of South Carolina and identify communities with little or no broadband access. Revolution D was hired as the consultant to map the state, and with assistance from Congressman James Clyburn's office, Ookla, was brought in as a partner as well. Ookla is a global leader in conducting broadband assessments. The maps are complete and are available to anyone interested in learning more about broadband access in South Carolina. These maps will be distributed to hospitals and health systems in South Carolina in hopes that this data will assist them in expanding telehealth efforts. Of note, the mapping assessment showed that 434,725 SC residents—about 12% of the SC population—lack access to FCC-recommended broadband service levels, with the majority of these residents living in our rural communities.

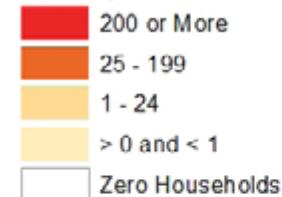
The mapping assessment showed that **434,725 SC residents**—about 12% of the SC population—**lack access to FCC-recommended broadband service levels**, with the majority of these residents living in our rural communities.



Speed Tiers (download / upload)



Density of Unserved Households (sq. mi.)



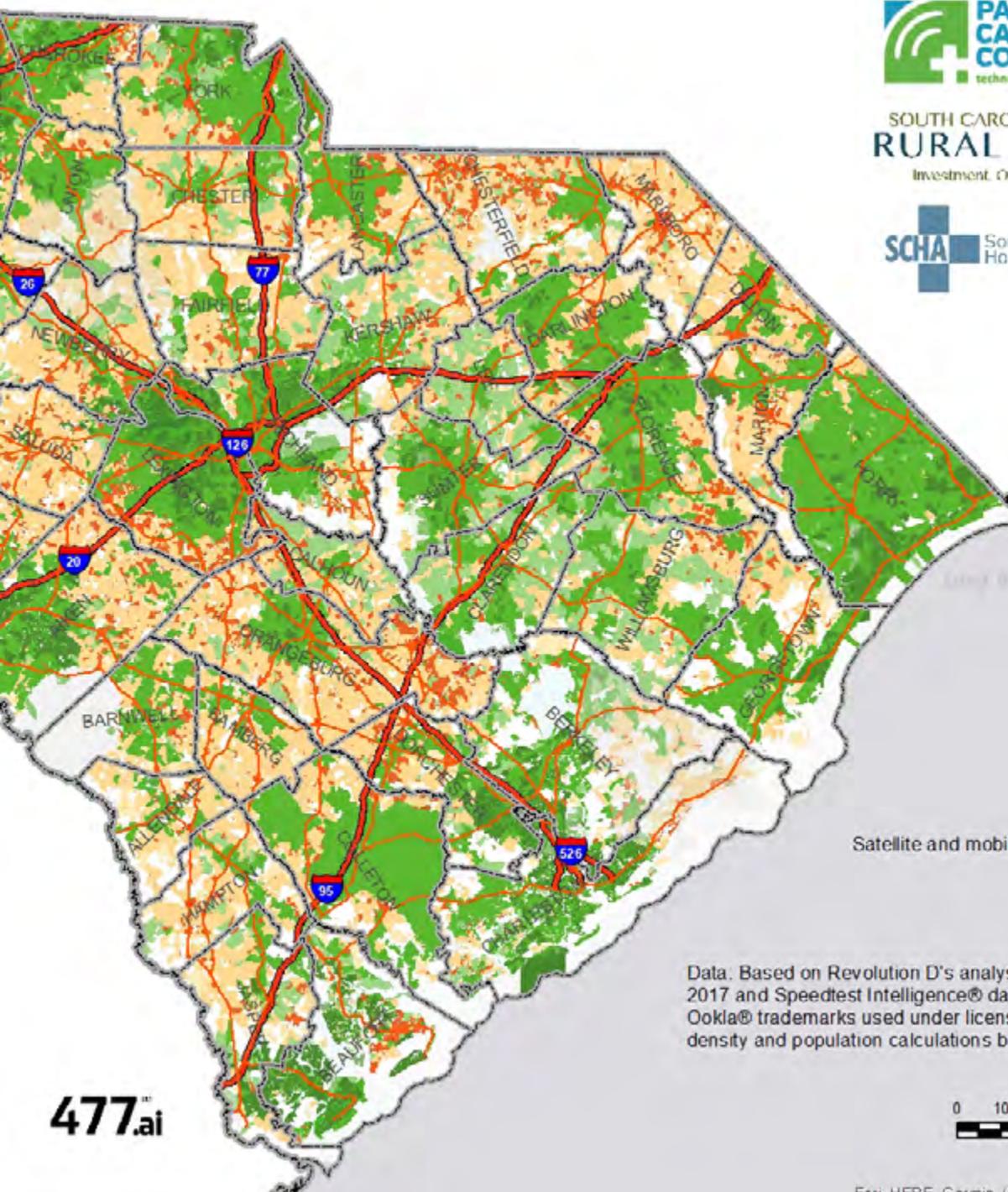
SCTAFACTS



Over the last 2 years, **15,000+** South Carolina patients have been monitored via tele-ICU, saving hundreds of lives

revolution .ai

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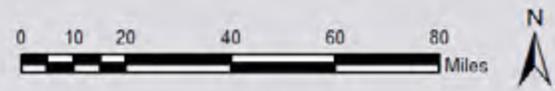
SOUTH CAROLINA OFFICE OF
RURAL HEALTH
Investment. Opportunity. Health.



Satellite and mobile broadband services may also be available.

Data: Based on Revolution D's analysis of FCC Form 477 data as of Dec. 31, 2017 and Speedtest Intelligence® data from Jan. 1, 2017 through July 31, 2019. Ookla® trademarks used under license and reprinted with permission. Household density and population calculations based on 2010 US Census information.

477.ai



Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

RESEARCH

Research

JAMA Pediatrics | Original Investigation

Association of a School-Based, Asthma-Focused Telehealth Program With Emergency Department Visits Among Children Enrolled in South Carolina Medicaid

John Bian, PhD, Kathryn K. Crisolo, MD, MPH, Andrew P. Sumner, MD, MSCR, Zaveni Sa, MS, Justin M. Potosi, D. Mauldin, PhD, James T. McEligott, MD, MSCR

IMPORTANCE: Telehealth may improve access to care for populations in rural communities. However, little is known about the effectiveness of telehealth programs designed for children.

OBJECTIVE: To examine the associations of a school-based telehealth program in Willard county (South Carolina) with all-cause emergency department (ED) visits made by children enrolled in Medicaid.

DESIGN, SETTING, AND PARTICIPANTS: This Medicaid claims data analysis was conducted in Willard county and 4 surrounding counties in South Carolina and included children 3 to 17 years who were enrolled in Medicaid and living in any of the 5 counties from Jan 2012 to December 2017. Willard county served as the intervention and the 4 surrounding counties without a telehealth program as the control. 2012 to 2014 was designated as the preintervention period, whereas 2015 to 2017 served as the postintervention period. The study was designed with a difference-in-differences specification, in which the unit of analysis was a child-month, and a subsample included children with asthma. The data analysis was performed from July 2018 to February 2019.

EXPOSURES: The school-based telehealth program implemented in Willard county from 2015.

MAIN RESULTS AND MEASURES: The binary outcome was the status of at least 1 all-cause ED visit by a child in a given month.

RESULTS: The full sample included 2 443 409 child-months from 23 198 children in Willard county and 233 964 children in the control counties. The mean (SD) proportion of monthly ED visits in Willard county were 3.65% (0.10%) during the preintervention and 3.87% (0.13%) during the postintervention. The corresponding proportions of the 4 co-counties were 3.37% preintervention (0.08%) and 3.56% postintervention (0.04%), respectively. The trends in the proportion were paralleled in the asthma subsample. If proportions in Willard county were 3.16% (0.37%) during the preintervention and 3.38% (0.34%) during the postintervention, respectively. The proportions for the control counties were 3.02% preintervention (0.10%) and 3.90% postintervention (0.17%), respectively. There was an interaction of the proportions between the pre/postintervention period and intervention/control counties in this subsample. The regression analysis of the full sample

JAMA Network Open

Original Investigation | Pediatrics

Treatment of Opioid Use Disorder in Pregnant Women via Telemedicine: A Nonrandomized Controlled Trial

Constance Gullu, MD, MSCR, Anna N. Simpson, PhD, Ede Douglas, MPH, Lisa Boyani, MD, Kathryn Crisolo, MD, MPH, James McEligott, MD, MSCR, Donna Johnson, MD, Kathleen Drably, MD, PhD

Abstract

Key Points

Question: Is opioid use disorder treatment received via telemedicine in obstetric practices associated with similar maternal and newborn outcomes compared with opioid use disorder treatment received in person in obstetric practices?

Findings: In this nonrandomized controlled trial including 98 pregnant women with opioid use disorder, there were no statistically significant differences in rates of maternal or treatment between women receiving opioid use disorder treatment via telemedicine vs in person (80.4% vs 92.7%). These findings were also apparent in newborns with neonatal abstinence syndrome (telemedicine 45.4% vs in person 63.2%).

Meaning: Telemedicine may provide a scalable solution to making treatment available to pregnant women to reduce the maternal morbidity and mortality associated with opioid use disorder and improve maternal and child health.

IMPORTANCE: There are high rates of maternal and newborn morbidity and mortality associated with opioid use disorder (OUD). Integrating OUD treatment in obstetric practices for pregnant and postpartum women via telemedicine can increase access to care and reduce the consequences of OUD. Evaluation of this care delivery model, however, is needed before widespread adoption.

OBJECTIVE: To compare maternal and newborn outcomes among pregnant women with OUD receiving care via telemedicine vs in person.

DESIGN, SETTING, AND PARTICIPANTS: A nonrandomized controlled trial including 98 women receiving prenatal OUD treatment in 4 outpatient obstetric practices by telemedicine or in person and followed up until 6 to 8 weeks post partum was conducted from September 4, 2017, to December 31, 2018. Logistic regression with propensity score adjustment was applied to reduce group selection bias and control for potentially confounding variables.

INTERVENTIONS: Participants were seen weekly for 4 weeks, every 2 weeks for 4 weeks, and monthly thereafter and provided relapse prevention therapy and buprenorphine.

MAIN RESULTS AND MEASURES: The outcomes were retention in treatment, defined as uninterrupted add-on treatment during pregnancy through 6 to 8 weeks post partum, urine drug screen results at delivery and 6 to 8 weeks post partum, and a neonatal abstinence syndrome (NAS) diagnosis collected via electronic health records.

RESULTS: The mean (SD) age of the 98 pregnant women was 30.23 (5.02) years. Of these, 41 of 44 women (93.2%) in the telemedicine group and 48 of 54 women (88.9%) in the in-person group chose to continue treatment in the program after an initial evaluation. After propensity score weighting and doubly robust estimation, no significant differences were found between groups in retention in treatment at 6 to 8 weeks post partum (telemedicine 80.4% vs in person 92.7%; treatment effect, -12.2%; 95% CI, -32.3% to -4.4%). Similarly, after propensity score weighting and

MUSC TELEHEALTH CENTER OF EXCELLENCE



The MUSC Center for Telehealth is one of two federally recognized National Telehealth Centers of Excellence (COE) as designated by the Health Resources & Services Administration (HRSA) – an award totaling \$4.6 million dollars to date. One of the main goals of MUSC’s COE is to research and evaluate MUSC’s telehealth programs and disseminate these findings nationally. The main areas of research focus include:

- Federal and local healthcare spending
- Models for telehealth service development, measurement, and evaluation
- Telehealth as a model for implementation of best practices
- Evaluation of behavioral health-focused telehealth programs
- Telehealth modalities for primary care



FIND OUT MORE!

Learn about the National Telehealth Centers of Excellence (COE) designation at the MUSC Center for Telehealth.

In 2019, at least **75 peer-reviewed articles** on telehealth were **published** by South Carolina researchers, a 62% increase from the year prior.

SCTAFACTS

In 2019, MUSC faculty contributed to **64 peer reviewed articles** on telehealth and presented on telehealth projects at over **25 national and international conferences.**



UNIVERSITY OF SOUTH CAROLINA TELEHEALTH RESEARCH

The USC School of Medicine has been supporting telehealth outcome research among Prisma Health, McLeod Health, and the SC Department of Mental Health (SCDMH). Analysis has focused primarily on the cost savings associated with the SCDMH's telepsychiatry programs as well as the direct-to-patient urgent care solutions deployed through Prisma and McLeod.

SCTA TELEHEALTH RESEARCH PILOT GRANTS

The SCTA partnered with the SC Clinical and Translational Research Institute (SCTR) this year to award four \$25,000 Telehealth Research Pilot Grants with the aim to accelerate the adoption, utilization, and investigation of telehealth interventions in South Carolina. There was an excellent response, and the following projects were selected:

- Iterative intervention development and feasibility testing of a smoking cessation e-visit for individuals experiencing homelessness
Cristin Adams, DO, Assistant Professor (MUSC College of Medicine)
- A comparison of standard office based postpartum BP monitoring to a text based remote self BP monitoring program in the management of maternity patients with a hypertensive disorder of pregnancy
Lauren Demosthenes, MD, Clinical Assistant Professor (USC School of Medicine)
- Improving pediatric ADHD management with virtual check-ins: A study of utilization and acceptability
Claire MacGeorge, MD, MSCR, Assistant Professor (MUSC College of Medicine)
- Stressors of inter-ICU transfer: Family centered care through telehealth
Nandita Nadig, MD, MSCR, Assistant Professor (MUSC College of Medicine)

SCTAFACTS



MUSC's school-based telehealth program

demonstrated a **35% reduction in ED visits** among asthmatic children in Williamsburg county



FIND OUT MORE!

Learn about the Annual
Telehealth Summit

6,000+ individuals took
advantage of telehealth-related
educational opportunities offered by
SCTA partners in 2019.

ANNUAL TELEHEALTH SUMMIT

Each year, Palmetto Care Connections (PCC) hosts the state's largest telehealth educational event, the Annual Telehealth Summit, which brings national and international leaders in telehealth to the state's capitol for a 3-day conference with presentations and training on emerging issues in telehealth. PCC also hosts regional symposiums throughout the year to bring telehealth leaders and stakeholders together to stay abreast of the ever-changing landscape of telehealth and healthcare in general. In 2019, 280 participants attended the Annual Telehealth Summit, and 128 attended the PCC regional symposiums.

SCTA EDUCATION & TRAINING WORKGROUP

The SCTA education and training workgroup is led by PCC and South Carolina Area Health Education Consortium (SC AHEC) and provides a variety of educational opportunities for practitioners and students. Educational opportunities include online courses, educational tours, demos and seminars. PCC's Wednesday Webinars and AHEC's online courses are available online at no charge. Courses range from Billing and Reimbursement Boot Camp to Behavioral Health Integration and Telehealth. Over 200 individuals took advantage of these free online educational opportunities. Additionally in 2019, both the Medical University of South Carolina and the University of South Carolina teach courses for health professional trainees that are focused on or include units devoted to telehealth.



CENTER FOR TELEHEALTH LEARNING COMMONS

A large part of the SCTA's education and training takes place within MUSC's state of the art Center for Telehealth Learning Commons. In 2019, over 750 visitors took part in tours, demos, and educational activities within the Center. Onsite provider training and education take place on an ongoing basis for service development and improvement.



PROMOTIONS

My Telehealth campaign



The Content Advisory Team (CAT) based at South Carolina Educational Television (SCETV) continues to lead the SCTA's promotional efforts. Their strategic marketing plan includes several strategies and tactics, one being the My Telehealth campaign which tells the stories of telehealth from the

patients', providers', and stakeholders' point of view. My Telehealth videos, podcasts, and radio segments all provide education, insight, and clinical evidence of telehealth efficiencies. The social media channels serve as distribution channels to get the story content out to the public. The CAT also distributes a monthly newsletter, an annual report, and maintains a website where all SCTA tools and information are shared.

In 2019, the social media campaign hit a milestone with the production of its **100TH** telehealth video.

Ten podcasts were written and produced in 2019 (with January, February, and March 2020 air dates), and the project's online page views **GREW BY 69%** with an **18% increase** in average time on the page.

The SCTA newsletter **subscribers grew by 60%**.

The social media audience **GREW BY 38%** on Facebook and 15% on the SCTA Twitter.



FIND OUT MORE!

Learn more about the My Telehealth campaign.



Telehealth Awareness Week

One of the pivotal opportunities to promote the work of the SCTA, and telehealth in general, is Telehealth Awareness Week, which takes place every third full week of October. SCTA partners host events, launch promotional campaigns, and distribute public awareness telehealth information.



SUSTAINABILITY

Payer & Policy Advocacy

The sustainability workgroup continued its work in 2019 advocating for additional health insurance coverage of telehealth services. To track its progress, the workgroup publishes a set of payer priorities each year that are agreed upon by all SCTA partners. Once the priorities are published, partners assign clinical champions or advocates to each of them and create action plans to engage health insurance payers, government agencies and in rare cases, to take legislative action. In 2019, Medicaid increased its facility

reimbursement rate for patient sites that connect to distant providers for telehealth consultations. The workgroup had been advocating for this increase for three years. Also, in 2019, the workgroup aligned its priorities with those inserted into a legislative proviso authored by the South Carolina Hospital Association which asked Medicaid and the state's employee benefit authority to adopt recent Medicare coverage for virtual care telehealth.

2019 Priorities for South Carolina Telehealth Payers

Payers are asked to make the below changes to their telehealth coverage policies.

General Health

- Adopt Medicare: Add remote patient monitoring (RPM) collection and interpretation
- Adopt Medicare: Add brief communication technology-based services (Virtual Check-ins)
- Adopt Medicare: Add remote evaluation and interpretation of recorded video and/or images (Store and Forward)
- Adopt Medicare: Add interprofessional internet consultations (e-Consults for specialty care)
- Remove originating site restrictions to deliver care to schools, nursing homes, prisons, etc.
- Remove Medicare rurality restrictions
- Adopt Medicare: Add homes as a covered site for ACO (accountable care organization) patients
- Adopt Medicare: Add registered dietitians and nutritionists as covered providers

Mental Health

- Add homes as a covered site for Opioid Use Disorder (OUD) patients Medicare's SUPPORT for Communities Act
- Add licensed psychologists as covered providers
- Add licensed social workers and master's degree level counselors as covered providers
- Add BHI (behavioral health integration) to deliver mental health into the PCP setting

Stroke Treatment

- Adopt Medicare: Remove coverage site restrictions for stroke patients

Dialysis Treatment

- Adopt Medicare: Add homes as a covered place of service
- Adopt Medicare: Provide free telehealth equipment to patients



SOUTH CAROLINA Telehealth ALLIANCE

To learn more about the SCTA please visit our web page or connect with us on social media.

CONTACT US

 sctelehealth.org

 info@sctelehealth.org

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