Center for Telehealth

The following proposal outlines the strategic direction of the Center for Telehealth in establishing the South Carolina Telehealth Alliance and in utilizing telehealth to transform and maximize the efficiency of the South Carolina health care system.

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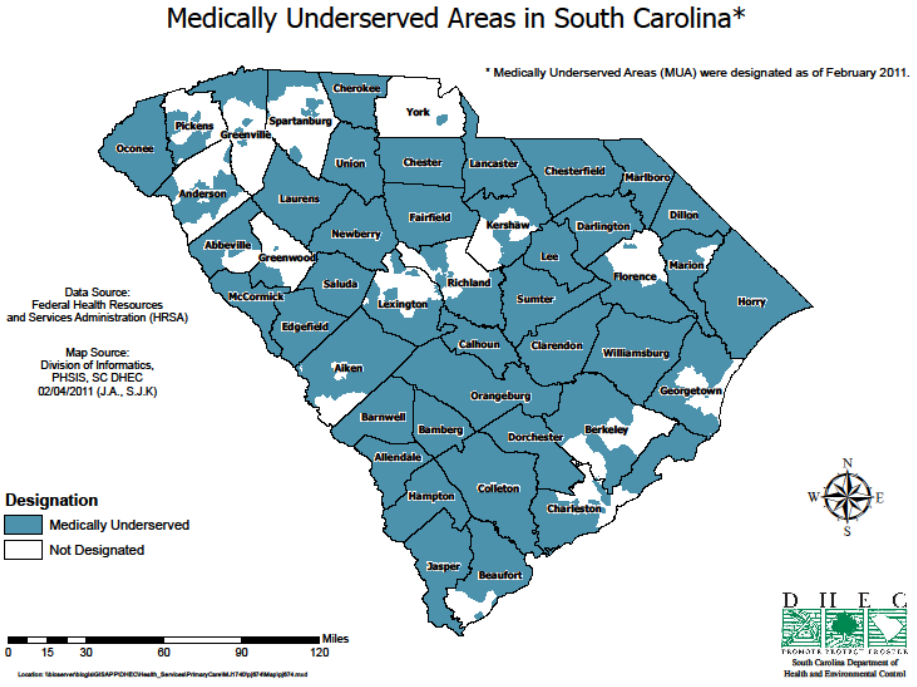
Executive Summary

According to the U.S. Department of Health and Human Services, there are 78 Medically Underserved Areas/Populations in South Carolina. Telehealth is a rapidly evolving sector of the health care industry that has increasingly been able to demonstrate remarkable improvements in the access to high-quality health care and, when used efficiently, has the ability to lower costs as well. In 2013, the state of South Carolina took a significant step towards the investment of telehealth by passing legislation that provided MUSC with $12.4 million of state appropriated funds to advance telehealth initiatives throughout the state.

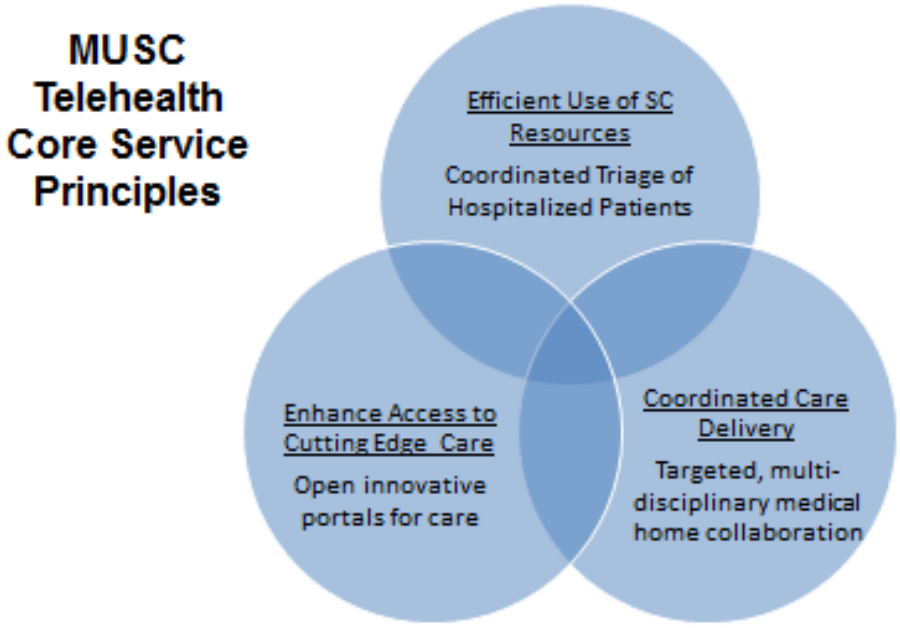
With the goal to construct an open-access statewide telehealth network that will have the capabilities of connecting all providers, MUSC created the Center for Telehealth. The Center for Telehealth was established to directly support and coordinate the strategic initiatives and operations of MUSC telehealth programs, optimize resource utilization, strengthen both clinical and financial performance, and facilitate the growth and development of MUSC telehealth programs that align with the MUSC Strategic Plan and address the needs of the South Carolina community. The following proposal outlines the strategic direction of the Center for Telehealth in establishing the South Carolina Telehealth Alliance and in utilizing telehealth to transform and maximize the efficiency of the South Carolina health care system.



MUSC Telehealth Commitment –

To Develop Telehealth Services that Improve Care and Lower Cost

While telehealth is often applied to replicate care over distance, this advantage only begins to tap the potential that the improved communication affords. While the technology is the catalyst, it is the human elements of collaborative knowledge and coordinated effort that provides the economies of scale that truly move the needle on health outcomes and cost containment. To this end, MUSC is committed to developing telehealth programs that purposely address improved efficiency of care and cost. The programs underway or in development have at their core one of three service principles:



Mission Statement

We improve the health of all South Carolinians by utilizing telehealth to enhance access to care and maximize the efficiency of the care system

Vision

MUSC's Center for Telehealth will become nationally recognized as a telehealth leader

We will change what's possible by establishing enhanced decision-making at the point of patient triage, emphasizing the intelligent matching of resources with the needs of the patient. As the State's telehealth leader, we will improve the health of all South Carolinians by facilitating the access of care at earlier points along the health care continuum and creating coordinated, co-management care between medical homes and specialists.

8 Key Objectives

1) Establish the South Carolina Telehealth Alliance
2) Deliver Services Over an Open-access Telehealth Network
3) Maximize Statewide Telestroke Coverage
4) Implement a Critical Care Outreach (Tele-ICU) Program
5) Increase Access for Medically Underserved Children with School-Based Telehealth
6) Improve Access to Health Education for Providers and Patients
7) Encourage Telehealth Development and Innovation
8) Open Innovative Portals for Care

Objective 1: Establish the South Carolina Telehealth Alliance

What

With the responsibility to maximize healthcare delivery throughout our state in mind, the South Carolina Telehealth Alliance is establishing an open-access telehealth network that will allow all providers to collaborate, consult and receive educational support directly in the setting in which they treat patients. Videoconferencing units that are a low cost burden are being placed throughout the state, with a focus on the areas in greatest need. The security and stability of this network is maintained through collaborative efforts between MUSC and the Palmetto State Provider Network, providing excellent connectivity to a rapidly expanding number of healthcare sites in South Carolina.

Telehealth consultative platforms that utilize a non-proprietary, common and standards-based methodology for communication are being placed in South Carolina health care facilities. While MUSC provides the support and many of the services over this network, the platform is open for utilization by all South Carolina Telehealth Alliance providers. The services provided over the network will be coordinated through intelligent software to allow the end users to easily access the specific services made available to them through telehealth partnerships.

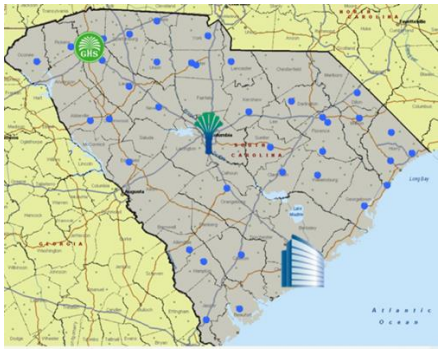
Why

The benefits of telehealth are best realized through collective effort and collaboration. An open-access and coordinated network will establish an unprecedented mechanism to improve health across the state while lowering costs.

How State Appropriated Funds Are Being Utilized

- Operational funding is being provided for the Center for Telehealth and collaborating partners in the Alliance to achieve the deliverables associated with the Telehealth Alliance Strategic Plan Driving Strategies (See Appendix A).

South Carolina Telehealth Alliance – Connected Hospitals



Objective 2: Deliver Services Over an Open-access Telehealth Network

What

With the responsibility to maximize healthcare delivery throughout our state in mind, MUSC is establishing an open-access telehealth network that will allow all providers to collaborate, consult and receive educational support directly in the setting in which they treat patients. Videoconferencing units are being placed throughout the state, with a focus on the areas in greatest need. The security and stability of this network is supported by MUSC in collaboration with the Palmetto State Provider Network where available.

MUSC is taking the lead in developing service delivery models that utilize this open-access technology, with over 20 specialty services delivered in this fashion in fiscal year 15. A service development plan will be established that focuses on programs that improve the efficiency of care and cost in health care delivery.

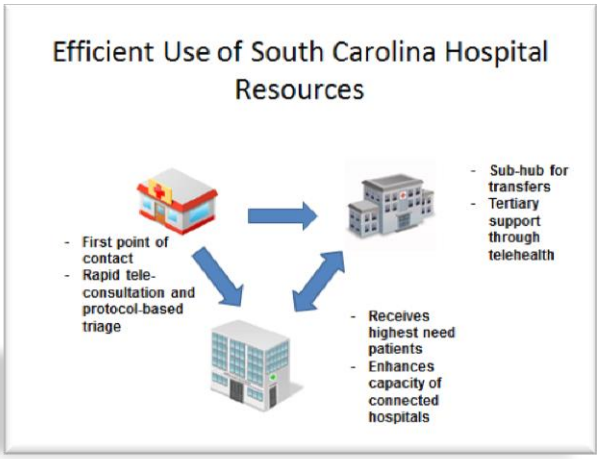
Why

The network will facilitate access to medical services and specialties previously unavailable in rural areas, thus improving the care received by patients in these areas. The network will also allow rural hospitals to retain some patients with the assistance of larger academic medical centers, keeping many patients close to home and bringing the hospitals much needed financial support. Similarly, hometown clinics will be supported by connections to specialists. Coordinating all care through the primary care office is both better for patients and also supports the local healthcare community.

One example of this is the development of a "smart-grid" of South Carolina hospitals, in which early collaborative assessment of a patient in their local community guides the triage of the patient, matching the needs of the patient with available resources. Local hospitals are supported in their ability to retain patients appropriate to their available capabilities, while the highest level of resources are reserved for those most in need.

How State Appropriated Funds Are Being Utilized

- Purchase of telehealth software platform
- Telehealth videoconferencing endpoints (e.g. carts) and maintenance
- Rural site support for capital expenses for network connectivity



Objective 3: Maximize Statewide Telestroke Coverage

What

The REACH MUSC program, a telestroke outreach initiative in which MUSC acts as the hub of stroke neurology expertise for 18 spoke hospitals, increases access for rural South Carolina residents to timely expert stroke care. This hugely successful telestroke initiative has provided life and brain saving care to South Carolinians who otherwise may have had worse outcomes following a stroke. This impact is such that a lack of telestroke availability is quickly becoming unacceptable. Telestroke will be made available in underserved locations to strategically provide coverage throughout the state.

Why

Since the program was established, the percentage of South Carolinians living within 60 minutes of expert stroke care has increased from 38% to 96%. The program achieves crucial response times to treat stroke victims that would be inconceivable without telestroke. Patients in rural locations treated in a telestroke network estimated to save over $1,400 in costs per patient treated.

How State Appropriated Funds Are Being Utilized

- Telestroke equipment, implementation, and training costs

- Telestroke service and technology fees are subsidized based on emergency room volume and other considerations, such as critical access status

Objective 4: Implement a Critical Care Outreach (Tele-ICU) Program

What

Tele-ICU initiatives are improving care for the sickest patients throughout the country, but the upfront costs of these programs are often too expensive for many of our regional medical centers. Now, as a new initiative, a combination of tele-ICU monitoring and multidisciplinary collaboration will be provided to hospitals who serve as the regional hub for rural areas. The ICU monitoring approach incorporates remote intensivist oversight of ICU patients with constant electronic monitoring of patient vital signs that can detect a patient who is becoming dangerously ill sooner. MUSC is also offering multidisciplinary collaboration by extending the expertise of our nurses, respiratory therapists, pharmacists and other ancillary professionals that will add a layer of resources and quality of care that is typically only available in larger centers.

Why

ICU care, when applied comprehensively, decreases ICU length of stay and overall cost of care by improving early detection of worsening disease. This initiative will complement the other hospital-based efforts by allowing more patients to remain in their regional center and still receive the highest level of care for which they need.

How State Appropriated Funds Will Be Utilized

- Upfront costs of implementation, equipment, cabling, installation, and training
- A percentage of the operational expenses will be subsidized

Objective 5: Increase Access for Medically Underserved Children with School-Based Telehealth

What

School-based Telehealth allows for care to be efficiently delivered directly to children in the school setting. School-based clinics are associated with many benefits such as improved access to care, reduced emergency room use, improved academic outcomes and improved health for chronic diseases. However, school-based care is often difficult to sustain as they are inefficient sources of income for providers. Telehealth allows the providers to serve multiple schools in the same day, as well as bring in additional care such as mental health, speech therapy and asthma management. Telehealth also allows school clinics to operate in rural areas regardless of the size of the school.

Why

Children along the I-95 Corridor and other rural areas of the state receive less preventive care and go to the emergency room twice as often for conditions such as asthma. School-based care can reduce the access barriers that lead to this reality. Improved control of chronic diseases and easy access to healthcare will improve the health of our children while also reducing the cost of care, not to mention the benefit of less missed school and work days for the families.

How State Appropriated Funds Are Being Utilized

- Capital expenses provide telehealth technology in the school setting
- Funds provide dedicated provider availability to staff the school clinics

Objective 6: Improve Access to Health Education for Providers and Patients

What

Telehealth education supports the clinical and research initiatives conducted by MUSC in partnership with hospitals and community practices across the state. Using a dedicated, broadband healthcare network, the South Carolina AHEC coordinates innovative programs through a statewide network of 40+ locations. Through videoconferencing and online courses, a significant amount of provider education and training is provided in support of telehealth initiatives. Providers are also exposed to best practices in clinical and basic science research directly through programs led by MUSC's expert faculty. Patients are supported through improved education of the health professions workforce and direct community health education programs. The South Carolina AHEC and MUSC support health professions students during their clinical rotations across the state by connecting students with faculty and staff at their home institutions.

In 2015, a telehealth training and delivery center will be constructed that will facilitate remote collaborations and teleconsultations throughout South Carolina and ensure operational efficiency is maximized within the Center for Telehealth. The telehealth simulation and training section of the center will provide clinicians an opportunity to gain telehealth education and training in a simulated environment. The center will also incorporate the evolution of the Admit Transfer Center's staff of registered nurses triaging emergency teleconsultations to improve the efficiency of the telehealth encounters. Teleconsultation rooms will be provided to allow easy access to physicians within the hospital to deliver timely specialist teleconsultations.

Why

South Carolina lacks adequate quantities and distribution of healthcare providers across all areas of the state. By providing increased and direct support for providers, students and patients in rural and underserved communities, the MUSC is helping to address issues of access and equity. In addition, the goals of the MUSC Center for Telehealth mission are better supported through the accompaniment of collaborative educational initiatives that address unmet provider and organization education needs.

How State Appropriated Funds Are Being Utilized

- Health education programs targeting both health care providers and patients are supported that are delivered via telehealth in practice and community settings.

- Investment in a telehealth training and delivery center

Objective 7: Encourage Telehealth Development and Innovation

What

A Telehealth Development and Innovation grant program will be launched, providing assistance to telehealth efforts in the development stage. Preferences will be given to programs that have potential to be sustainable, save costs while improving care, are scalable to the state as a whole and are in line with the healthcare needs of South Carolina.

Why

The potential for telehealth technologies to improve the lives of South Carolinians is vast, yet it is difficult to predict which applications of technology will be the best for our state. Through this grant funding opportunity, South Carolina can continue to lead the way to a healthier state and nation.

How State Appropriated Funds Will Be Utilized

- Beginning in 2015, small grant pilot funding will be available to applicants in South Carolina

Objective 8: Open Innovative Portals for Care

What

Beginning in 2015, investments will be made in programs that open innovative portals of care that allow intervention at earlier points along the health continuum. Physiologic home monitoring, in home consultation, mobile device integration, and community health kiosks may be deployed under this umbrella. In coordination with local providers and MUSC's population health strategies, these interventions will target significant areas of need in South Carolina such as chronic disease control, compliance with recommended care, early detection of illness and episodic primary care.

Why

With the emergence of new, lower-cost technologies and the respective rapidly increase in consumer-adoption, strategies that open up new innovative portals of care allow for an unprecedented opportunity for patients to connect with their providers and become more engaged with their own health care. This improved access has the potential to enable early diagnosis and shift more focus towards prevention. In addition, these new technologies can be utilized to provide routine medical and/or follow up care that does not require a physical examination with palpation. Early results have shown improved efficiency to the health care system with a decrease in emergency room visits and unnecessary readmissions.

How State Appropriated Funds Will Be Utilized

- Investments in new technological programs that align with MUSC's population health strategies and open new portals of care, such as those delivered via mobile devices and health kiosks

5 Year – High Level Budget Summary

	FY15	FY16	FY17	FY18	FY19	Total
Previous Year Balance	$10,450,000	$20,899,107	$8,105,014	$1,348,161	$300,097	
Nonrecurring State Funds	$15,000,000					
Recurring State Funds	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	
Starting FY Balance	$29,450,000	$24,899,107	$12,105,014	$5,348,161	$4,300,097	
Personnel	$1,767,018	$2,195,876	$2,373,695	$2,433,348	$2,494,790	$11,264,727
Critical Care Outreach (Tele-ICU)	$3,746,496	$4,423,131	$2,063,908	$827,904	$0	$11,061,439
Center for Telehealth Operations	$185,379	$166,086	$124,500	$124,500	$124,500	$724,965
Training and Deliver Center		$3,000,000				$3,000,000
Education/Conference	$305,000	$45,000	$45,000	$45,000	$45,000	$485,000
Telehealth Program Awards	$100,000	$100,000	$100,000	$100,000	$100,000	$500,000
Software Platform	$234,000	$333,000	$128,000	$114,000	$114,000	$923,000
Videoconferencing Endpoints	$750,000	$1,870,000	$1,870,000			$4,490,000
Outcomes Evaluation/External Contracts	$200,000	$525,000	$541,250	$558,313	$576,228	$2,400,791
Neuro Services	$453,000	$766,000	$140,500	$45,000	$45,000	$1,449,500
mHealth	$650,000	$1,700,000	$1,700,000	$700,000	$700,000	$5,450,000
Clinical Support	$160,000	$1,670,000	$1,670,000	$100,000	$100,000	$3,700,000
FY Investment	$8,550,893	$16,794,093	$10,756,852	$5,048,065	$4,299,518	$45,449,421
End of Year Balance	$20,899,107	$8,105,014	$1,348,161	$300,097	$579	

Appendix A:

South Carolina Telehealth Alliance

Strategic Plan

Definition of Telehealth

(The following is the HRSA definition. Definitions vary.)

"The Health Resources Services Administration (HRSA) defines telehealth as the use of electronic information and telecommunications technologies to support long-distance clinical health care, patient and professional health-related education, public health and health administration. Technologies include videoconferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications.

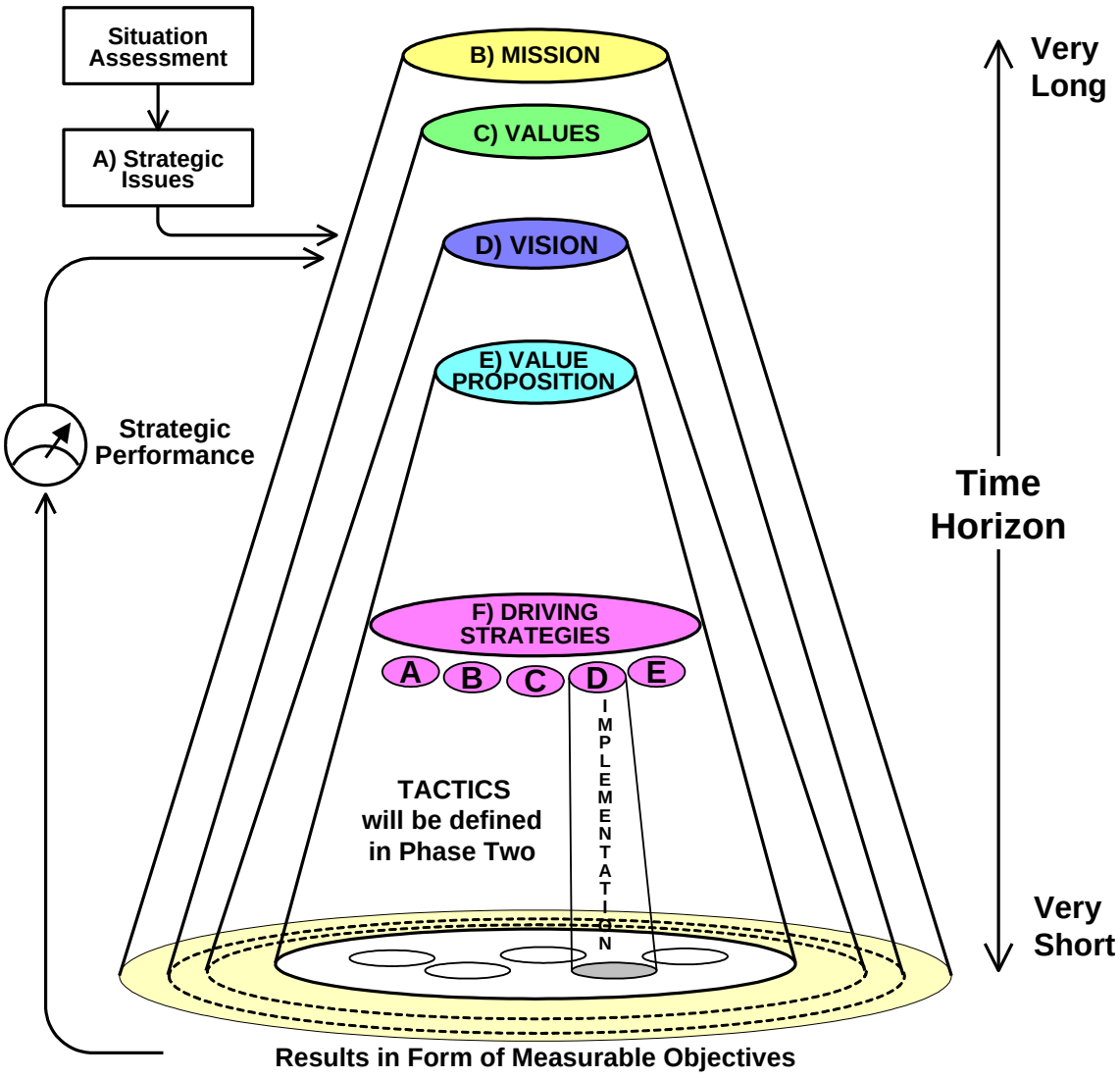
Telehealth is different from telemedicine because it refers to a *broader scope of remote healthcare services* than telemedicine. While telemedicine refers specifically to remote clinical services, telehealth can refer to remote non-clinical services, such as provider training, administrative meetings, and continuing medical education, in addition to clinical services."

A) Strategic Issues

1. Patient perspective needs to be core.
2. Access, equity and disparities must be focus.
3. Collaboration (including co-management) can be leveraged as a competence.
4. Rural and underserved require emphasis.
5. Telehealth must be fit appropriately into practice settings (do no harm).
6. Payer concerns must be addressed (value must be demonstrated).
7. Virtual integration of comprehensive capabilities should be achieved.
8. South Carolina has the potential to become a model for collaborative telehealth.
9. Resources must be focused (e.g., to “schools”).
10. “Scope of practice” must be considered.
11. Clear demonstration of value and outcomes will be needed to attract funding (from the state) and reimbursement (from employers and payers).
12. Future funding and investment will be critical.

South Carolina Telehealth Alliance

Strategic Planning Framework



B) Mission

Improve the health of all South Carolinians through telehealth.

C) Values

- Patient centered
- Quality
- Collaboration
- Sustainability
- Accountability

D) 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.

E) Value Proposition

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

F) Driving Strategies

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

2. Understand and effectively respond to the needs of users of telehealth with an emphasis on the underserved and rural.

3. Invest in expanding needed specialty and subspecialty capabilities through telehealth.

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

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

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

Driving Strategy Tactics and Deliverables

Strategy Champion Institutions:

Medical University of South Carolina (MUSC)

University of South Carolina (USC)

Greenville Hospital System (GHS)

Department of Mental Health (DMH)

Palmetto Care Connections (PCC)

South Carolina Educational Television (SCETV)

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

   Champions: Designees of MUSC, USC, GHS, DMH and PCC

Tactics:

a) Explore a common telehealth technological platform that is capable of coordinating multiple referring and consulting hospitals
    a. The telehealth provider entities will collaborate to ensure technological synergies to be incorporated into institutional strategic planning
        i. *Deliverable: By March 1, 2015 SC Telehealth Alliance providers will collectively establish*
            1. *Core compatibility standards for video conferencing, security and confidentiality electronic, and medical record integration.*
            2. *MUSC to complete RFP process for a telehealth delivery platform to include advisory members of GHS, USC and DMH*

b) Coordinate existing telehealth programs within the Alliance
        i. *Deliverable: By June 1, 2015 a plan for existing telehealth services to coordinate their delivery will be established*

2. **Understand and effectively respond to the needs of users of telehealth with an emphasis on the underserved and rural.**

   Champions: Designees of PCC, SCETV and USC

Tactics:

a) Conduct onsite assessments of rural providers to include interest, desired services, workforce capacity, and internet connectivity
    a. Perform a thorough needs assessment of rural hospitals, FQHCs and clinics
        i. *Deliverable: By March 1, 2015 a needs assessment team will be facilitated by PCC and include investigators from MUSC, USC and GHS.*
            1. *The team will develop a community health access assessment plan for at least one rural region to include a critical access hospital, regional referral hospitals and all primary care health access points*
            2. *The team will assess the ability of a primary care network to be augmented by telehealth*
    b. Develop workflow assistance for referring sites for the implementation of quality telehealth service delivery
        i. *Deliverable: By June 1, 2015 a PCC initiative will establish a telehealth best-practices advisory team for referring sites charged with advising on technical specifications, connectivity, administration and clinical workflow aspects of a telehealth enabled site*

b) Facilitate improved connectivity for rural providers
    a. The capability of assessing a referring site's current broadband capabilities and performing a review of all options for desired connectivity for site, including ETV resources and the USAC's HCF Program for subsidized funding, will be established
        i. *Deliverable: By September 1, 2015 the connectivity assessment for all sites in at least one rural region will be completed*
    b. Assist with equipment installs, support and training
        i. *Deliverable: By December 1, 2015 all health access points that are have adequate bandwidth and desiring to participate in telehealth activities within at least one rural region will be equipped with telehealth technologies*

c) Objectively assess for care disparities in chronic health condition management
    a. Perform a telehealth needs assessment at the regional level to include both available quantitative health data and qualitative community assessments
        i. *Deliverable: The needs assessment team detailed in Strategy 2a will establish a telehealth service delivery needs assessment following the completion of the health access assessment*
    b. Identify and assist in the development of appropriate telehealth service lines
        i. Deliverable: By September 1, 2015 PCC will establish a region-specific database of the available telehealth services in South Carolina to be utilized in identifying service gaps upon completion of the needs assessment (Strategy 2a and 2c)
    c. Identify consulting assistance to communities for telehealth grant opportunities
        i. *Deliverable: By September 1, 2015 PCC will establish a formal support mechanism to assist community providers in participation of telehealth grant opportunities*

3. **Invest in expanding needed specialty and subspecialty capabilities through telehealth.**

   Champions: Designees of MUSC, USC and GHS

Tactics:

a) Promote telehealth services which transform the care delivery system to provide better care, lower cost and maximize the limited supply of care providers

    a. *Deliverable: MUSC will report a timeline and the pathway of service development by March 1, 2015.*

4. **Conduct statewide education, training and promotion to providers and the public to accelerate and spread adoption of telehealth.**

   Champions: Designees of PCC and ETV

Tactics:

a) Leverage the experience of the PCC to raise awareness, educate and facilitate the adoption of telehealth

    a. Provide monthly newsletter discussing telehealth news and send to health care providers in SC, hold educational webinars for providers and their staffs, maintain central website for telehealth information and continue to convene the annual telehealth summit to promote state efforts and educate on national trends
        i. Deliverable: Ongoing

b) Provide training for future providers through multidisciplinary telehealth courses at the graduate level

    a. Establish a telehealth best practices training mechanism

        i. *Deliverable: By June 1, 2015 PCC will articulate a model for disseminating telehealth knowledge and training for multidisciplinary health teams*

    b. Leverage SCETV's 50+ years of experience and the Area Health Education Consortium SCHOOLS network to disseminate telehealth best practices and tele-educational courses for health care providers and patients

        i. Deliverable: Ongoing

c) Investigate the feasibility of statewide centralized credentialing program for all telehealth providers

        i. Deliverable: By June 1, 2015 PCC will report a feasibility assessment of a centralized credentialing program

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

   Champions: Designees of MUSC and representatives of the State legislature

Tactics:

a) Establish a SC Telehealth Advisory Council (11 members, 2 year non-recurring term):

- 2 rural health providers
  - Dr. Danette McAlhaney (Bamberg Family Practice)
  - Dr. Paul Hletko (Georgetown Pediatric Center)
- 3 telehealth experts from different academic institutions
  - Dr. James McElligott (MUSC)
  - Blix Rice (GHS)
  - Dr. Meera Narasimhan (USC)
- 1 member representing PCC
  - Kathy Schwarting
- 1 member representing the General Assembly (or delegated staff)
  - Senator Alexander
  - Representative Murrell Smith
- 1 member representing Department of Mental Health
  - John Magill
- 1 member representing ETV
  - Don Godish
- 1 member representing DHHS
  - Mandy Williams

a. Deliverable: The Advisory Council will convene by December 15, 2014.

b) Establish success metrics that focus on SC care problems that are amenable to telehealth and which encourage collaboration for equitable impact

a. *Deliverable: By March 1, 2015 the Advisory Council will establish success metrics for telehealth delivery in South Carolina*

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

Champions: Designees of MUSC, USC, GHS, DHHS, PCC and ETV

Tactics:

a) Document, evaluate and communicate outcomes related to existing and new telehealth initiatives to include cost savings, clinical quality improvements, increased access to care, etc. ETV resources and experience will be leveraged to deliver telehealth successes to the public and other stakeholders

a. Deliverable: By June 1, 2015 and as representing the South Carolina Telehealth Alliance, MUSC and ETV will initiate effective public awareness campaigns

b) Support research that establishes academic visibility and credibility for telehealth in South Carolina

a. *Deliverable: A report on the ongoing assessments and telehealth activities will be presented at the 2015 Annual Telehealth Summit of South Carolina*

Appendix B:

MUSC Telehealth Services

Interim Report

Inpatient and Emergency Teleconsultation Program

How it works:

The Inpatient and Emergency Teleconsultation program provides a wide variety of hospital-based teleconsultation services to hospitals in rural South Carolina who would otherwise face critical shortages of subspecialist services in their area.

- A mobile telemedicine cart is placed in the community hospital's ED.
- When a patient arrives to the community hospital ED in need of subspecialty consultation, the cart is placed in the patient's room, and the subspecialty provider is contacted for a consult.
- The consulting subspecialist uses a videoconferencing endpoint in their home, office, or hospital unit to connect to the community hospital's telemedicine cart for consultation.
- The subspecialist assesses the patient and makes recommendations for either treatment in place or transport to the referral center.

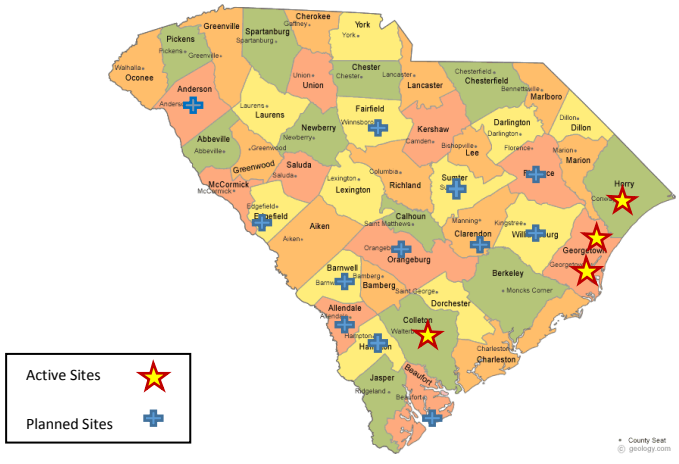
What equipment is used:

Equipment for a successful inpatient or emergency consult includes the following:

- Telemedicine cart with high-definition pan/zoom/tilt camera
- Hand held examination camera
- Telemedicine-enabled stethoscope

What sites connect:

This extensive program is designed to allow remote consultation from a wide variety of adult and pediatric subspecialists as the need arises at a particular community site. Currently available consultations include pediatric critical care, pediatric emergency medicine, pediatric burn care, pediatric GI, adult neurology, and EEG interpretation. Currently,there are four active sites and twelve planned sites.



Inpatient and Emergency Teleconsultation Program

Summary

MUSC's Inpatient and Emergency Teleconsultation program encompasses a variety of hospital-based teleconsultation services designed to address the critical shortage of subspecialist services in rural South Carolina and helps to make community hospitals more financially viable and clinically effective. In a very short period of time, the program has established a versatile administrative and technical infrastructure that allows for the efficient deployment of a variety of specialty services to rural facilities throughout the state. By providing these services to even the most underserved and financially crippled facilities in South Carolina, including Critical Access Hospitals, the Inpatient and Emergency Teleconsultation program will transform partnering rural hospitals into sustainable facilities that are capable of serving their community's healthcare needs in ways that were never possible before. The availability of these services significantly improves healthcare outcomes and access issues for residents throughout the state.

Synopsis of 2014

The initial Pediatric Emergency and Critical Care Telemedicine program was rolled out at Conway Medical Center in May of 2014. In December of 2014, the program went live in Georgetown Memorial Hospital and Waccamaw Community Hospital. To date, the program has completed 18 consultations. In addition we are overseeing the creation and deployment of several additional programs including, general tele-neurology, tele-EEG, tele-burn (pediatric), and tele-gastroenterology (pediatric).

From an administrative standpoint, the Inpatient and Emergency Teleconsultation Program has accomplished a great deal. We have led the implementation of credentialing-by-proxy for the credentialing of all of MUSC's hospital-based telehealth programs, which along with the development of a standard protocol for the planning and implementation of new inpatient and emergency teleconsultation programs, has greatly contributed to improved efficiencies for the development and deployment of new telehealth programs across a wide range of specialty services.

In an effort to facilitate training, outreach, education, and promotion for a variety of telehealth programs, we have conceptualized, planned and initiated the construction of the MUSC Telehealth Simulation Center. Our staff has also facilitated the RUS/DLT grant application to fund installation of telehealth equipment in rural hospitals across South Carolina.

In addition, our staff is also leading the development of the National Pediatric Telehealth guidelines for the American Telemedicine Association (ATA).

Goals for 2015

Goals for this year include**;** the roll out of Pediatric Emergency and Critical Care Telemedicine programs to four additional rural hospital locations, as well as the implementation of tele-neurology, tele-EEG, pediatric tele-burn, and pediatric tele- GI in the pre-existing sites as well as four additional sites. Additionally, we will lead the establishment of the South Carolina Children's Hospital Collaborative

Telehealth Network. This program will be the first of its kind across the nation, representing the new gold standard for a collaborative and integrated statewide telehealth plan. The application for a grant to fund this initiative is in progress. 2015 will also see the completion of the MUSC Telehealth Simulation Center and the publication of the National Pediatric Guidelines for the ATA.

Value to MUSC

The Inpatient and Emergency Teleconsultation services at MUSC encompass a large number of the programs run through the Center for Telehealth. The program serves as the foundation for all future hospital-based teleconsultation programs at MUSC, and by extension, the state of South Carolina. The expansion of hospital teleconsultation has been identified by senior leadership at MUSC as a key strategic goal for the organization, with the expectation that our program will expand to include a majority of MUSC subspecialties and a majority of rural hospital locations in South Carolina in the coming years. This program is a transformational program for the delivery of health care services both at MUSC and at community hospitals across South Carolina.

Value from a State Health Perspective

MUSC's inpatient and emergency teleconsultation programs have the potential to have a dramatic impact on the health and well-being of countless communities in South Carolina. By improving access to numerous specialty services in the state's rural regions, the program will impact outcomes across a broad spectrum of populations and conditions. Due to the wide variety of different programs planned and in progress, the potential health impact on the state of South Carolina is immense.

Value from a State Cost Perspective

The potential impact of avoidance of unnecessary transports and their associated costs is substantial. Data from the MUSC Pediatric Emergency and Critical Care Telemedicine program indicate that 7.3% of pediatric transfers to MUSC for pediatric emergency and critical care services were felt in retrospect to have been unnecessary, totaling an estimated $100,000 in avoidable costs for just that small subset of patients for whom surveys were completed. Avoided unnecessary air transportation could also have a significant impact on costs. The same Pediatric Emergency and Critical Care Telemedicine data showed 17 instances over two years of patients transported by helicopter who were subsequently judged to have been appropriate for ground transport, totaling another $51,000 in avoidable costs. In only a few months since implementation, the Pediatric Emergency and Critical Care Telemedicine program has already saved an estimated $13,500 through averted unnecessary air transports and $4000 through averted unnecessary transfers by ground transportation. Extrapolating those savings over the planned broader range of services for both adults and children equates to millions saved in transportation costs alone. These programs can also reduce costs by impacting hospital and ICU lengths of stay, length and incidence of mechanical ventilation, complication rates, unnecessary medication use, and numerous other morbidities.

Telestroke Program

How it works:

Telestroke is an acute care service delivered to patients in emergency rooms across the state. Patients with stroke symptoms are triaged by EMS and/or remote emergency room staff to receive emergent acute stroke consultation delivered by stroke specialists located in Charleston. The consult is delivered via a web-based platform with two-way audio and video, using real time shared medical documentation. Steps of a telestroke encounter include:

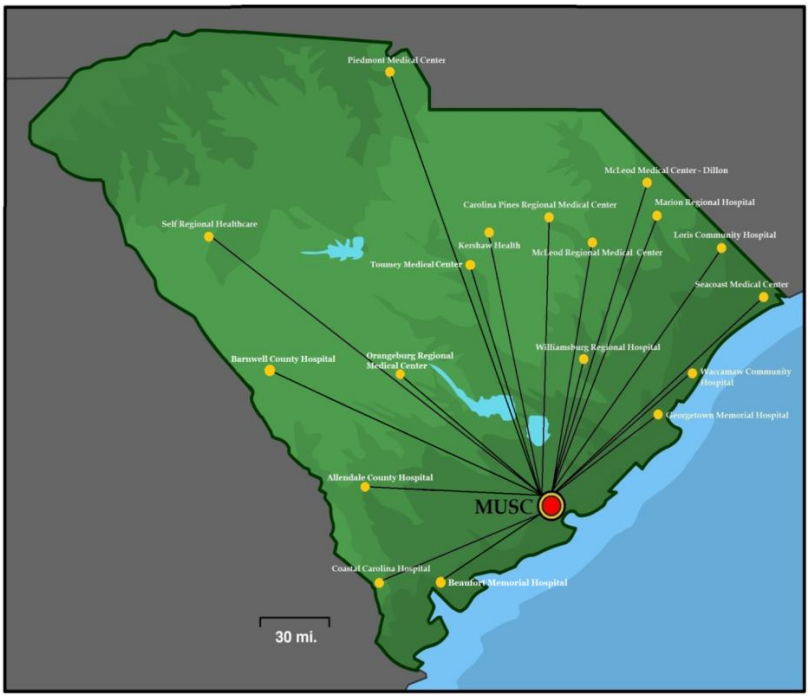
- Patient arrives in remote emergency room and CT scan is obtained.
- Nurse calls MUSC Stroke Center for a telestroke consult.
- A stroke specialist is connected via the web within 10 minutes. They review the CT scan, examine the patient and make a treatment recommendation.
- The patient is either admitted locally or transported to MUSC for advanced care.
- A note is generated from the consult website and is filed in the medical record at both locations.

What equipment is used:

Equipment for a successful telestroke visit includes the following:

- A MD or RN to assist with the patient exam and performing the NIH stroke scale.
- Telestroke web enabled cart equipped with a web camera and speaker.

What sites connect:



Telestroke Program

Summary

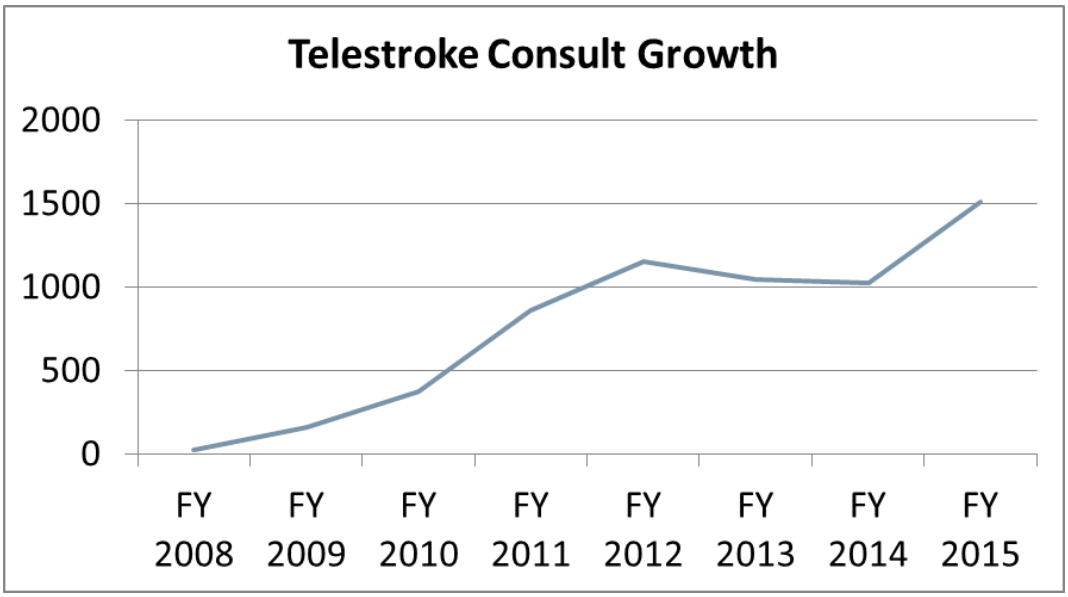
Beginning in 2008, the telestroke program was developed at MUSC. This network is a "hub and spoke" system for facilitating the rapid assessment of stroke patients, treating with tPA and determining the eligibility of other emergent therapies, such as late revascularization using intra-arterial recanalization. This program was implemented at six hospitals in the state without access to acute stroke care. In the first 12 months of the program 56 patients were treated with tPA. In the 12 months prior to the implementation of this program 5 patients had been treated at these sites. It was immediately evident that this service should be offered to all hospitals in South Carolina with a need for acute stroke services.

Synopsis of 2014

During 2014, the Telestroke Program at the Medical University of South Carolina (MUSC) invested in infrastructure and updated the equipment at 12 hospitals. The old carts were repurposed and put into use to deliver Telehealth clinic visits for other specialties. During training visits at the existing sites, stroke education was offered to the medical staff as well as process improvement projects aimed at decreasing treatment times and improving outcomes. Three new telestroke sites were identified and went live to bring the total network to 15 active hospitals. General Teleneurology services were introduced as the next service to complement telestroke.

Goals for 2015

Goals for this year include growing to an 18 spoke network and providing additional general neurologic services where needed. The addition of an outreach nurse coordinator will improve communication, education and treatment times and outcomes. General Teleneurology will be developed and implemented in at least 2 spoke hospitals.



FY 2015 Estimated based on current volume

Value to MUSC

MUSC inpatient stroke service discharges over 1200 stroke patients each year. The Telestroke service has grown continuously and in FY 15 over 1500 consults will be provided. With the current volumes of stroke patients at MUSC, it is in the interest of MUSC, our partner sites and telestroke patients to enable our partners to keep patients locally and transfer only those needing advanced care. The Telestroke network has matured to include 7 hospitals with Primary Stroke Center certification. Some of these hospitals are participating in the network as "sub-hubs" accepting transfers from other telestroke spokes, allowing MUSC to keep beds available for the sickest patients and allowing others to stay closer to home and family.

Value from a State Health and Cost Perspective

A primary goal of the MUSC Telestroke Program is to provide access to expert stroke care for all citizens of South Carolina. Access is measured in drive time to the closest stroke ready hospital (i.e. a primary stroke center or telestroke site). With the additional sites added in FY 15, **96% of the state's population will be within a 60 minute drive time of expert stroke care**. Without telemedicine, only 56% of the state's population would be within a 60 minute drive time of this level of care.

According to the analysis performed at MUSC by Abby Kazley, PhD. and published in American Health and Drug Benefits, the use of tPA in South Carolina accounts for a cost-savings for each patient treated of $4084. There would be a cost savings of $408,419 over the lifetime of 100 treated patients with acute ischemic stroke. A calculated cost-savings gained by increasing the tPA treatment rate in South Carolina with a high incidence of stroke from the current 3% rate to an achievable 20% rate over a 5-year period would be $16,615,723. In addition, a recent Mayo clinic study found that patients treated within a telestroke network compared to routine care at a rural community hospital incurred $1,436 lower costs and gained 0.02 quality-adjusted life-years over a lifetime. Implementing this system of coverage will potentially save the state millions of dollars and improve the quality of outcomes for many South Carolinians.

School-Based Telehealth Program

How it works:

School-based telehealth provides healthcare to children in the school setting using telehealth technologies with the assistance of the school nurse. Steps of a school-based telehealth visit include:

- Parent/guardian completion of consent forms; parent/guardian is invited to participate in the visit.
- School nurse connects to provider through telehealth technology.
- Provider takes patient history and performs an exam using specialized equipment that allows the provider to see high definition images and listen to the heart and lungs.
- Following the visit, the treatment plan is discussed with the parent/guardian and prescriptions are called in to a local pharmacy. A follow-up note is sent to the child's regular doctor.

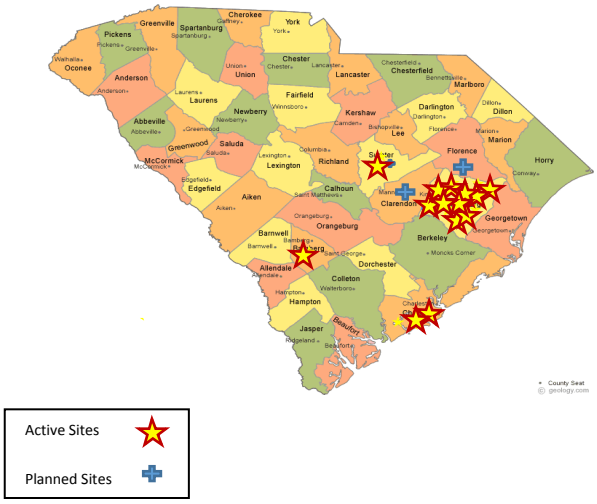
What equipment is used:

- Exam camera
- Telemedicine-enabled otoscope
- Telemedicine-enabled stethoscope
- Telehealth cart with computer and monitor (pictured on right)
- Web camera and speaker

What sites connect:

Nurse practitioners, pediatricians, and mental health providers from MUSC or the local community connect with the schools. Currently, 14 sites are participating in the program:

- 10 in Williamsburg County
- 1 in Bamberg County
- 1 in Sumter County
- 2 in Charleston County



School-Based Telehealth Program

Summary

School-based clinics have been shown to increase health access for rural children, decrease emergency room visits, decrease absenteeism, improve chronic disease management and improve academic performance. The application of telehealth allows the services to be delivered in rural areas and smaller schools without the sustainability barriers that otherwise necessitate large, urban schools. Acute sick care and chronic disease management are delivered in the school setting via a telehealth connection. The telehealth approach utilizes secure video conferencing to connect a healthcare provider with the school nurse, the patient and the parent if he/she so chooses. Telehealth equipment incorporates real-time video conferencing with essential and thorough examination capabilities. Importantly, our current model includes an emphasis on the use of local providers as telehealth providers or care coordinating entities.

Synopsis of 2014

During 2014, the School-Based Telehealth Program at the Medical University of South Carolina (MUSC) had three pilot schools, one urban (Meeting Street Academy-Charleston) and two rural (Williamsburg Magnet School of the Arts and Hemingway Elementary). Telehealth capabilities were placed in these school s allowing families to obtain care through a collaborative visit with the school nurse and the primary care clinician.

Goals for 2015

An important goal for this year is the extension to 12 additional schools (total of 15) in Williamsburg, Sumter, Charleston and Bamberg counties. A nurse practitioner dedicated to this service has been hired and is currently going through training and orientation, ensuring consistent access starting in February 2015. During the first quarter of 2015, we have extended the program to Cherryvale Elementary in Sumter with preliminary arrangements made to extend the program to Greeleyville Elementary in Williamsburg County. During the second quarter of 2015, 10 additional schools will be added, including 8 in Williamsburg County, 1 in Bamberg and 1 in Charleston County.

Value to MUSC

Health care reform initiatives incentivize school clinic approaches, and consistent engagement with all payers will be maintained. This program's model is well-poised to benefit from incentives for outcomes based reimbursement and is able to adapt to growing health insurance coverage and delivery of preventive healthcare, which will provide high-yield improvements on a population level. A Program Manager for School-Based Telehealth was hired in FY 2015 which reflects MUSC's commitment to focus on population health. This program will allow MUSC to consult on cases that otherwise may have been unavailable to them and to improve the health of children within those communities while utilizing local resources.

Value from a State Health Perspective

The primary goal of the School-Based Telehealth effort is to make healthcare more accessible to children in rural and underserved communities across the state. A 20% increase in overall health care utilization is anticipated for those who participate in the program. A secondary impact of the program is academic excellence, which is aligned with this initiative as school-based clinics have been associated with improved academic outcomes and graduation rates. This is of primary importance to the schools who will partner in this effort as academic performance is directly tied to school funding. The actual societal savings are likely to be much higher when decreased travel time, decreased missed school and work days and improved healthcare outcomes and savings are included.

Value from a State Cost Perspective

The telehealth care team can see more volume and operate more efficiently through a multiple site referral process that is not dependent on an on-site provider. Cost analysis has demonstrated positive outcomes in the literature, with reduced costs of 9.5% compared to on-site care during a time of greater technology costs. Other elements of the cost analysis will include downstream revenues from an expanding patient base for referrals and reduced costs from inappropriate use of high cost care settings. By the end of 2015, the program is anticipated to be serving 10 to 15 patients per day over a population of approximately 6,000 children. For children served, a 20% reduction in emergency room utilization is anticipated equating to health care cost savings of over $30,000 annually.

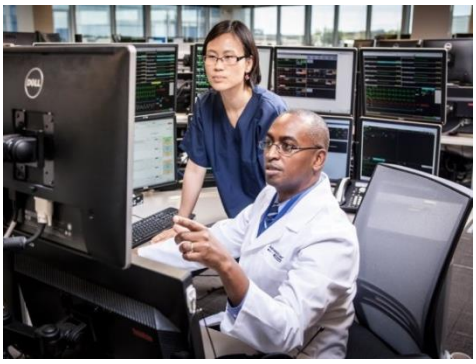
Tele-ICU and ICU Innovations

How it works:

The tele-ICU will deliver comprehensive, around the clock patient monitoring by MUSC and Advanced ICU Care intensivists and nursing staff. ICU Innovations is an associated critical care outreach program that includes rigorous focus on patient safety and quality improvement as well as multi-disciplinary peer-to-peer education.

The tele-ICU and ICU Innovations program will enhance the care of critically ill patients in partner hospitals' ICUs by:

- Two way monitors will be placed in the partnering hospitals' ICU
- These monitors will provide partnering ICU's with 24/7/365 access to MUSC's team of board certified and experienced intensivists and specialists. Along with nursing staff, these teams will monitor patients around the clock.
- These services will be accompanied by multi-disciplinary provider education, integrated quality related meetings and data sharing.

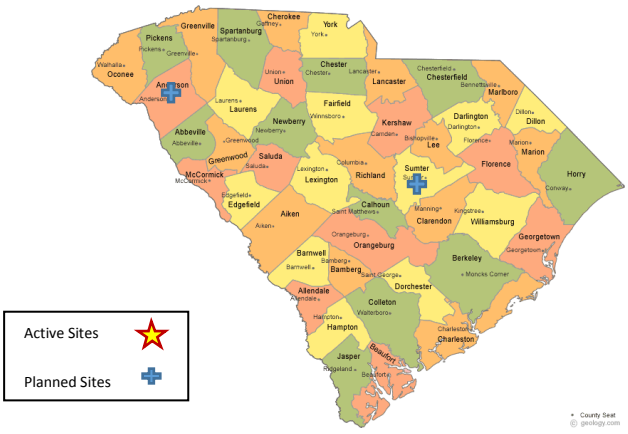


What equipment is used:

- Real-time, two-way audiovisual monitors
- Continuous, sophisticated vital sign monitoring technology that alerts remote intensivists and nursing staff of adverse patient changes
- In-room camera with capability to zoom for better view of the patient during assessment and visualization of IV pump or ventilator settings

What sites connect:

Physicians and nurses in partner hospital ICUs connect with board-certified intensivists and critical care nurses in the Operations Center. Currently, two sites have contracts. Monitoring will begin in the summer of 2015 at AnMed Health and Tuomey Regional Medical Center.



Tele-ICU and ICU Innovations Programs

Summary

MUSC is partnering with Advanced ICU Care to build an outreach tele-ICU and deliver comprehensive, around the clock patient monitoring by MUSC and Advanced ICU Care intensivists and nursing staff. Additionally, MUSC is developing a comprehensive critical care outreach education program called ICU Innovations. This program will improve the care of critically ill patients in partner hospitals' ICUs by improving patient safety and quality of care, via implementing evidence-based best practices, offering multi-disciplinary education, integrating quality related meetings and data sharing, and providing 24/7/365 access to MUSC's board certified and experienced intensivists for consultation and patient follow-up.

Synopsis of 2014

MUSC has executed contracts with AnMed Health and Tuomey Regional Medical Center. Two additional rural hospitals are in the final stages of contract negotiations, and additional discussions are ongoing with five other hospitals.

Simultaneously, the program has built an extensive foundation for the ICU Innovations' interprofessional team. The program medical director, Dr. Dee Ford, and program nurse coordinator, Emily Warr, have recruited a respiratory therapist, pharmacist, and outcomes research team and are currently working to develop the outreach educational curriculum.

Goals for 2015

For the first quarter of 2015, we have focused efforts on physician credentialing, hospital recruitment, equipping the Operations Center to go-live, and building the foundational components of the interprofessional education program for partner hospitals. MUSC physician training is scheduled to take place in June 2015 with an anticipated Operations Center go-live date in July 2015. Recruitment of future partner hospitals will be a large focus in the coming months as we strive to achieve our goal of 60 ICU beds contracted by the close of FY 15. We are on track to meet this goal as interest in this program is growing across the state.

Value to MUSC

MUSC will benefit from this program in several ways. Through telemedicine consultation, it will be possible to more effectively triage patients so that only the patients with true needs for onsite care on the MUSC campus are transferred. Presently, our MICU operates at >90% occupancy making optimizing the allocation of MICU bed resources an important objective. Additionally, the telemedicine consultation portion of the program will produce comprehensive knowledge of the history of care provided to patients if they ultimately require transfer to MUSC. This high level communication and data transfer will improve the ability of MUSC clinicians to optimally manage the patient's care. Finally, MUSC is an innovative leader in health care for the state of South Carolina. Serving as a resource for

quality improvement to community hospitals will further grow our reputation in patient safety and quality.

Value from a State Health Perspective

Patients, families, and clinicians at partner hospitals will receive new benefits from the hospital's participation in the program. Patients will receive increased quality of care with fewer complications, translating into reduced morbidity and mortality. We estimate that the program will reduce duration of mechanical ventilation by 30% and reduce rates of central line blood stream infections and ventilator associated pneumonia rates below national averages. Patients will also benefit from having an MUSC intensivist involved in their care via telemedicine. This relationship will provide access to medical specialties not currently or consistently available at our partner hospitals. It is important to note that intensivist directed care significantly improves mortality, morbidity, quality, and cost of care. Clinicians at partner hospitals will benefit from the opportunity to work with peers at MUSC in multiple contexts including educational forums, quality improvement meetings, case conferences, and during patient care. Finally, we believe the program will increase patient, family, and staff satisfaction in communities throughout South Carolina.

Value from a State Cost Perspective

MUSC's partnership with AICU will likely yield similar outcomes as those produced in AICU's years of Tele-ICU experience. One improvement upon AICU's success offered by MUSC's program is an ongoing relationship with the MUSC physicians, nurses, respiratory therapists and pharmacists to form a collaboration focused on improving teamwork and patient outcomes. The quality improvement outcomes produced by the partnership between Tuomey Hospital in Sumter, SC and AICU are highlighted below. These outcomes are predictive of results we will achieve with our partner hospitals in the coming years. This program will have a significant effect on length of stay, duration of mechanical ventilation, morbidity, mortality and the associated costs of all these factors.

Tuomey Hospital Patient Outcomes		
	Baseline	Tuomey and Tele-ICU results
Mortality rates	50% higher than predicted	3% below predicted
Sepsis mortality	47% higher than predicted	11% below predicted
ICU average length of stay	4.4 days	3.15 days (28% decrease; 13% below predicted)
APACHE severity score	54	58 (13.5% increase)
Average ventilator days	5.8	4.1 (29% decrease)

Virtual Tele Consultation (VTC) - Outpatient Telehealth

How it works:

Outpatient telehealth provides specialty healthcare to adults and children at their local primary care provider's medical practice – the patient's medical home. Steps of an outpatient telehealth visit include:

- Community provider refers their patient for a specialty teleconsultation
- Traditional patient scheduling
- Patient remains at their local physician's office with their physician or nurse practitioner
- Medical record, labs and/or radiographic images shared with MUSC specialist in advance
- MUSC specialist sees the patient via secure remote video audio connection
- Specialist enters notes into medical record as he or she talks with the patient and makes recommendations
- Consult notes transmitted to referring physician for review with the patient

What equipment is used:

Equipment for a successful telehealth visit includes the following:

- Telehealth cart with computer and monitor
- Web camera and speaker
- An exam camera and stethoscope as required

What sites connect:

MUSC specialists, such as adult and pediatric surgeons, psychiatrists and dieticians, connect with primary care provider offices. Currently, 25 sites in 13 counties are contracted for participating in the program:

Virtual Tele Consultation (VTC) - Outpatient Telehealth

Summary

A number of population groups have limited access to quality tertiary healthcare. Barriers include inability to pay, lack of insurance, distance from tertiary care facilities, advanced age, inadequate knowledge, limited transportation, resources and time constraints – especially for working families. Available research suggests that such vulnerable populations are more likely to experience inferior outcomes, more likely to have fewer health care choices offered or exercised and less likely to see a specialist. The application of telehealth allows specialty services to be delivered in rural communities without the barriers of time and travel. Since its inception, the VTC program has grown from 11 teleconsultations in 2012 to a total of 184 in 2014. Recent quarterly data has demonstrated significant program growth with a 139% patient consult increase over last year's results.

Synopsis of 2014

During 2014, the Virtual Tele Consultation program at MUSC had 25 contracted practices in 13 primarily rural counties. Telehealth equipment was placed in these community practices allowing patients to obtain specialty care through a collaborative relationship between their primary care provider and the specialist.

Goals for 2015

Goals for this year include extension to a potential 8 primary care practices for adults and pediatrics in Georgetown, Horry, and Williamsburg, 6 in Allendale, Bamberg, Barnwell, and Orangeburg and 2 in Beaufort and Jasper counties totaling a potential 16 practices. During the first quarter of 2015, we have extended the program to offer specialties services in Parent Child Interactive Therapy, Sickle Cell disease management, and adult and pediatric Psychiatry increasing to a total of 19 specialty services provided.

Value to MUSC

The VTC team sees patient consult volume continuing on the exponential increase especially as specialty services are expanded and primary care practices are enrolled in program participation. The program offers low-cost technical interventions that provide high-quality interactions with patients. The primary care providers welcome a partnership with specialists to ensure quality care coordination for their patients. Cost analysis has demonstrated patients save an average of $22.50 in travel cost of fuel and an average of 145 miles per scheduled physician visit. Telemedicine is a viable option for patients in rural areas with transportation issues that currently prevent them from accessing specialist care.

Value from a State Health and Cost Perspective

A primary goal of the VTC effort is to make specialty healthcare more accessible to adult and children in rural and medically underserved communities across the state. The VTC program has already demonstrated value in decreased travel time, decreased missed time from work and school and overall improved health. An impact of the program is that rural residents of South Carolina have among the highest rates of obesity, hypertension and diabetes in the country but have poor access to dieticians trained to help them manage those diseases or to change their eating patterns to avoid developing them. As nutritional consultations comprise the largest percentage of patient consults, the one-on-one nutrition and behavior counseling can significantly aid in reducing these disease rates.

Telemedicine-Assisted Case Management for Diabetes

How it works:

- Eligible participants are seen at adult medicine primary care practices within a Federally Qualified Health Center (FQHC) system and are 18 years of age and older, diagnosed with type 2 diabetes, and have a hemoglobin A1c (HbA1c) ≥8%.
- The primary outcome is HbA1c at 6-months post-randomization. Secondary outcomes are blood pressure control and quality of life at 6 months post-randomization.
- This program utilizes home tele-monitoring technology in conjunction with active nurse case management.

What equipment is used:

- Blood sugar monitoring device

What sites connect:

The study has already been initiated at Abbeville Area Medical Center. There are eight anticipated implementation sites in Orangeburg County that also service the neighboring communities of Vance, Neeses, St. Matthews, St. George, and Denmark, South Carolina. Other expected implementation sites are located in Bamberg and Allendale counties. Eventually, the study will be extended to the I-95 corridor to establish the program at FQHCs in Kingstree and Lake City, South Carolina

Telemedicine-Assisted Case Management for Diabetes

Summary

South Carolina's population has the tenth highest rate of diagnosed diabetes in the nation with 9.6% of the population diagnosed with this condition. Nurse case management has been shown to have a positive impact on treatment adherence, clinical outcomes and quality of life measures for this chronic disease. Additionally, there is a growing body of evidence to suggest that tele-monitoring strategies combined with active care management is an effective intervention for improving metabolic control and lowering HbA1c values in diabetic patients. However, few studies have tested the effectiveness of technology-assisted nurse case management in low income, predominantly rural populations. This program employs an innovative 2-in-1 tele-monitoring system coupled with nurse case management to optimize diabetes care for low income rural, underserved and minority adults with type 2 diabetes. The preliminary study will be conducted in community-based adult medicine primary care practices within a Federally Qualified Health Center (FQHC) system. These clinics provide services to residents in Berkeley, Charleston, and Dorchester Counties of South Carolina who are predominantly lower income African Americans.

Synopsis of 2014

In mid-2014, the study was initiated at the Abbeville Area Medical Center, a general medical and surgical hospital in Abbeville, South Carolina. The Abbeville Area Medical Center serves approximately 2,000 patients with type 2 diabetes. As of December 1, 2014, Abbeville Area Medical Center has adopted the program and works independently to recruit clinic patients and distribute the tele-monitoring devices, having enrolled 17 clinic patients with type 2 diabetes into the program. They remain dedicated to sustaining the program as a part of their patient-centered medical home initiatives.

Goals for 2015

The implementation at the Abbeville Area Medical Center will be followed by implementation at FQHCs, hospitals, and clinics in Orangeburg, South Carolina. There are eight FQHCs in Orangeburg County that also service the neighboring communities of Vance, Neeses, St. Matthews, St. George, and Denmark, South Carolina. In 2015, we also expect to work with FQHCs in Bamberg and Allendale counties to implement the program.

Value to MUSC

By implementing this program, MUSC will serve as a leader in diabetes care and will help expand healthcare access to patients seen at hospitals and clinics in rural counties and along the I-95 corridor. Furthermore, MUSC's efforts will provide evidence to congressional leadership in support of using telehealth technologies in rural counties and hospitals in South Carolina. MUSC has a strong desire to support and create programs which aim to improve health and health systems in the entire state.

Value from a State Health Perspective

It is anticipated that this program will decrease HbA1c levels in a high-risk population with limited glycemic control. The intervention is expected to benefit patients by improving blood glucose and blood pressure control and reducing their risk of developing complications from diabetes. The program will provide evidence-based coordinated care to the patients treated at these sites. In addition, the staff will receive training and support for implementing interventions designed to improved diabetes management and outcomes.
The reported outcomes include HbA1c, systolic blood pressure, diabetes knowledge, and self-monitoring of blood glucose at 3months follow-up. Based on the preliminary analyses of the first 100 randomized participants, individuals randomized to the intervention group improved in all reported outcomes demonstrated a significant impact of this research and the resulting programs.

Value from a State Cost Perspective

This program will prove cost effective by reducing inpatient admissions and emergency room visits for high-risk patients in the local and surrounding areas of the study sites. The program is also expected to demonstrate benefits within 6-12 months of implementing the intervention, and we anticipate helping approximately 2000 patients better manage their self-care practices. Within 12-24 months, approximately 4000 patients will be serviced by including additional sites for study implementation. Finally, within 36 months, we expect to reach 6000 participants across rural counties in South Carolina and improve diabetes-related outcomes. The large reach of this program will contribute to lowered costs associated with poor self-care practices, complications and the associated costs.