



# SC TELEHEALTH ALLIANCE

QUARTERLY REPORT



**2017**  
QUARTER  
TWO

# Executive Summary

In the second quarter of 2017, the South Carolina Telehealth Alliance ("SCTA") continued their work on executing tactics under the 2017 SCTA strategic plan. The SCTA operations manual is being utilized at the Advisory Council level, and a new SCTA membership model has been drafted for review by the Advisory Council. The SCTA IT Workgroup has agreed on technical standards for the state telehealth network, and they have implemented a new SCTA help desk support system that can be used across partnering institutions. The SCTA regional hubs' operational leaders have been working on an agreement to further accelerate telehealth service development throughout the state. While there are still challenges with collecting timely data from multiple institutions, many of the current telehealth services are now reporting on key performance indicators to better assist with evaluating the effectiveness of each service. New and existing SCTA workgroups are helping improve communications and operationalize tactics under the strategic plan. This report will provide further details and additional work being conducted to meet the milestones set forth by the 2017 SCTA strategic plan.

## **Mission**

Improve the health of all South Carolinians through telehealth.

## **Values**

Patient centered

Quality

Collaboration

Sustainability

Accountability

## **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.

# Driving Strategy 1

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

The **SCTA IT Workgroup** has established technical standards and protocols (see **Appendix A**), which are now being prepped for inclusion on the SCTA website.

Led by **McLeod Health**, a case simulation process for testing of the telehealth IT infrastructure is underway. The process will ensure a highly-reliable telehealth network for clinical services.

A significant accomplishment under this infrastructure strategy is the forming of a uniform help desk support system that can be used across institutions. The help desk and online ticketing system is active and available statewide. The on-call technical team is notified when a help desk ticket is submitted. Technical resources are available during normal business hours, as needed, and for urgent requests, the on-call technical resource will be paged and respond to the request within 15 minutes. This represents true collaboration among the IT support of the SCTA members.

The Credentialing Workgroup, led by **Palmetto Care Connections (PCC)**, analyzed surveyed results which showed referring hospitals are interested in centralizing provider credentialing information. The workgroup reviewed vendor proposals and selected a vendor to pilot a centralized database in 2018.

## SCTA Strategy 1 - Milestones

Strategy 1: Deploy a coordinated open-access telehealth network in South Carolina				
Milestone	Timeline	Champion	Status	Notes
<b>Tactic 1: Establish collaborative language to define standards and protocols for equipment and technology that conform to existing industry standards, meet or exceed federal mandates and emphasize interoperability and security</b>				
Complete draft of guidelines for compliance language regarding standards and protocols as it relates to the Hub Agreement with approach to exceptions (exceptions will be included as an Appendix)	March	MUSC Health	Completed	None
Finalize collaborative and compliance language and approach to exceptions document	June	MUSC Health	Completed	None
Distribute guidelines through SCTA website and package with Hub Agreement/membership materials	September	MUSC Health	Pending	Due in Q3
<b>Tactic 2: Create a directory of existing telehealth programs and providers, to include small pilot and grant funded projects.</b>				
Complete template draft and populate with data from SCTA IT Workgroup member programs	March	MUSC Health, Roper St. Francis	Transitioned	IT Workgroup focusing on endpoints (and not specific programs)
Make recommendation regarding timeline, budget and implementation process for developing a tool to collect directory information online	June	MUSC Health, Roper St. Francis		Incorporated into new SCTA website build
<b>Tactic 3: Establish a process for regular ongoing use case simulation "testing" of new systems, processes and protocols across partner sites</b>				
Draft of use case simulations and recommended timeline for testing developed	March	McLeod Health	In Progress	Use case simulations are being developed
Begin implementation of testing process	June	McLeod Health	In Progress	
<b>Tactic 4: Continue to develop a streamlined credentialing process for hospital-based services</b>				
Survey SC hospitals on credentialing process	March	PCC, MUSC Health	Completed	None
Develop recommendation on improving telehealth credentialing in South Carolina	September	PCC, MUSC Health	Pending	Due in Q3
<b>Tactic 5: Explore the feasibility of a SCTA tool, to include system monitoring/dashboard, for an automated online help desk for steering support calls, identifying problems and capturing issues</b>				
Make recommendation regarding timeline, budget and implementation process for online help desk platform	March	MUSC Health	Completed	None

# Driving Strategy 2

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

**Palmetto Care Connections** has helped 20 sites get connected with telehealth equipment in the 4-county area of Bamberg, Allendale, Barnwell, and Hampton. PCC has partnered with Connect SC to assess areas lacking broadband connectivity. The findings will be compared to the current FCC broadband map to target connecting providers in underserved broadband areas. The study is expected to be completed by Q4 of CY17.

For South Carolina, the FCC site indicates the following:

- Number of Broadband Service Providers in SC: 34
- Most Common Download: 100-1000 mbps
- Most Common Upload: 4-6 mbps
- Broadband Access for SC:

66.7 physicians per 100,000 population  
84.7% of SC has access to broadband

The data is indicative of asynchronous connectivity being the primary type of circuit which is not conducive for telehealth synchronous ("real-time") video consults.



**Palmetto Care Connections'** Technical Director, Matt Hiatt, is working to improve broadband connectivity in underserved areas.

## Quarterly reporting of barriers/issues identified and proposed solutions offered:

### 1. Low Bandwidth

a. Bamberg Family Practice was experiencing bandwidth issues. Vidyo equipment was installed and connected to allow telehealth visits. Work with internet providers to increase bandwidth

### 2. Resistance of providers and administration

a. Routine visits/calls to promote available telehealth services

### 3. Limited insurance coverage & reimbursement

a. Work with SCTA Telehealth Growth & Sustainability Specialist to demonstrate to legislators and payers the impact of telehealth usage

### 4. Low referral rate

- a. Continue to encourage the use of telehealth in clinics and schools
- b. Decrease in volume with Diabetes Education Classes over the summer

# Driving Strategy 2

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

The **Diabetes Self-Management Education/Training program** received **55 total referrals**, **17 patients** have attended at least one class and **29 have graduated**. The program's success has afforded PCC a unique opportunity to complete a Special Innovation Program Proposal for the Centers for Medicare and Medicaid Services (CMS) in the quarter two.

## Quarterly reporting of actual utilization and utilization trends:

1. Bamberg Family Practice connected with MUSC's VTC service: 13 Referrals; 9 Encounters
2. DMH Telepsychiatry Program provided 101 psychiatric services via telehealth to the Bamberg, Barnwell, Allendale and Hampton Region
3. Low Country Health Care Systems Fairfax and Low Country AHEC (Diabetes Classes): 18 Referrals; 8 have attended at least one class; 5 have graduated
4. Low Country Health Care Systems Barnwell and Low Country AHEC (Diabetes Classes): 9 Referrals; 8 have attended at least one class; 4 have graduated
5. Low Country AHEC (Originating site), Walterboro, SC has had 28 persons referred, 10 have attended at least 1 class and 20 have graduated
6. Coastal Plans connected with Roper Endocrinology for 7 telehealth consults

## SCTA Strategy 2 - Milestones

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

Milestone	Timeline	Champion	Status	Notes
<b>Tactic 1: Monitor key indicators of improved access to care delivered via telehealth for the four county areas of Bamberg, Barnwell, Allendale and Hampton identified in 2016 as service development priorities</b>				
Identify key indicators that will be monitored	March	PCC	Completed	None
Present baseline data of identified key indicators	June	PCC	In Progress	Will focus on diabetic patients
Identify telehealth service lines to be added to improve key indicators and engage consulting providers on implementing new service line(s)	September	PCC	Pending	Due in Q3
<b>Tactic 2: Review the Connect2Health<sup>FCC</sup> Task Force's Mapping Broadband Health in America tool and identify underserved areas of South Carolina</b>				
Conduct thorough review of the Connect2Health <sup>FCC</sup> Task Force's Mapping Broadband Health in America tool for entire state. Report out on underserved areas by county and region.	March	PCC	In Progress	Assessment being conducted
Develop strategy for increasing broadband access to the identified underserved areas	June	PCC	Deferred to Q4	Will report out on study
<b>Tactic 3: Monitor clinics to make sure they have the support they need to deliver services and monitor utilization of existing/new service lines</b>				
Quarterly reporting of actual utilization and utilization trends.	Ongoing	PCC	Ongoing	None
Quarterly reporting of barriers/issues identified and proposed solutions offered.	Ongoing	PCC	Ongoing	None

# Driving Strategy 3

## Invest in expanding needed specialty and subspecialty capabilities through telehealth

The SCTA regional hub operational leaders, representing Greenville Health System, McLeod Health, MUSC Health, and Palmetto Health, communicate regularly on service development efforts across the state. A large part of the focus of the last quarter was on achieving the subtactic 1A milestone to "establish an equitable approach to providing operational support for the Regional Hubs in order to catalyze the development of high value services." This new agreement will provide significant financial support for the regional hubs to establish catalytic service development throughout the state. The draft agreement was completed in April and is expected to be executed in CY17 Q3.

The second quarter also brought the establishment of the two SCTA workgroups, direct-to-consumer and school-based telehealth, identified earlier in the year. The two workgroups are engaging SC stakeholders to achieve the September milestones of drafting short term objectives and a long term vision for their respective services.

Palmetto Health and McLeod Health have been leading the direct-to-consumer workgroup meetings, and they are currently collecting baseline data on SC programs to assess current utilization.

The school-based telehealth workgroup was also formalized in the second quarter with the first in-person meeting scheduled to take place in July at MUSC's Center for Telehealth. The school-based telehealth workgroup will be focusing on establishing guidelines for program quality and expansion of access to care in SC.

## SCTA Strategy 3 - Milestones

### Strategy 3: Invest in expanding needed specialty and subspecialty capabilities through telehealth

Milestone	Timeline	Champion	Status	Notes
<b>Tactic 1: Catalyze telehealth service development through regional hubs</b>				
<b>Subtactic 1A:</b> Establish an equitable approach to providing operational support for the Regional Hubs in order to catalyze the development of high value services				
The SCTA regional hub's operational leaders will provide an assessment of telehealth service development barriers in South Carolina.	March	MUSC Health	Completed	None
A draft agreement to provide support for accelerated regional service development will be presented to SCTA Advisory Council for review and recommendations.	June	MUSC Health	Completed	Expected to be executed in Q3
<b>Subtactic 1B:</b> Establish service specific collaborative work groups charged with formulating short term objectives and a long term vision for the service in South Carolina				
Identify at least two service specific workgroups (e.g. telestroke and school-based health) with recommendations on participants	March	MUSC Health	Completed	None
Workgroups draft short term objectives and long term vision for their respective services	September	MUSC Health, Palmetto Health, McLeod Health	Pending	Due in Q3
<b>Subtactic 1C:</b> Establish executive level communications between Regional Hubs to ensure synergies in service development				
Review and discuss collaborative service development opportunities on an as-needed basis	Ongoing	MUSC Health, Palmetto Health, McLeod Health, GHS	Ongoing	None

# Driving Strategy 3

Invest in expanding needed specialty and subspecialty capabilities through telehealth

Since inception, the **South Carolina Department of Mental Health** (DMH) has provided more than 67,000 psychiatric services via telehealth in its telepsychiatry programs. Most recently, DMH collaborated with **MUSC Health** on improving telepsychiatry services at two rural Critical Access Hospitals (CAHs). DMH and MUSC are working together on contracting with new hospitals (e.g. **Edgefield County Hospital**) to receive telepsychiatry in their emergency departments and replacing end-of-life telehealth carts at existing sites (e.g. **Williamsburg Regional Hospital**).

In order to continue to evaluate telepsychiatry services, DMH has identified and will track the following three (3) metrics:

- Total Number of Telepsychiatry Services Provided Per Month (includes ED and community telepsychiatry programs)	<b>~ 1550 services</b>
- Percent of Telepsychiatry Patients Receiving 30-Day Follow-up Care (versus control group)	<b>31% vs 14%</b>
- Inpatient Hospital Charge Savings Per Episode, Telepsychiatry (versus control group)	<b>\$8,746 vs \$11,087</b>

## SC Tele-ICU CY17 Q2 Data

**2,493** patient stays  
**12,976** video assessments  
**5,438** interventions  
**158** emergency responses  
**34,609** total interactions

### SC Hospitals connected with Tele-ICU:

AnMed Health  
 Carolina Pines Regional Medical Center  
 Kershaw Health  
 MUSC Health - operations center  
 Palmetto Health Tuomey  
 Roper St. Francis\*  
 Self Regional  
 Springs Memorial

\* Data not included

Tele-ICU has potentially saved lives in SC in Q2

**52**

(According to actual vs predicted ICU mortality statistics)



in May, **Palmetto Health Tuomey**, through their tele-ICU partnership, was awarded the 2017 I SEE YOU CARE Award in recognition of their efforts to decrease the length of stay for patients in the ICU, shorten the amount of time a patient stays on a ventilator and improve overall patient outcomes.

# Driving Strategy 3

Invest in expanding needed specialty and subspecialty capabilities through telehealth

The SCTA telestroke networks are tracking "door-to-needle" (DTN) times for ischemic stroke patients. The DTN time is the window of time between when the patient enters the emergency department door until they have received the potentially life-saving drug, tPA.

At the request of the SCTA Advisory Council, Ellen Debenham, MUSC Health manager of clinical services, presented the **MUSC Health** neuroscience programs, including telestroke, teleneurology, and tele-EEG, at the June meeting. Hospitals participating in that telestroke network are listed to the right with the best quarterly DTN times listed below.

## Telestroke: Best Door-To-Needle Times



- April - Roper Hospital and Williamsburg



- May - Tideland's Georgetown



- June - Tideland's Waccamaw

Beaufort Memorial Hospital
Bon Secours St. Francis Hospital
Carolina Pines Regional Medical Center
Carolinas Hospital System
Coastal Carolina Hospital
Conway Medical Center
Georgetown Memorial Hospital
Hampton Regional Medical Center
Hilton Head Hospital
Kershaw Health
Loris Community Hospital
Marion County Medical Center
McLeod Cheraw
McLeod Clarendon
McLeod Medical Center Dillon
McLeod Regional Medical Center
Mount Pleasant Hospital
Piedmont Medical Center
Regional Medical Center Orangeburg
Roper Hospital
Roper Hospital Berkeley
Roper Hospital Northwoods
Seacoast Medical Center
Self Regional Healthcare
Waccamaw Community Hospital
Williamsburg Regional Hospital

# SCTA Strategy 3 - Milestones

## Strategy 3: Invest in expanding needed specialty and subspecialty capabilities through telehealth

Milestone	Timeline	Champion	Status	Notes
<b>Tactic 2: Support SC community hospitals with integrating telehealth into the care they deliver</b>				
<b>Subtactic 2A:</b> Expand emergency room-based mental health consultations in South Carolina with a focus on rural hospitals				
Identify and track key metrics to evaluate telepsychiatry services to SC hospitals	June	DMH	Completed	None
<b>Subtactic 2B:</b> Evaluate the impact of tele-ICU on community hospitals				
Identify and track key metrics to evaluate tele-ICU services to SC hospitals	June	MUSC Health	Completed	None
<b>Subtactic 2C:</b> Optimize the delivery of telestroke services				
Identify and track key metrics to evaluate telestroke services to SC hospitals	June	MUSC Health	Completed	None

# Driving Strategy 3

## Invest in expanding needed specialty and subspecialty capabilities through telehealth

In quarter two, the **Palmetto Health - USC Medical Group's SC Hepatitis C Telehealth Initiative**, led by Dr. Divya Ahuja, continued their focus on assisting primary care providers with managing complex conditions. The educational teleconferences they provided between April and June were attended by 98 clinicians, and they reviewed 25 patient cases. While their focus is on the South Carolina community (sites listed to the right), they have opened up attendance to anyone, and clinicians from North Carolina, Tennessee, Florida, New Hampshire, Oklahoma, and Kentucky also participated.

The primary service offered to primary care offices, the **MUSC Virtual Tele Consult** program, has adopted the process indicator of program utilization per site. This indicator will provide insight into the high and low utilizers of the program and help to inform further innovations to improve specialty-to-primary co-management of patients.

Additionally, a focused interview process will be undertaken over the latter half of 2017 in order to inform the 2018 strategic initiatives for this important telehealth modality.

### HCV Telehealth Sites:

1. Eau Claire Cooperative Health Centers- Columbia
2. MUSC- Charleston
3. Little River Medical Center- Little River & Loris sites
4. Rural Health Services- Aiken
5. Immunology Center- Columbia
6. United Health Group- Hanahan
7. Prescription Center- Spartanburg
8. Palmetto Health Richland & Baptist- Columbia
9. Careteam Plus- Conway
10. Blue Cross Blue Shield- Columbia
11. Cardinal Health- Pawley's Island
12. Tidelands Waccamaw Oncology- Murrells Inlet
13. U.S. Immigration & Customs Enforcement (ICE) Health Service Corps- Columbia

## SCTA Strategy 3 - Milestones

### Strategy 3: Invest in expanding needed specialty and subspecialty capabilities through telehealth

Milestone	Timeline	Champion	Status	Notes
<b>Tactic 3: Enhance co-management between primary care and specialty services</b>				
<b>Subtactic 3A:</b> Implement provider education via telehealth which enables primary care settings to co-manage complex diseases with the assistance of specialists and a multidisciplinary team				
Identify and track key metrics to evaluate HCV initiative	June	Palmetto Health-USC Medical Group	Completed	None
<b>Subtactic 3B:</b> Explore efficient delivery of specialty and supporting services in primary care settings				
Identify and track key metrics to evaluate telehealth services delivered to primary care settings	June	MUSC Health	Completed	None

# Driving Strategy 3

## Invest in expanding needed specialty and subspecialty capabilities through telehealth

The establishment of the SCTA school-based telehealth workgroup will allow for improved communications and collaboration between the operational school-based teams of different organizations. The workgroup will provide a venue to share resources and establish quality standards. The metrics identified to monitor will be the total number of school-based telehealth encounters, the number of SC telehealth school-based clinics, and the percentage of high-priority schools offered to receive telehealth services. High-priority schools were defined as either recommended by the **S.C. Department of Education** or an area with a high prevalence of childhood asthma rates. Currently, there are 52 telehealth school-based clinics in South Carolina.



Kelli Garber, the Lead Nurse Practitioner at MUSC's Center for Telehealth, trains a school nurse on how to use an electronic examination camera.

The direct-to-consumer (DTC) workgroup has started to bring in more community hospitals, including **AnMed Health** and **Spartanburg Regional Healthcare System**, with experience and/or an interest in DTC applications. The workgroup is currently collecting organizational data on patient exam time, provider review time, percentage of patients who could complete their visit with telehealth, conditions treated, patient demographics, and patient survey results.

## SCTA Strategy 3 - Milestones

### Strategy 3: Invest in expanding needed specialty and subspecialty capabilities through telehealth

Milestone	Timeline	Champion	Status	Notes
<b>Tactic 4: Enhance access to care through direct connections with patients and non-traditional clinical settings</b>				
<b>Subtactic 4A:</b> Expand school-based telehealth to communities across the state through regional collaboration and coordination				
Identify and track key metrics to evaluate school-based services	June	MUSC Health	Completed	None
<b>Subtactic 4B:</b> Explore feasibility of a statewide direct-to-consumer model that ensures high quality and keeps care local				
Identify stakeholders to participate in exploration of a SCTA direct-to-consumer model	March	Palmetto Health, McLeod Health	Completed	None
Assessment of current SC utilization and local and national trends of direct-to-consumer care	June	Palmetto Health, McLeod Health	In Progress	Data being collected
Provide recommendations for a SCTA direct-to-consumer model	September	Palmetto Health, McLeod Health	Pending	Due in Q3

# Driving Strategy 4

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

The Education Committee has been very active in 2017, with notable engagement from the medical schools affiliated with **MUSC Health**, **USC-Palmetto Health** and the **Greenville Health System**. These organizations are on track with the complex process of integrating new educational content within their current curriculum.

Led by **Palmetto Care Connections**, the process of deploying a modified needs assessment of the educational needs of rural providers is underway. This process will include an assessment of the rural providers' preferred method of receiving education and training on the use of telehealth. This strategy rolls into the fall of 2017, and its conclusion will coincide in a timely manner with the formulation of the 2018 strategy of deploying the educational interventions.

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

Milestone	Timeline	Champion	Status	Notes
<b>Tactic 1: Develop an overall telehealth knowledge dissemination plan to SCTA institutions with a mechanism to provide introductory knowledge of telehealth to their learners and providers</b>				
Engage health care provider training institutions, beginning the with the four medical schools, to determine their readiness and preferred format for the incorporation of introductory knowledge into their existing curriculums.	March	SC AHEC	Completed	None
Present outline of how schools will apply telehealth learning	June	SC AHEC	In Progress	Workgroup sharing resources across institutions
Articulate expected launch dates of first curriculums to include telehealth	September	SC AHEC	Pending	Due in Q3
<b>Tactic 2: Develop an iterative process for educational needs assessment to include some evaluation of the current knowledge and comfort level of existing providers and identification of emerging needs</b>				
Review most recently done needs assessment and identify areas of need that continue to be unmet	June	PCC, SC AHEC	In Progress	Being reviewed
Revise needs assessment and begin implementation of needs assessment process	September	PCC, SC AHEC	Pending	Due in Q3
Needs assessment data analyzed and draft report developed	December	PCC, SC AHEC	Pending	Due in Q4
<b>Tactic 3: Establish a mechanism to ensure telehealth knowledge and training is disseminated to rural sites</b>				
Inventory of existing training materials for rural providers	March	PCC	Completed	None
Survey rural providers to determine best training mechanism for their schedules	June	PCC	In Progress	Being conducted
Recommend identified training materials	September	PCC	Pending	Due in Q3
Training materials available to rural providers	December	PCC	Pending	Due in Q4

# Driving Strategy 5

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

## Membership Model

The membership model is under review by the SCTA Advisory Council, with model overview provide in **Appendix B**. Of note, the model provides three tiers of engagement with the SCTA that recognize the level of strategic engagement an organization has with the SCTA. This 2017 accomplishment will establish the structure needed to enhance SCTA member group communications and facilitate the onboarding of new partner institutions.

## Operations Manual

The Advisory Council Operations Manual is finalized and is already being utilized. Council members anecdotally report satisfaction with the new process, notably the structured process for informing instructions about new contracts and well-defined reporting timelines. The next quarter includes an assessment of the impact of these process changes, which the co-Chairs of the Advisory Council are undertaking through direct discussions with each Council member. Of note, the Council has agreed to spend more in-person time in addition to the Council meetings in order to continue the in-depth discussion regarding individual programs.

The program of focus for quarter 2 was telestroke, with the MUSC telestroke program discussing the operations and finances associated with the program with the Council.

## SCTA Strategy 5 - Milestones

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

Milestone	Timeline	Champion	Status	Notes
<b>Tactic 1: Introduce formal membership model with defined benefits and responsibilities for participating in the SCTA</b>				
Draft membership document(s) with defined benefits and responsibilities delineated	March	SCTA – Manager, External Affairs	Completed	None
Finalize membership documents and materials and establish a plan for distribution	June	SCTA – Manager, External Affairs	In Progress	Under review
<b>Tactic 2: Develop a strategy for streamlining communications within the SCTA with a focus on Advisory Council procedures</b>				
Operational Procedures document for SCTA Advisory Council available for review	March	SCTA – Manager, External Affairs	Completed	None
Operational Procedures applied to Advisory Council operations	June	SCTA – Manager, External Affairs	Completed	None
Assessment of Operational Procedures and proposed modifications underway	September	SCTA – Manager, External Affairs	Pending	Due in Q3

# Driving Strategy 6

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

## SCTA Marketing Plan

The Content Advisory Team, led by SC ETV, presented the SCTA marketing plan and received feedback from SCTA partners' marketing representatives. Their valuable feedback is being implemented into the plan. As the campaign continues to increase telehealth awareness in South Carolina, the marketing plan will continue to be updated to respond to needs identified by the Content Advisory Team.

## SCTA Reporting

Working in coordination with the Content Advisory Team and the SCTA Advisory Council, a SCTA reporting schedule has been implemented that allows for sufficient time for partners to submit their telehealth data and success stories, preparation of the reports, review by the Advisory Council, and submission to the appropriate stakeholders.

## SCTA Recognized on the National Stage:

While questioning the **Health and Human Services Secretary Tom Price** in a June committee hearing, **U.S. Representative Tom Rice, 7th District of SC**, highlighted many of the SCTA 2016 accomplishments.

# SCTA Strategy 6A - Milestones

## Strategy 6A: Demonstrate to legislators, payers, providers and the public, the impact of telehealth in improving access, quality and affordability

Milestone	Timeline	Champion	Status	Notes
<b>Tactic 1: Promote awareness of SCTA and SCTA resources</b>				
Develop draft strategic marketing plan	March	SCETV	Completed	None
Review composition of existing content advisory group and identify and invite representation from additional key strategic partners in order to increase coordination around marketing efforts	March	SCETV	Completed	None
Finalize marketing plan after obtaining buy-in and feedback from all partners	June	SCETV	Completed	None
<b>Tactic 2: Disseminate new telehealth information, data, resources and success stories within the state of South Carolina and beyond</b>				
Leverage existing SCTA reports as a mechanism for disseminating new information, data, resources and success stories	Ongoing	SCTA – Manager, External Affairs	Ongoing	None
Establish a standing agenda item for monthly content advisory team meetings that includes: (1) sharing of any new information, data, resources and success stories and (2) strategic discussion about how best to market the new information, data, resources and success stories with an emphasis on the desired key message by target audience	March	SCTA – Manager, External Affairs	Completed	None

# Driving Strategy 6

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

## Reimbursement

The Reimbursement workgroup, led by the SCTA - Manager of External Affairs, has been meeting to determine the types of data that are needed for additional telehealth payer coverage. The SCTA has been engaged with discussions with BlueCross BlueShield of SC, SC Department of Health and Human Services, and WellCare on telehealth policy and reimbursement opportunities.

## Policy Education

The SCTA has shared telehealth reimbursement resources collected by MUSC's Center for Telehealth to share with other SC hospitals. Work is being done to provide improved dissemination of state telehealth policy through an updated SCTA website build.

## SCTA Strategy 6B - Milestones

### Strategy 6B: Demonstrate to legislators, payers, providers and the public, the impact of telehealth in improving access, quality and affordability

Milestone	Timeline	Champion	Status	Notes
<b>Tactic 1: Work with payers to enhance telehealth reimbursement policies by coordinating recommendations across organizations and advocating for consistent policies across CPT codes</b>				
Plan developed for bringing providers and payers together on a regular basis to identify priority areas and collaboratively discuss reimbursement policies for telehealth in SC	March	SCTA – Manager, External Affairs	Completed	None
Template developed for putting the recommended reimbursement policies in writing that identifies core questions and/or data points needed to facilitate the discussion with payers	March	SCTA – Manager, External Affairs	Completed	None
<b>Tactic 2: Educate providers on best practices, lessons learned and success stories pertaining to billing and reimbursement for telehealth</b>				
Fact sheet with standardized terminology and definitions pertaining to telehealth reimbursement developed and made available to SCTA members and the general public	March	PCC, SCTA – Manager, External Affairs	Completed	None
Inventory of existing training efforts/modules developed and made available to SCTA members and the general public	June	PCC, SCTA – Manager, External Affairs	In Progress	Will be included in new SCTA website build
Discussions initiated with key contacts associated with existing training efforts/modules about how to leverage these existing efforts with provider education on billing and reimbursement	September	PCC, SCTA – Manager, External Affairs	Pending	Due in Q3
<b>Tactic 3: Implement a plan to collect data for payers based on payer-identified metrics (e.g. patient/population health outcomes, cost-savings/ROI) that are most important for them in making policy decisions pertaining to reimbursement and the development of alternative payment models</b>				
Draft approved list of data requirements for telehealth programs	March	SCTA – Manager, External Affairs	In Progress	Payer outreach ongoing
Review data using revised data retrieval schedule on regular basis	Ongoing	SCTA – Manager, External Affairs	Ongoing	

## Appendix A: SCTA Technical Standards

**SCTA Mission:** Improve the health of all South Carolinians through telehealth

*Telehealth is the use of telecommunication and information technologies in order to provide clinical health care at a distance. The South Carolina Department of Health and Human Services Program Requirements, Coverage Guidelines, item 4 states 'The telemedicine equipment and transmission speed and image resolution must be technically sufficient to support the service.'*

**SCTA Expected Deliverables:** Create, deploy and support an open-access Telehealth network in South Carolina. Disseminate, support and utilize open-access telehealth technologies in SC hospitals and primary care clinics.

**SCTA Strategy:** The establishment of an open-access telehealth network in South Carolina is achieved through the use of industry standard video protocols H.323, SIP and H.264. Using standardized protocols and equipment ensures compatibility across all statewide telehealth network infrastructure components and participating sites.

### **SCTA Open-Access Network Technical Standards:**

All participating Telehealth endpoints and infrastructure should utilize standardized videoconferencing protocols. Telehealth endpoints may include both hardware and or software codecs. Requiring the use of industry standards insures compatibility with existing SCTA Telehealth infrastructure investments and guarantees consistent communications and call capability between all participating SC healthcare sites.

### **Video Conferencing Endpoints Defined:**

**Hardware Codecs:** A device that encodes a data stream or signal for transmission, storage or encryption, or decodes it for playback. The term codec is also used as a generic name for a videoconferencing unit.

**Software Codecs:** A software application designed to perform the same functions as hardware codecs while utilizing processor and video resources on a PC, Mac, tablet or other portable / mobile device.

### **Telehealth Infrastructure Defined:**

**Telehealth infrastructure:** The servers and or application specific appliances that facilitate both multipoint conferencing and interoperability with other standards-based video endpoints including SIP, H.323 and H.264. Interoperability includes the transcoding of media as well as the interworking of signaling to facilitate point-to-point and multipoint calling. Categories of video conferencing infrastructure include, but are not limited to: video routers, gateways, registration points, multipoint conference units (MCU), call managers, telepresence servers, network management and provisioning servers.

**SCTA Network Protocol Standards:** South Carolina Telehealth Alliance partners will utilize equipment that is compatible with International Telecommunications Union (ITU) defined standards for video conferencing. These standard based protocols are defined as H.323, Session Initiation Protocol (SIP), H.264, and its extensions.

## Appendix A: SCTA Technical Standards

### Protocols definition:

**H.323** is a protocol standard for multimedia communications. H.323 was designed to support real-time transfer of audio and video data IP networks. The standard involves several different protocols covering specific aspects of Internet telephony. The International Telecommunication Union (ITU-T) maintains H.323 and these related standards. Hardware based codecs almost exclusively use the H.323 protocol.

**Session Initiation Protocol (SIP)** is a signaling communication protocol widely used for controlling multimedia communication settings such as voice and video calls over (IP) networks. Software based codecs use the SIP protocol.

**H.264** The intent of the H.264/AVC project was to create a standard capable of providing good video quality at substantially lower bit rates than previous standards. Products that utilize the H.264 standard should be utilized in areas where low bandwidth prevents telehealth sessions from being successful using high definition h.323 or SIP protocols.

**Video Resolution and Frame Rates:** Whenever possible, telehealth endpoints and telehealth infrastructure should be configured to support high definition conferencing. If bandwidth problems prevent the use of high definition resolutions or frame rates, the equipment should be configured to use the available bandwidth. The SCTA default minimum settings for high definition resolution and frame rates are recommended at 720p at 30 frames per second.

### Network and Endpoint Security:

SCTA partners must address network and endpoint security with the use of advanced encryption standards. Telehealth sessions should be configured to use a minimum of AES 128 bit encryption session security standards. Each software codec must have assigned usernames and passwords that prevent unauthorized use of the systems. In addition to encryption and user account security, any device that participates in SCTA consults must register to secure video conferencing gatekeepers. Gatekeepers capture and provide audit information for each telemedicine encounter. Audit trails and call records must be accessible to insure SCTA partners meet all Family Education Rights and Privacy Act (FERPA) , Healthcare Insurance Portability and Accounting Act (HIPAA) , Payment Card Industry (PCI), Protected Healthcare Information (PHI) and other state and federal government regulatory requirements.

### Telehealth Providers and Referring Site Minimum Technical Standards:

South Carolina hospitals and remote sites participating in SCTA telehealth programs shall be responsible for ensuring that all telehealth endpoints have access to wired and/or wireless Ethernet connectivity and unfiltered, publicly routable Internet or PSPN access. In addition to Internet or PSPN network access, the following requirements must be satisfied for successful connectivity and continuity in telehealth programs and services.

## Appendix A: SCTA Technical Standards

- a. IP Addressing – Telehealth equipment and communications requires the use of Internet Protocol (IP) addressing, It is the responsibility of the hospital or remote site to provide publicly routable or network address translated IP addresses for use with Telehealth equipment and communications
- b. In addition to IP addressing, subnet mask and gateway information, DNS services must be provided for successful consults.
- c. Wired connectivity - 100mb full duplex switch port or better is required.
- d. Wireless connectivity –wireless can be utilized if the minimum signal strength in all areas supporting wireless telehealth equipment is -65DB or better on non interfering 802.11n or 802.11ac access points.
- e. Internet or PSPN bandwidth – Participating sites should provide bandwidth at a rate 2 megabits per second, per simultaneous telehealth call and between all call participants.
- f. Access to enterprise and or PSPN Telehealth infrastructure - Telehealth encounters between sites will utilize infrastructure and services provided by the participating enterprise and or the Palmetto State Providers Network (PSPN). The infrastructure includes Gatekeepers, Gateways, Multi point conference units (bridges), Call Managers, Recording devices, Portals and Telepresence Management Servers.
- g. Firewall rules exceptions - Telehealth consults require real time two way communications for audio, video and content sharing. Medical device peripherals used in telehealth encounters provide remote access to examination camera images and stethoscope audio. Firewall rules exceptions are provided to enable these patient care devices and allow for bidirectional communications. The following ports and protocols are currently used in creating firewall exceptions

### Firewall exceptions and port rules:

#### H.323 and Assent ports needed through Firewall

Function	Port/Range	Type	Direction
Gatekeeper Discovery (RAS)	1719	UDP	↔
Q.931 Call Setup	1720	TCP	↔
H.245 Range	5555 - 6555	TCP	↔
Video, Audio & Data/FECC Range	2326 - 2487	UDP	↔

#### H323 Traversal Assent Ports

Function	Port/Range	Type	Direction
Gatekeeper Discovery (RAS)	1719	UDP	↔
Call Setup/Caps Exchange	2776	TCP	↔
RTP Media	2776	UDP	↔
RTCP Media	2777	UDP	↔

## Appendix A: SCTA Technical Standards

### Firewall Ports for H.323 and SIP Video Communications

Some manufacturers may use alternate ports for video communications. Check with your equipment and manufacturers recommendations for specific port and protocol information.

To register with SCTA gatekeepers and place/receive calls, the client side firewall TCP/UDP connections must be opened.

This document discusses the firewall ports that need to be opened for codecs & carts to communicate with SIP clients.

Session Initiation Protocol (SIP). Subscribing, registering, presence querying, call invites is all communicated through SIP. SIP messages are sent using TCP, with or without TLS encryption depending on the provisioned settings.

The default SIP listening ports used are 5060 (unencrypted) and 5061 (encrypted).

All ports below should be bi-directional.

Type	Protocol	Range Start	Destination Port/Range End
DNS	UDP	N/A	53
TURN	UDP	N/A	3478 or 5349/TLS
SIP Signaling	TCP	N/A	5060 or 80
SIP Secure Signaling	TCP	N/A	5061 or 443
RTP – Video	UDP	16384	32767
Provisioning Software Upgrade	TCP	N/A	80/443
Gatekeeper Discovery (RAS)	UDP	N/A	1719
Q.931 Call Setup	TCP	N/A	1720
H.245	TCP	5555	6555
Video, Audio, & Data / FECC	UDP	2326	2487
Call Setup/Caps Exchange	TCP	N/A	2776
RTP Media	UDP	N/A	2776
RTCP Media	UDP	N/A	2777

If registering with PSPN infrastructure, the ports should be opened to the following PSPN hosts:

Vcscluster.pspnsc.org

206.74.79.3 Border controller (VCS)

206.74.79.7 Border Controller (VCS)

206.74.79.12 TMS management server

## Appendix A: SCTA Technical Standards

### Exceptions to the use of SCTA technical standards:

The SCTA technical standards are required to ensure telehealth network and communications continuity, equipment compatibility, network security and call quality. The SCTA recognizes that not every telehealth program or service will operate equipment that conforms to the open-access network technical standards and network protocol standards. Several SCTA telehealth programs and services operate equipment that is part of a larger network of services which do not utilize the communications protocols addressed in the SCTA technical requirements. The SCTA also recognizes that changing technologies will eventually impact all telehealth programs, requiring the need for exceptions to the SCTA technical requirements;

When the need for exceptions exists, it should be noted that the exceptions are to specific sections pertaining to the open-access network and standard network protocols. If proprietary platforms are implemented, there are a number of technical standards in this document that should still be met, particularly with regard to image resolution and security.

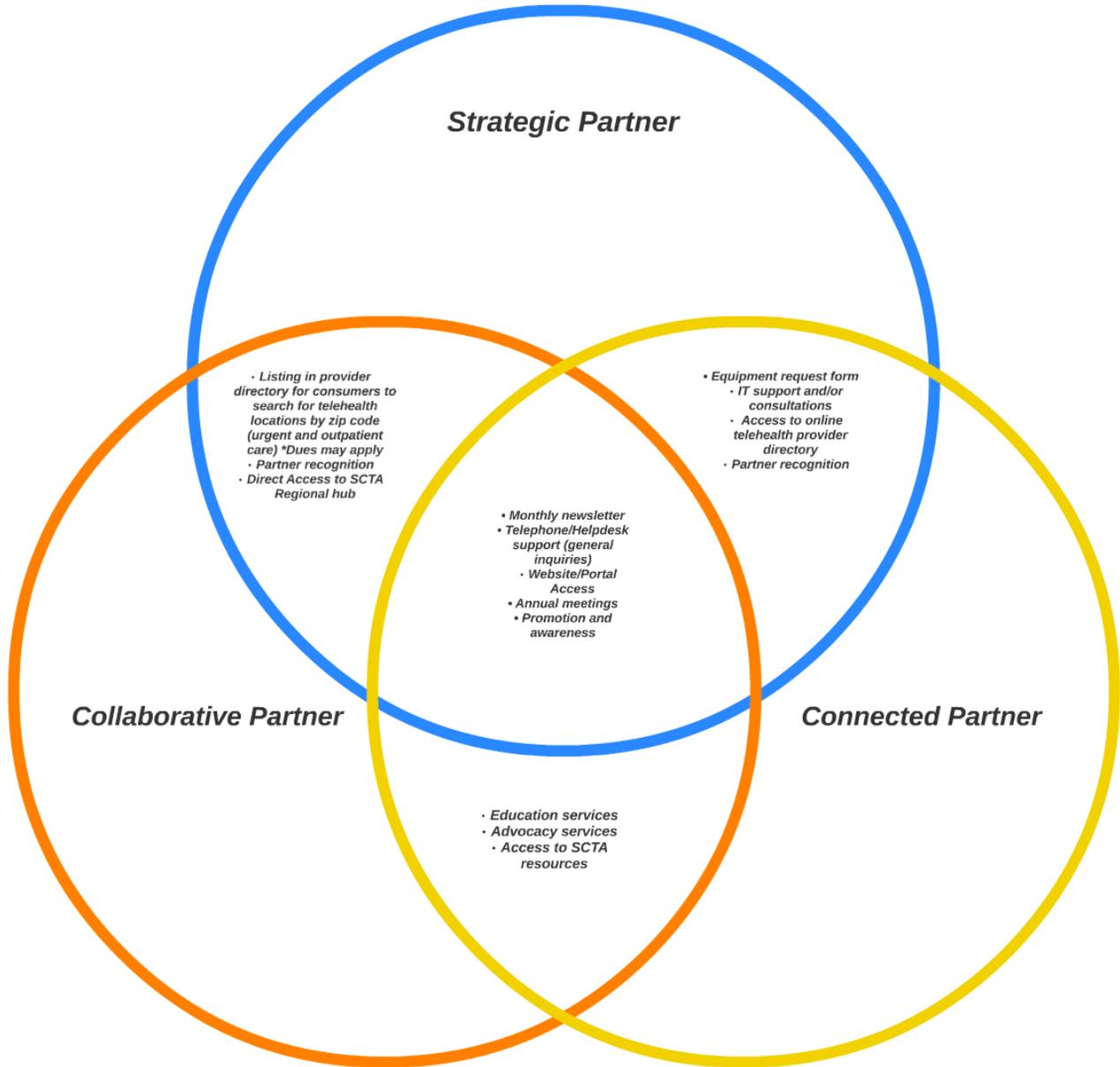
The current known exceptions to the SCTA technical requirements are:

- 1) The MUSC and Roper St. Francis telestroke program and its equipment (i.e. REACH)
- 2) The Palmetto Health and Greenville Health System telestroke program and its equipment (i.e. InTouch)

## Appendix B: SCTA Membership Model (Draft)

PROPOSED LEVEL	DESCRIPTION	RESPONSIBILITIES	BENEFITS
<b>STRATEGIC PARTNER</b>  <b>Regional Hubs:</b> GHS, McLeod, MUSC & PH/USC  <b>Specialty Hubs:</b> AHEC, DMH, PCC	A <b>Strategic Partner</b> is funded by SCTA and contributes to the overall strategic plan	<ul style="list-style-type: none"> <li>• Fiscal and operational management of open-access telehealth network for SC</li> <li>• Clinical service development and delivery</li> <li>• SCTA collaboration convening</li> <li>• Innovation</li> <li>• Clinical and technical support of connected partners</li> </ul>	<ul style="list-style-type: none"> <li>• Equipment request form</li> <li>• IT support and/or consultations, CRM (customer relationship management) software access</li> <li>• Access to online telehealth provider directory</li> <li>• Monthly newsletter</li> <li>• Telehealth research consultation-free to clinicians</li> <li>• Participation in collaborative workgroup and Special Interest Groups (SIGs)</li> <li>• Issue briefs</li> <li>• Annual meetings</li> <li>• SCTA Strategic Plan development</li> </ul>
<b>CONNECTED PARTNER</b>  <b>Examples:</b> Physician Offices, Clinics, FQHCs	A <b>Connected Partner</b> receives telehealth equipment, support or service from one or more strategic partners	<ul style="list-style-type: none"> <li>• Participate in telehealth services</li> <li>• Contribute to outcomes collection at least annually</li> </ul>	<ul style="list-style-type: none"> <li>• Equipment request form</li> <li>• IT support and/or consultations</li> <li>• Access to online telehealth provider directory</li> <li>• Monthly newsletter</li> <li>• Participation in collaborative workgroup and Special Interest Groups (SIGs)</li> <li>• Telephone support (general inquiries)</li> <li>• Listing in provider directory for consumers to search for telehealth locations by zip code (urgent and outpatient care)</li> <li>• Provide outcomes data</li> <li>• Annual meetings</li> <li>• Connected partner award</li> </ul>
<b>COLLABORATIVE PARTNER</b>  <b>Examples:</b> Payers, SCHA, SCMA, SCPHCA, SCBCH	A <b>Collaborative Partner</b> is a non-funded entity whose activities are aligned with the mission of the SCTA	<ul style="list-style-type: none"> <li>• Assist in promotion and awareness of SCTA and its work</li> <li>• Assist in advocacy efforts to expand telehealth services across the state</li> <li>• Vendors (support SCTA's open-access network)</li> </ul>	<ul style="list-style-type: none"> <li>• Listing in provider directory for consumers to search for telehealth locations by zip code (urgent and outpatient care)</li> <li>• <b>*dues may apply</b></li> <li>• Monthly newsletter</li> <li>• Telephone support (general inquiries)</li> <li>• Annual meetings</li> <li>• Promotion and awareness</li> <li>• Collaborative Partner award</li> </ul>

## Appendix B: SCTA Membership Model (Draft)



# Proposed Membership Model

## Appendix B: SCTA Membership Model (Draft)

	Membership level benefits		
	Strategic Partner	Connected Partner	Collaborative Partner
Benefits			
Strategic Plan development	✓		
CRM software access	✓		
Equipment Request Form	✓	✓	
IT Support and/or consultations	✓	✓	
Telehealth research consultation-free to clinicians	✓	✓	
Service development consultation	✓	✓	
Workgroup/SIG participation	✓	✓	
Issue briefs and publications	✓	✓	
Service/IT development funding support	✓	✓	
Promotion and awareness	✓	✓	✓
Monthly newsletter	✓	✓	✓
Annual meeting (possible discounted registration)	✓	✓	✓
Recognition by member level	✓	✓	✓
Telephone/HelpDesk support	✓	✓	✓
Access to online telehealth provider directory	✓	✓	✓
Listing in provider directory for consumers to search telehealth locations by zip code (urgent and outpatient care)	✓	✓	✓

	Immediate benefit
	Future benefit

	Membership responsibilities		
	Strategic Partner	Connected Partner	Collaborative Partner
Responsibilities			
Fiscal and operational management of open-access telehealth network for SC	✓		
Clinical service development and delivery	✓		
SCTA Collaboration convening	✓		
Clinical and technical support of connected partners	✓		
Innovation	✓	✓	
Service delivery	✓	✓	
Promotion and awareness	✓	✓	✓
Advocacy	✓	✓	✓
Education	✓	✓	✓
Vendors	✓	✓	✓



---

SOUTH CAROLINA  
**Telehealth**  
ALLIANCE

An unprecedented collaboration  
that is a model for the nation.

---