South Carolina Telehealth Alliance
2016 - 2nd Quarter Report

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.

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

The South Carolina Telehealth Alliance ("SCTA") is an unprecedented collaboration of academic medical centers, community hospitals and providers, existing telemedicine systems, government leaders and other entities that believe that all South Carolina residents should and can have access to quality health care, while effectively managing the cost of providing care.

In quarter two of CY2016, the SCTA, through collaborations with new and existing partners, has continued to expand telehealth initiatives throughout the state. With new contracts being executed, the SCTA now has agreements to provide state telehealth funding to all of the current SCTA strategic partners in order to continue to collaboratively expand telehealth in South Carolina.

SCTA Strategic Partners:

Greenville Health System ("GHS")

Palmetto Health

Medical University of South Carolina ("MUSC")

Palmetto Care Connections ("PCC")

Department of Mental Health ("DMH")

South Carolina Area Health Education Consortium ("SC AHEC")

South Carolina Educational Television ("SC ETV")

SCTA strategic partners and connected sites have maintained active participation in statewide efforts pursuant to the SCTA Strategic Plan and mission. What follows in this document is a summary of deliverables met for the second quarter of CY2016, SCTA Advisory Council meeting proceedings, statewide telehealth program updates and other past and future SCTA activities. Additional information can be found in the appendices.

Driving Strategies and Tactics

1. **Deploy a coordinated, open-access telehealth network in South Carolina**.
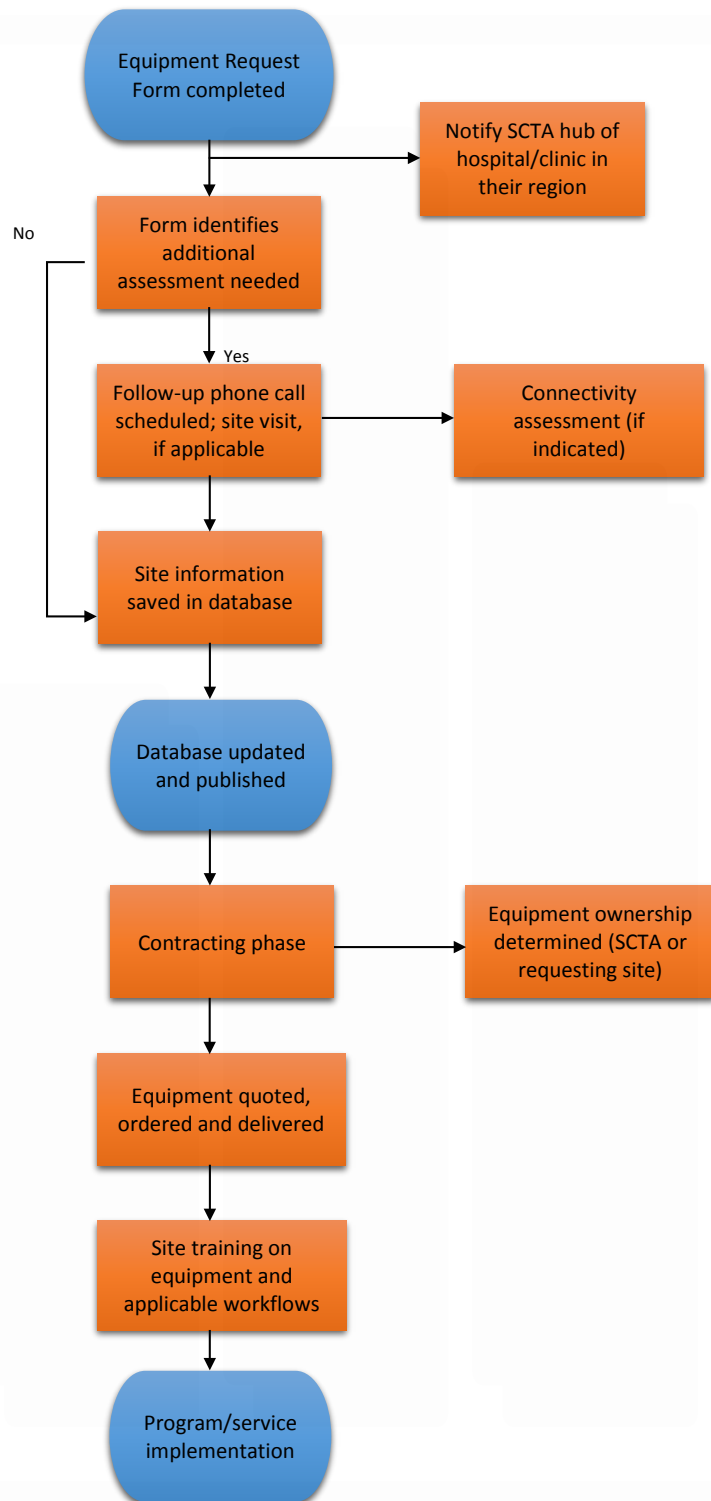
In 2016, any hospital in South Carolina wishing to receive telehealth services will have a mechanism to be equipped to do so.

A primary focus for 2016 was to accelerate the meaningful deployment of telehealth technologies with a focus on hospitals. To this end, SCTA has developed a communication plan to contact and provide continual outreach to hospitals in the state to inform them of the Equipment Request Form process. To date, more than half of the South Carolina hospitals have been reached, whether through parent organizations or the hospitals directly. The remaining hospitals will receive communications regarding access to telehealth technologies over the next quarter. The SCTA Advisory Council acknowledged that the remaining hospitals are likely to include more independent hospitals and will require increased focus.
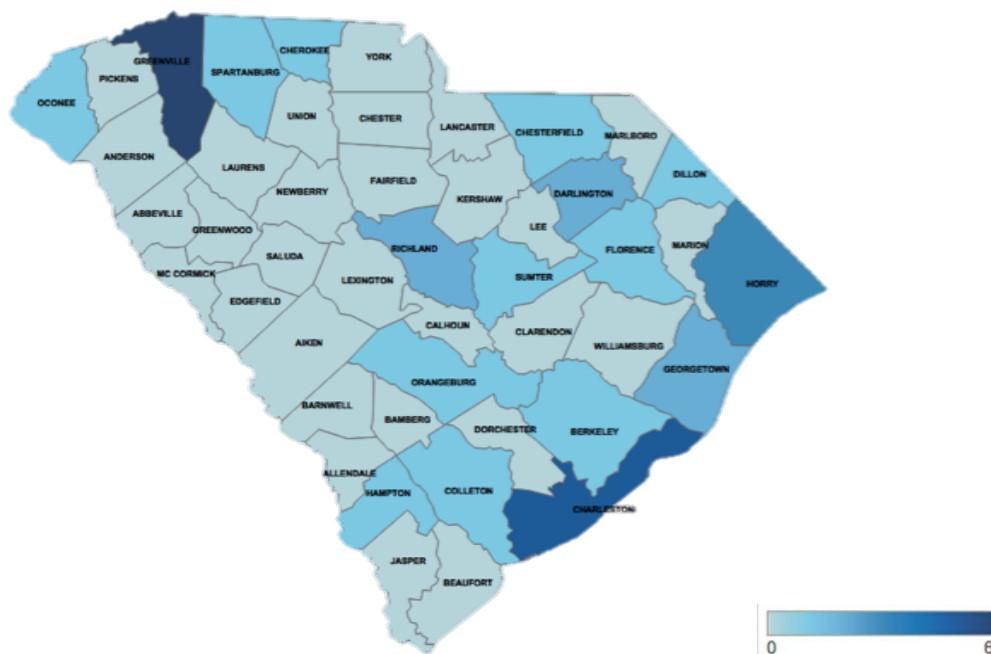

Over half of the hospitals in the state have been introduced to the Equipment Request Form process.

Equipment Request Form Process

```
Equipment Request
Form completed
      │
      ├──────────────────────────────► Notify SCTA hub of
      │                                  hospital/clinic in
      ▼                                  their region
Form identifies
additional         ─── No ──┐
assessment needed          │
      │                    │
     Yes                   │
      ▼                    │
Follow-up phone call       │
scheduled; site visit, ───►│──► Connectivity
if applicable              │     assessment (if
      │                    │     indicated)
      ▼                    │
Site information ◄─────────┘
saved in database
      │
      ▼
Database updated
and published
      │
      ▼
Contracting phase ────────► Equipment ownership
      │                      determined (SCTA or
      ▼                      requesting site)
Equipment quoted,
ordered and delivered
      │
      ▼
Site training on
equipment and
applicable workflows
      │
      ▼
Program/service
implementation
```

Driving Strategies and Tactics

PCC has met with McLeod Health, Palmetto Health, and Greenville Health System representatives to explore the feasibility and value of creating a single repository for physician credentialing. PCC has proposed a preliminary model (illustrated below) to start those initial organizations.
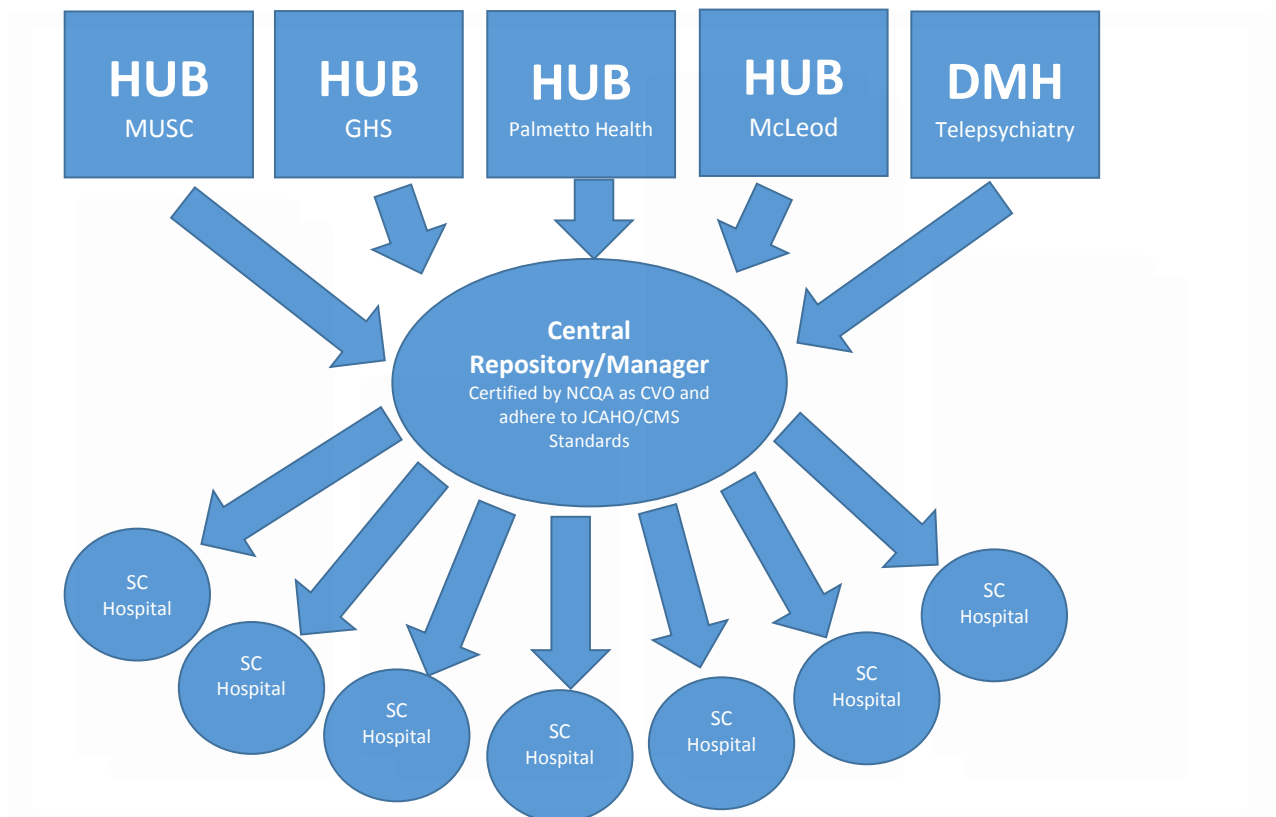
1. *Assumed that most telehealth providers will be housed at telehealth hubs*
2. *Other telehealth hub providers may emerge outside of the initial major hubs*
3. *All telehealth provider information sent into central repository*
4. *Per NCQA standards, it will take approximately 6 months for PCC (or other neutral organization) to become certified as a centralized verification organization ("CVO"). At that point, the CVO can provide primary source verification services to any hospital in SC, per contract.*
5. *Data reports will be available to hub providers and SC hospitals*

Driving Strategies and Tactics

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

In 2016, telehealth service development will be driven to the tailored needs of a rural region.

As a result of PCC's needs assessment survey conducted in 2015, ten services have been identified as priority for populations in the four-county region of the state that includes Hampton, Barnwell, Allendale and Bamberg. MUSC is currently conducting an internal assessment of specialty care physician leaders to implement at least one additional service which responds to the needs of this region.

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

In 2016, the telehealth support to South Carolina hospitals will be accelerated by both increasing the number of services available and the number institutions providing services regionally.
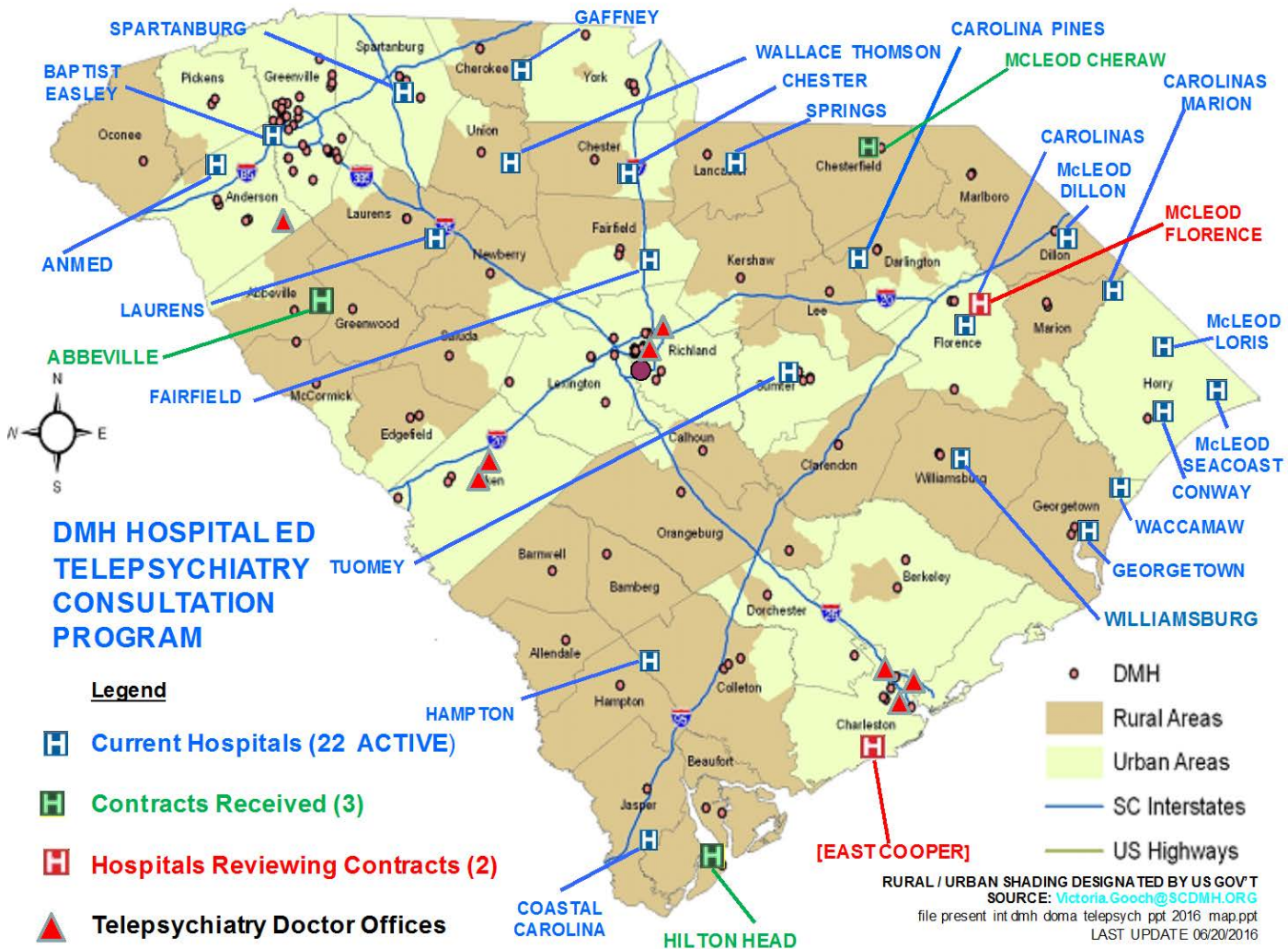
June 2016 Deliverable:
Regional support hub personnel training completed and regular coordination meetings established.

Telehealth leadership at Palmetto Health, Greenville Health System, and MUSC maintain regularly scheduled conference calls and other meetings to share lessons learned and available resources and discuss operational efforts within the different regions. These calls provide a venue to share information and better communicate issues, concerns, and needs across the state. New telehealth leadership at McLeod Health has been contacted about joining the meetings with the other regional hubs.

Palmetto Health and Greenville Health System have been conducting internal telehealth strategic planning in preparation for reporting their organization's roadmaps for regional telehealth growth.

SOUTH CAROLINA
Telehealth
ALLIANCE

The Department of Mental Health has been contracted to expand their successful statewide telepsychiatry network and provide financial subsidies for small, rural hospitals. See **Appendix A** for a comprehensive update on the DMH telepsychiatry program.

DMH HOSPITAL ED TELEPSYCHIATRY CONSULTATION PROGRAM

Legend

H Current Hospitals (22 ACTIVE)

H Contracts Received (3)

H Hospitals Reviewing Contracts (2)

▲ Telepsychiatry Doctor Offices

o DMH

▨ Rural Areas

▨ Urban Areas

— SC Interstates

— US Highways

RURAL / URBAN SHADING DESIGNATED BY US GOV'T
SOURCE: Victoria.Gooch@SCDMH.ORG
file present int dmh doma telepsych ppt 2016 map.ppt
LAST UPDATE 06/20/2016

Driving Strategies and Tactics

> **June 2016 Deliverable:**
> An expansion plan to increase telehealth participation in low-utilization counties for primary care clinics will be underway.

Nutrition counseling has shown to be a telehealth service that can be easily adopted in primary care settings. The service addresses a high-needs priority and serves to introduce a practice to the workflows of a telehealth encounter. As a result, nutrition counseling is the most utilized service in the Virtual Tele-Consultation (VTC) program. In addition, the SC Department of Health and Human Services has identified the need to extend nutritional services, but unfortunately the geographical distribution of registered dieticians does not promote equitable access to care throughout our state. Expanding nutritional counseling through telehealth could increase the telehealth adoption rate while synergistically providing momentum to SC DHHS's current efforts on obesity-management.

### *Objectives for nutritional counseling through telehealth expansion:*

- Identify target counties who underutilize telehealth and have high needs for nutrition counseling
- Disseminate nutrition counseling via telehealth to the target counties with standards-based video technologies and support from SCTA partners
- Identify, enroll and equip registered dieticians in the state who may wish to participate by staffing tele-nutrition visits
- Track utilization and outcomes as directed by DHHS
- Work with insurers to initiate professional service billing

Target County Identification Criteria:

- High level of obesity
- Limited availability of in-county registered dieticians
- Low utilization of telehealth

County choice will also be influenced by regional availability of participating SCTA partners and subject to coordination with similar DHHS and DHEC efforts.

Billed Nutrition Consultations
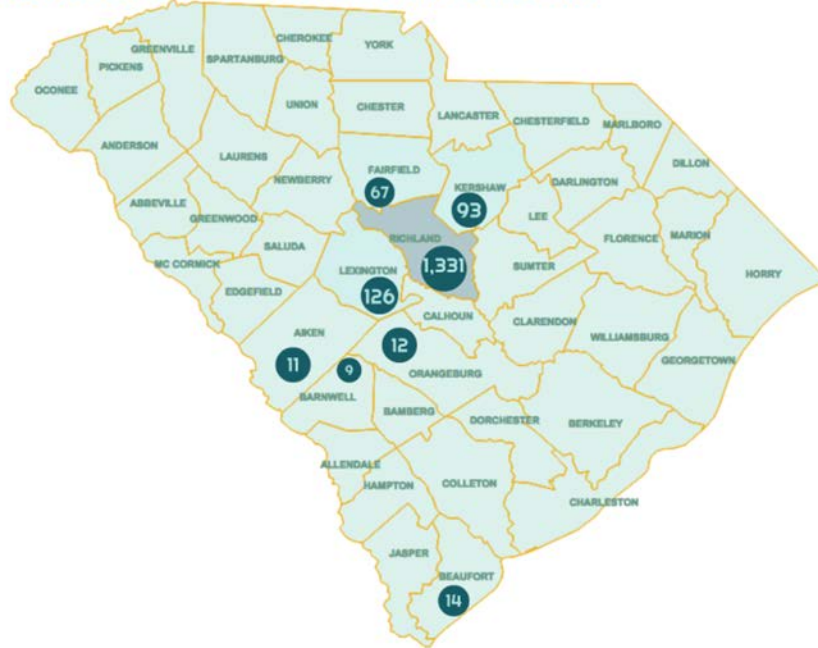
Billed Nutrition Consultations including Telehealth

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

In 2016, the Alliance will begin preparing the workforce of the future by integrating telehealth training into health provider education programs across the state.

June 2016 Deliverable:
A program development and statewide implementation plan for telehealth training for the healthcare workforce will be established.

PCC currently offers Star Telehealth Certifications on their website and provides the 4-hour hands-on technology component for each course offering. In addition, PCC and AHEC have worked to identify best practices nationally regarding telehealth education and trainings in order to create tailored telehealth courses for South Carolina providers. The following topic areas have been proposed as SCTA modules:

- Equipment
    - Hardware
    - Software
    - Peripherals

- Processes
    - Billing
    - Scheduling
    - Referrals and Follow-up

- Presenting
    - Near Site
    - Far Site
    - Program Specific (e.g. telestroke, school-based, mental health)

- Overview/Implementation
    - Telehealth 101
    - Efficacy
    - Population Health

Driving Strategies and Tactics

As part of the Education and Communications Workgroup, PCC and AHEC are already looking to meet September's deliverable by working with SCTA members to identify training areas that meets the needs of healthcare professionals in the state. Additionally, the workgroup will begin prioritizing topic areas, identifying complementary programs/modules, identifying content experts, and expanding technology to support education and training efforts.

Other next steps include the following:

Development

- Align Prioritized Topics with Content Experts
- Determine Education Technology
- Finalize Scripts
- Record Modules
- Finalize Video Edits
- Brand for SCTA

Dissemination

- Host on AHEC LMS
- Pilot with SCTA Membership Subgroup
- Release to SCTA Members
- Release to South Carolina Providers
- Revise and Update
- Address New Training Needs

PCC continues to distribute a monthly e-newsletter and host webinars on telehealth topics. The 5th Annual Telehealth Summit of SC will be held on October 6th-7th at the Columbia Metropolitan Convention Center in Columbia, SC. The SC Telehealth Alliance planning retreat will precede the Summit taking place on October 5, 2016. Details about the retreat are forthcoming.

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

In 2016, active healthcare stakeholder involvement in the Alliance will increase through the establishment of regional and task-focused workgroups.

June 2016 Deliverable:
Working groups convened and first report to SCTA Advisory Council

New and existing workgroups have convened meetings to meet deadlines and deliverables set forth in the 2016 SCTA Strategic Plan. Representatives from the SCTA Advisory Council and SCTA at-large comprise the workgroups listed below. These workgroups have met to discuss and prepare plans of action to complete tasks for the calendar year:

- Needs Assessment Committee (see strategy 2)
- Education and Communications Committee (see strategy 4)
- IT Workgroup (update below)
- Credentialing Workgroup (see strategy 1)
- Content Advisory Team (see strategy 6)
- Reimbursement and Cost Savings Task Force (see **Appendix B**)

The SCTA IT Workgroup has demonstrated the following "major wins" through increased interorganizational communications and collaboration:

- DMH and MUSC IT staff collaborated to conduct test calls between systems and successfully demonstrate an open-access program.

- GHS and MUSC enabled a secure Vidyo interportal communication link between their robust IT infrastructures.

Driving Strategies and Tactics

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

In 2016, the Alliance will work directly with insurers to develop sustainable reimbursement models which incentivize the use of effective telehealth in South Carolina.

June 2016 Deliverable:
Marketing material development and dissemination plan finalized

SC ETV has led an initiative to develop original content for an education and awareness telehealth campaign for South Carolina.

The Content Advisory Team has representation from the following organizations:
- SC Department of Mental Health
- SC Hospital Association
- SC ETV
- Greenville Health System
- Palmetto Health
- Medical University of South Carolina
- Palmetto Care Connections

The SC Telehealth Alliance Content Advisory Team has developed a means of determining a baseline telehealth knowledge level among South Carolinians to best direct and inform marketing, education and awareness assets going forward. The team pushed out the "Telehealth in South Carolina" survey to measure how much citizens of South Carolina know about telehealth and telemedicine. The survey can be found by following this link: https://www.surveymonkey.com/r/sctelehealth

SC ETV will be using the "MyTelehealth" moniker to personalize the SCTA telehealth campaign for citizens around the state. All radio, video, online and written materials will be shared using "MyTelehealth" as an outro statement. Assets created to increase awareness, which include radio, video and written copy, will be made available to all regional hub providers and strategic partners for future redistribution in their respective regions of the state.

DMH TELEPSYCHIATRY CONSULTATION PROGRAM

- Provides Statewide Psychiatric Consultation Services
- 7 Psychiatrists' Offices strategically located statewide (01/2016)
- 13 new offices opened in Charleston for hospital and community telepsychiatry
    - 11 ED Psychiatrists actively consulting (7.3 FTE) and 1 conducting Peer Review
- Statewide EHR developed and implemented for Telepsychiatry Consultation Program
- 25 Hospitals under contract with 22 currently participating, 3 being equipped now
    - 2 additional Hospitals reviewing contracts for potential participation
- Over 28,902 Consultations Since Inception in March, 2009
- 53% Reduction in Emergency Department (ED) Lengths of Stay (LOS), per USC School of Medicine
- CY 2015: 34% of Patients Recommended for Release (Discharge) Same Day of Consultation
- 200% Increase in Aftercare Referral Services Participation at 30/60/90 day marks, per USC SoM
- Impact on Patients… (03/2015)
    - 100% of ED Staff state Telepsychiatry is an efficient use of Patient's time
    - 92% state Patients appear comfortable during consultations
- Efficient Use of Hospital Resources… (03/2015)
    - 70% of Hospital Administrators state the program is an efficient use of hospital funds
    - 80% would recommend the program to other hospitals
    - 60% would be interested in additional uses of the platform for other medical specialties
- Program Spawned 2 NIMH R01 Research Grants Measuring Statewide Financial Impact
- RO1 grant (led by Dr. Meera Narasimhan, USC School of Medicine) shows substantial savings: 30 day overall telepsychiatry costs (ED + inpatient + follow-up) were significantly lower for the Telepsychiatry group; $5,172 Telepsychiatry vs. Control cost of $8,178 ($3,006) per episode of care.
- 5 State/Regional/National Awards Since Inception (March/2009)
- July 2012: Shared Savings Plan Initiated with All Participating Hospitals
- Sustainability Success: TDE funded 100% in FY 2008/9… and 7.94% for 2015
- January 2013: USC School of Medicine (SoM) General Psychiatry Residents Began required Telepsychiatry Consultation Rotations
- January 2013: Raleigh Presentation to NC Legislative Committee on Health Issues
- Program was Catalyst for Utilizing PSPN (Palmetto State Providers Network - a Fiber Optic Medical Network) and the SC ORS (Office of Research & Statistics) SCHIEx (SC Health Information Exchange) Database
- Hospitals Electronically Connected to Allow Consultations for Other Medical Specialties in Addition to Mental Health Consultations
- At TDE's request, the program contributed expertise to 4 NC Telepsychiatry (start-up) programs
- 9 Hospitals agreed to permit the real-time, clinically-supervised use of General Psychiatry Residents for ED Telepsychiatry (04/2014) – 9 hospitals continued agreement 05/2015
- Consultation Data shared with more than 26 other State/National Organizations
- *DMH currently providing 450 consultations per month between MH centers and clinics*
- *DMH currently providing additional 450 consultations per month between MH centers*

SCTA Reimbursement Policy Retreat

May 6, 2016 at Palmetto Health Baptist Parkridge

Facilitated by: Rena Brewer, CEO for the Global Partnership for TeleHealth (GPT)
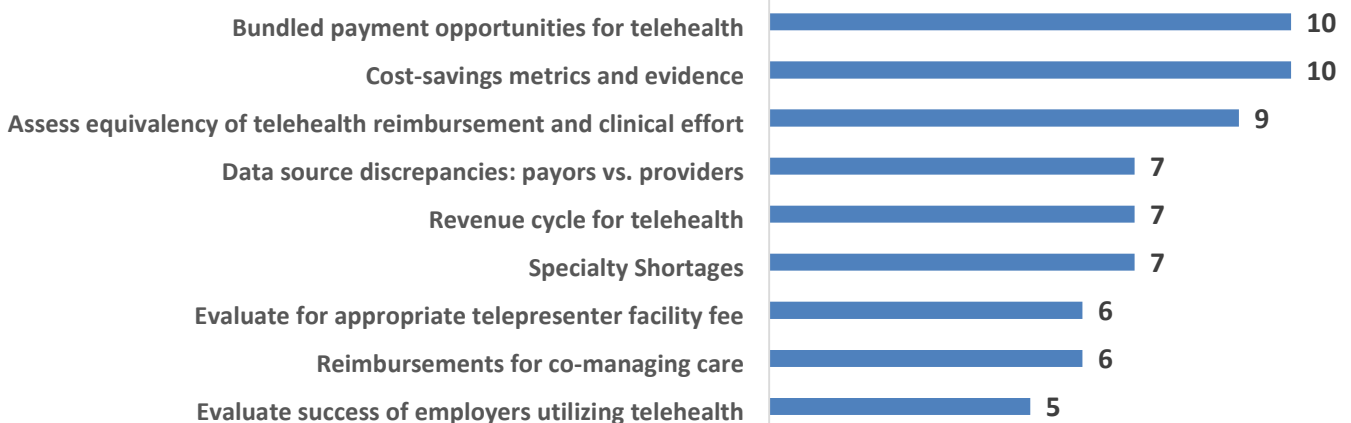
Organizations represented:

- Blue Cross Blue Shield of South Carolina
- SC Department of Health and Human Services
- Select Health (MCO)
- Palmetto Care Connections
- Medical University of South Carolina
- South Carolina Telehealth Alliance
- Greenville Health System
- Palmetto Health – USC Medical Group
- McLeod Health
- Georgia Partnership for Telehealth
- South Carolina Hospital Association

Presenters:

- Arron Lambert, MPH, MBA
  Director, Medicaid State Operations
  Amerigroup Georgia

- Lisa Wright, MD
  Blue Cross Blue Shield of Alabama
  and
  Stephani Tyler, Medical Policy Unit Manager
  Blue Cross Blue Shield of Alabama

- Michael Smith, MA, MPA
  Program Director, Center for Strategic Public Health Preparedness
  Florida State University – College of Medicine

Payor Task Force: Issue prioritization

Issue	Score
Bundled payment opportunities for telehealth	10
Cost-savings metrics and evidence	10
Assess equivalency of telehealth reimbursement and clinical effort	9
Data source discrepancies: payors vs. providers	7
Revenue cycle for telehealth	7
Specialty Shortages	7
Evaluate for appropriate telepresenter facility fee	6
Reimbursements for co-managing care	6
Evaluate success of employers utilizing telehealth	5

The Center for Telehealth began operations in November 2013. Below is an illustration of the allocation of funds as of July 1, 2016.

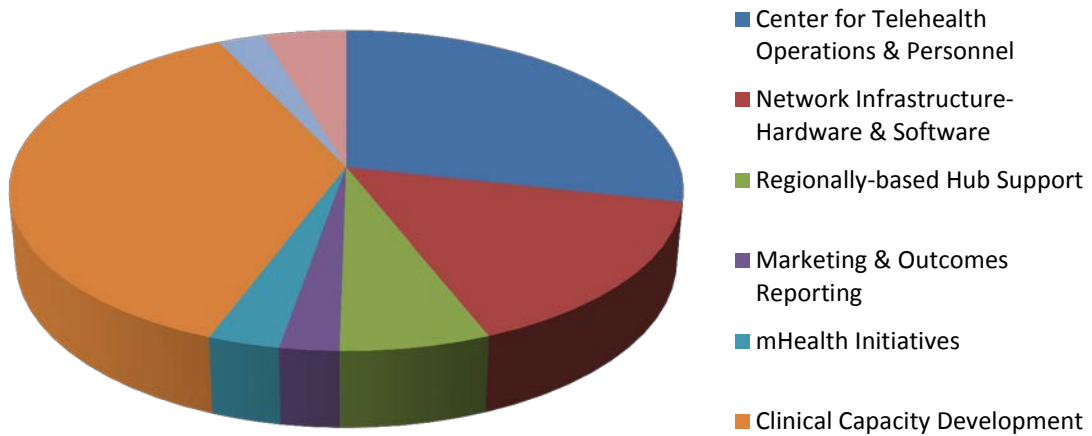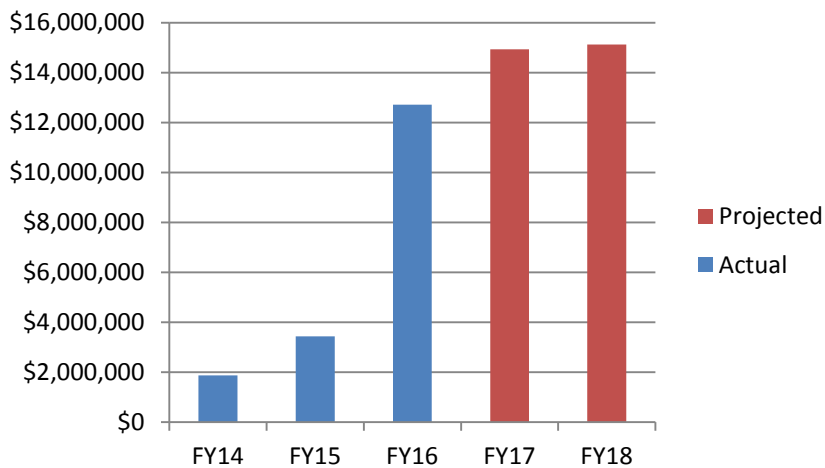Figure 1. Allocation of Funds

Legend:
- Center for Telehealth Operations & Personnel
- Network Infrastructure- Hardware & Software
- Regionally-based Hub Support
- Marketing & Outcomes Reporting
- mHealth Initiatives
- Clinical Capacity Development

Figure 2. Actual Expenditures and Projected Budget

Legend:
- Projected
- Actual

Telehealth Program Updates
Quarter 2

Across the state, the number of patient visits conducted by telehealth continues to grow. During the second quarter of 2016, South Carolina providers conducted over 4500 telehealth visits. Highlights of telehealth program expansion, development, and dissemination of knowledge are described below.

Table 1: New Telehealth Sites (March-June 2016)

Site	Program
Cheraw	AHEC
McLeod Health	AHEC
Volunteers in Medicine, Hilton Head	AHEC
Beaufort Jasper Hampton Comprehensive Health Services, Chelsea	Maternal Fetal Telemedicine
Beaufort Memorial Ob/Gyn	Maternal Fetal Telemedicine
Riverside Ob/GYN	Maternal Fetal Telemedicine
Winyah Women's Center, Georgetown	Maternal Fetal Telemedicine
EB Ellington Elementary, Ravenel	School-based Telehealth
James Simons Elementary, Charleston	School-based Telehealth
Mary Ford Elementary, North Charleston	School-based Telehealth
Minnie Hughes Elementary, Hollywood	School-based Telehealth
Carolina Pines (implementation phase)	Tele-ICU
Kershaw Health, Camden	Tele-ICU
Springs Memorial Hospital, Lancaster (implementation phase)	Tele-ICU
Self Regional Healthcare, Greenwood (implementation phase)	Tele-ICU
Hampton Regional	Tele-Neurology
McLeod Health Cheraw	Tele-Stroke
Hampton Regional	Tele-Stroke

Table 2: New Telehealth Services (March-June 2016)

Service	Program
Affiliates Education Program	AHEC
Community Outreach	VTC
Neonatology	Inpatient and Emergency Telemedicine
Pediatric Development Rapid Triage Service	VTC
Prenatal Opioid Counseling	Maternal Fetal Telemedicine
Reproductive Infectious Disease	Maternal Fetal Telemedicine

Area Health Education Centers (AHEC) Office of Telehealth Education

The first South Carolina Population Health Summit was held on May 20, 2016 using the SCHOOLS network. The Summit brought together grassroots community leaders, along with people who run organizations that directly impact the health and economic well-being of each community. The participants engaged in conversations about the next steps to improve the health of the populations in South Carolina. Over 170 people attended the full day Summit. Participants were located across five venues: Winthrop University, the Sisters of Charity Foundation and Upstate, Pee Dee and Lowcountry AHECs.

Inpatient & Emergency Telemedicine

The Inpatient and Emergency Telehealth program saw a significant increase in the utilization of telemedicine during this quarter. In telehealth sites, over half of consultations are now conducted via telemedicine rather than via telephone. This reflects a change over the last 6 months from 31.58% to over 57.14% of consultations occurring via telemedicine.

The program is also working to expand access to new services and improve existing sites. New carts were added to three hospitals and the following programs are in development: Ortho-Trauma, Adult & Pediatric Palliative Care, Adult & Pediatric Rheumatology, Adult & Pediatric Ear, Nose & Throat, Pulmonary & Critical Care Triage, Pediatric Acute Asthma Management (research pilot), Pediatric Sports Medicine, Nephrology, Sickle Cell, and Infectious Disease.

Maternal Fetal Telemedicine

Epic Video Visits are now live for a low risk prenatal care study led by Dr. Donna Johnson. Enrollment began for the study earlier this month and they plan to enroll 200 patients. The intervention group will receive a number of prenatal care visits in the home, using an electronic blood pressure cuff, scale and fetal doppler. Participants will access these visits and enter their measurements through the MyChart app. The goal of this study is to demonstrate that prenatal care can be reliably delivered to low risk patients through telehealth in the home while maintaining patient and provider satisfaction as well as quality and safety of care.

Tele-ICU Program

The Tele-ICU program experienced substantial growth in the number of sites between March and June 2016. Conservatively, the addition of Kershaw Health and three additional locations (Table 1) will triple the number of patients monitored via Tele-ICU. The ICU Innovations team continues to provide interprofessional quality improvement education and expects the number of critical care outreach education opportunities to triple. To facilitate the significant program growth, the Associate Medical Director for Tele-ICU joined the team this quarter.

School-based Telehealth Program

The school-based telehealth program advocated for telehealth on the local and national level during the second quarter. Program leaders met with legislators to discuss HR2948 The Medicare Telehealth Parity Act of 2015 and HR 4662 the School-Based Asthma Management Program Act. The school-based health team participated in advocacy day at the School-Based Health Alliance convention to support Hallways to Health Act (S.2590/H.R. 4621), legislation that would provide federal support for high-quality comprehensive health care and mental health services to students at school-based health centers across the country.

Telehealth Resilience and Recovery Program

Patients who are hospitalized for traumatic physical injuries are at high risk to develop posttraumatic stress disorder (PTSD), depression, and require follow-up care to facilitate mental health recovery. The TRRP model of care for patients affected by traumatic injury consists of a five-step process: (1) identification of patients with traumatic injury at high risk for development of posttraumatic stress disorder (PTSD) or depression; (2) in-hospital education and enrollment in a 30-day mental health screening service; (3) 30-day mental health telephone screening; (4) comprehensive mental health assessment; and (5) delivery of best-practice treatment for PTSD or depression, or referral to address other mental health needs.

To date, 80% of screened TRRP patients prefer home-based telehealth vs. face-to-face treatment. Nearly half of our home-based telehealth patients have their own technology to support telehealth visits. The other half needed technology through our clinic to support home-based telehealth visits. In most cases, we have met this need by mailing them iPads, funded by MUSC Center for Telehealth. This equates to a projection of over 60 TRRP telehealth cases for our first year. We estimate completing over 200 mental health treatment sessions with TRRP patients, with over 160 of these visits being completed via telehealth technology.

Virtual Teleconsultation (VTC) Program

The program continues to experience growth in the number of telehealth consultations. The VTC program conducted 232 patient consults (March-June 2016) compared to 124 for the prior quarter. The VTC program found conducting visits via telemedicine saved patients from driving 34,720 miles this quarter.

The VTC program now serves 44 primary care practices and 8 specialty practices in 14 South Carolina counties. Additional practices are in contractual negotiation and/or implementation stage for possible participation. This continued growth will allow more of South Carolina's population to receive collaborative health care.

An advancement for the program is the inclusion of all patient consults conducted through the VTC program into the medical center's electronic patient medical record database – EPIC

Telehealth Grants

Davidson, T. (2016). Developing resources for families with children under the age of 11 who experience serious injury. Internal pilot grant from MUSC College of Nursing

Lesher, A. (PI). Consultant, DuBose-Morris, R. (2016). Addressing Childhood Burn Injury in South Carolina by Improving Access to Care and Expanding Injury Prevention Services Through a State-Wide Telehealth Network. Sponsored by: SC Blue Cross and Blue Shield Foundation. $200,000 over 2 years (2016-2018)

Telehealth Publications:

Acierno, R., Gros, D.F., Ruggiero, K.J., Hernandez-Tejada, B.M.A, Knapp, R.G., Lejuez, C.W., Muzzy, W., Frueh, C.B., Egede, L.E., & Tuerk, P.W. (2016). Behavioral activation and therapeutic exposure for posttraumatic stress disorder: A noninferiority trial of treatment delivered in person versus home-based telehealth. *Depression and Anxiety,* 5(1): 415-423.

Gilmore, A.K., Davis, M.T., Grubaugh, A., Resnick, H., Birks, A., Denier, C., Muzzy, W., Tuerk, P., & Acierno, R. (2016). Do you expect me to receive PTSD care in a setting where most of the other patients remind me of the perpetrator? Home-based telemedicine to address barriers to care unique to military sexual trauma and veterans affairs hospitals. *Contemporary Clinical Trials,* 48(May), 59-64.

Gregoski, M.J., Newton, J., Ling, C.G., Blaylock, K., Smith, S.A.O, Paguntalan, J., & Treiber, F.A. (2016). Effective weight-loss using an e-health delivered physical activity and dietary intervention: A federal credit union pilot study. *Work,* 54(1): 127-134.

Korte, K.J., Allan, N.P., Gros, D.R., Acierno, R. (2016). Differential treatment responses in individuals with subclinical and clinical PTSD. *Journal of Anxiety Disorders,* 38(March): 95-101.

Shane-McWhorter, L., McAdam-Marx, C., Lenert, L., Petersen, M., Woolsey, D., Coursey, J.M., Whittaker, T.C., Hyer, C., LaMarche, D., Carroll, P., & Chuy, L. (2016). Augmenting telemonitoring interventions by targeting patient needs in a primarily Hispanic underserved population. *Diabetes Spectrum,* 29(2): 121-127.

Wangeline, B.C., Szafranski, D.D., & Gos, D.F. (2016). Telehealth technologies in evidence-based psychotherapy. In Computer Assisted and Web-based Innovations in Psychology, Special Education, and Health, 119-140. Waltham, MA: Elsevier Inc.

Welch, B.M., Marshall, E., Qanungo, S., Aziz, A., Laken, M., Lenert, L., & Obeid, J. (2016). Teleconsent: A novel approach to obtain informed consent for research. *Contemporary Clinical Trials Communications,* 3(15): 74-79.

Telehealth Presentations:

Baker-Whitcomb, A.F. (2016). Benefits and barriers to credentialing by proxy. e-poster American Telemedicine Association Conference Minneapolis MN.

Debenham, E., Hannah, J., Holmstedt, C., Turner, N. (2016). Improving trends in door to needle time in a statewide telestroke program. American Telemedicine Association Conference Minneapolis MN.

Debenham, E., Hannah, J., Holmstedt, C., Turner, N. (2016). Improving trends in door to needle time in a statewide telestroke program. Presented to MUSC Telehealth Research

DuBose-Morris, R., Walker, J. & McMenamin, M. (2016). Chronic Disease Management Through Innovative Partnerships in Education and Technology: AHECs as Leaders. To Be Presented at the National AHEC Organization Conference, Washington, DC, June 28, 2016.

DuBose-Morris, R., Brown, J., Westmoreland, A., Patel. S. & McMenamin, A. (2016). Using Telehealth Modalities to Deliver Practice-Based Weight Management Initiatives to Rural Communities. E-Poster Presented at the American Telemedicine Association 2016 Annual Conference, Minneapolis, MN, May 16, 2016.

DuBose-Morris, R., Brown, J., Montgomery, S., & McMenamin, M. (2016). Wellness Connect: Addressing Rural Obesity Management Using Telehealth. Presented at the National Rural Health Association's 39th Annual Rural Health Conference, Minneapolis, MN, May 13, 2016.

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Gwenette, F., & Langston, L. (2016). Growing strong: Issues in child development and behavior for primary care physicians and other providers. Presentation at Tidelands Health, Murrells Inlet, SC

Harvey, J., Cramer, C., Yeager, B., Green, T., McSwain, D.S. (2016). The impact of telemedicine on pediatric critical care triage. Poster presented at the MUSC Pediatric Research Day, Charleston SC.

McSwain, S.D. (2016). Research results: Pediatric programs. Session Moderator at the American Telemedicine Association Conference Minneapolis MN.

McSwain, S.D. (2016). American Association for Respiratory Care National Hill Day

Warr, E., Sterba, K., Goodwin, A.J., Johnson, E., Tassig, T., Kilpatrick, B., Zapka, J. & Ford, D.W. (2016). ICU Innovations: Leveraging University Expertise into Community ICUs via Interprofessional Education. American Thoracic Society Annual Conference San Francisco, California

Withy, K., DuBose-Morris, R., & Shelton, S. (2016). Health Education Innovations: New Distance Methodologies, Improved Care, Satisfaction. Presented at the National Rural Health Association's 39th Annual Rural Health Conference, Minneapolis, MN, May 11, 2016.

Yeager, B. (2016). *Telehealth Practice and HR 2948, The Medicare Telehealth Parity Act* National Webinar: American Association for Respiratory Care – Webinar. March, 2016

Yeager, B. (2016). *The State of Telehealth in South Carolina: Telehealth Practice and Policy Primer.* National Asthma and Allergy Association – National Hill Day Washington, DC

Telehealth Research Supported by the Alliance

Telemedicine Implementation & Evaluation Grant Awardees:

Brotherton, S. & Van Ravenstein, K. (2016). *Using Telemedicine and Activity Trackers to Promote Physical Activity in Low-Income Older Adults.*

Camp, M., & Dwyer, G. (2016). *Reducing the Impact of Behavioral Health Crises: Innovative EMS-Mental Health Center Telehealth Model.*

Henshaw, M., & SanGiovanni, C. (2016). *MUSC Heart Health Telemedicine Pilot.*

Lyons, M., & Schwartz, C. (2016). *Greenwood Genetic Center Telehealth Initiative*

Markowitz, J., & Ransome, E. (2016). *Feasibility of Eosinophilic Esophagitis follow-up care through telemedicine: A pilot study on patient's perspective.*

Posadas Salas, M.A., (2016). *The Role in Enhancing the Care of Patients with Kidney Disease and Kidney Transplant.*

Stewart, R., de Arellano, M., & Poon, J. (2016). *Increasing Access to Developmental and Behavioral Health Care Through Technology.*

Williams, D., & Simpson, A. (2016). *Pediatric Telehealth Acute Asthma Program.*

Medical University Hospital Authority
Telehealth Expenditures and Projected Budget

	FY14	FY15	FY16	Total	*FY17*	*FY18*
Center for Telehealth Operations & Personnel						
Center Personnel	$206,120.33	$714,285.71	$2,144,891.52			
Supplies-Printing-Misc	$9,363.84	$20,648.11	$50,410.34			
Telephone,Cellular, Fax	$2,459.20	$10,926.55	$22,743.34			
Education and Travel	$21,624.30	$90,241.96	$107,597.21			
Facility	$1,600.00	$63,764.80	$190,012.69			
State Strategic Plan Consultant	$91,393.32	$46,747.76				
Training and Delivery Center			$1,105,453.51			
Total	$332,560.99	$946,614.89	$3,621,108.72	$4,762,143.52	*$5,100,000*	*$5,300,000*
Network Infrastructure- Hardware & Software						
Hardware	$66,881.85	$264,070.36	$1,035,564.16			
Software	$152,182.51	$148,723.69	$412,956.66			
Tele-ICU Operations Center	$325,000.00	$19,302.00				
Telestroke Support for Hospitals	$400,788.16	$421,392.11	$522,266.40			
Total	$944,852.52	$853,488.16	$1,970,787.22	$3,769,127.90	*$1,875,000*	*$1,875,000*
Regionally-based Support						
Rural Site Telepresenters		$4,153.00				
Regionally-based Hub Support			$800,000.00			
Community Hospital Support						
Total		$4,153.00	$800,000.00	$804,153.00	*$2,000,000*	*$2,000,000*
Marketing & Outcomes Reporting						
SCTA Campaign		$541,237.27				
Marketing materials			$22,626.40			
SCTA Campaign (SC ETV)			$154,875.00			
Outcomes reporting (personnel)		$15,369.00	$138,682.14			
Total		$556,606.27	$316,183.54	$2,106,606	*$550,000*	*$550,000*
mHealth Initiatives						
Rural Diabetes	$284,304.00	$282,304.00	$282,304.00			
Stroke Reduction/Smoking Cessation	$100,000.00	$100,000.00	$100,000.00			
Total	$384,304.00	$382,304.00	$382,304.00	$1,148,912.00	*$500,000*	*$500,000*
Clinical Capacity Development						
Service Development	$88,120.71	$364,309.86	$2,973,526.82			
Weight Management Initiative	$74,295.00	$84,630.00	$107,000.00			
Innovation and Development		$15,000.00	$155,000.00			
Tele-ICU Support for Hospitals			$1,482,728.82			
Total	$162,415.71	$463,939.86	$4,718,255.64	$5,185,686.21	*$4,100,000*	*$4,100,000*
Rural Site Support						
Palmetto Care Connections	$53,000.00	$215,500.00	$325,000.00			
Total	$53,000.00	$215,500.00	$325,000.00	$593,500	*$350,000*	*$400,000*
Office of Telehealth Education						
SC AHEC		$10,193.00	$581,531.66			
Total		$10,193.00	$581,531.66	$591,724.66	*$400,000*	*$400,000*
TOTAL	**$1,877,133.22**	**$3,432,799.18**	**$12,715.170.78**	**$17,728,037.10**	***$14,925,000***	***$15,125,000***