

# INSTITUTIONAL MENTORSHIP

Telehealth is gaining momentum with a shift towards consumerism and value-based care.

- 17% of all evaluation and management visits will be virtual by 2028.
- 71% of providers are using and value telehealth.
- 77% of patients are willing to conduct a virtual care encounter.
- 37 states have enacted telehealth parity laws.

As a Health Resources and Services Administration (HRSA) designated National Telehealth Center of Excellence, MUSC Health is offering institutional mentorship and expert consultation to assist with the integration of telehealth into your organization's care delivery system.

## Offerings Include:

- Strategic plan development
- Infrastructure and service portfolio gap analysis
- Telehealth partnership evaluation
- Best-practice framework for partnerships
- Step-by-step partnership implementation plan

**Sources:** HIMSS Analytics, 2017; Advisory Board, 2017; Sg2 Analysis, 2018.

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# VIRTUAL URGENT CARE

Virtual Urgent Care is an online service that provides rapid diagnosis and treatment without the need for patients to visit an urgent care center or emergency room for low acuity conditions. The platform offers easy-to-use asynchronous (adaptive interview) and synchronous (real-time video and phone) capabilities for patients to connect with local providers using their own devices.

## Benefits:

- **White labeling with your organization's branding**
- Standardized solution to treat patients who call about minor, urgent care conditions
- Adult and pediatric services offered
- Availability during evening and weekend hours
- Option for care when same day appointments are not available
- EMR integration available
- **MUSC provider staffing available**

## Patient Diagnoses Include:

- UTI
- Yeast infection
- Flu
- Sinus infection
- Allergies
- Cold sores
- Minor burns
- Skin irritation/rash
- Pink eye

\* Also offer EpiPen refills

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# INFECTIOUS DISEASE CONSULTS, ANTIMICROBIAL STEWARDSHIP & INFECTION CONTROL

The use of telehealth allows MUSC to bring board certified infectious disease physicians and ASP-certified pharmacists to community partners and deliver superior care in the effective management of infectious disease and antimicrobial stewardship.

## Program Benefits:

- **Fewer hospital infections** (C-diff, CAUTI, CLABSI)
- Decrease overuse/misuse of antimicrobials resulting in **decreased pharmacy costs**
- Decreased rate of emerging resistant pathogens
- Improve management of sepsis and ID cases
- **Fewer transfers** for ID case management
- Meet the **Joint Commission's requirements** for ASP

## Offerings Include:

### ID Consultation Services

- Inpatient consultations

### Antimicrobial Stewardship Program

- ASP development, support, and oversight
- Quarterly team meetings
- ASP pharmacist training

### Infection Control (IC) Program

- IC development, support, and oversight
- Ad hoc meetings

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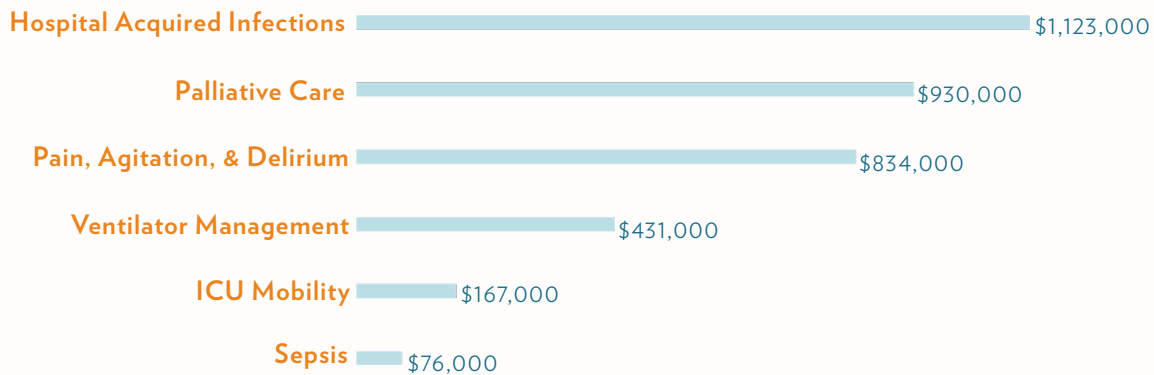
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# ICU INNOVATIONS

MUSC partners with hospitals to offer a cost-effective way to improve patient safety, quality, and project implementation with substantial return on investment through ICU-related outcomes. ICU Innovations is an interprofessional quality improvement program created by MUSC clinical leaders, and offered to ICU teams at community hospitals of all sizes. Our experienced consulting team collaborates with your multidisciplinary ICU team to create successful evidence-based quality improvement programs and implementation that yield quality and financial benefits for your organization.

*Partner hospitals with an average of 750 ICU patients/year can expect to see the following cost savings over a 3-year period:*



## Specific Observable Partner Outcomes:

- Doubled compliance with severe sepsis/septic shock bundle over three-year period
- Paired spontaneous breathing and awakening trials to expedite ventilator liberation
- Improved compliance with delirium scoring, documentation, and treatment
- Adoption of early ICU ambulation program improved patient functional outcomes

*“ICU Innovations has provided the team with an opportunity to adapt our structures and processes of care to effectively implement evidence based best practices in our ICU... Because of the integration of this novel model focused on critical care quality and process improvement, we have achieved an interprofessional synergy that is invaluable and, as a result, have improved ICU outcomes... ICU Innovations’ support and guidance was essential to our ICU achieving Beacon Gold designation from AACN.”*

- ICU Medical Director, Partner Hospital

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# ICU

MUSC, in partnership with Advanced ICU Care (AICU) offers 24/7 continuous patient monitoring at partner hospitals. Care is provided by MUSC Health, AICU intensivists, and critical care nurses. Tele-ICU is a transformational program that uses proactive technology and two-way audiovisual communication to enable intensivists, critical care nurses, and other critical care team specialists to collaborate to provide remote ICU care.

Some hospitals use tele-ICU to gain access to intensivists while others use the service for an additional layer of critical care support. System alerts produced by sophisticated algorithm software inform remote tele-ICU physicians and nurses of important trends in a patient's condition, enabling proactive clinical decision-making and early identification of potential problems.

*Partner hospitals with 15-20 ICU beds have seen the following outcomes over a 5-year period.*

## Historical Performance Trends

62%

Increase in  
ICU Volume

1.4%

Decrease in  
Mortality Rate

9%

Decrease in  
ICU ALOS

37%

Decrease in Avg # Vent  
Days/ICU Pt.

13%

Decrease in  
Hospital ALOS

1.8%

Decrease in Hospital  
Mortality Rate

451%

Increase in Annual # of  
ICU Days Saved

299%

Increase in Annual # of  
Hospital Days Saved

160%

Increase in Annual # of  
Vent Days Saved

**166** potential lives saved in SC in 2017  
based on actual vs. predicted mortality

## Impact on Leapfrog ICU Physician Staffing Score

Hospitals can improve Leapfrog scores by integrating 24/7 tele-ICU coverage. Current South Carolina tele-ICU partners reporting to the Leapfrog hospital survey have earned 'substantial progress' (3) or 'fully meets standard' (4) Leapfrog scores.

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# ACUTE STROKE

Since 2008, MUSC's telestroke program has been partnering with community-based hospitals and medical centers to provide round-the-clock, immediate access to expert vascular neurology consultations for stroke evaluation and treatment. This nationally-recognized service supports your hospital providers with treatment and triage decisions bringing world-class care to your community.

## Program Benefits:

- Quarterly reporting of quality metrics
- Ongoing sharing of **best practices**
- Real-time **on-site education** for providers and staff
- Educational WebEx series
- An annual boot camp education day
- Quarterly newsletters
- Access to neuroscience telehealth education web pages
- Participation in quarterly SC Hospital Association Stroke Committee meetings
- Participation in quarterly SC Telehealth Alliance Stroke Committee meetings

## Telestroke Quality Outcomes:

- Decreased door-to-needle - **average DTN < 60 minutes**
- Average **5 minute or less** consultant response time
- Provide **90-day Modified Rankin** follow-up to all patients who receive tPA
- **Acute Stroke Ready and Primary Stroke Certification support**
- **Decreased patient transfers**
- Increased tPA utilization resulting in higher reimbursement rates

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# CONTINUOUS VIRTUAL MONITORING

MUSC partners with organizations to offer an additional layer of workforce support in the form of 24/7 monitoring of at-risk patients to improve safety and reduce staffing costs. Virtual monitoring technicians (VMTs) remotely collaborate with your organization's interdisciplinary medical team to deliver continuous patient monitoring. MUSC's VMT safety team uses two-way audiovisual communication technology enabled by a mobile cart or fixed monitoring solution to redirect unsafe patient behaviors in real time. Program hardware and software optimize patient monitoring ratios, increasing observability from historical 1:1 sitter ratios to 1 VMT: 8-10 patients.

## Program Benefits:

- **70% to 100% reduction in falls** year over year in units with strong engagement
- Optimized safety through **restraint reduction** and expedited transitions
- Shift-based integration of care and safety planning
- **Cost savings** with workforce optimization
- Manage patients with altered mental status
- Reduce risk of elopement
- **24/7 oversight** of patients
- Improved patient/family satisfaction

*“My patient responded very positively to the CVM service, restraints were removed, and he was discharged to an acute rehab hospital 3-5 days earlier than expected. Overall, CVM allowed him to increase activity and work with therapeutic services more aggressively. It led to a reduced length of stay and improved patient satisfaction.”*

- Medical Director

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# INPATIENT PSYCHIATRY

MUSC offers a highly specialized psychiatric consultative service for medically complex patients using telehealth. By partnering with hospitals, MUSC can provide consultative care on inpatient medical, obstetric, and surgical units. Also known as psychosomatic medicine, this service focuses on the care of patients with comorbid psychiatric and general medical conditions. Consultations address a wide array of conditions and have a dramatic impact on patient quality, safety, and even length of stay. Assessments often allow medical treatment to continue in the local community hospital without the need to transfer to a psychiatric hospital.

## Program Benefits:

- Address complex medical and psychiatric issues
- **Reduced length of stay** by addressing complex psychiatric comorbidities
- Manage substance use disorders, detoxification, and withdrawal
- Diagnose and treat patients with delirium and dementia
- **Safety and risk assessments** for agitated, violent or suicidal patients
- **Medication recommendations**
- Assessments for psychiatric commitment or hospitalization
- Diagnosis and **treatment of chronic mental health conditions** like schizophrenia
- Management of psychiatric conditions that are directly impacting medical treatment (e.g. managing anxiety with a patient weaning off a ventilator)

*“The telehealth inpatient program provides guidance and recommendations to assist in the management of psychiatric patients. This service allows our patients to stay within their community and receive expert specialty care.”*

- Partner Hospital

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# NEUROLOGY

A variety of neurologic conditions require specialized care, which may create significant challenges for hospitals that do not have the population to support a full-time neurologist. MUSC partners with hospitals to provide expert neurological consultations, evaluations and treatment recommendations, in both the emergency department and inpatient setting. MUSC's teleneurology program expands on the well-established telestroke program to meet the need for specialty consults for a wide-range of critical and complex neurologic conditions. We offer scheduled and 24/7 acute coverage or part-time coverage to support local neurologists.

## Program Benefits:

- **Scheduled** same day or **urgent consults 24/7**
- Support for seizure, Alzheimer's, Parkinson's, and other neurological conditions
- 24-hour follow-up and secondary stroke prevention
  - Improve stroke outcomes
  - **Decrease length of stay**
- Allows partner hospitals to **meet requirements for primary stroke certification**
- Patients and families remain within their community network of support
- Alleviates health care access disparities for rural communities

Patients who presented after the establishment of the teleneurology network were less likely to transfer and maintained high-quality outcomes consistent with a tertiary medical center.

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# PALLIATIVE CARE

MUSC partners with hospitals to provide scheduled consultations with a palliative care expert. Palliative telehealth services provide access to a MUSC palliative care provider who can help with pain and symptom management, advanced care planning, and supportive care for your patients. We also offer training for your chaplains and social workers so they can partner with us to provide highly specialized, interdisciplinary palliative care.

## Program Benefits:

- **Decrease length of stay**
- Higher patient and family satisfaction
- Longer survival rates
- **Decrease unnecessary testing**
- Discharged patients result in an **adjusted net savings of \$1696** in direct costs
- Complex patients who expire have an **adjusted net savings of \$4908** in direct costs

**Source:** Morrison et al., 2008

## Patient Diagnoses Include:

- Cancer
- HIV
- Complex injuries, including brain injuries
- Heart disease, including congestive heart failure (CHF)
- Kidney disease
- Lung condition, such as chronic obstructive pulmonary disease (COPD)
- Memory conditions including Alzheimer's disease and Parkinson's disease
- Neurological conditions, including amyotrophic lateral sclerosis (ALS)

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# CENTER FOR TELEHEALTH HOSPITAL SERVICES



The Center for Telehealth is a state-of-the-art multi-functional center equipped with resources for telehealth administration, operations, education, training, and simulation. Most importantly, it is the hub of telehealth being delivered to patients in partner hospitals, private practices, clinics, skilled nursing facilities, schools, correctional facilities, businesses, and directly to patients.

As headquarters of the South Carolina Telehealth Alliance, the MUSC Center for Telehealth is a National Telehealth Center of Excellence, one of only two in the country.



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# SOUTH CAROLINA TELEHEALTH ALLIANCE



Headquartered in the MUSC Center for Telehealth, the South Carolina Telehealth Alliance (SCTA) is a statewide collaboration of many organizations, such as hospital systems, private practices, clinics, schools, community organizations, and government entities, joining forces to expand telehealth in South Carolina. The SCTA strategic plan focuses on creating a statewide telehealth network that enables access to quality health care, while effectively managing the cost of providing care.

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