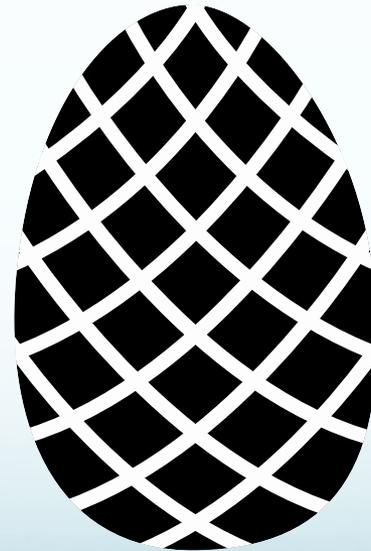




# Building a Statewide Telehealth Network

Ragan DuBose-Morris, PhD  
South Carolina AHEC  
Medical University of South Carolina

# The Tale of Two Pineapples



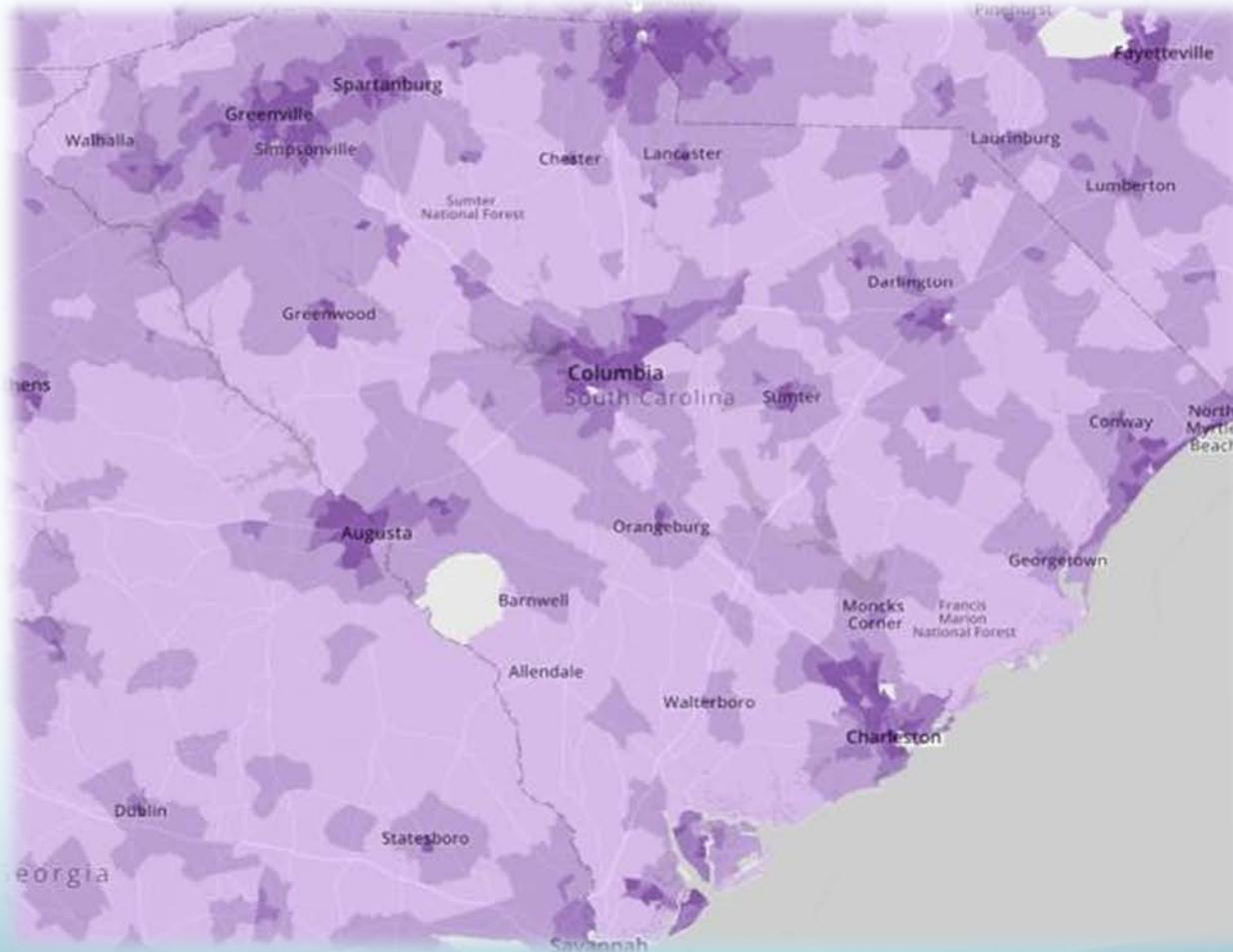
# The Scene



- South Carolina is a small state – 40<sup>th</sup> in U.S. by size
- Pockets of urban/suburban/rural areas – 24<sup>th</sup> in U.S. by population
- Health rankings:
  - 43<sup>rd</sup> in U.S. for overall health
  - Low high school graduation rates
  - High levels of obesity – 42.5% of black residents
  - High incidence of preterm births – ranked 47<sup>th</sup> in low birth weight
  - High levels of violent crime

Source: America's Health Rankings

# South Carolina's Population Density



Source: U.S. Census, 2010

# Our Story – Building Infrastructure



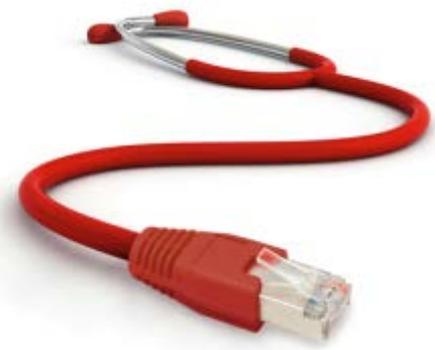
- South Carolina AHEC
- Palmetto State Providers Network
  - Federal Communications Commission/Universal Service Administrative Company
  - FRC, LLC – SCANA Corp/Palmetto Net
- Academic Medical Schools
  - Medical University of South Carolina
  - University of South Carolina
- Rural, Urban & Tertiary Hospitals

# Building a Healthcare Superhighway



- Palmetto State Providers Network (PSPN)
  - Initially Funded in 2009 - \$9.5 million
  - FCC Rural Health Pilot Program and USAC
  - Dedicated Broadband Connections for Healthcare Delivery & Education
  - Originally Connected 57 Individual Locations Across South Carolina. Today, Healthcare Connect Fund:
    - 34+ hospitals and healthcare systems
    - 42+ FQHCs
    - 11+ educational/other providers
  - FCC Funds Cover 65% of Costs for Eligible Locations

# PSPN – The Fast & Secure Lane



- Private Broadband, Symmetrical Commodity & Internet2 Connectivity
- Dedicated Video Traffic & Video Bridge
- Scalable Service
  - 10 Mbs – Base
  - + 10 Mbs Increments
- Layer 2 & 3 Circuits – Connectivity to Health Information Exchanges
- HIPAA and FERPA Compliant

# Telehealth On-Ramp



- Education
  - Gateway to Telehealth
  - Non-Threatening & Optional
  - Address Long Standing Access Issues
- Clinical Services
  - Access to Specialist
  - Emergency Consults – Stroke, OB, Mental Health
  - Improved Care Coordination
- Research
  - Wider Participation of Study Participants
  - Examination of Telehealth Technologies to Deliver Services

# Our Educational Reach

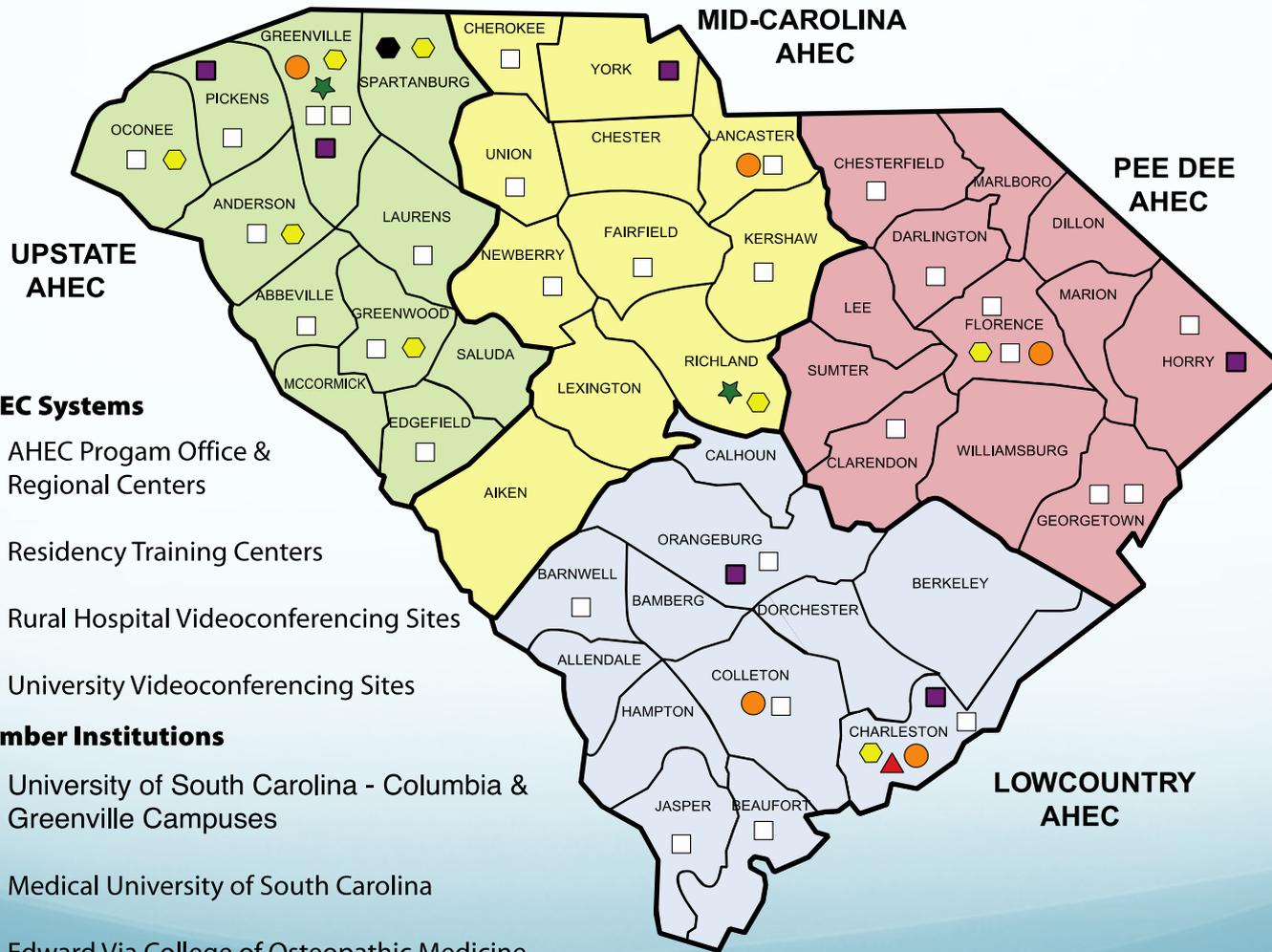




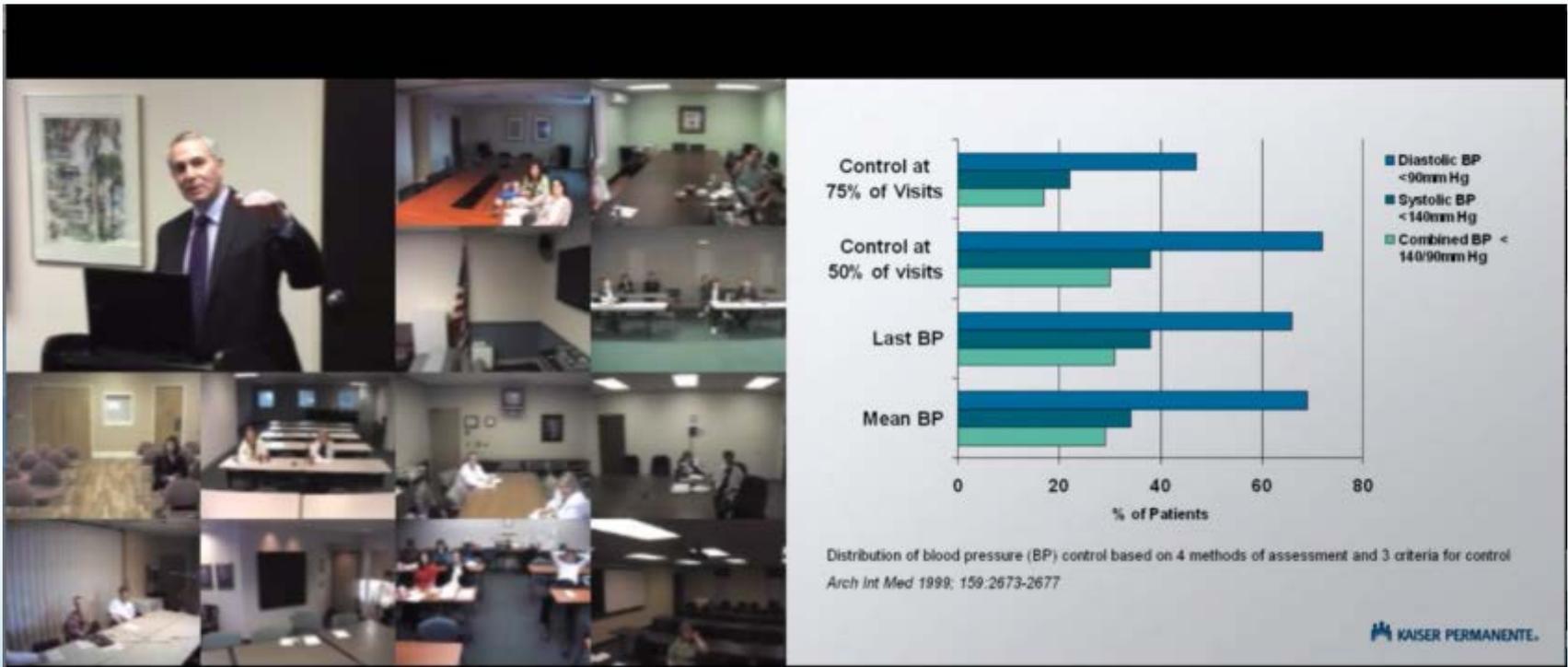
# SC AHEC – On the Bus

- HRSA Funded Equipment Grant – 2010
- Collaboration of the South Carolina AHEC System
  - Program Office at MUSC
  - Four Regional Centers
  - Rural & Underserved Hospitals
  - Academic Medical Centers
  - PSPN Partner Organizations
- **South Carolina Health Occupations Outreach Learning System (SCHOOLS)**

# South Carolina AHEC System



# SCHOOLS Broadcast



# SCHOOLS: Then and Now



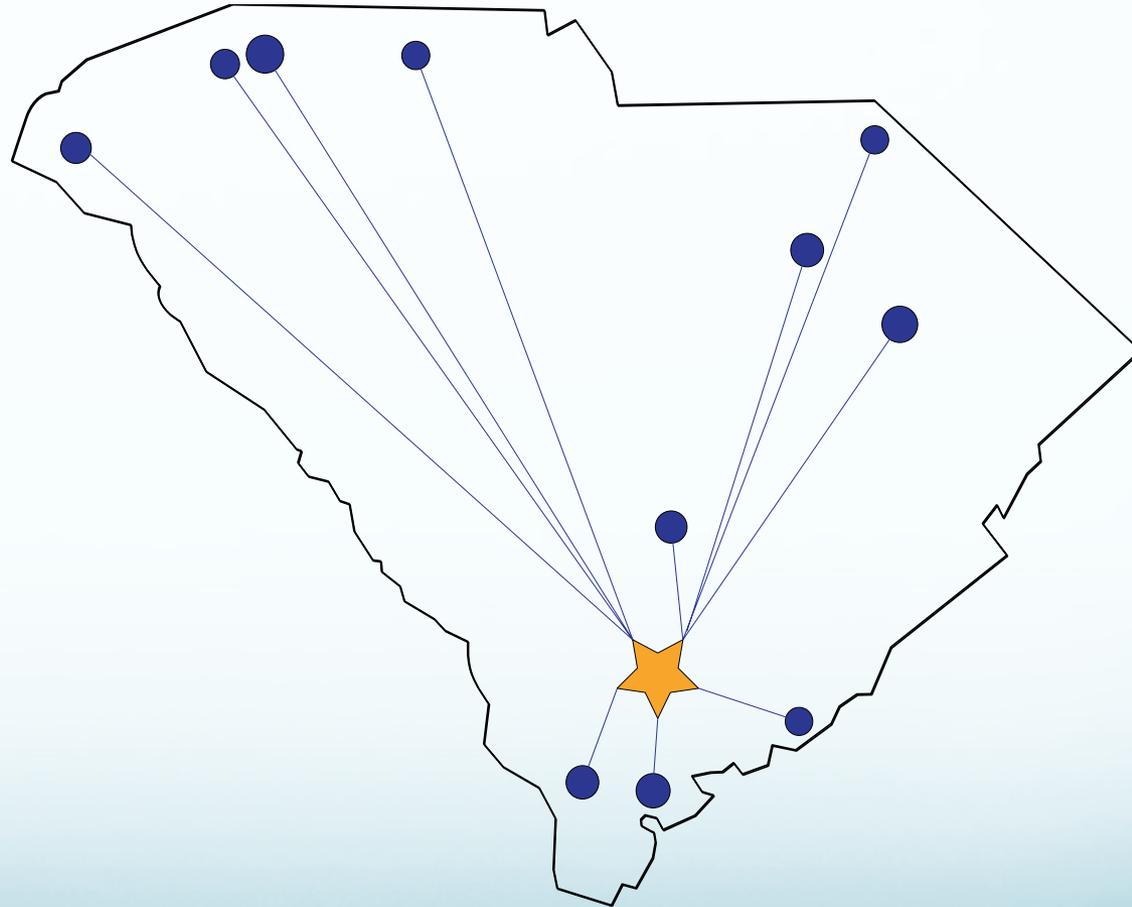
2011

- 25 Locations
- 68 Programs
- >700 Participants
- Programming for Healthcare Professionals
- Support of Telehealth Initiatives

2014

- 52 Locations
- 161 Programs
- >2,800 Participants
- Programming for Healthcare Professionals, Students, Patients and Community Members
- Leading Telehealth Initiatives

# Increasing the Reach



# Examples of Ongoing Initiatives



- South Carolina College of Pharmacy – Grand Rounds
- MUSC Pediatric Morning Report for Community Providers
- TITAN Case Presentations – Medical Management of HIV/AIDS
- Emergency Management System – Quality Improvement Programs
- APRN Monthly Update – Practicing Providers
- American University of Beirut Medical Center – Balian Training
- Bench to Bedside - Undergraduate Health Career Preparation (7 Colleges and Universities Statewide)

# The Magic Behind the Curtain



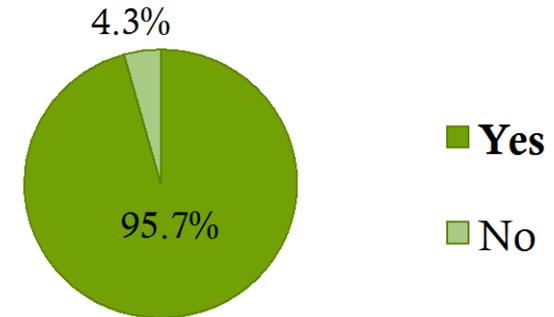
- Approval to Offer Professional Credits Through Distance and Online Programs
- Online Registration Portal
  - User Login
  - Registration
  - Pre-Post Tests/Evaluations
  - Certifications
- Network and Technology Improvements
- Faculty Engagement and Speaker Buy-In

# Improving Care & Access

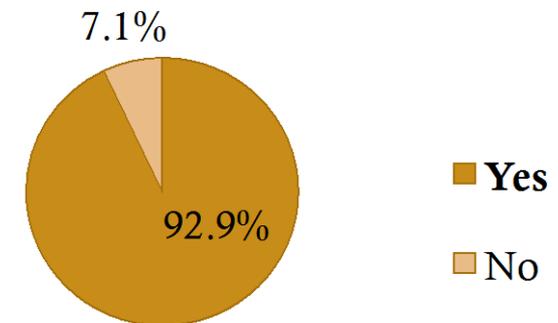
Data shows that these programs contribute to:

- Improved knowledge
- Practice improvement
- Provider engagement
- Provider recertification
- Cost/Time Savings
- Patient and caregiver support

**As a result of this program, my knowledge level increased.**



**As a result of this training, I intend to implement at least one practice improvement.**



# Opportunities for Partnership



- Internal & external funding through grants
  - Obesity Management – Practice Group Consults
  - Oral Health – Specialty Consultations
- Specialized outreach efforts for specific diseases and patient populations
- Support for emerging telehealth networks (training, meetings)
- Better understanding of technology by communities, providers, funders and legislators

# New Partners



- Expansion of PSPN Facilities:
  - Healthcare Systems
  - FQHCs/Rural Health Clinics
  - Private Practices
- Palmetto Care Connections – HRSA Telehealth Resource Center Technical Assistance Grantee
- State Appropriation - \$14,000,000
  - Creation of Center for Telehealth at MUSC – State Coordinating Entity



# Gateway to Telehealth – Addressing Needs



- Tele-education activities support providers and patients
- Provides real-time access to evidence-based advances
- Helps support practice changes occurring with telehealth and electronic health records
- Eases participants into the use of the technology for telehealth communication
- Creates new partnerships between knowledge centers and community practices

# Center for Telehealth Initiatives



- REACH MUSC Telestroke
- Pediatric Emergency and Critical Care Telehealth
- Critical Care Outreach (Tele-ICU)
- Telemental Health
- Teleneurology & TeleEEG
- School Based Telehealth
- Maternal Fetal Telemedicine
- Virtual Tele Consult
- National Crime Victims Research & Treatment Center



# Telehealth “Wins”



- Stroke Care
  - 24/7 Stroke Consultations Save Lives and Improve Outcomes
  - 4,651 Patients Have Received Stroke Care Since 2008
  - 809 Patients Have Received tPA Treatments
  - Since the Program’s Inception, the Number of Patients Within a 60-Minute Drive of a Certified Stroke Center has Increased from 38% to 76%

Time = Brain

# Telehealth “Wins”



- Critical Consults
  - Pediatric Emergency and Critical Care Telemedicine to Community ER's
  - Provide Critical Care Specialist Support at the Time it is Needed Most
  - Speak Directly to Children and Their Families Prior to Transfer
  - Reduce Unnecessary Transfers and Air Transports (Helicopter Transport Cost Over \$10,000 per Transfer)

# Telehealth “Wins”



- High-Risk Maternal Medicine
  - 50 more babies born at term over four years
  - Reduction of \$1.2M in Health Care Costs
    - Maternal Care
    - Neonatal Care
    - Pediatric Care
  - Potential Decrease in Special Needs Children
  - Expansion of services in Family Medicine and Internal Medicine Provider Offices Across 8 County Area Through DHHS Appropriation

# Challenges & Opportunities



- Recognizing and Diffusing Turf Conflicts
- Lack of Connectivity to Remote Providers
- Lack of Parity in Third-Party Reimbursement
- Different Levels of Technical and Educational Expertise Across Facilities
- Reduced Federal Subsidies – Pilot Program to Healthcare Connect Fund
- Evolving Business Models

# Challenges & Opportunities



- Standardization and Capacity of Platforms and Peripherals
- Confluence of ACA and EHR Implementation
- Licensing and Credentialing (Big Strides with Credentialing By Proxy)
- Identification of Priority Areas
- Integration of Silos
- Workforce Capacity, Supply and Demand Models

# Not Reinventing the Wheel



- Leveraging Existing Resources to Offer New Services and Applications
- Utilizing Telehealth Champions
- Extending Services – Not Always Developing New Ones (Choosing the Right Tool for the Need)
- Recognizing the Multi-Faceted Components of Telehealth
  - Education (Student and Practicing Provider)
  - Research

# Reinventing the Wheel – What's Next?



- Increased Support for Hospitals and Providers
- New Models of Education, Clinical Care and Research
- Shorter Time Between Development & Dissemination
  - Bench to Bedside Research
  - Clinical Partnerships
  - Educational Programming – Health Care Reform to Ebola
- Better Health Outcomes



Come Visit!

- [www.scahec.net/schools](http://www.scahec.net/schools)
- [www.muschealth.org/telehealth](http://www.muschealth.org/telehealth)
- [www.palmettocareconnections.org](http://www.palmettocareconnections.org)
- [www.pspnsc.org](http://www.pspnsc.org)