

USC School of Medicine

Rural Health Initiatives Overview

- Background
- The ICARED Program
- South Carolina Center for Rural and Primary Healthcare

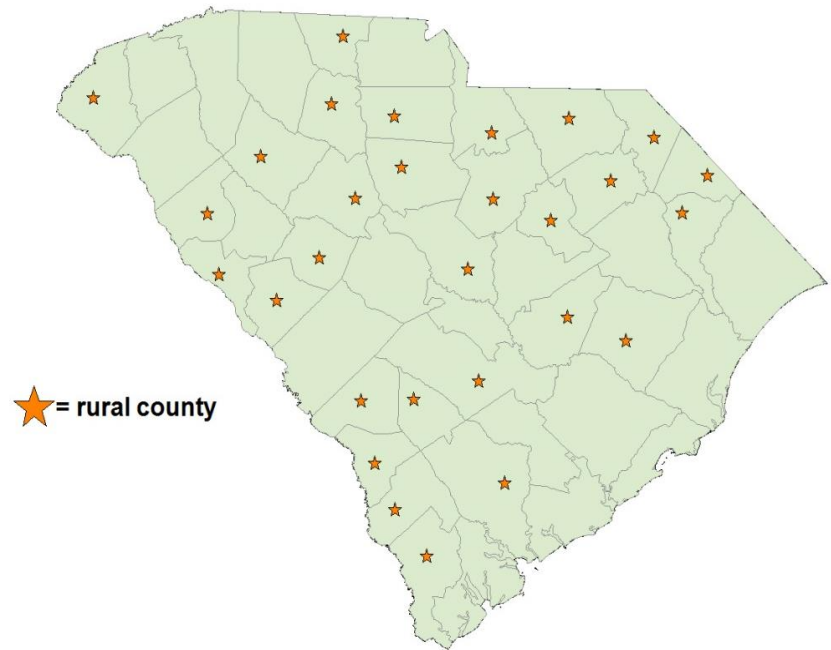
BACKGROUND

Health challenges for South Carolinians

- An aging population
- Increasing rates of chronic illness
- A rural state
- A dwindling primary care workforce

Physicians in Rural SC

- In 29 of our 46 counties at least half of the population lives in a non-urbanized area
- 23% of our population lives in a rural county
- Only 10% of the physician workforce has their primary practice site in a rural county



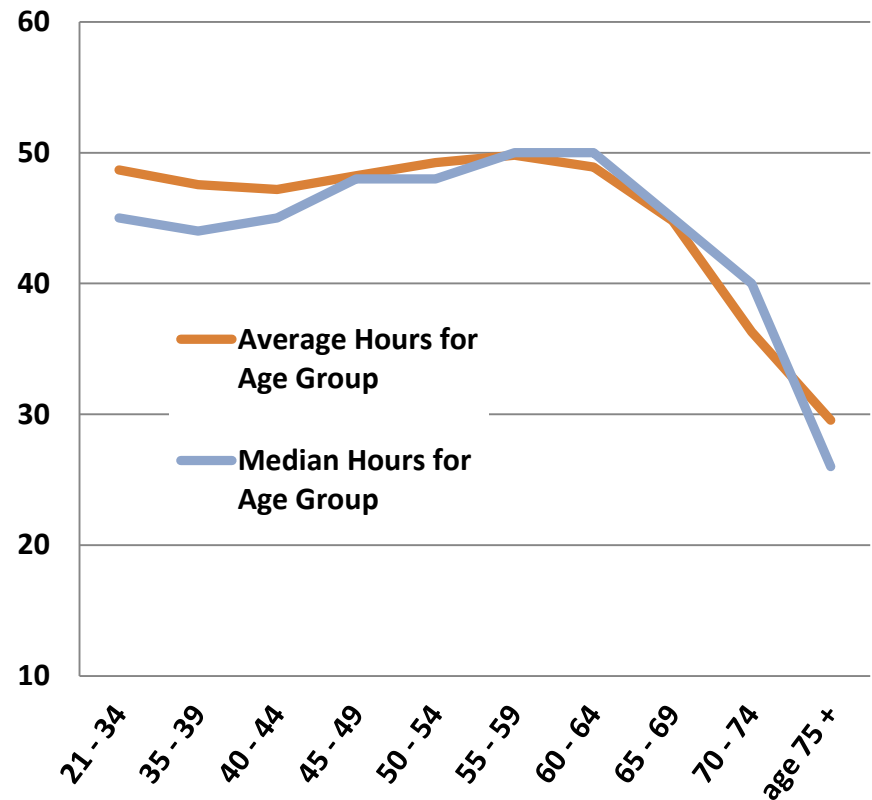
Rural is defined as any county in which 50% or more of the population lives outside of an urbanized area, based on 2010 Census population counts.

- SC ranks 40th in US in primary care workforce
 - 77.5 PCPs/100,000 in SC vs. 90.1/100,000 US
 - 1.2 million in SC live in primary care shortage area
 - 25% of the state vs. national average of 19%
 - 5.6 PCPs/10,000 in rural vs. 10.8/10,000 for urban
- Median cost for medical school
 - nearly 16 times the cost forty years ago
 - Costs create disincentive to pursue primary care

An aging physician workforce

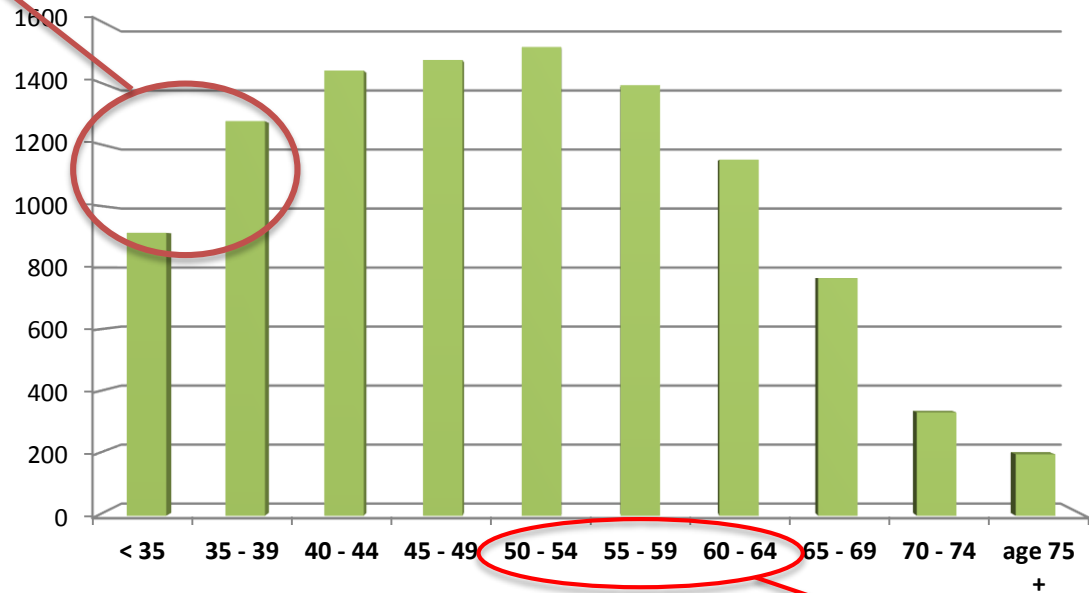
- 23% of the active physicians in SC are age 60 or older
- Physician's work hours decline sharply after age 65

Average and Median Hours Worked per Week by Age for SC Physicians at Primary Practice Site in 2015



Physicians with an active license and active in the workforce by age group 2015

Insufficient
numbers in
the pipeline



■ # in the SC Workforce

Only 10% of the physician
workforce has their primary
practice site in a rural county

2025 pre-retirement
cohort

% of physicians age 60+ in rural SC counties

% age 60 +	County	% age 60 +	County	% age 60 +	County
27%	ABBEVILLE	27%	DARLINGTON	24%	MARION
31%	ALLENDALE	36%	DILLON	17%	MARLBORO
44%	BAMBERG	19%	EDGEFIELD	22%	MCCORMICK
24%	BARNWELL	39%	FAIRFIELD	21%	NEWBERRY
0 physicians	CALHOUN	30%	HAMPTON	21%	OCONEE
44%	CHEROKEE	28%	JASPER	22%	ORANGEBURG
28%	CHESTER	22%	KERSHAW	20%	SALUDA
19%	CHESTERFIELD	27%	LANCASTER	28%	UNION
0%	CLARENDON	27%	LAURENS	17%	WILLIAMSBURG
22%	COLLETON	50%	LEE		

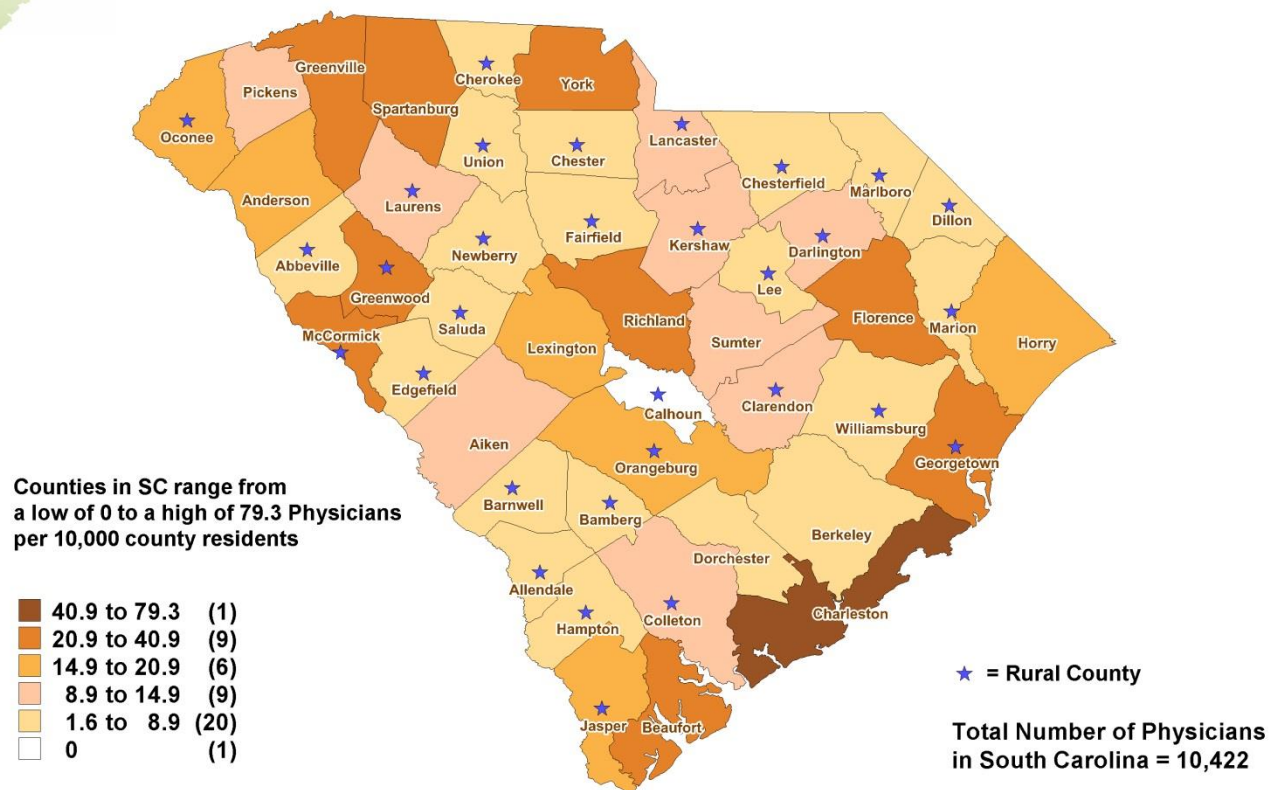
This information is based on all active physicians who reported their primary practice was located in this county during their license renewal process, June 2015



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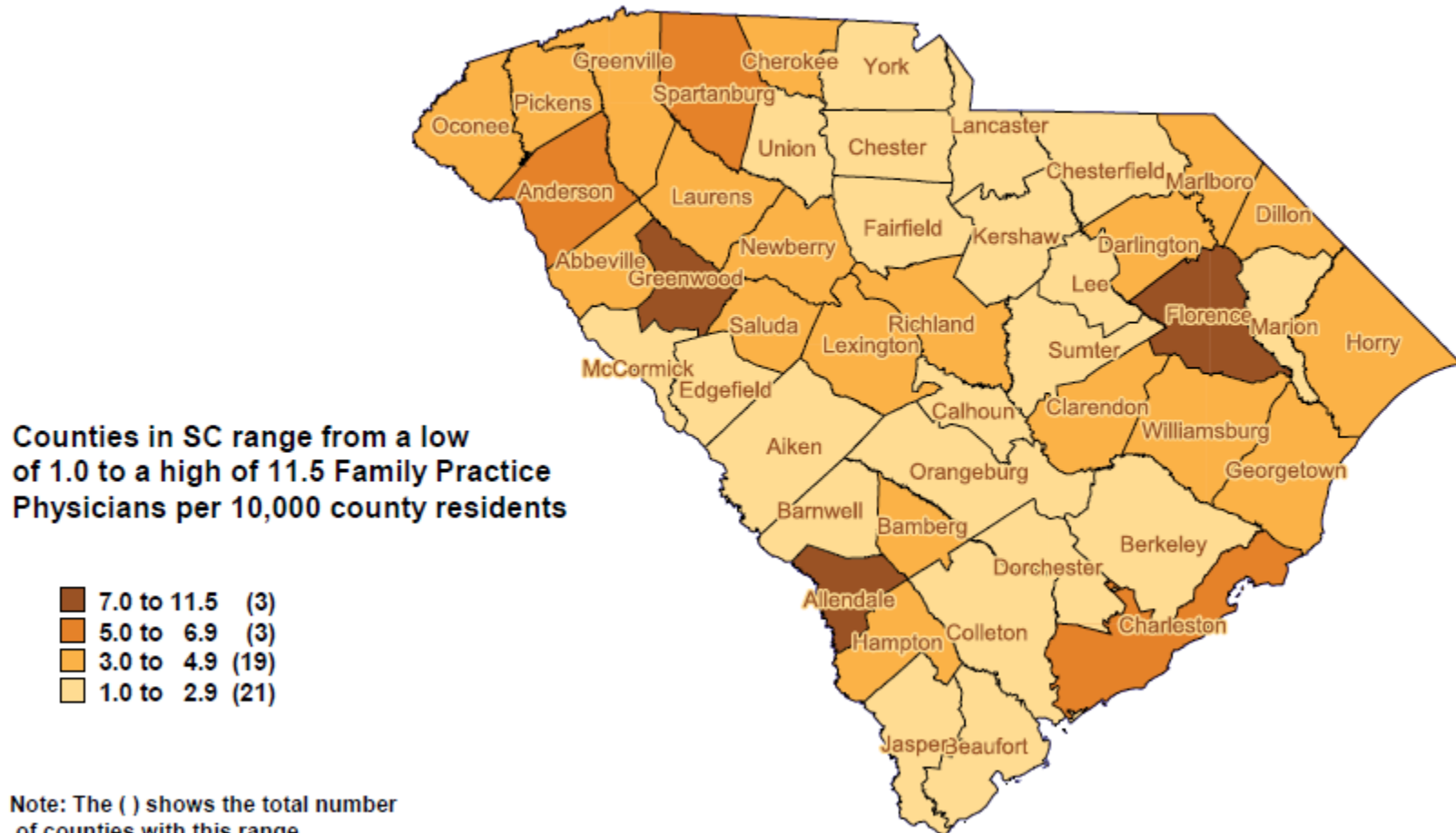


Concentration of Total Physicians Per 10,000 Population in 2015



This information is based on all Physicians with an active license to practice and a practice location in South Carolina as reported during the license renewal period ending 06/30/2015. This map does not include medical residents. County practice locations are those reported as the primary practice site. Rural counties are those where 50% or more of the population lives outside an urbanized area, based on 2010 census counts.

Concentration of Family Practice Physicians Per 10,000 Population



Statewide Rural Health Initiatives

University of South Carolina
School of Medicine



THE ICARED PROGRAM

The ICARED Program provides

- Clinical services
 - Improve access to specialty services in rural areas.
- Practice support
 - CME and training opportunities underserved primary care practices
- A focus on innovative technologies
 - Incorporate new technologies into rural health
- Collaborations targeting challenging rural health issues

ICARED 2017

- Programs initiated in the ICARED grant would be continued
- We propose expanding program funding to allow for six additional practice sites.
- Subsequent slides will outline how the ICARED Program supports rural clinical practices

Continuing Medical Education

- Determine the CME needs of rural and underserved SC primary care practices
- Provide various education venues to satisfy these needs, including tele-education (noon conferences/grand rounds), CME programs, library access and subscriptions.

Onsite Subspecialty Support

- “Boots on the ground” subspecialists
- dental, pediatric subspecialists, maternal fetal medicine, neurology, orthopedics and adult cardiology.
- Current sites include Society Hill, Hartsville, Orangeburg, Sumter, Lancaster, Winnsboro, Aiken, Bamberg, and Florence.
- Expansions planned in addition to the 9 current ICARED sites

New Technologies

- Pilot programs in Orangeburg and Calhoun counties provide onsite pediatric echocardiography.
- Prevents unnecessary transfer and supports appropriate transport of neonates
- Expand to other rural communities.
- Train physicians in rural settings using hand held ultrasound units.

Community Engagement

- The FoodShare Fresh Food Box program
- helps patients with Type 2 diabetes mellitus improve nutrition through fresh food access, affordability and nutrition education.
- Fresh produce delivered to participants in Orangeburg and Bamberg counties for \$10 along with diabetes tele-education.

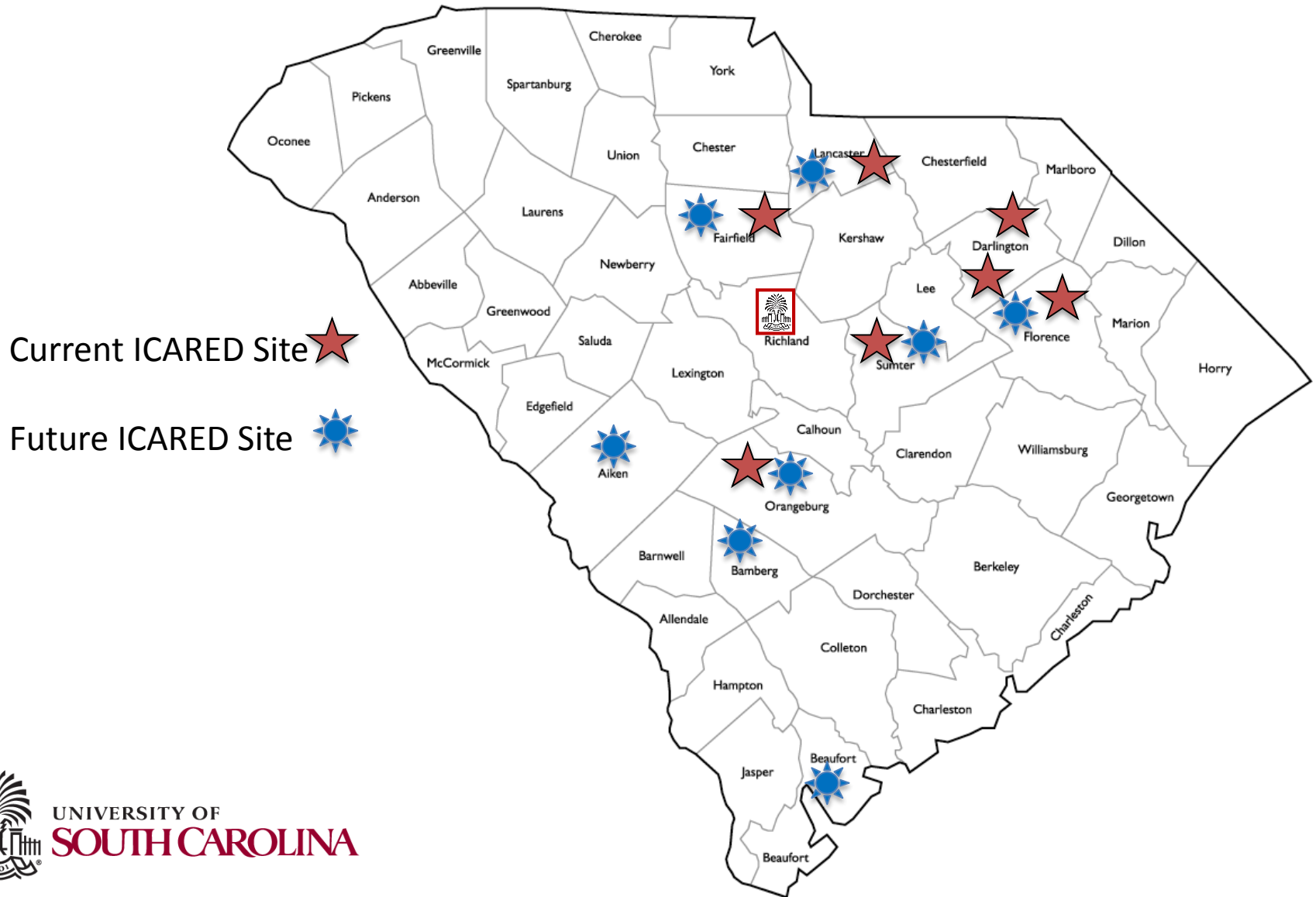
Expanded Sub-specialty Services

- Immunology Center will stage patients with hepatitis C disease and provide clinical advice on treatment.
- Remote heart failure monitoring program will be implemented for patients living in Sumter and surrounding counties
- Early cardiologist directed interventions can help avoid preventable hospitalization.

Academic Collaborations

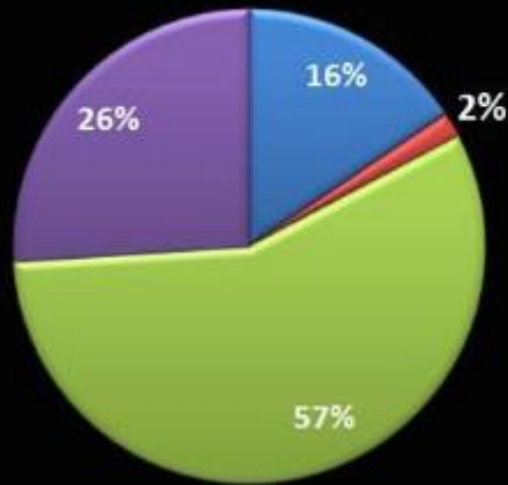
- USC School of Nursing: Palliative care demonstration project
- USC School of Pharmacy: experiential teaching model in rural health, education for rural pharmacies; rural health pharmacy residency and pharmacy student internship.
- USC School of Public Health: study of primary care service delivery profile in South Carolina
- USC School of Social Work: practice level team training program in collaboration with SCORH

ICARED Sites

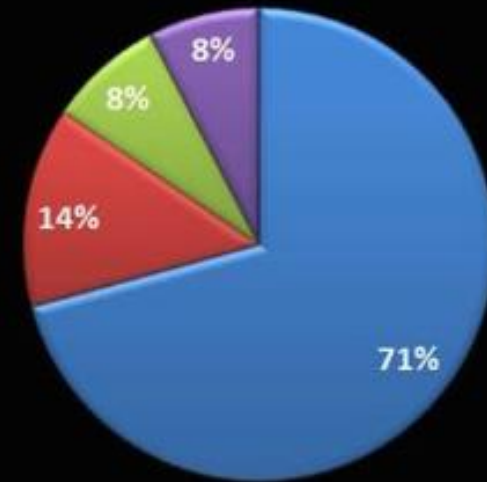


Percent of the Population in a Hotspot

High Need Areas



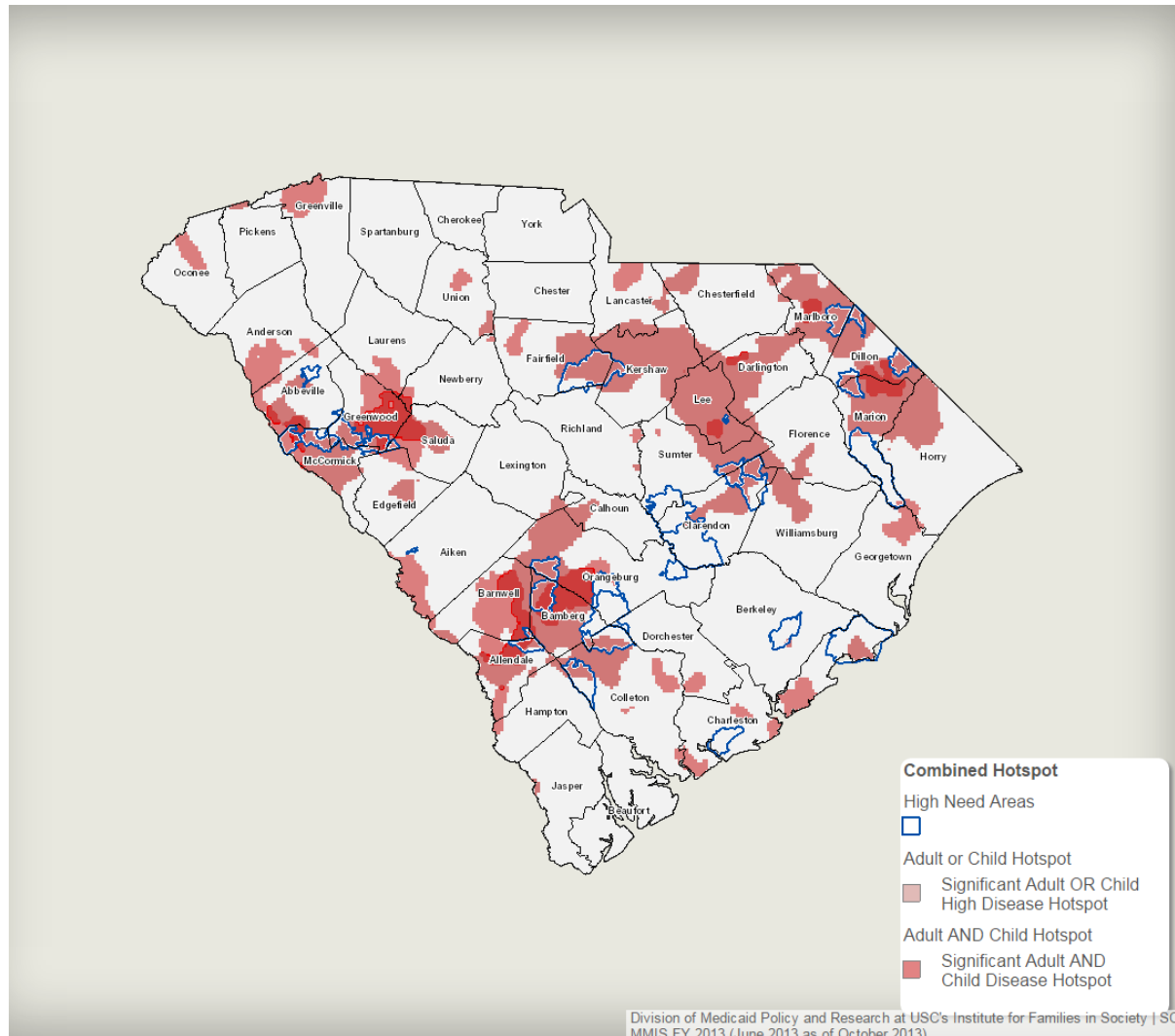
Rest of the State



- No Hotspot
- Adult Only Hotspot
- Child Only Hotspot
- Adult and Child Combined Hotspot

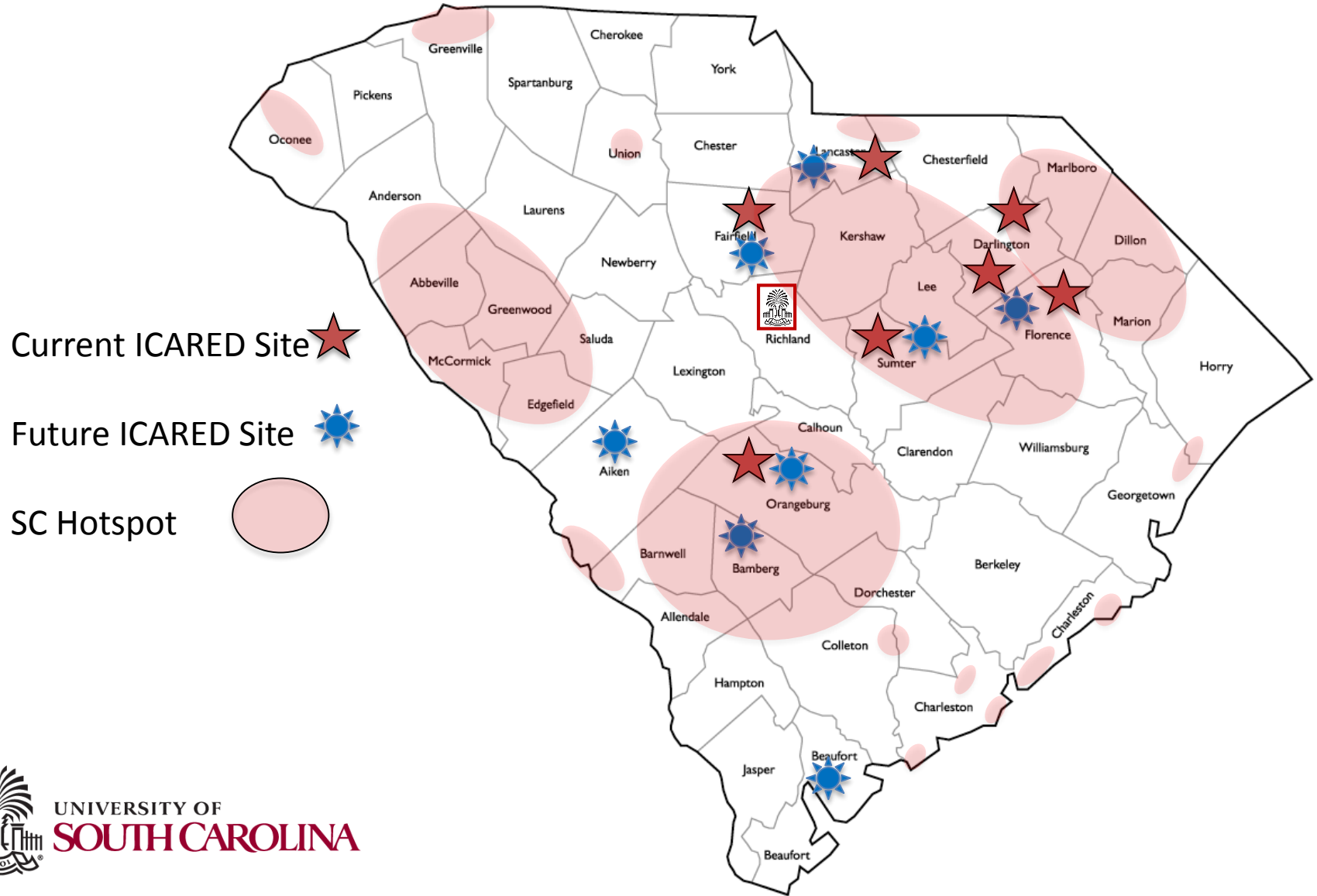


Disease Hotspots of South Carolina



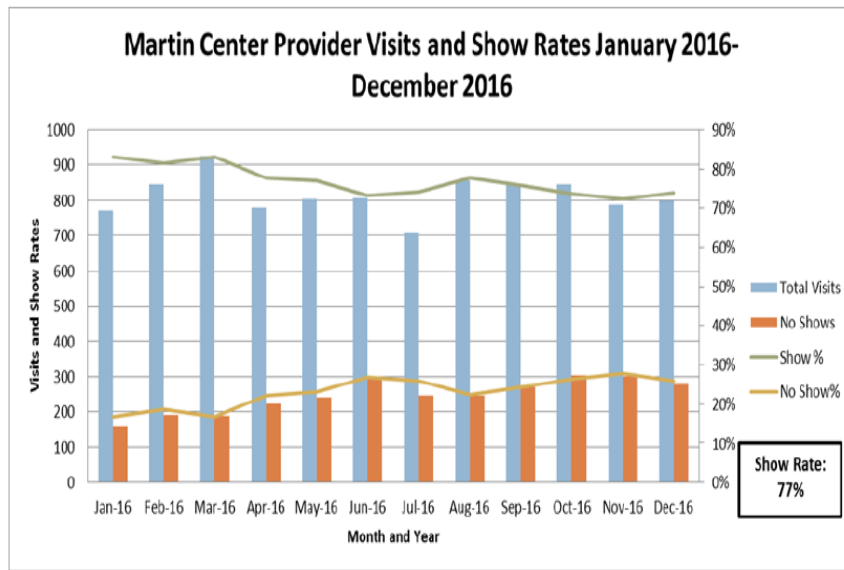
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ICARED Sites



Family Medicine

Fairfield County



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Family Medicine has scheduled over **9000** patients since January 2016 with a show rate of **77%.**

Obstetrics and Gynecology

Orangeburg County

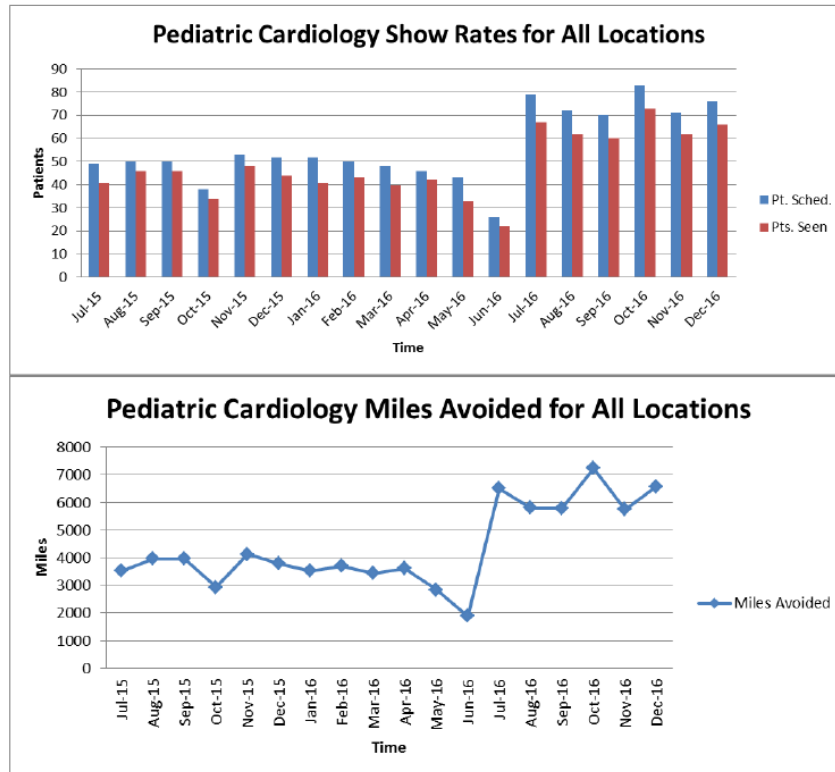
Service Date	Patient Encounters	Diagnosis
June 2016	2	1. venous thromboembolism
		2. spont miscar; chtn; hx pre eclmp

- In Fiscal Year 2015-2016 there was an average consult rate of 1 patient/month from the Orangeburg Catchment Area
- 30 scans were completed over the year

Pediatrics

Cardiology

Orangeburg, Sumter, Lancaster, and Aiken County



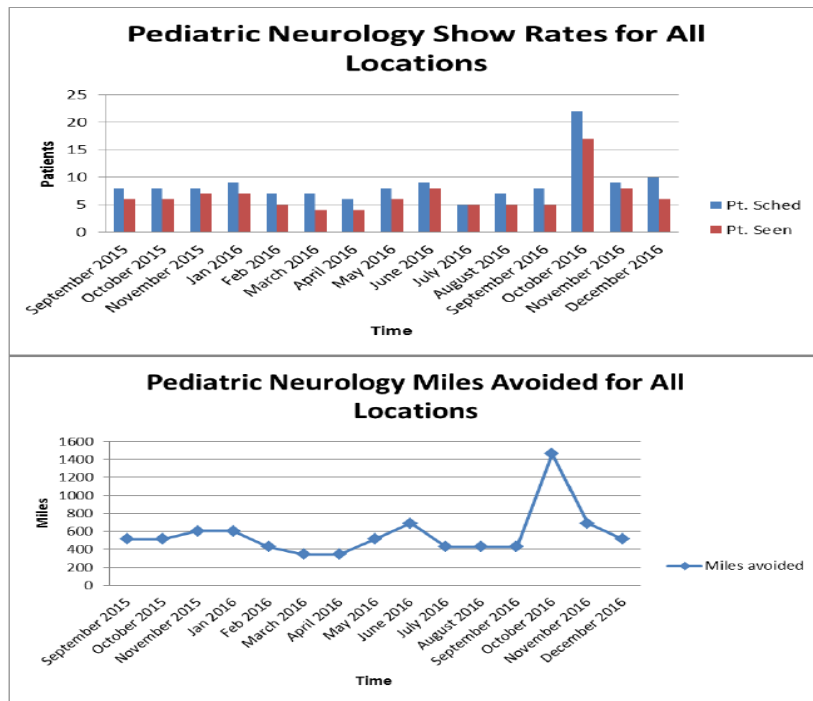
- Show Rate **86%**
- **78,938** Miles Avoided Averaging **4,386** miles avoided per month.
- Trained **39** med students and **19** residents

Narasimhan et al USC 2016

Pediatrics

Neurology

Orangeburg and Sumter County



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Pediatric Neurology has a **76%** show rate and has saved patient a total of **8,514** miles since September 2015.

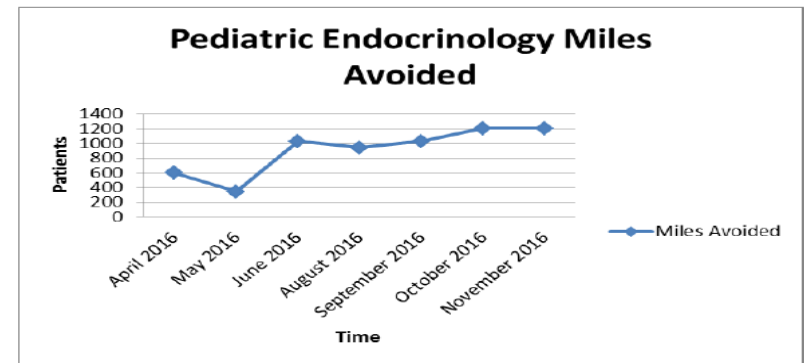
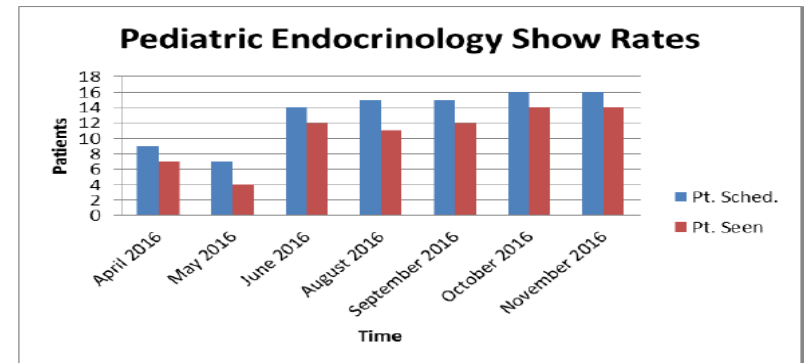


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Pediatrics

Endocrinology
Orangeburg County

Pediatric Endocrinology has a show rate of **79%** and has saved patients **6,364** miles since April 2016.

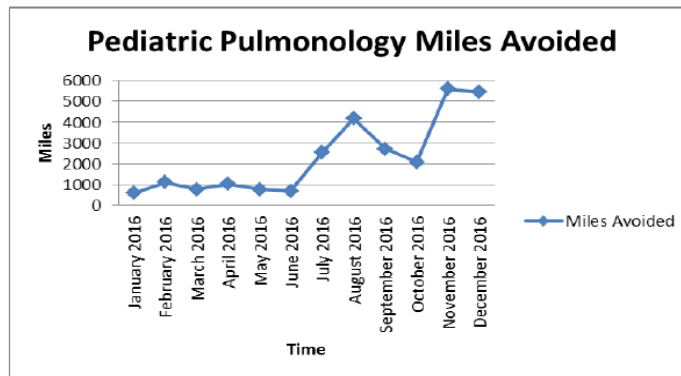
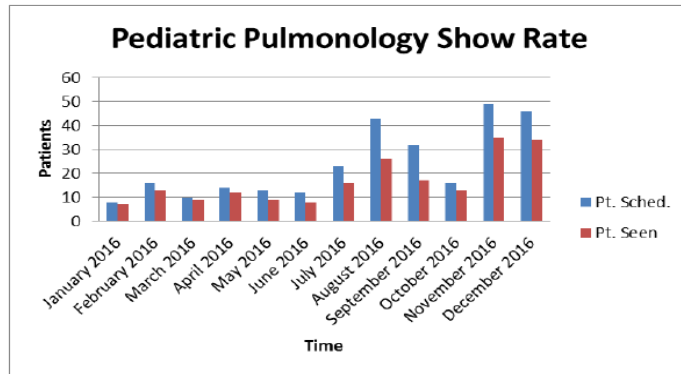


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Pediatrics

Pulmonology

Orangeburg and Florence County



Pediatric Pulmonology has a show rate of **74%** and has saved patient a total of **27,548** miles since January 2016.

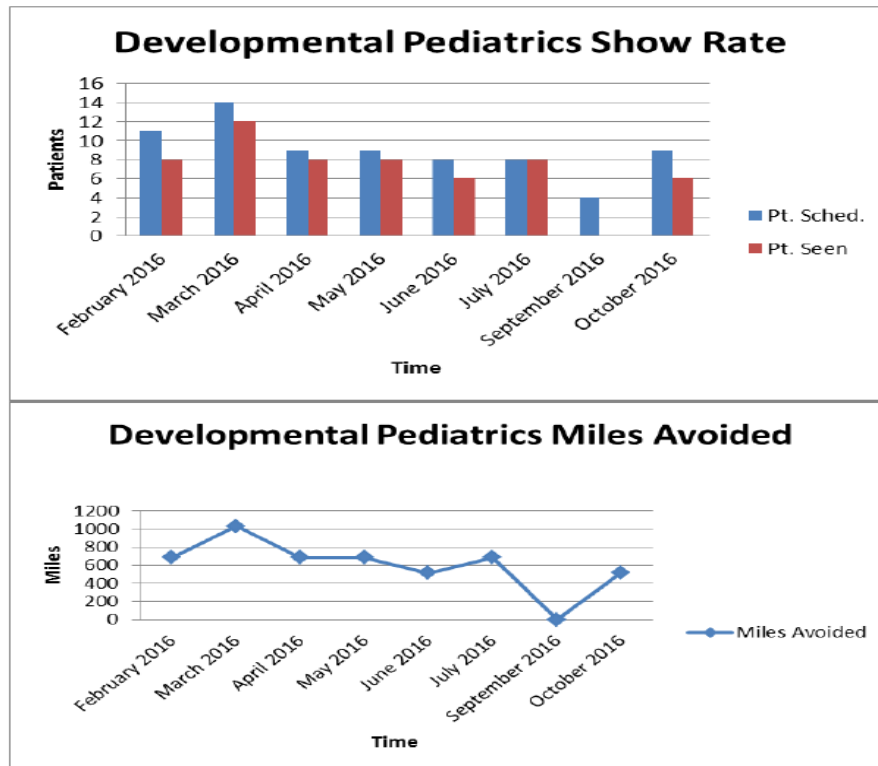
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Pediatrics

Developmental
Orangeburg County



Developmental Pediatrics has a show rate of **67%** and has saved patients **516** miles since February 2016

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Pediatrics

Nephrology

Orangeburg County

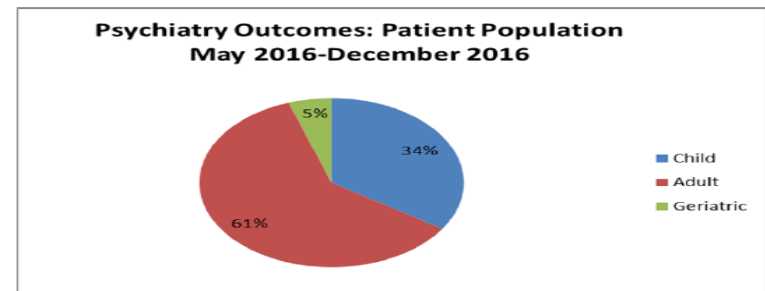
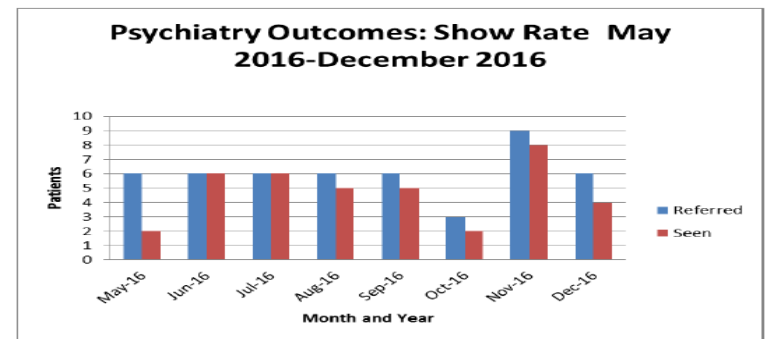
- Pediatric Nephrology started in November 2016
- Show rate of **75%** with a total of **1440** miles avoided
- 1 medical student was trained in the first month

Psychiatry

Darlington County

Serving Chesterfield, Dillon, and Marlboro County

Psychiatry has scheduled
48 adult, child, and
geriatric patients with a
show rate of **79%**.



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Future Directions

- Continued funding and successful outcomes from the ICARED model allows for:
 - Continued expansion to areas of need
 - Example: Pee-Dee
 - More comprehensive services
 - Additional subspecialties based on community need
 - Examples: Pediatric subspecialties, Dental
 - Expansion through collaboration
 - Example: Develop services to Upstate SC in partnership with GHS and USC-G

SOUTH CAROLINA CENTER FOR RURAL AND PRIMARY HEALTHCARE



SC Center for Rural and Primary Healthcare

- 2016-17 Proviso 33.27 directed the USC School of Medicine to establish the Center
- Mission: Support and develop rural and primary care education, delivery, and sustainability in South Carolina through clinical practice, training and research.

SC Center for Rural and Primary Healthcare

- Operated out of USC School of Medicine
- Supported by consulting Advisory Committee comprised of key state stakeholders
- Collaborative working relationships
 - SC DHHS
 - SC Office of Rural Health
 - SC AHEC
 - SC publically-affiliated educational institutions

Core Objectives

- Support rural and underserved healthcare providers
- Improve diversity and distribution of SC rural health workforce
- Research to inform strategy, investment and health policy related to SC rural and primary healthcare
- Provide programs giving access to specialized services
- Promote collaboration among state rural health entities
- Increase and enhance rural health professions and interprofessional education.

Current Initiatives Part 1

- Establish and staff Center
- Detailed analysis of SC rural health care resources
 - Develop up-to-date data warehouse of public-use data to be utilized by providers, policy makers, and educators to alleviate SC health disparities
- Rural practice information hub
 - rural clinicians can collaborate, interact, and exchange best practices.
 - provide enhanced clinical information and continuing education services

Current Initiatives Part 2

- Develop Rural Health Fellowship
- Rural Practitioner/Staff Development and Practice Enhancement seed grant program
- Expand USC School of Medicine rural clinical training sites at rural practice sites in the SC Midlands or Pee Dee region
- Rural Residency Program development in Sumter, SC

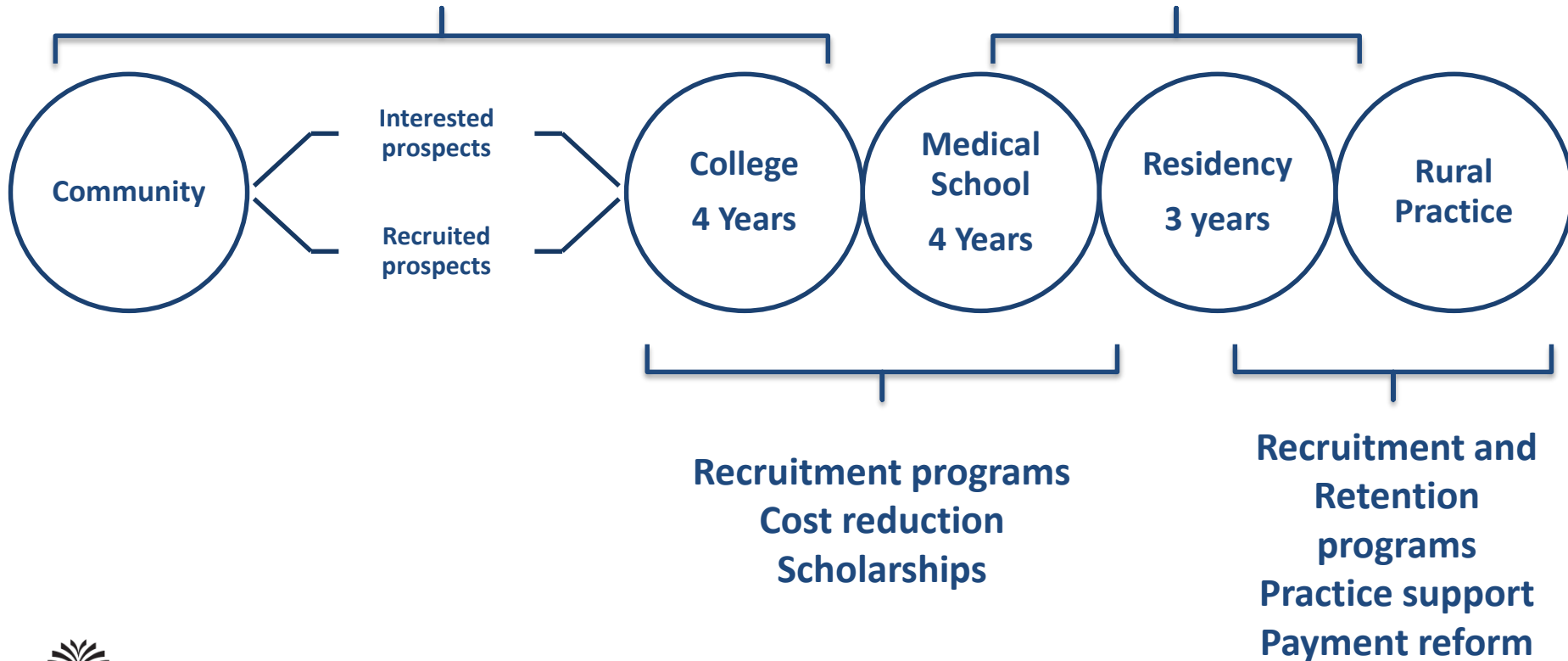
Current Initiatives Part 3

- Statewide Rural Practice Scholarship and Loan Repayment Program for Medical Students, Advanced Practice Registered Nurse and Physician Assistant students.
- Rural Pharmacy Extension Service
 - Consultation and practice support on challenging pharmacotherapy issues, medication safety information, evidence-based recommendations for safe, high-value medication use.

Primary Care Workforce Chain

Recruitment programs
Community programs

Debt reduction
or repayment



Proposed New Initiatives

- Rural health clinical track
 - Develop rural track for residents in Winnsboro
- Expand research center
 - Increase capacity for research output
- Pilot accelerated medical education track
 - Collaborate with regional partners testing accelerated education track. 3 years medical school, 3 years residency, 3 years FQHC/RHC

Funding overview

- Presently these programs are funded through the following 2016 Provisos:
 - Proviso 33.21: Health Outcomes Plan
 - Proviso 33.27: Rural Health Initiative



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Thank you
We welcome your questions