

# Georgia House Rural Development Council

September 6, 2017



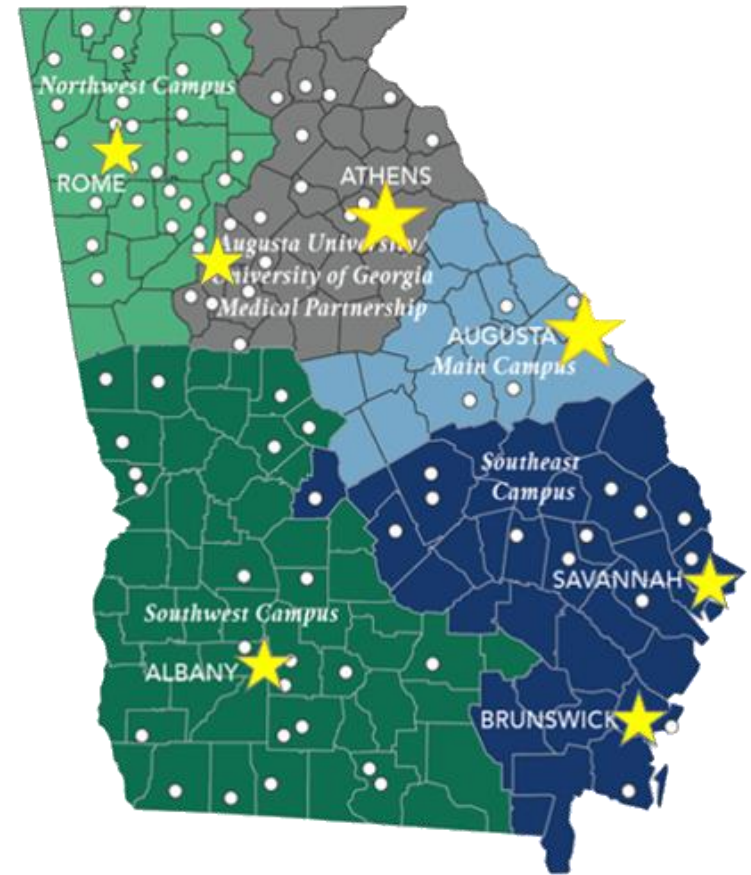
**David C. Hess, M.D.**

*Dean, Medical College of Georgia  
EVP for Medical Affairs and Integration  
Presidential Distinguished Chair  
Augusta University*



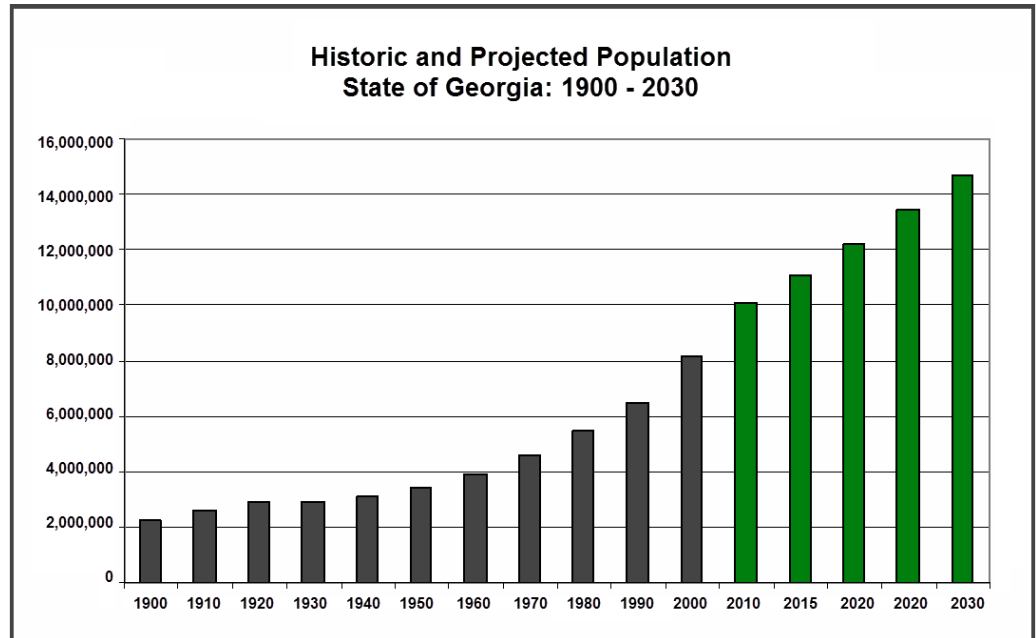
# Georgia's Public Medical School

- **8<sup>th</sup>** largest in nation for total medical school enrollment
- Partnerships with clinical teaching sites across the state
- Four-year AU-UGA Medical Partnership in Athens
- Clinical campus locations across the state in Albany, Rome, and Savannah/Brunswick
- Plans under development with partners at Wellstar for new location in Atlanta



# Georgia Population Growth

- 8<sup>th</sup> largest state in US by population: 10.4 million
- Georgia's population is projected to grow by 4.6 million by 2030
- Projected to grow by 46% between 2010-30
- We are this growing state's public medical school- the only one!



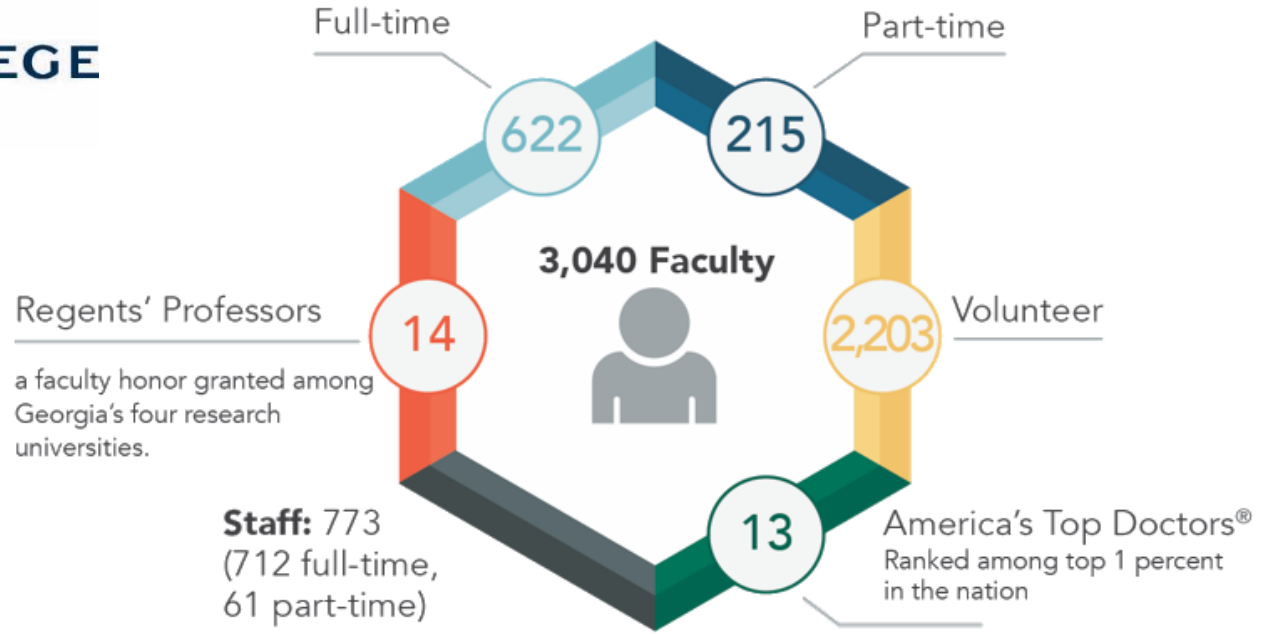
*Georgia Office of Planning and Budget 2030 Population Projections*





AUGUSTA UNIVERSITY  
**MEDICAL COLLEGE  
 OF GEORGIA**

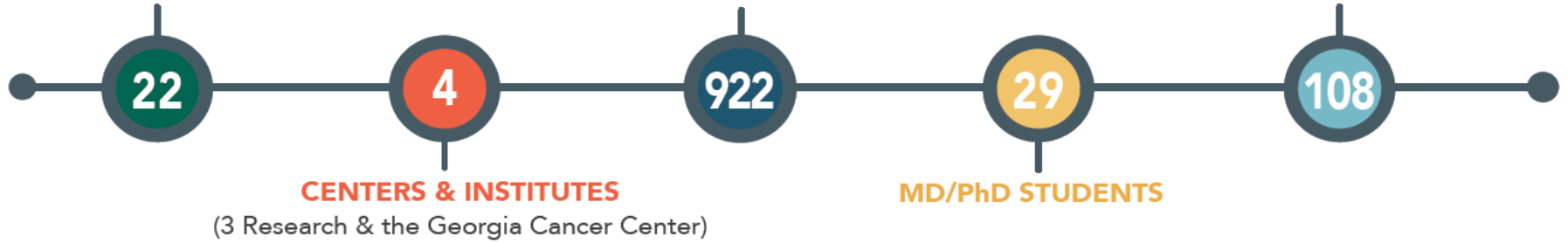
# 2017 Snapshot



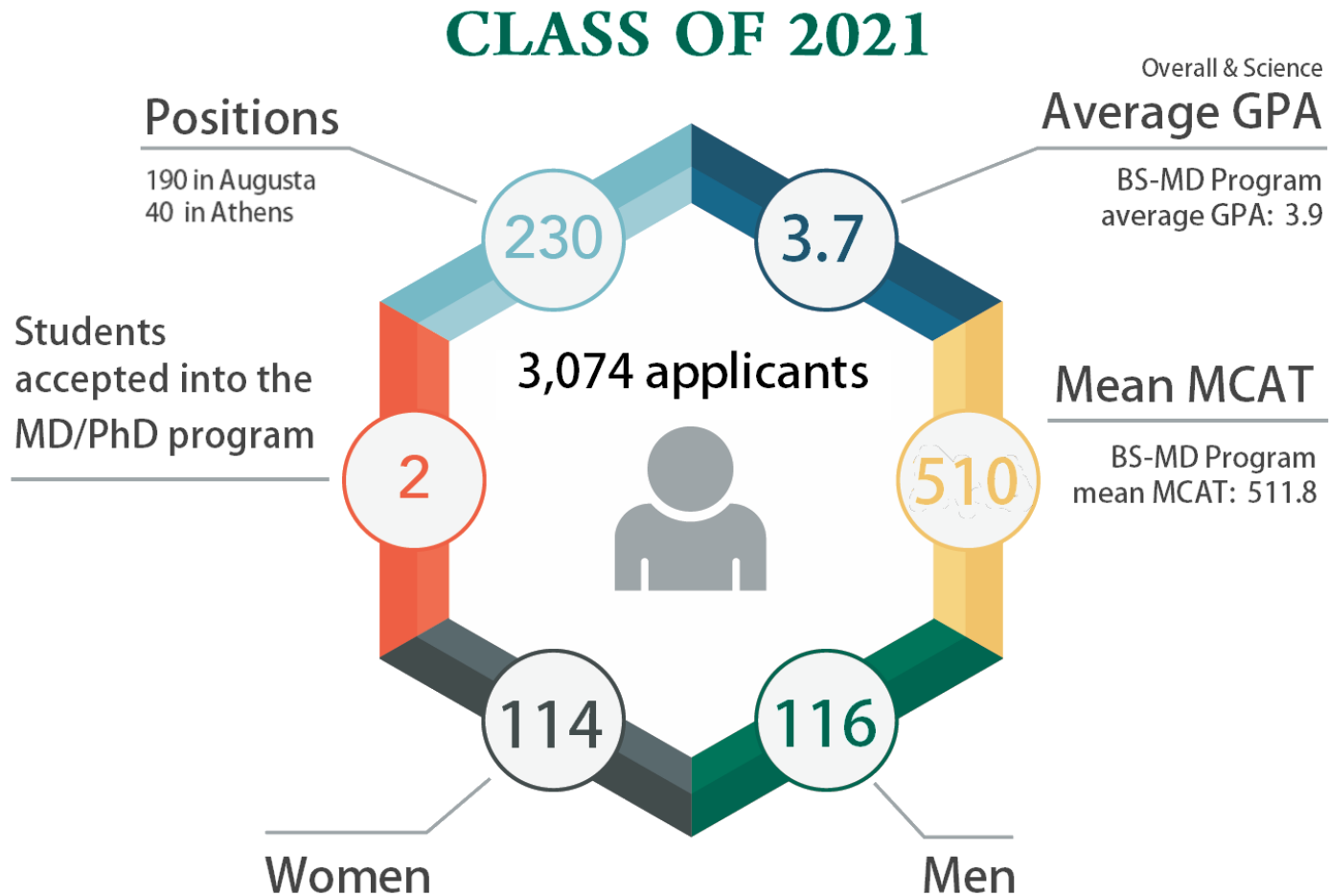
**ACADEMIC DEPARTMENTS**

**MEDICAL STUDENTS**

**PhD STUDENTS**



# We Have Outstanding Students



# Outstanding Medical Education Program

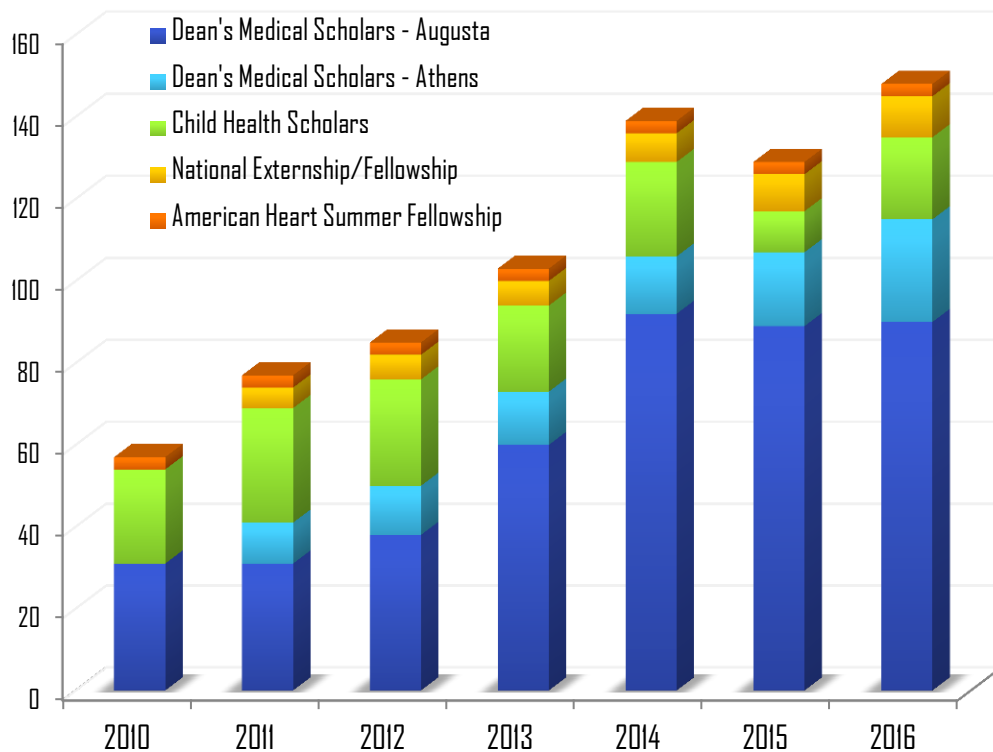
- Holistic admissions process
- Interprofessional learning
- Simulation Center
- Ultrasound curriculum
- Diverse learning experiences with statewide campus model
- Partnerships throughout the state
- Recruitment of new educators
- LCME accreditation (full)



# Our Students Are Active in Research

**Approximately 75% of MCG students participate in research projects.**

## Medical Student Research 2010-2016



### The Augusta Chronicle

Posted March 4, 2017 09:36 pm - Updated March 4, 2017

By Tom Corwin

Staff Writer

MCG student seeking answers to mysterious kidney disease killing men in Nicaragua



Posted September 26, 2016 11:45 pm - Updated September 27, 2016

By Tom Corwin

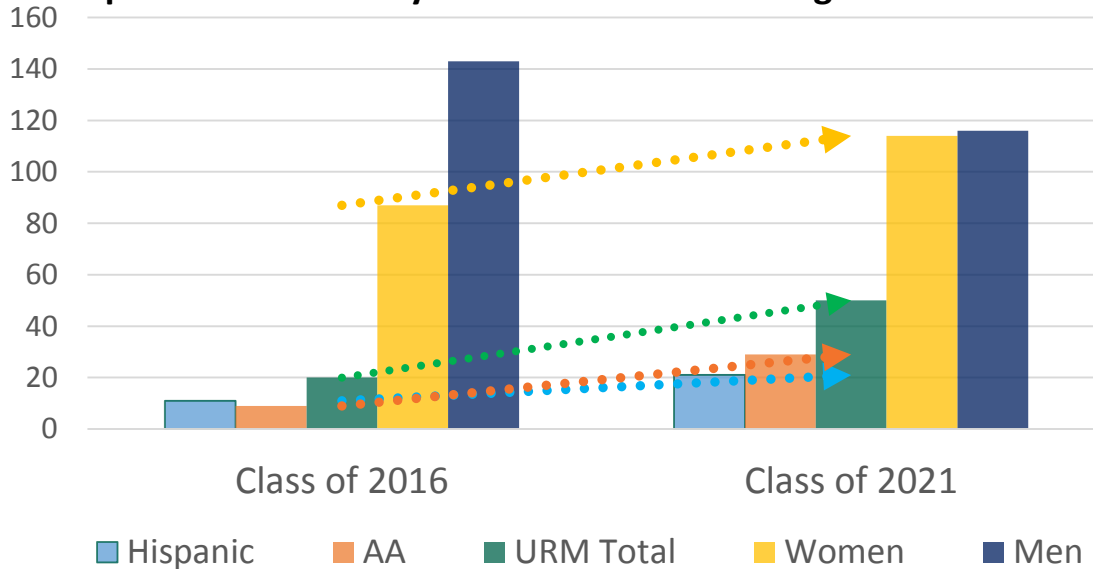
Staff Writer

MCG students research dialysis maladies



# Medical Student Diversity

Comparison of Diversity in MCG Classes Entering in 2012 and 2017



Growth in number of individuals historically underrepresented in medicine entering MCG- Percent increase from 2012 and 2017:

- Hispanic/Latino: **91%**
- AA: **222%**
- Total URM: **150%**
- Female: **31%**

AAMC

Table 20B. U.S. Medical Schools by Number of Black or African-American Matriculants ( $\geq 10$ ), 2015

Medical School	Black Matriculants
Meharry Medical College, TN	75
Howard University College of Medicine, DC	68
Morehouse School of Medicine, GA	59
University of Illinois College of Medicine, IL	35
Medical College of Georgia at Augusta University, GA	34
Indiana University School of Medicine, IN	33
New York Medical College, NY	25





# 2017 Medical Student Match

- Match rate above national average
- Students matched to programs in 38 states
- 28% of the class will remain in Georgia
- 17% staying at AUHealth/ MCG or affiliated residencies
- 49% entering primary care specialties



# Physician Workforce Development: We Are the Largest MD-Resident Provider in GA

	Emory	MCG	Mercer	Morehouse	PCOM - GA	Overall
Total Graduates	128	223	102	57	116	626
Total Graduates Entering GME	125	223	100	55	114	617
Entering Primary Care/Core Specialties	73 (58%)	150 (67%)	66 (66%)	39 (71%)	66 (58%)	394 (64%)
Graduates Staying in GA Residency	23%	28%	28%	13%	17%	23%

**In 2016 MCG graduated more physicians going into primary care and core specialties (family medicine, internal medicine, pediatrics, OB/BYN, emergency medicine, general surgery) than any other medical school in the State of Georgia by more than double.**



# Georgia's Health Status

## *“Global Health is in Our Backyard”*

- Ranked **41** out of 50 states for overall health<sup>1</sup>
- Ranked **46** in nation for state health system performance<sup>2</sup>
- Ranked **43** for infant mortality (increased 9% 2015-16) and 47 for low birth weight<sup>1</sup>
- Ranked **41** in nation for stroke<sup>1</sup>
- Ranked **36** for cardiovascular deaths<sup>1</sup>
- Ranked **35** for adult diabetes<sup>1</sup>
- Ranked **44** in nation for clinical care<sup>1</sup>

### New Task Force on Improvement of Overall Health Status for Georgia



**Denise Kornegay**  
*Associate Dean, Area Health Education Centers*

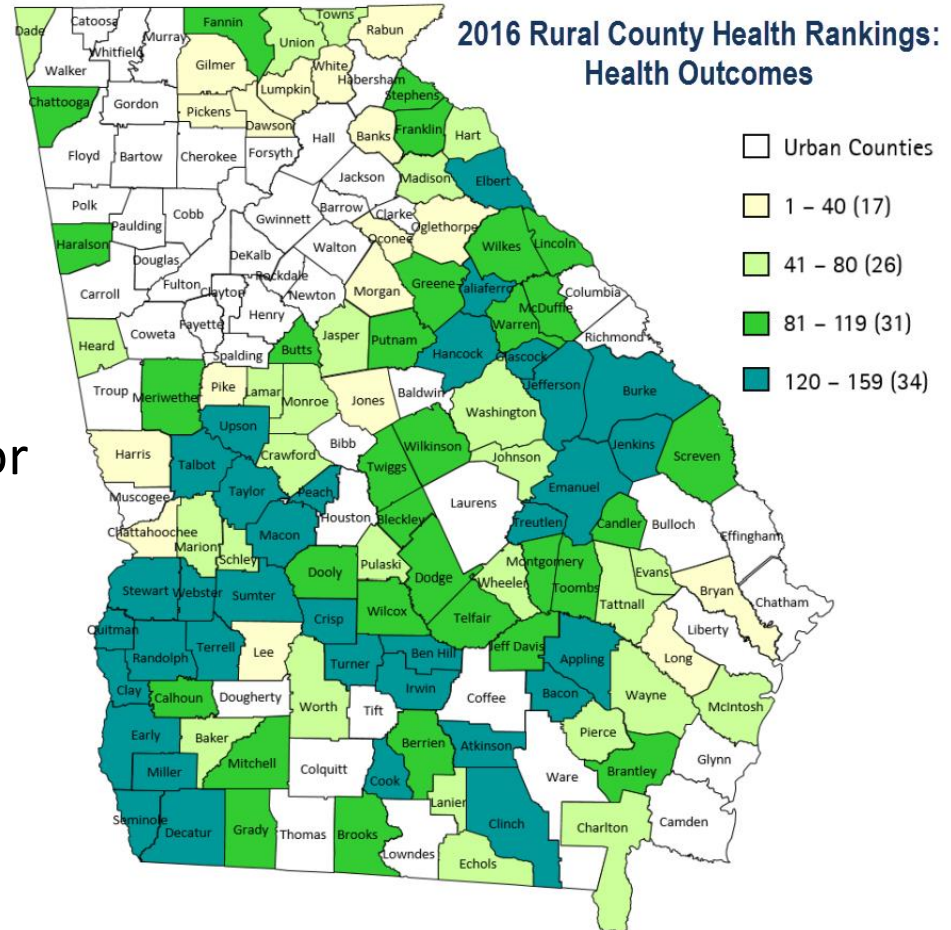


**Dr. Doug Patten**  
*Campus Associate Dean, Southwest Campus*



# Rural Georgia Impacted Most

- 108 of Georgia's 159 counties are rural<sup>1</sup>
- 101 rural counties have death rate above state average<sup>2</sup>
- Georgians in rural areas disproportionately experience poor outcomes; worst health outcomes for 34 counties<sup>2</sup>
- Rural counties have higher instances of cancer, heart disease, and stroke related deaths<sup>2</sup>
- Increased prevalence of chronic conditions, e.g. diabetes<sup>2</sup>

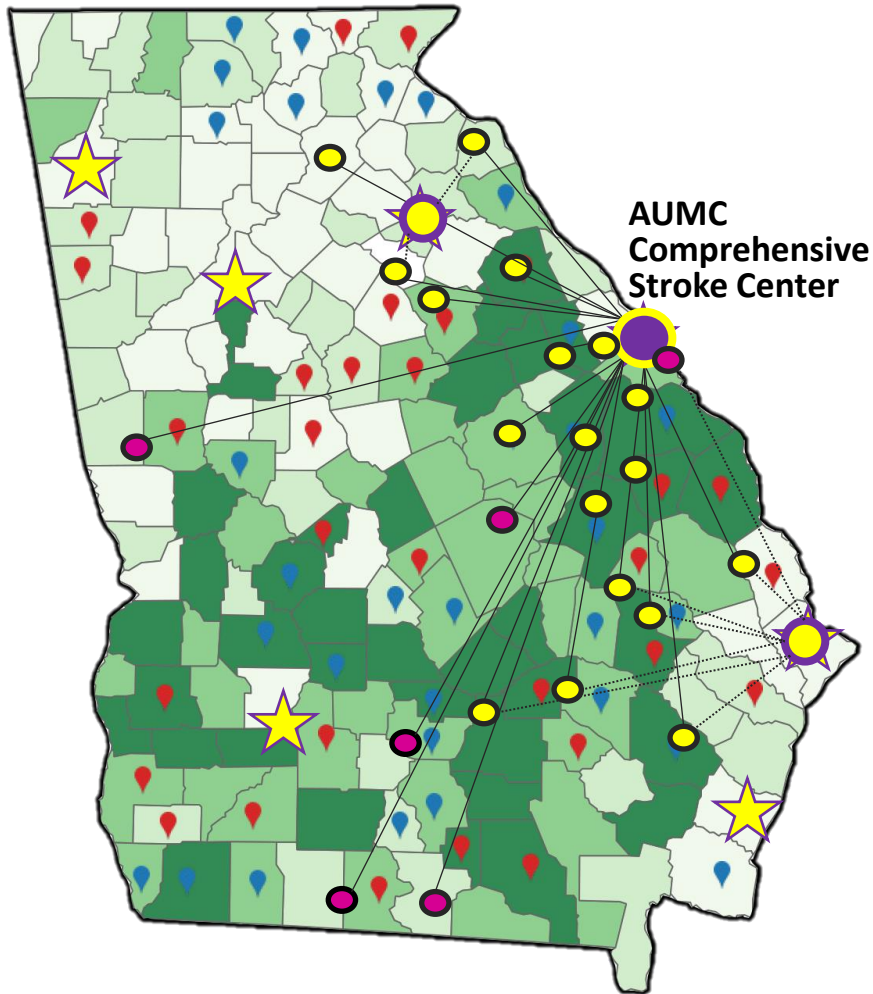


<sup>1</sup>Georgia State Office of Rural Health

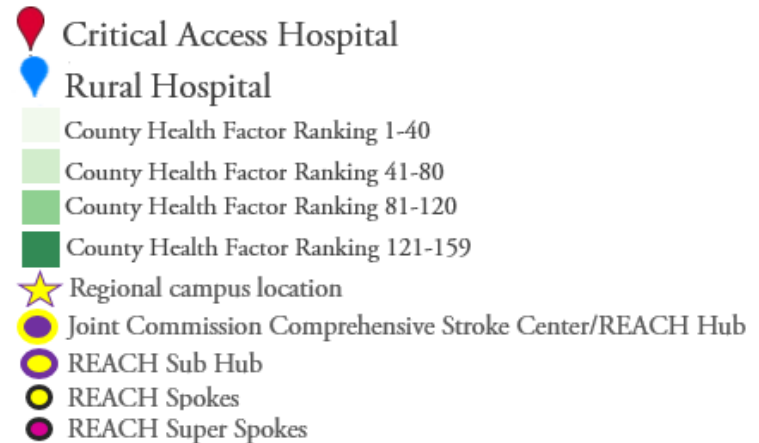
<sup>2</sup>Georgia Public Health Association



# The Two Georgias: Rural Health Care



- Majority of rural/critical access hospitals are located in counties ranked in the bottom 50%
- Populations in these counties have more health challenges

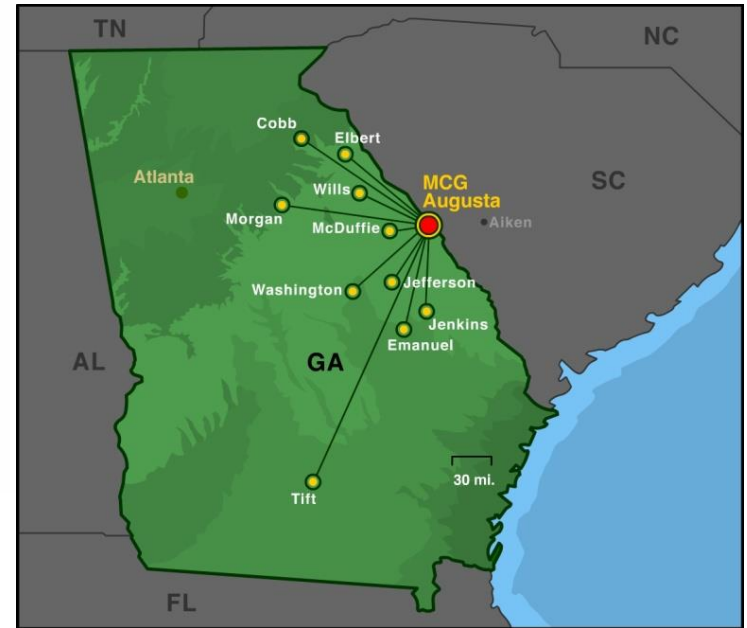
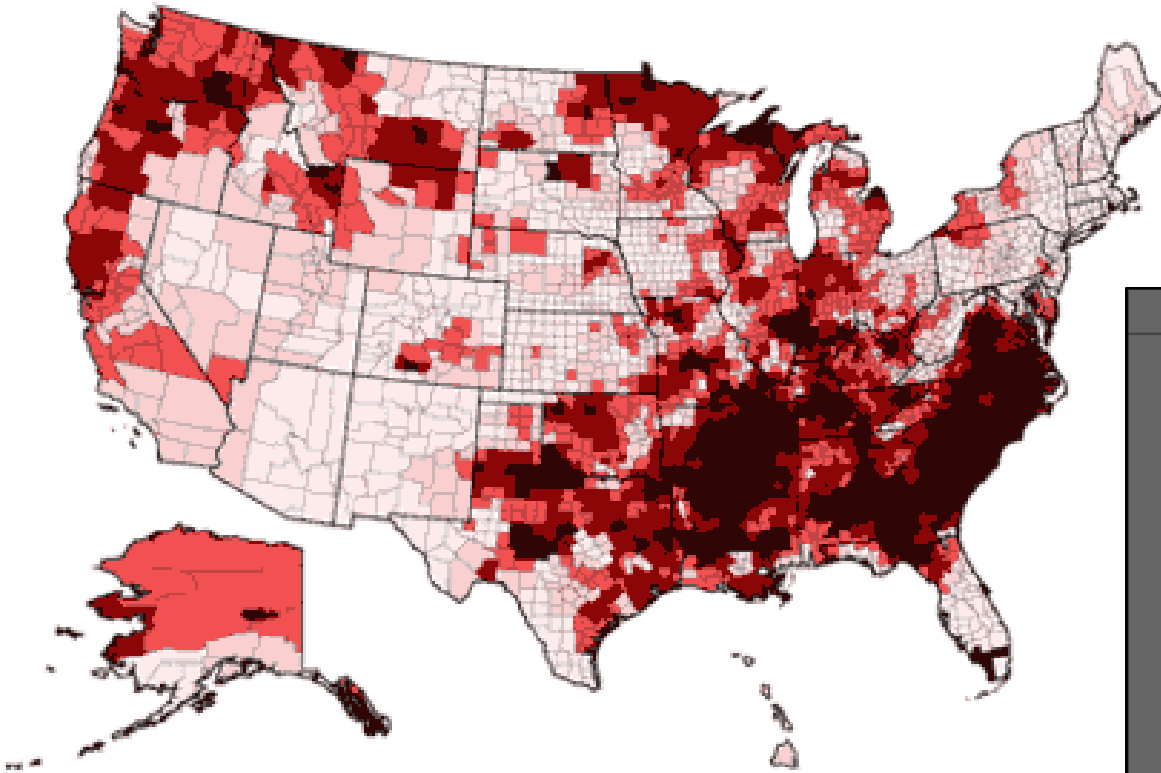


# A Case Study of Telestroke for Rural GA

- The MCG REACH Telestroke network was the first rural telestroke system in the US and the world
- Established in 2003 at Emanuel County Hospital and McDuffie Regional
- Have treated over 1200 patients with tPA in GA
- Spun out company, REACH Health, Inc., headquartered in Alpharetta, GA



# *U.S. Stroke Belt*



Source: US Census Bureau Postcensal Population Estimates (IDC9 430-438.9) (1991-1995)

# Front Page of Wall Street Journal

Tragic case of young stroke victim taken to the “wrong hospital”

## *Fatal Blockages*

### Stroke Victims Are Often Taken To Wrong Hospital

Outdated Ambulance Rules, Inadequate ERs Make Dangerous Ailment Worse

#### Lessons From Trauma Centers

By THOMAS M. BURTON

Christina Mei suffered a stroke just before noon on Sept. 2, 2001. Within eight minutes, an ambulance arrived. Her medical fate may have been sealed by where the ambulance took her.

Ms. Mei's stroke, caused by a clot blocking blood flow to her brain, occurred while she was driving with her family south of San Francisco. Her car swerved, but she was able to pull over

before slumping at the wheel. Paramedics saw the classic signs of a stroke: The 45-year-old driver couldn't speak or move the right side of her body.

Had Ms. Mei's stroke occurred a few miles to the south, she probably would

#### By the Numbers

- **How many:** 700,000 strokes a year in the U.S., 164,000 of them fatal
- **Rankings:** No. 1 cause of disability, No. 3 cause of death
- **Types:** 80% or more caused by artery blockage, up to 20% by burst blood vessels
- **Death rate:** About 1 in 10 clot-caused strokes results in death within 30 days, compared with 1 in 3 hemorrhagic strokes
- **Warning signs:** 14% of people who have strokes or “mini-strokes” have another within one year

Sources: American Stroke Association; WSJ research

have been taken to Stanford University Medical Center, one of the world's top stroke hospitals. There, a neurologist almost certainly would have seen her quickly and administered an intravenous





# Many/Most U.S. Hospitals NOT Treating Stroke Patients With IV tPA

- MEDPAR database revealed that **64%** of US hospitals did not treat a single Medicare patient with tPA over a 2 year period
- (Kleindorfer D, Stroke, 2009;40:3580)

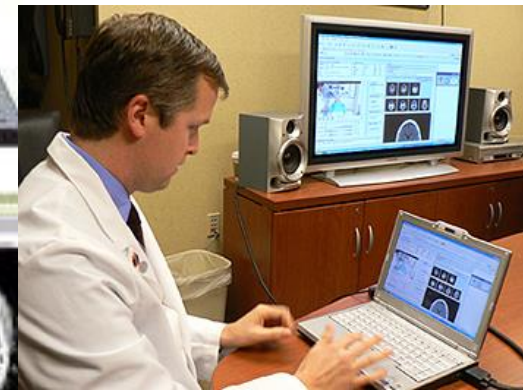
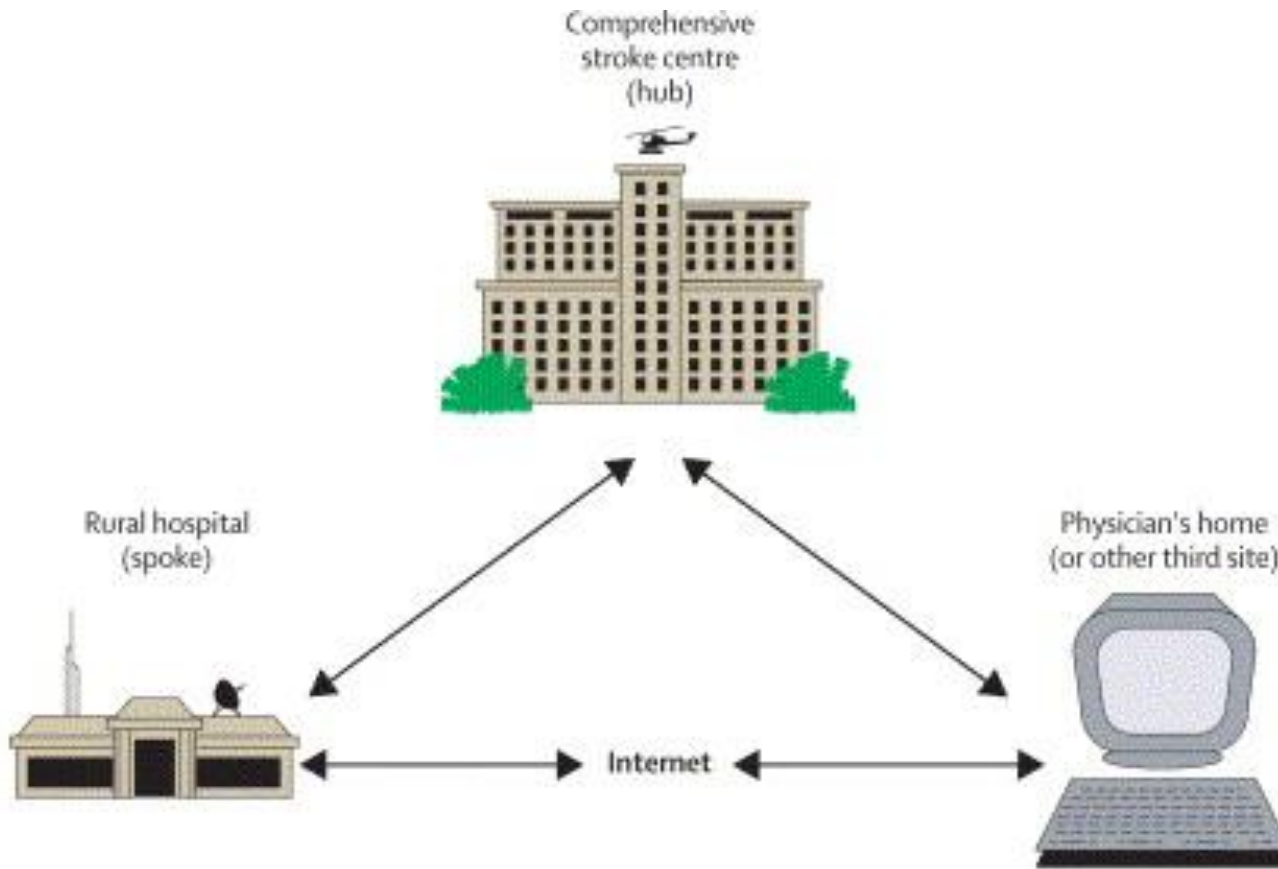
Bed size, region, and population density associated with low tPA usage

	Univariate Mean Rt-PA Treatment Rate (95% CI)*	Multivariable Regression	
		$\chi^2$	P Value
Bed size (# of beds/hospital)		397.9	<0.001
<50	0.3% (0.2% to 0.4%)		
50-200	1.1% (1.0% to 1.2%)		
>200	2.6% (2.4% to 2.8%)		
Region of United States		53.2	<0.001
Midwest	2.0% (1.7% to 2.2%)		
Northeast	2.7% (2.3% to 3.1%)		
South	1.8% (1.6% to 2.1%)		
West	2.5% (2.1% to 2.9%)		
Population density (persons/sq. mile)		21.3	<0.001
<50	0.9% (0.7% to 1.1%)		
50-500	1.7% (1.6% to 1.9%)		
>500	2.7% (2.5% to 3.0%)		

\*Means are weighted by the total No. of stroke admissions to the hospital during the study period.



# REACH Hub & Spoke Telestroke Model



# Elderly woman with sudden onset of inability to speak, right sided paralysis

- 88 yo WF with hx of High blood pressure and pacemaker
- Develops sudden onset of aphasia and right sided weakness at 11:45 am
- Arrives at community hospital (JC Primary Stroke Center) at 12:25 pm
- Evaluated by “telestroke”: NIHSS of 24 –Global aphasia and right hemiparesis





# Telestroke Consultation

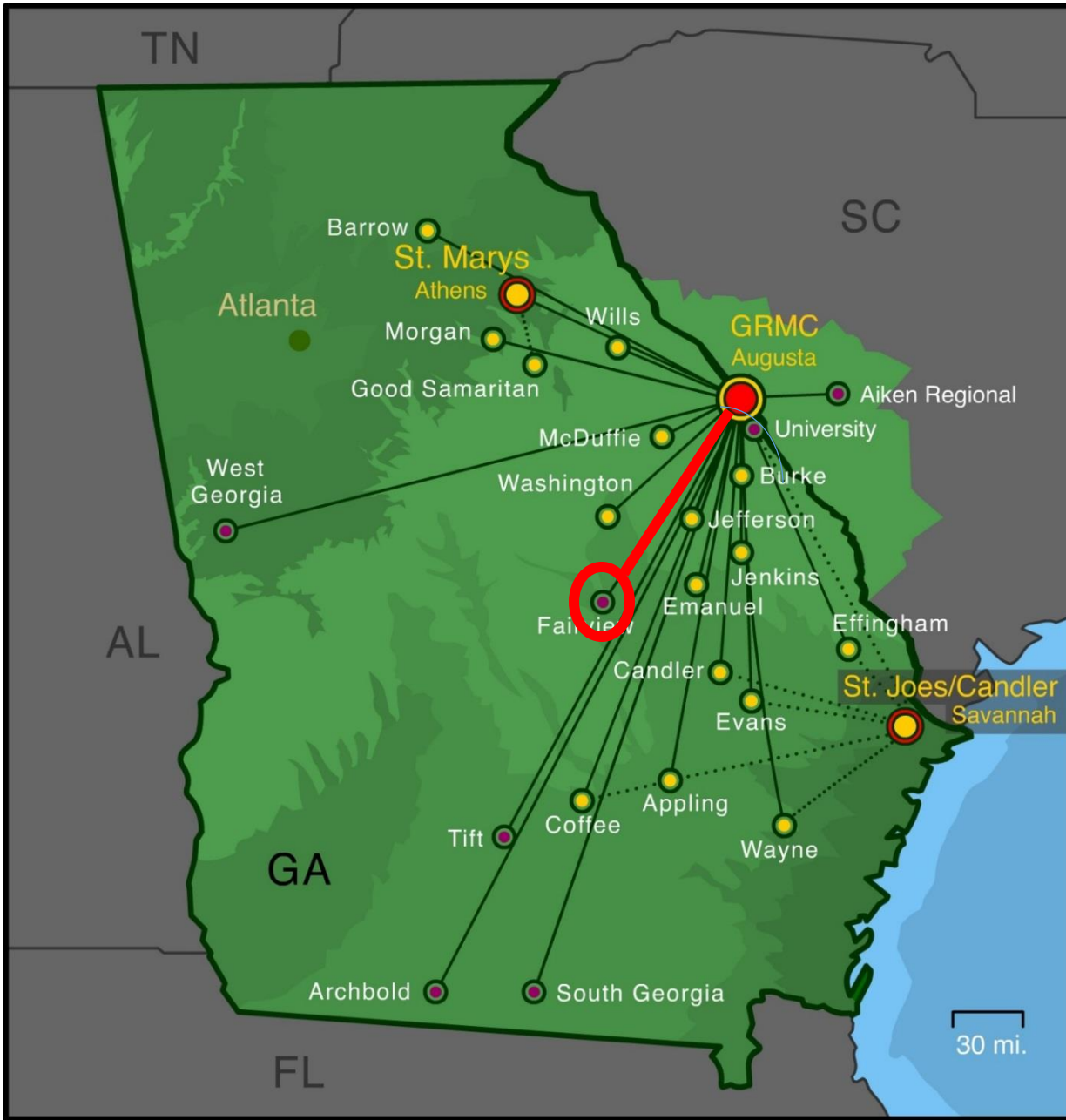
- Treated with IV tPA at 1:15 pm (90 minutes from symptom onset)
- Next decision: is she an endovascular thrombectomy candidate? YES



# Transfer to CSC

- Transferred by helicopter to AUHealth Joint Commission Certified Comprehensive Stroke Center (CSC) for consideration **of mechanical thrombectomy**
- Arrives to CSC- AUMC. NIHSS of 18
- CT angiogram done

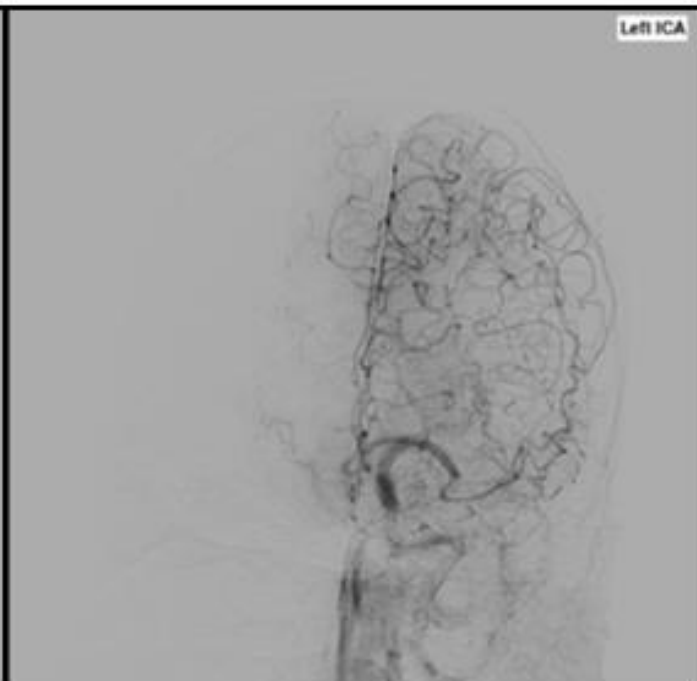




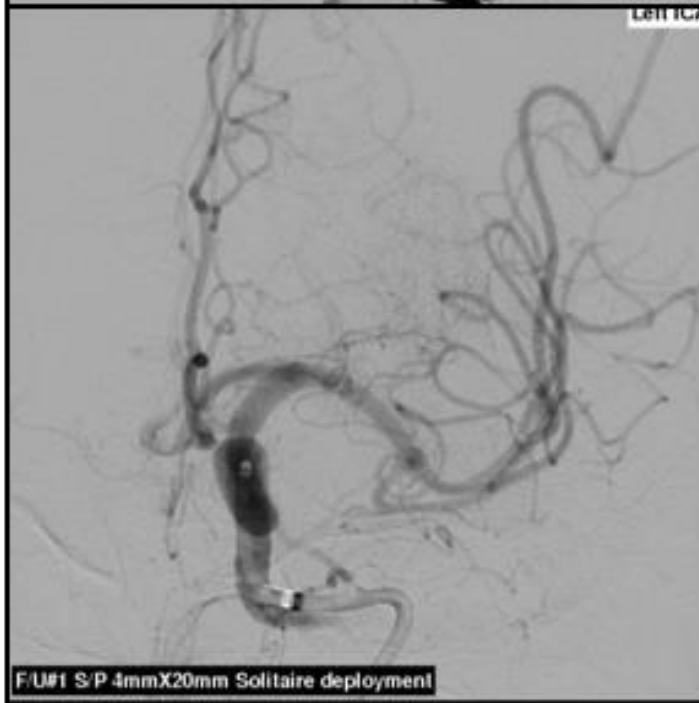
Left ICA



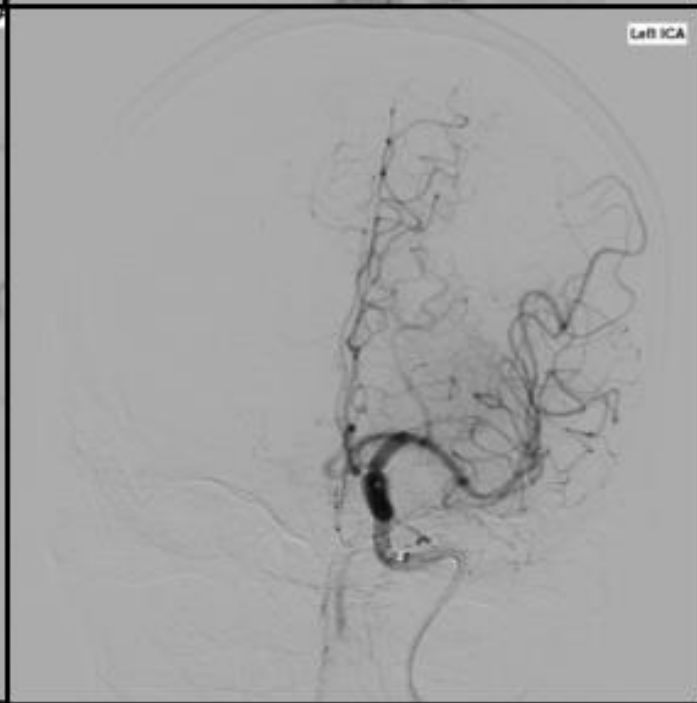
Left ICA



Left ICA



Left ICA



F/U#1 S/P 4mmX20mm Solitaire deployment



# Follow Up

- Recovers speech and language
- Right side strength improves
- Found to have atrial fibrillation
- Started on apixaban
- Inpatient rehab back in the Primary Stroke Center Rehab facility



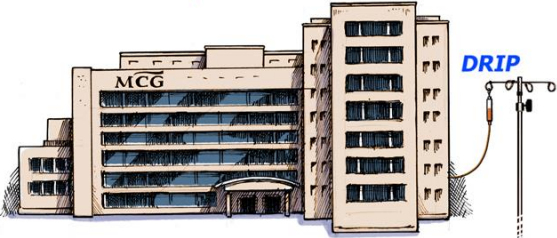
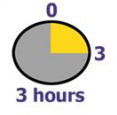
# Ship and Drip



(100 bed facility)



SHIP



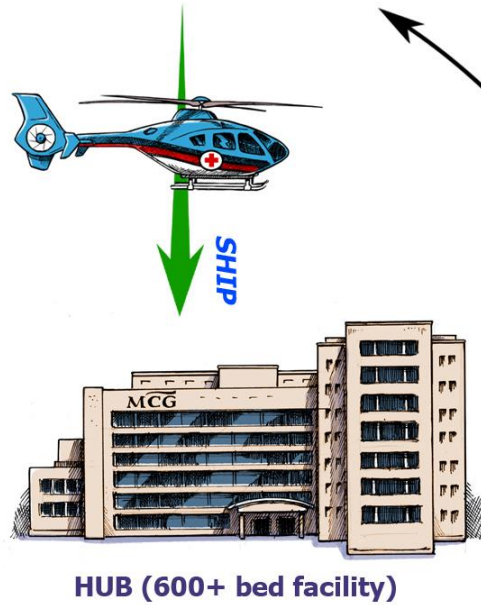
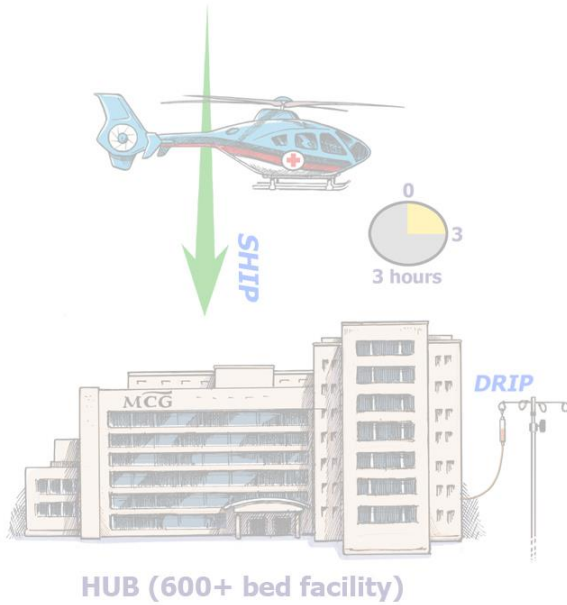
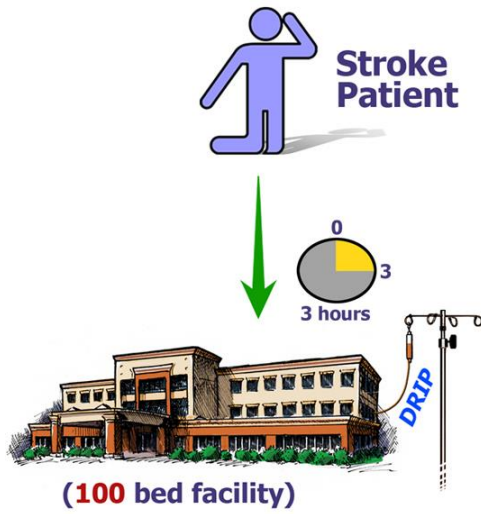
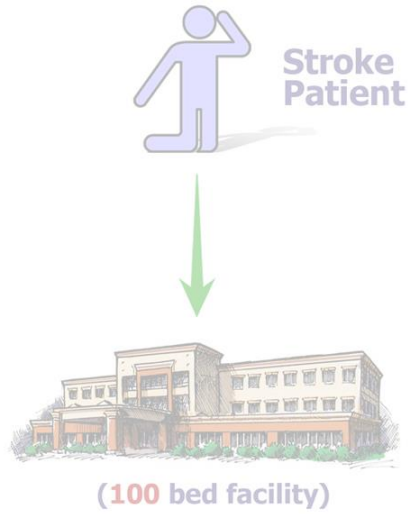
HUB (600+ bed facility)



**Ship and Drip**

vs.

**Drip & Ship**



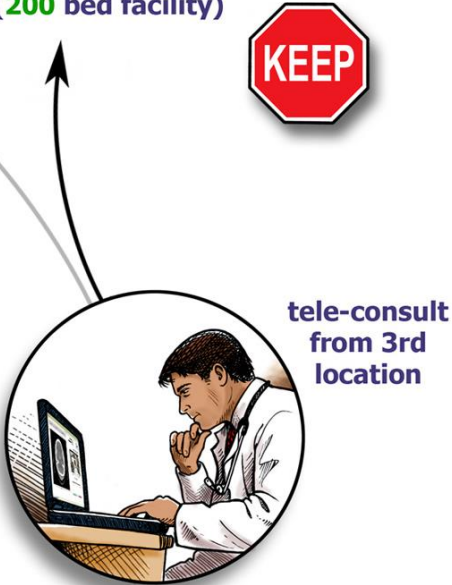
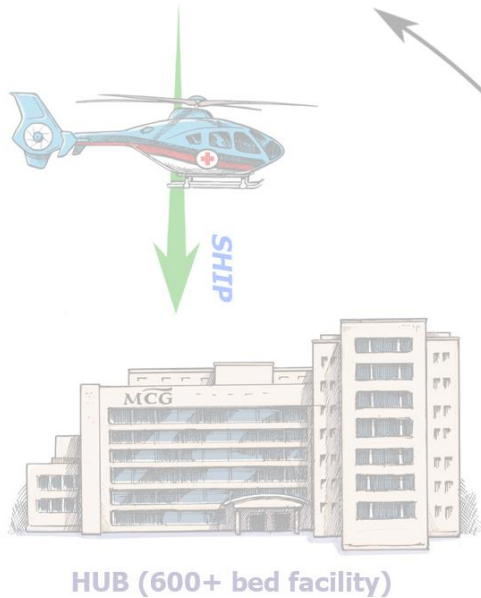
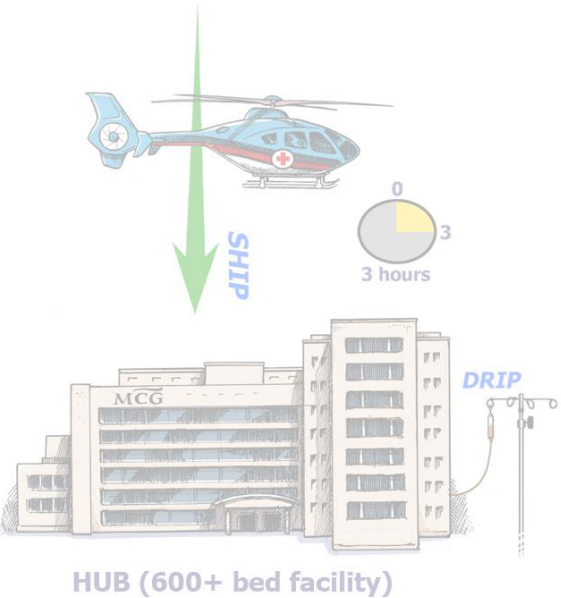
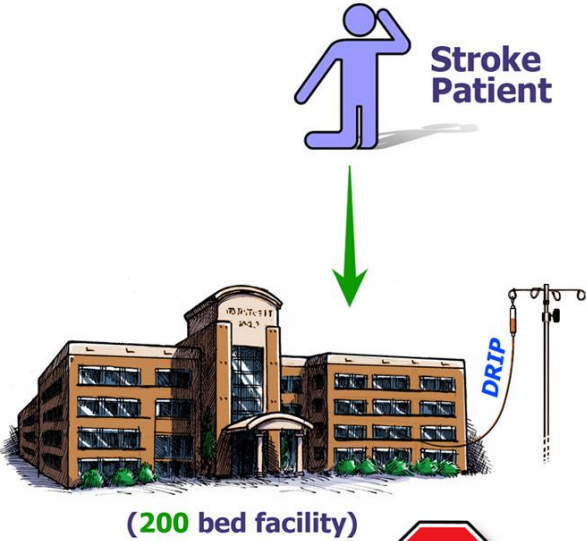
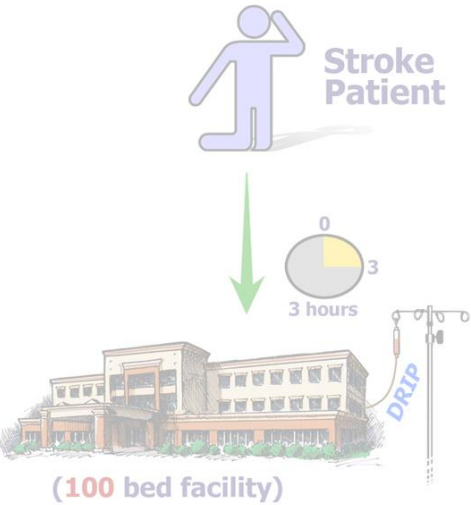
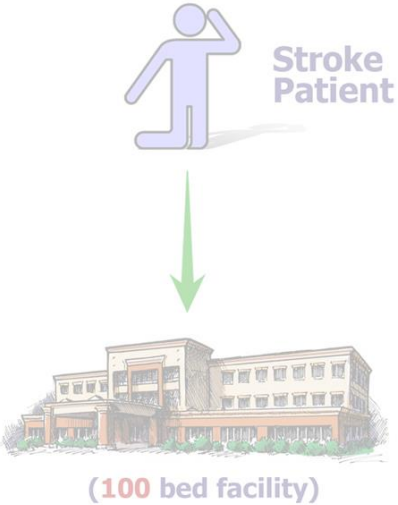
**Ship and Drip**

vs.

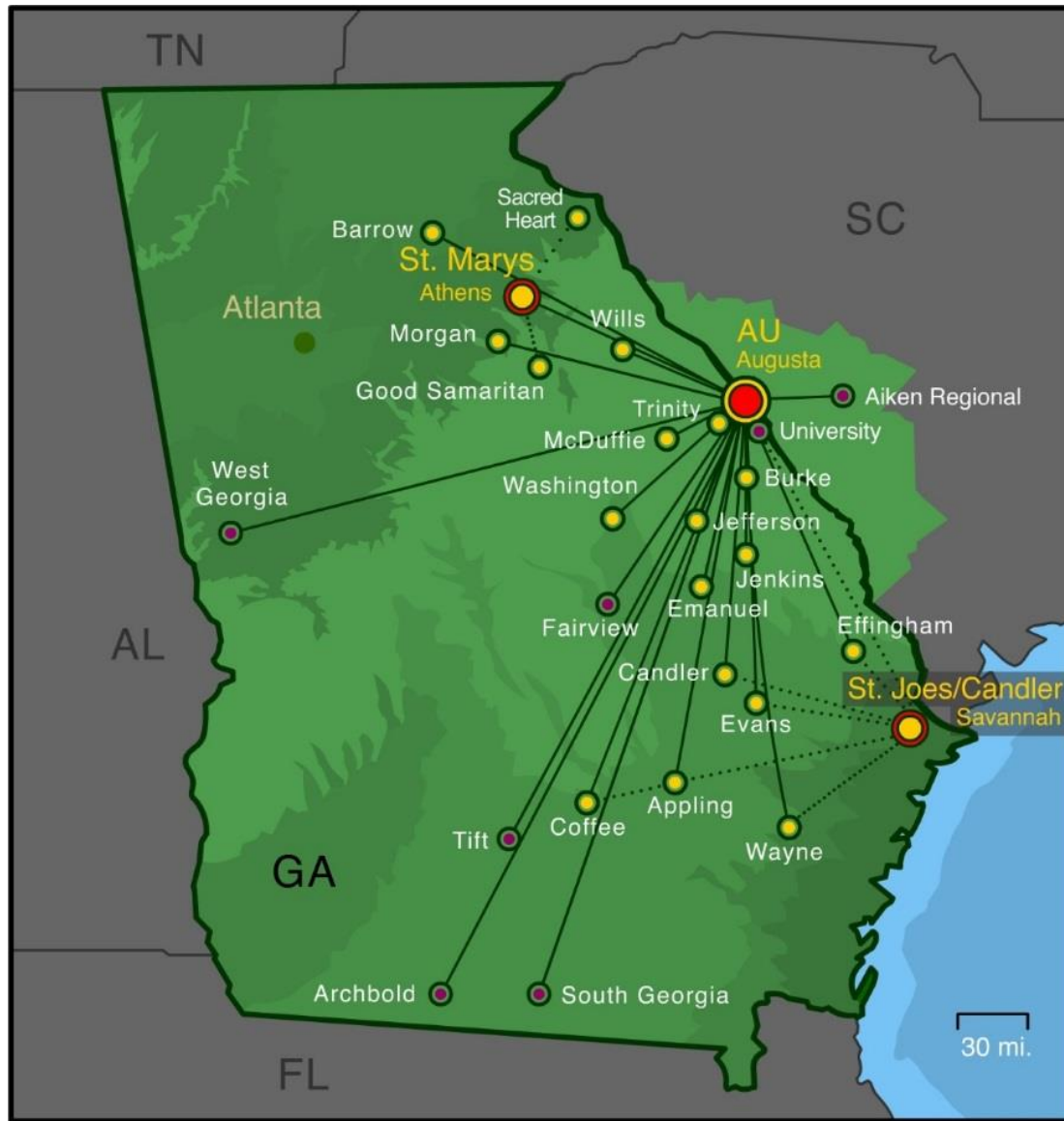
**Drip & Ship**

vs.

**Drip & Keep**



# MCG-AU Health Multi-Hub and Spoke Network



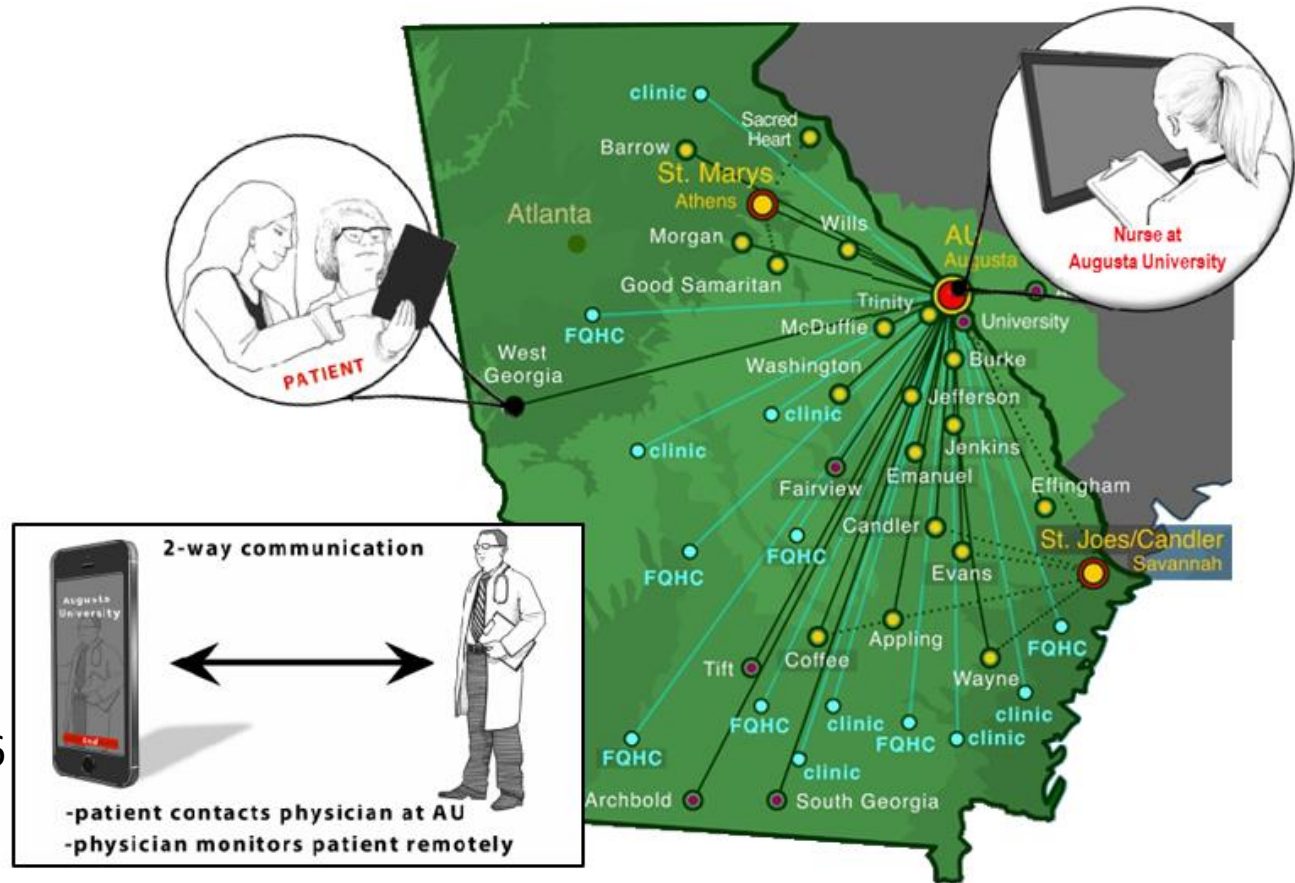
# “It’s the Human Factors”



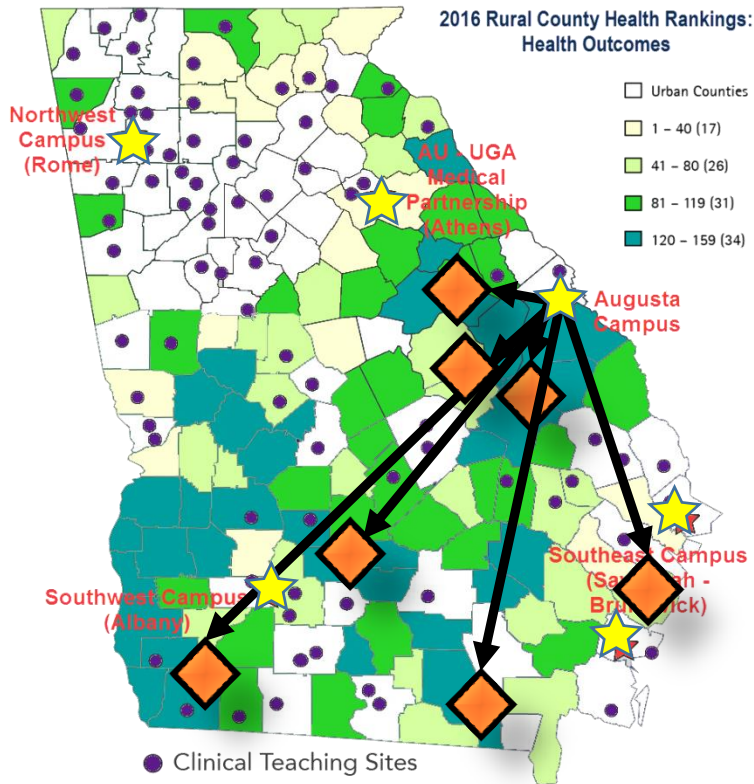
- Importance of Education and Training
- A “Spoke Champion”: usually a nurse

# Helping Rural Georgia Through Telemedicine

- We have the supply:  
Richmond County #1 in State in Physicians in Internal Medicine, Surgery, Ob/GYN and #2 in Pediatrics and AU one of largest group of SPECIALISTS in state (GBPW 2014-15)
- Estimated 17% of E/M visits by telehealth in Columbia County in 2026
- There are too few specialists in rural Georgia



# A Great Idea: Interprofessional Collaboration Between College of Nursing and Our Emergency Department



- Lack of ED coverage in rural hospitals
- Recruit DNP (Nurse Practitioner) from rural area
- One year DNP residency in rural ED
- Telemedical support from MCG/AU ED
- DNP staffs ED post-residency with AU ED support





# Statewide Focus

- Community and rural hospitals
- Rural health initiatives for medical students
- Interprofessional care with AU College of Nursing, AU College of Allied Health Sciences, and UGA College of Pharmacy
- Enhance access to complex care
- New ways to address healthcare needs of Georgia, e.g. REACH, telehealth, remote care



# Regional Campus Impact on Rural Health

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## Pre-Medical

- MCG's Student Educational Enhancement Program (SEEP) provides supplemental academic preparation for students from under-represented social and racial segments of Georgia, many of whom come from the poor and rural communities served by the Southwest (SW) Campus
- MCG's early decision process identifies applicants for early decision who make a commitment to attend the SW Campus for their clinical experience

## Pre-Clinical

- MCG students from the rural counties of the SW Georgia who choose the SW Campus are eligible for scholarships made possible by generous donors, including some MCG Alumni
- SW Campus leadership are engaged with MCG students in their first and second years of medical school, augmenting their public health experience to include a focus on health disparities in rural Georgia.

## Clinical

- Augusta students are also increasing their participation in clinical training in SW Georgia, expanding the rural exposure to a larger segment of each class
- Core clerkships and many of the electives are offered at sites all across the SW Campus including small and rural communities

## Certificate for Rural Health

- SW Campus offers a Certificate of Rural Health for students who complete a course of study that can begin in their pre-clinical years, and extend through their clinical experience. Areas of focus include assessment of community health needs and identification of key stakeholders who are addressing these needs, service learning experiences in small and rural community settings, collaborative learning with county and district level public health, mentoring opportunities for students in these rural and underserved communities, and the role of physicians as leaders of overall health improvement strategies.



# Certificate of Rural Community Health Program

- Based at SW Clinical Campus in Albany
- Course work/other requirements completed throughout all 4 years of medical school
- Students earn 15 hours towards MPH degree
- Optional 5<sup>th</sup> year for those wishing to complete MPH
- Program designed to:
  - Provide students with basic knowledge and tools to investigate and determine solutions to rural health issues
  - Create support network among students and physicians in rural areas
  - Keep students from rural areas connected to their roots and increase likelihood that they will return to practice



# Rural Hospital Task Force

- Stability of Georgia's rural hospitals is an institutional priority
- Center of Rural Health established
- Recommendations include:
  - Developing a model of clinical integration with select rural hospitals
  - Creating and enhancing academic programming and continuing education
  - Strengthening and **expanding telehealth**



# Georgia Statewide AHEC Network

**Mission: Support the recruitment, training and retention of a diverse health professions workforce throughout Georgia.**

**RECRUIT:** expose students to health careers and develop intent to pursue post-secondary education in primary healthcare professions.



**26,525**  
total participants in **604** regional  
AHEC activities and programs

**788**  
participants in Intensive Health  
Careers Programs (20+ hours)

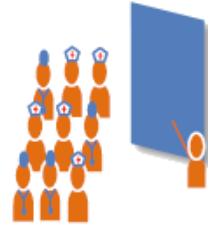
**TRAIN:** improves readiness, willingness, and ability of health professions trainees to serve in primary care, and rural and underserved community settings.

facilitated  
**4,302**  
total student  
rotations

**2,471**  
total health professions students with **683,902** hours  
of community-based clinical education/ training

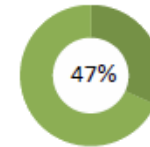
- **2,158** medical rotations
- **2,144** associated health professions rotations

Supported **Travel** and **Housing** for **3,222** rotations



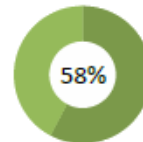
**RETAIN:** address key issues in health professional shortage areas by providing health professionals with access to resources that support practice, reduce professional isolation, disseminate best practices, and improve quality of healthcare for medically underserved communities and health disparities populations.

**4,422**  
continuing education participants

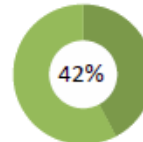


Provided **17,330** CME/CEU  
credit hours

indicated hours were necessary to  
meet clinical licensure requirements



*Clinical training rotations provided in a  
Primary Care Setting*



*Clinical training rotations provided in a  
Non-Primary Care Setting*

Provided health careers, clinical training, or continuing education services to **12,675** minority students, residents, trainees, or practicing health professionals.



# Thank you.

