



NATIONAL CONSORTIUM OF
TELEHEALTH
RESOURCE CENTERS

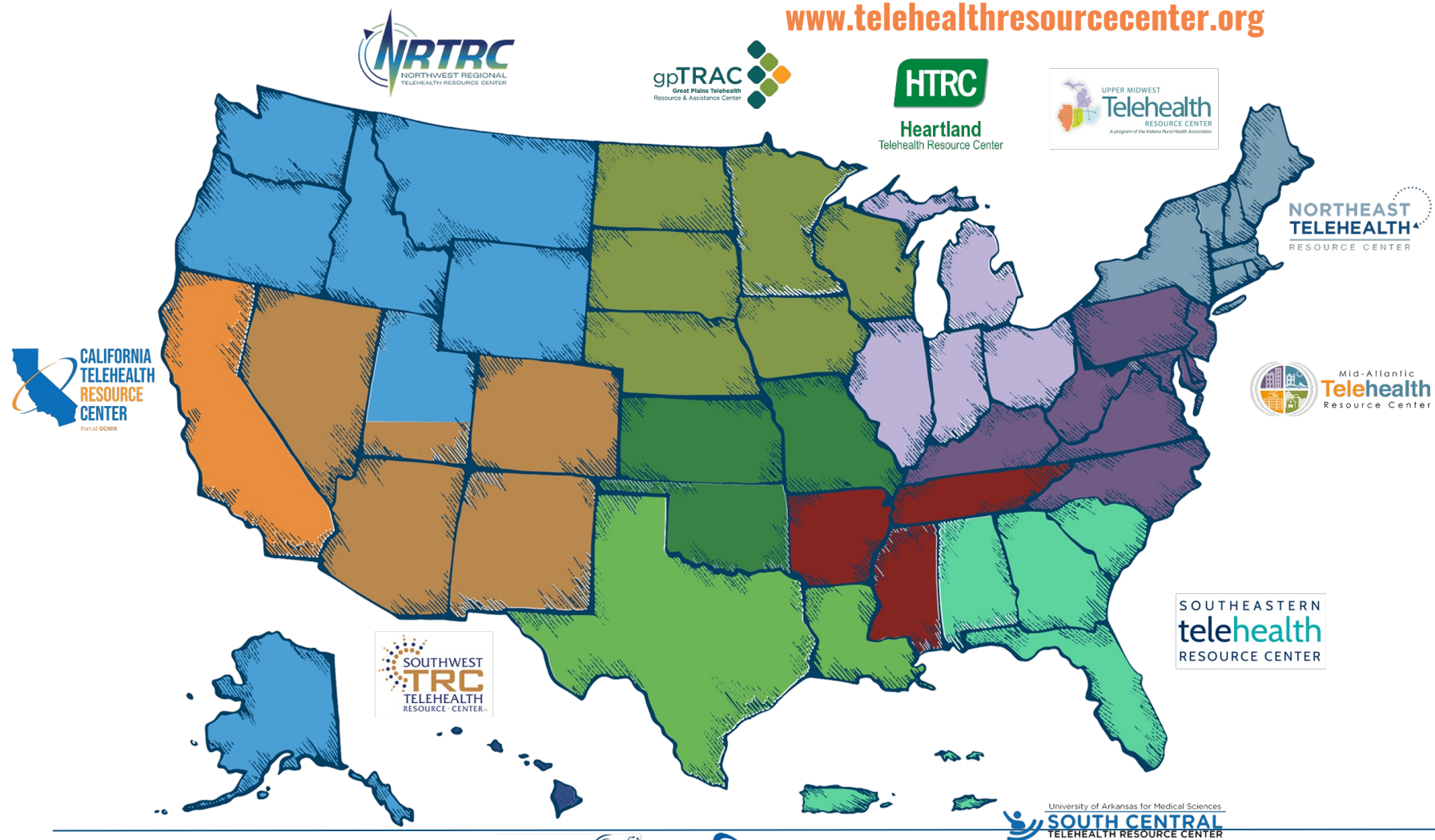
The Southern Regional Disaster Response System (SRDRS) – A Comprehensive Overview

October 19, 2023



HRSA Funded Telehealth Resource Centers

www.telehealthresourcecenter.org



NRTRC	gpTRAC	NETRC
CTRC	HTRC	UMTRC
SWTRC	SCTRC	MATRC
PBTRC	TexLa	SETRC
12 REGIONAL RESOURCE CENTERS		

 TTAC TelehealthTechnology.org	 CCHP
2 NATIONAL RESOURCE CENTERS	



Copyright 2023 © National Consortium of Telehealth Resource Centers



Webinar Tips and Notes

- Your phone &/or computer microphone has been muted.
- If we do not reach your question, please contact your regional TRC. There may be delays in response time:
<https://telehealthresourcecenter.org/contact-us/>
- Please fill out the post-webinar survey.
- Closed Captioning is available.
- Please submit your questions using the Q&A function.
- The webinar is being **recorded**.
- Recordings will be posted to our YouTube Channel:
<https://www.youtube.com/c/nctrc>



The Southern Regional Disaster Response System: A Comprehensive Overview

October 19, 2023

AGENDA

Emory Rural Tele-EMS Network – Dr. Michael Carr

Emory Tele-Observation Services – Dr. Michael Ross

Wellstar MCG Health Tele-Critical Care Services – Dr. Matt Lyon

The SRDRS Initiative – Dr. Alex Isakov

Q&A/Discussion

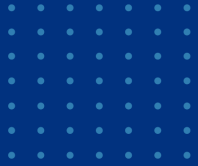


NATIONAL CONSORTIUM OF
TELEHEALTH
RESOURCE CENTERS



Southern Regional Disaster
Response System

HHS Region 4



The Emory Rural Tele-EMS Network

And the Southern Regional Disaster Response System

Michael J. Carr, MD FACEP FAEMS

Assistant Professor, Emory University School of Medicine

Department of Emergency Medicine, Section of Prehospital and Disaster Medicine

Principal Investigator / Director, Emory Rural Tele-EMS Network

Email: michael.j.carr@emory.edu



EMORY
UNIVERSITY
SCHOOL OF
MEDICINE

Prehospital and
Disaster Medicine
Department of
Emergency Medicine



ER-TEMS

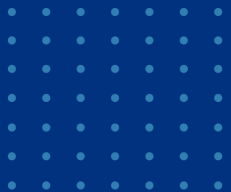
EMORY RURAL TELE-EMS NETWORK

Disclosure



"The Emory Rural Tele-EMS Network is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of a financial assistance award totaling \$1.2 million with 100 percentage funded by HRSA/HHS and zero percentage funded by non-government source(s). The contents are those of Emory University and do not necessarily represent the official views of, nor an endorsement, by HRSA/HHS, or the U.S. Government."





Just 5 THINGS



Just 5 THINGS

1

OUR "WHY":

PROBLEM?
PATIENTS?
METRICS &
MEASUREMENTS?

2

SOFTWARE, EQUIPMENT, & CONNECTIVITY:

VENDOR
RELATIONSHIPS?
HARDWARE
SOLUTIONS?

3

SUSTAINABILITY PLAN:

FINANCIAL
VIABILITY?
GRANT FUNDING?
ADAPTABLE?
MULTI-USE?

4

SOUTHERN REGIONAL DISASTER RESPONSE

FLEX DAILY USE MODEL
SUPPORT LOCAL DISASTER

5

THE VISION FOR ER-TEMS / SRDRS INTEGRATION

EMERGENCY
PHYSICIANS &
SPECIALTY
CONSULTATION



Just 5 THINGS

1

OUR WHY:

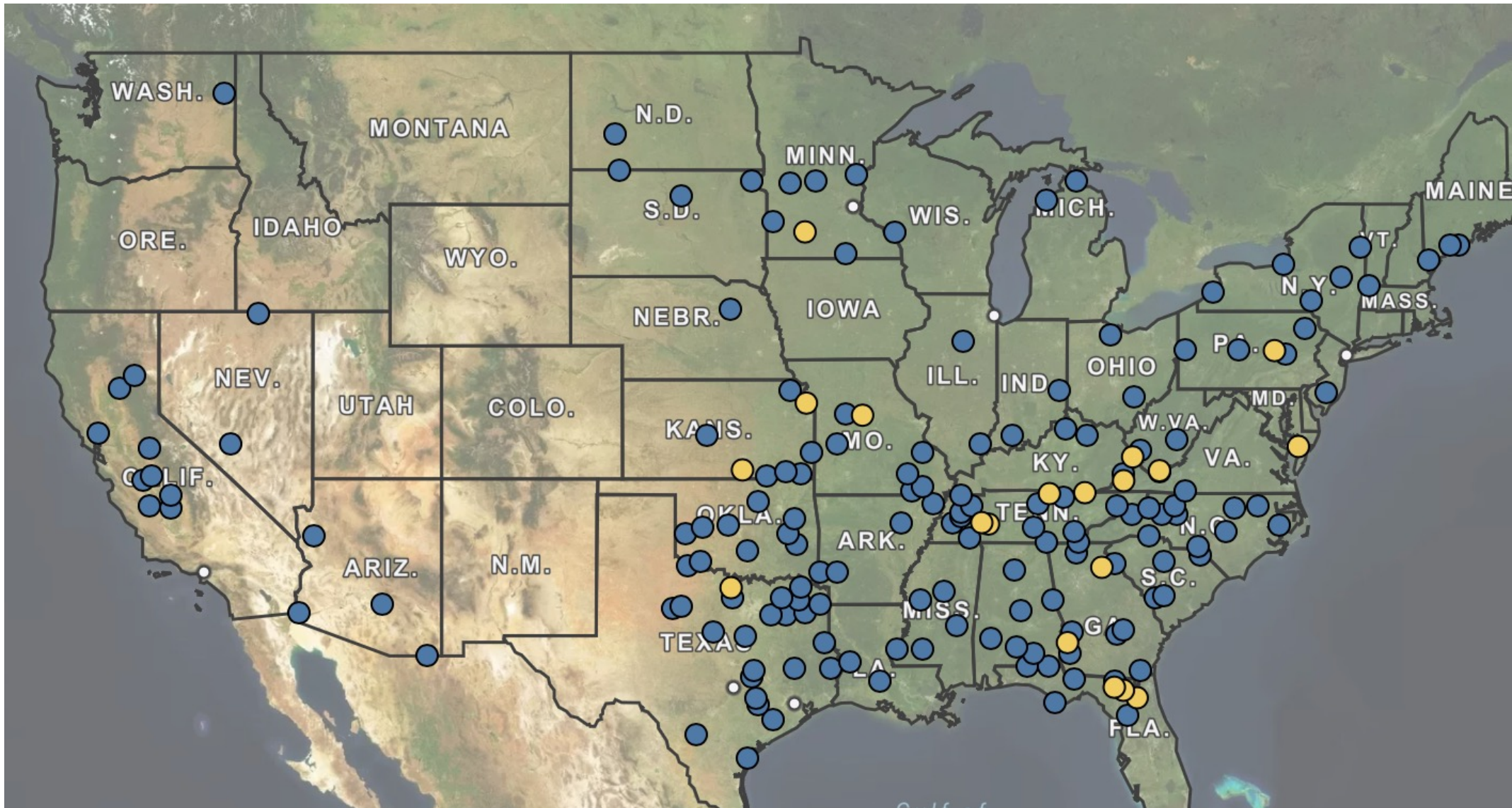
WHAT'S OUR:

- Problem?
- Population?
- What will we measure?
- Start up?

1 - FIND YOUR WHY

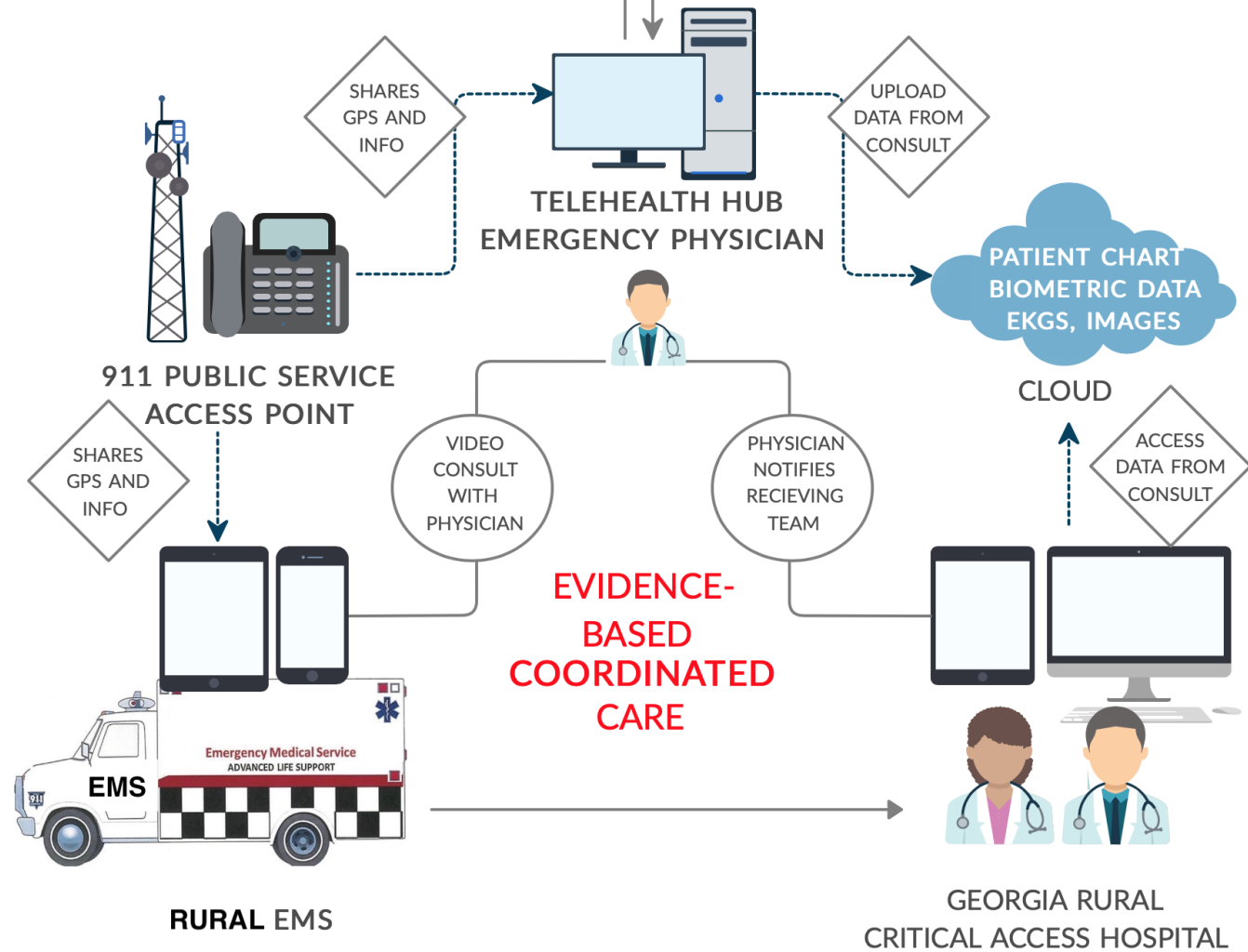


Rural hospital closures since 2005 (180+)



Credit: UNC Cecil G. Sheps Center for Health Services Research

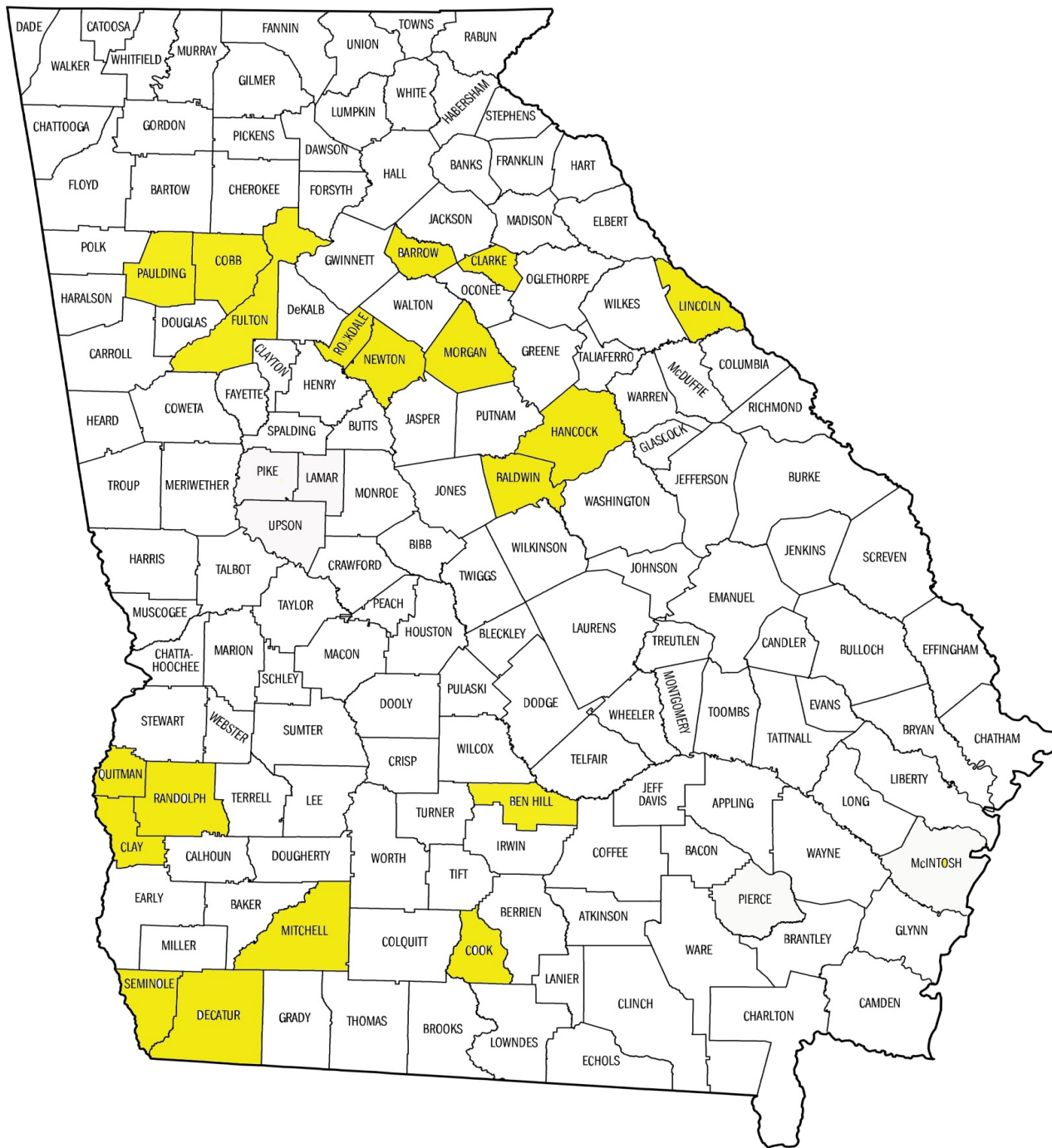




PROVIDE EARLY INTERVENTION TO TIME-SENSITIVE
CONDITIONS WITH PROVEN OUTCOME BENEFIT

- CARDIAC ARREST
- LABOR AND DELIVERY
- STEMI
- SERIOUS COMMUNICABLE DISEASE
- STROKE
- TRAUMA
- SEPSIS

GEORGIA

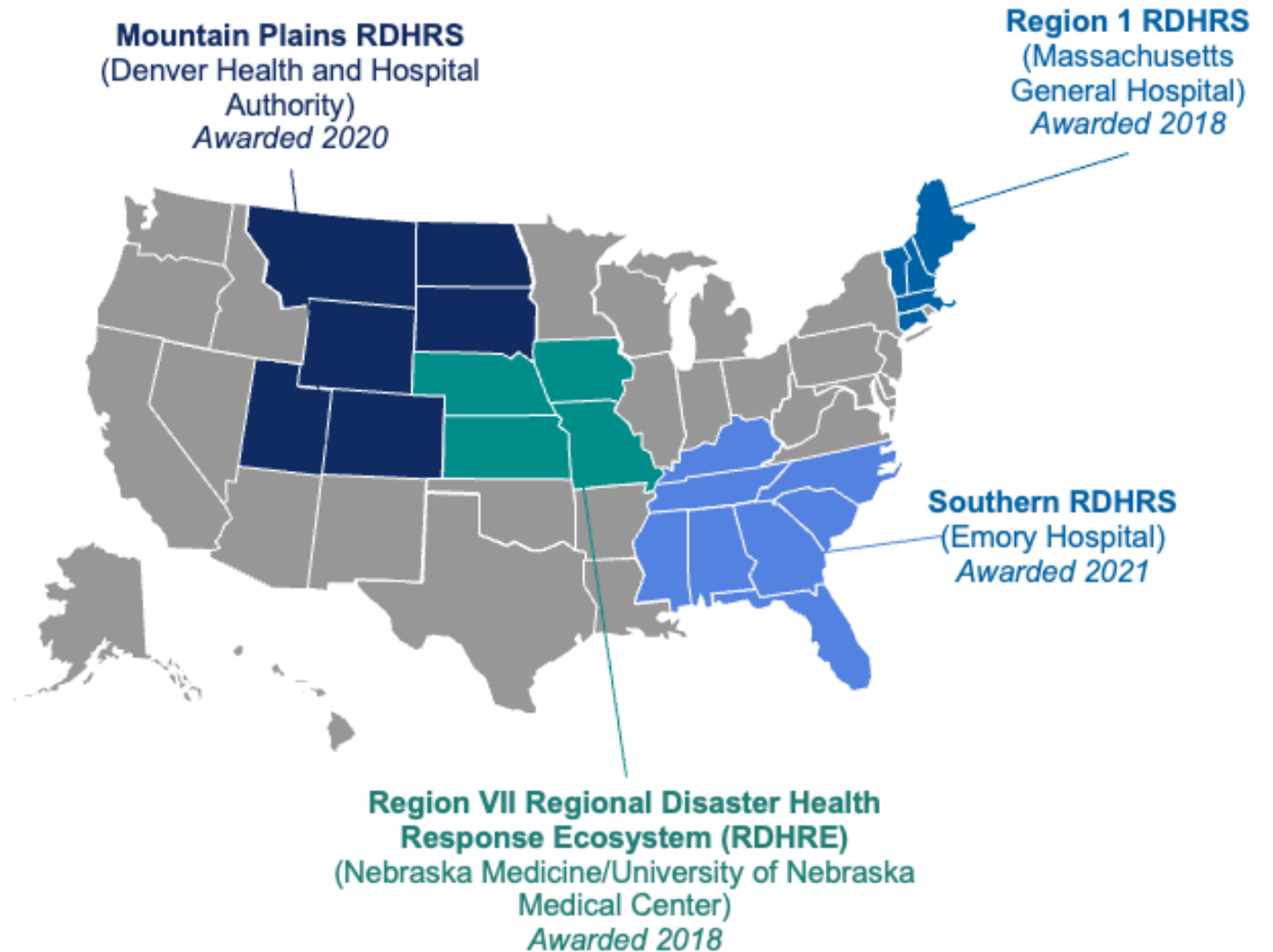


Current Tele-EMS footprint:
Ambulances
already
deployed, or
are in process
of installation.

A map of the state of Georgia, showing its 159 counties. Fifteen counties are highlighted in yellow, representing the counties where the 2018 gubernatorial election took place. These counties are: Paulding, Cobb, Gwinnett, Barrow, Clarke, Lincoln, Fulton, DeKalb, Walton, Oconee, Oglethorpe, Wilkes, Hancock, Baldwin, Upson, Pike, Lamar, Monroe, Jones, Bibb, Wilkinson, Washington, Johnson, Emanuel, Candler, Bulloch, Effingham, McIntosh, Pierce, Glynn, Camden, Echols, Lowndes, Brooks, Thomas, Grady, Decatur, Seminole, Miller, Early, Calhoun, Dougherty, Lee, Terrell, Randolph, Quitman, and Stewart.

Anticipated
expansion
over the
next year

Future of Tele-EMS





Just 5 THINGS

2

SOFTWARE,
EQUIPMENT, &
CONNECTIVITY:

VENDOR RELATIONSHIPS
HARDWARE SOLUTIONS

2 – SOFTWARE, EQUIPMENT, CONNECTIVITY



CHALLENGE:

- WHAT SOFTWARE?
- WHAT EQUIPMENT
- CONNECTIVITY:
 - Existing vendor relationships?
 - Specific hardware needs?



SUCCESS

- Plan: **30 ambulances** over 4 year grant period
 - swyMed
 - Software solution with experience!



swyMed™



2 – SOFTWARE, EQUIPMENT, CONNECTIVITY



CHALLENGE:

- WHAT SOFTWARE?
- WHAT EQUIPMENT
- CONNECTIVITY:
 - Existing vendor relationships?
 - Specific hardware needs?



SUCCESS

- DT Research: Durable, antimicrobial, “all in one”
- AXIS Pan-tilt-zoom cameras
- Yamaha speaker
- Zoll X-series monitor





ER-TEMS



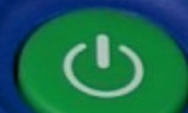
ER-TEMS



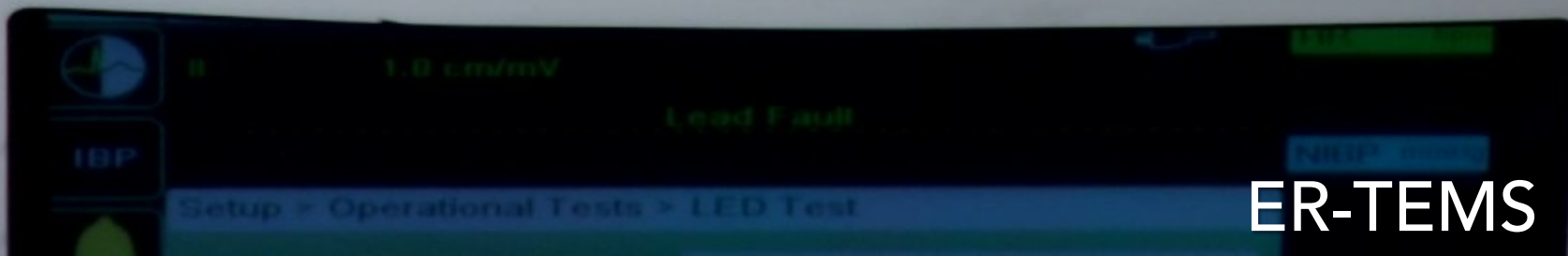
ER-TEMS



X Series™



ZOLL®



ER-TEMS



ER-TEMS

2 – SOFTWARE, EQUIPMENT, CONNECTIVITY



CHALLENGE:

- WHAT SOFTWARE?
- WHAT EQUIPMENT
- CONNECTIVITY:
 - Existing vendor relationships?
 - Specific hardware needs?



SUCCESS

- Satellite: not good for moving targets
- Cellular:
 - Rural limitations
 - Tower can "see" antenna
 - Antenna can't "see" tower.



DUAL-SIM and SATELLITE CAPABILITY



Source: FirstNet.gov

MobileInternetInfo.com

STARLINK

Mobile Satellite Internet

For RVers & Cruisers

The Starlink logo is a large, stylized 'X' shape. Below it, there are illustrations of a satellite in orbit, a red car towing a white trailer, and a white boat. The background is light blue.

10/19/23



Just 5 THINGS

3

SUSTAINABILITY PLAN:

- Financial Viability?
- Ongoing grant funding?
- Adaptable to changing landscape
- Multi-purpose service

3 – SUSTAINABILITY



CHALLENGE:

SUSTAINABILITY PLAN:

- PLAN: 30 ambulances, 24/7/365 coverage
- Cost of coverage: Physician FTE
- Early deployment: low volume



SUCCESS

DUAL SERVICE Model: Overlap with existing workflows

- Tele-Triage / Tele-Observation





ER-TEMS

ER-TEMS SUSTAINABILITY

A light blue classical building facade with five columns and a pediment. The columns are fluted and have papyrus capitals. The pediment features a Greek key pattern. The building sits on a three-tiered base. Text labels are placed around the columns: 'FEE FOR SERVICE' to the left of the first column, 'MULTI-USE' between the second and third columns, 'SUBSCRIBE' between the third and fourth columns, 'STATE FUNDED' between the fourth and fifth columns, and 'PHILANTROPY' to the right of the fifth column.

FEE FOR
SERVICE

MULTI-
USE

SUBSCRIBE

STATE
FUNDED

PHILANTROPY



Just 5 THINGS

4

SOUTHERN REGIONAL DISASTER REPOSE SYSTEM

Flex daily use model
Support local disaster / MCI
SME and surge capacity

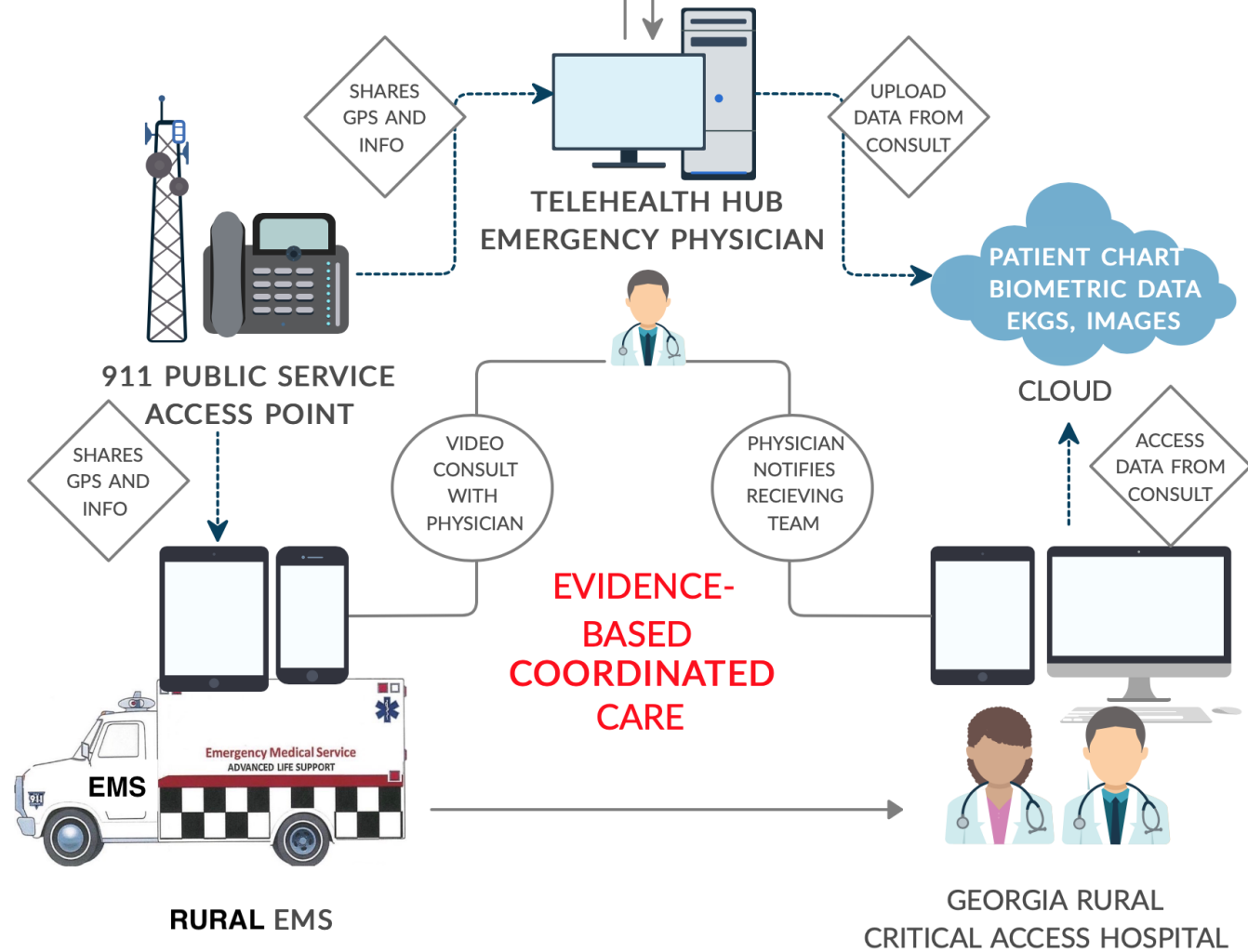


Just 5 THINGS

5

THE VISION FOR ER-TEMS / SRDRS INTEGRATION

EMERGENCY PHYSICIANS &
SPECIALTY CONSULTATION
- DISASTER RESPONSE -

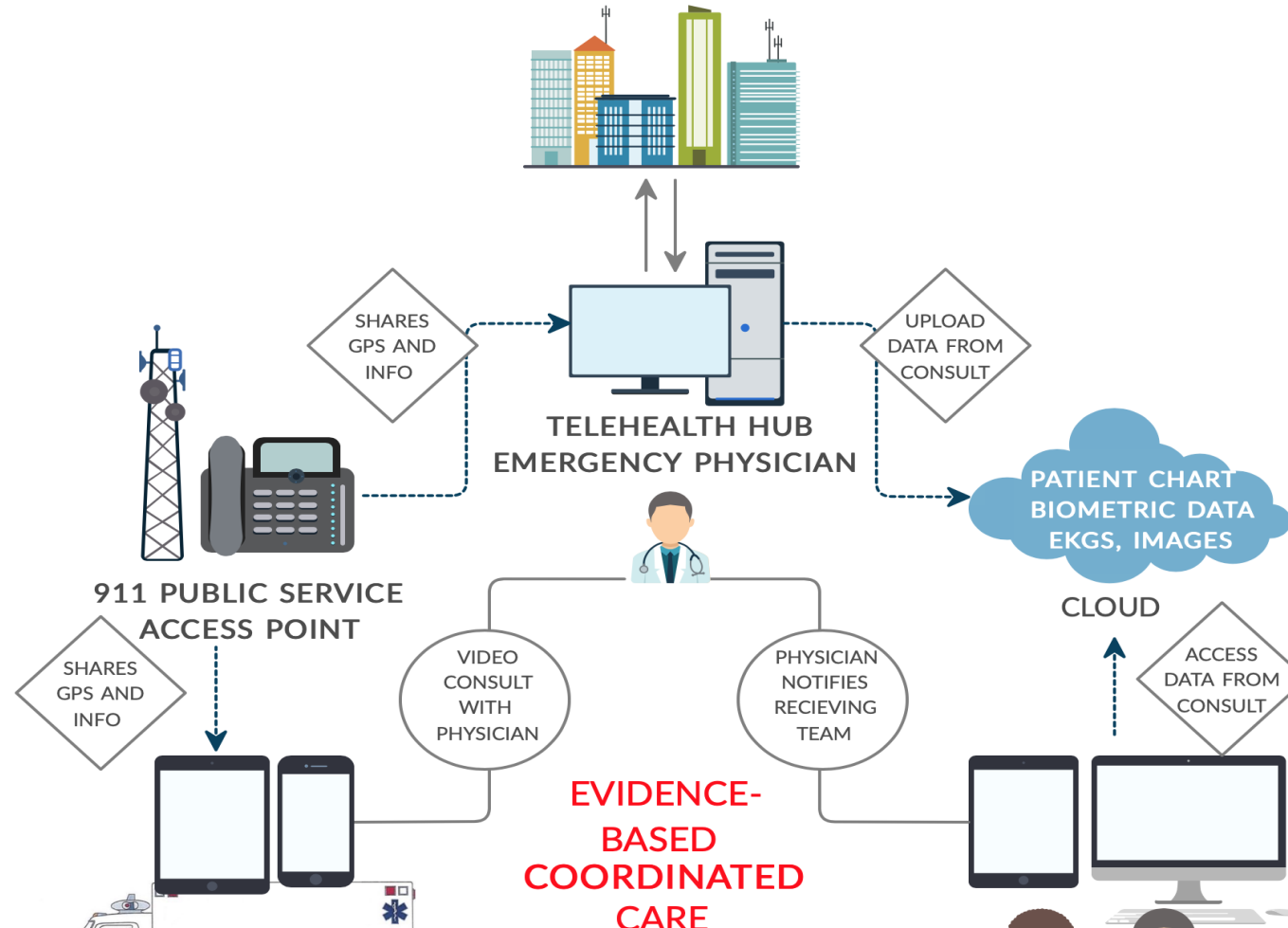


PROVIDE EARLY INTERVENTION TO TIME-SENSITIVE
CONDITIONS WITH PROVEN OUTCOME BENEFIT

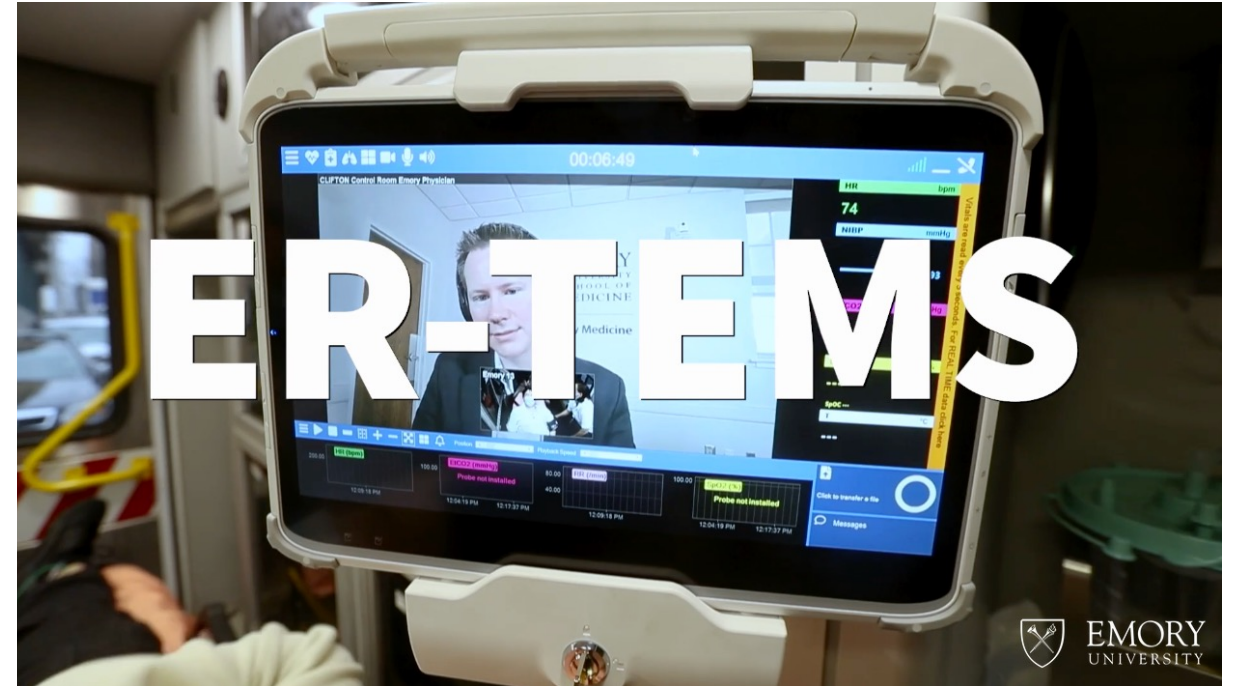
- CARDIAC ARREST
- LABOR AND DELIVERY
- STEMI
- SERIOUS COMMUNICABLE DISEASE
- STROKE
- TRAUMA
- SEPSIS



TERTIARY MEDICAL CENTER - SPECIALTY SERVICES



More info: ER-TEMS



**Watch the video on
our website (in QR link)!**



Just 5 THINGS

1

OUR "WHY":

PROBLEM?
PATIENTS?
METRICS &
MEASUREMENTS?

2

SOFTWARE, EQUIPMENT, & CONNECTIVITY:

VENDOR
RELATIONSHIPS?
HARDWARE
SOLUTIONS?

3

SUSTAINABILITY PLAN:

FINANCIAL
VIABILITY?
GRANT FUNDING?
ADAPTABLE?
MULTI-USE?

4

SOUTHERN REGIONAL DISASTER RESPONSE

FLEX DAILY USE MODEL
SUPPORT LOCAL DISASTER

5

THE VISION FOR ER-TEMS / SRDRS INTEGRATION

EMERGENCY
PHYSICIANS &
SPECIALTY
CONSULTATION

SUMMARY

TELE-OBSERVATION AND DISASTER PREPAREDNESS: A SUSTAINABLE “WIN-WIN”

SEPTEMBER 20, 2023

Michael A. Ross, MD, FACEP, FACC

Chief of Service, Observation Medicine
Director, Emergency Virtual Care
Professor, Department of Emergency Medicine
Emory University School of Medicine
Adjunct Faculty, Nell Hodgson Woodruff School of Nursing



TELE-OBSERVATION AND DISASTER PREPAREDNESS:

- 1) Background – nomenclature, what works, and what doesn't
- 2) Tele-Observation – the model and the evidence
- 3) Disaster preparedness – a sustainable “win-win”

Primary clinical reference: CDU Manual

<https://med.emory.edu/departments/emergency-medicine/documents/cdu-manual-protocols.pdf>

1. OBSERVATION NOMENCLATURE

Observation Patients = “6 to 24 hour” patients. Distinct patient population.

Observation Service = “*management to determine the need for admission*”

- 20 – 35% of patients staying in hospitals are “observation” patients

Observation Settings – defined by two variables: Protocols + Units

- Protocol driven, observation units are the best “setting”
- **2/3 of U.S. Hospitals do not have an observation unit (CDC data)**

EXHIBIT 1

Hospital Settings In Which Observation Services Are Provided

Setting	Description	Characteristics
Type 1	Protocol driven, observation unit	Highest level of evidence for favorable outcomes Care typically directed by ED
Type 2	Discretionary care, observation unit	Care directed by a variety of specialists Unit typically based in ED
Type 3	Protocol driven, bed in any location	Often called a “virtual observation unit”
Type 4	Discretionary care, bed in any location	Most common practice Unstructured care Poor alignment of resources with patients’ needs



State of the Art: Emergency
Department Observation Units

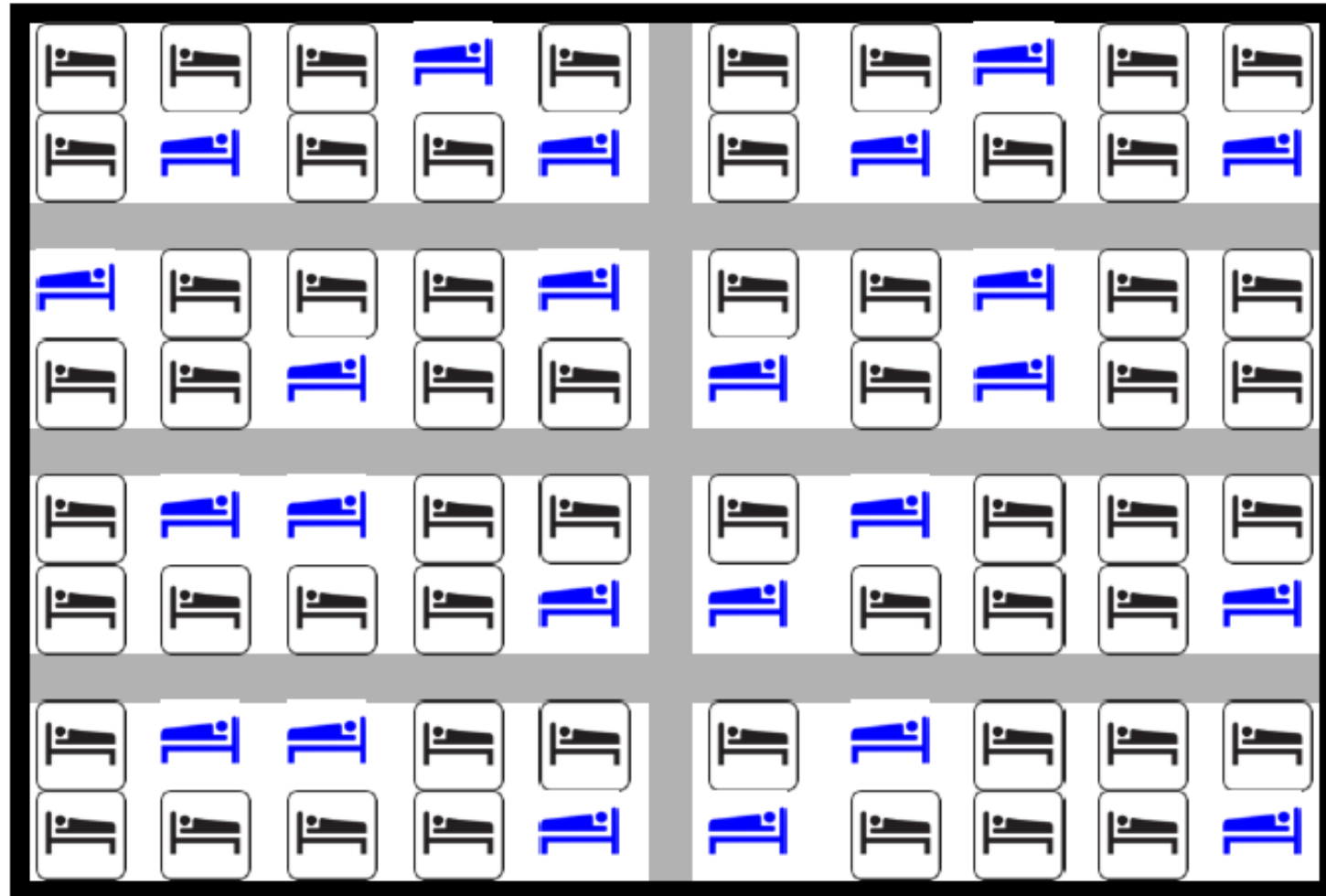
Michael A. Ross, MD,* Taruna Aurora, MD,† Louis Graff, MD,‡ Pawan Suri, MD,†
Rachel O'Malley, MD,§ Aderonke Ojo, MD,¶ Steve Bohan, MD||, and Carol Clark, MD**

<u>Condition / Year / Author</u>	<u>N</u>	<u>Primary Outcome</u>
1. Syncope / 14 / Sun *	124	↓ admissions and LOS
2. Chest Pain / 10 / Miller *	110	↓ Cost (stress MRI)
3. Atrial Fib / 08 / Decker	153	↑ conversion to sinus
4. TIA / 07 / Ross	149	↓ LOS and cost
5. Syncope / 04 / Shen	103	↑ established diagnosis, ↓ admissions
6. Asthma / 97 / McDermot	222	↓ admissions, no relapse ↑
7. Chest Pain / 98 / Farkouh	424	No difference cardiac events
8. Chest Pain / 97 / Roberts	165	↓ LOS and cost
9. Chest Pain / 96 / Gomez	100	↓ LOS and cost

TELEMEDICINE AND TYPE 1 UNITS

***A tale of three hospitals . . .
What works and what doesn't***

SCENARIO A: INPATIENT BED – TYPE 4



Length of stay = 33hr

Total Direct Cost = \$1,978

Blue Bed = Observation Patient

Black Bed = Inpatient

Pink Bed = New Bed Capacity

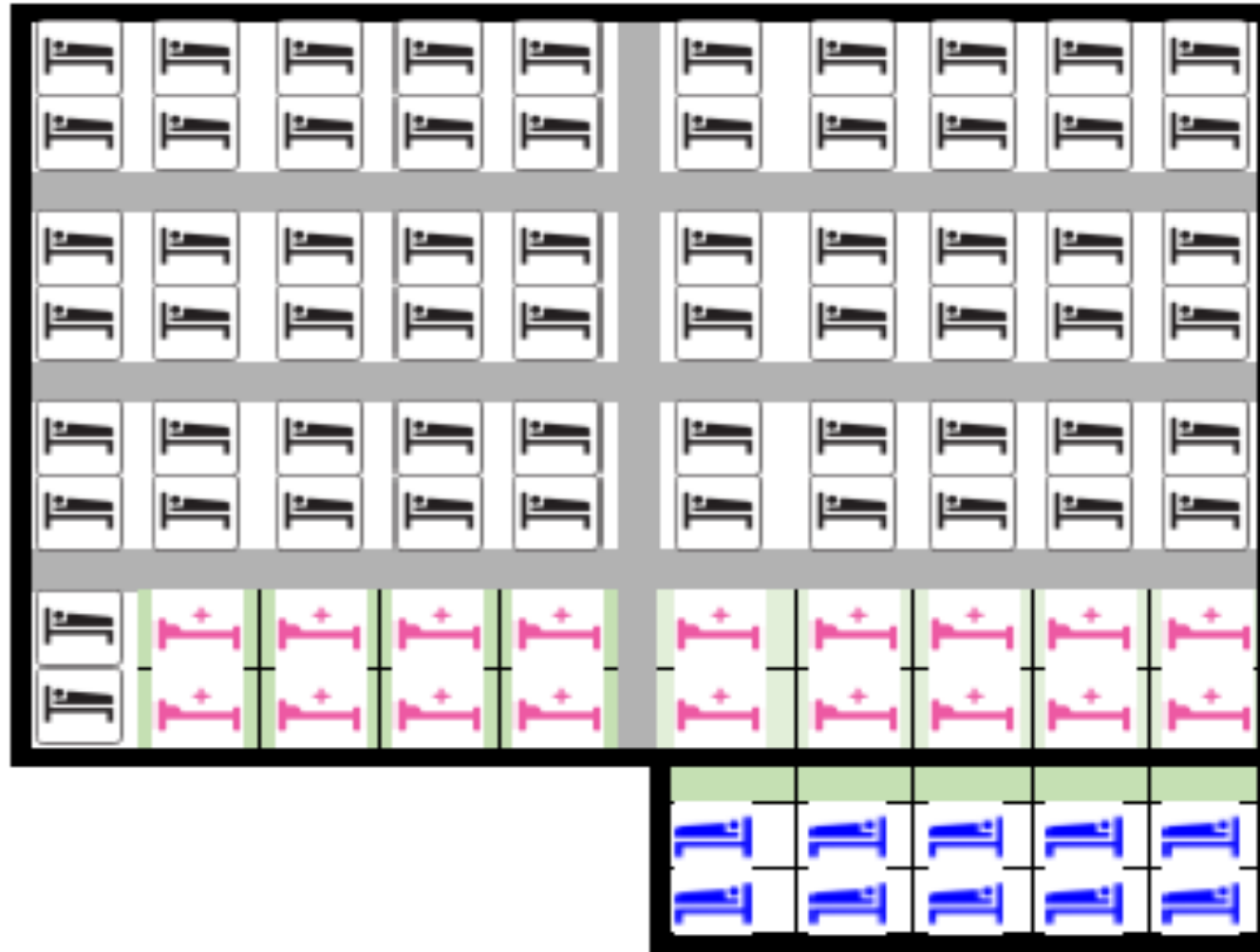
SCENARIO B: TYPE 1 SETTING – INPATIENT FLOOR



Length of stay = 28 hr
Total Direct Cost = \$1,800

Blue Bed = Observation Patient
Black Bed = Inpatient
Pink Bed = New Bed Capacity

SCENARIO C: TYPE 1 SETTING – NON-IP BEDS, ED RUN OU

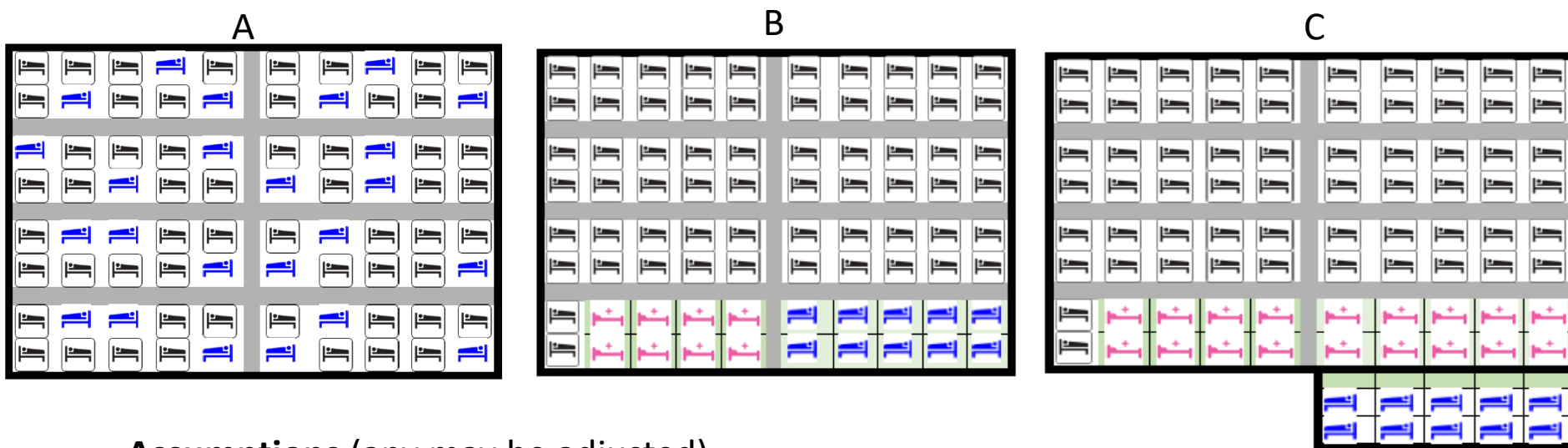


Length of stay = 17 hr
Total Direct Cost = \$1,342

Blue Bed = Observation Patient
Black Bed = Inpatient
Pink Bed = New Bed Capacity

IMPACT OF SETTING AND SERVICE ON THE CARE OF DISCHARGED OBSERVATION PATIENTS

Setting	Annual Census	LOS (hours)	TDC	Annual Cost	Annual cost savings	Annual Bed Days	Bed days saved - Efficiency	Bed days saved - Efficiency + OP Location	Annual Revenue Enhancement (\$1K/bed day)	Cost + Revenue Impact
A - Type 4 setting	3,000	33	\$1,978	\$5,934,000	0	4125	0	0	\$0	\$0
B - Type 1 IP setting	3,000	28	\$1,874	\$5,622,000	\$312,000	3500	625	625	\$625,000	\$937,000
C - Type 1 EDOU setting	3,000	17	\$1,342	\$4,026,000	\$1,908,000	2125	2000	4125	\$4,125,000	\$6,033,000



Assumptions (any may be adjusted)

1. An open inpatient bed will backfill with an inpatient
2. Only discharged patients are used (OU admissions differ)
3. ~Ten bed unit – ~1 patient / bed / day
4. Captures 100% of observation patients

FROM HYPOTHETICAL TO REAL: ANNUAL EHC EDOU SAVINGS

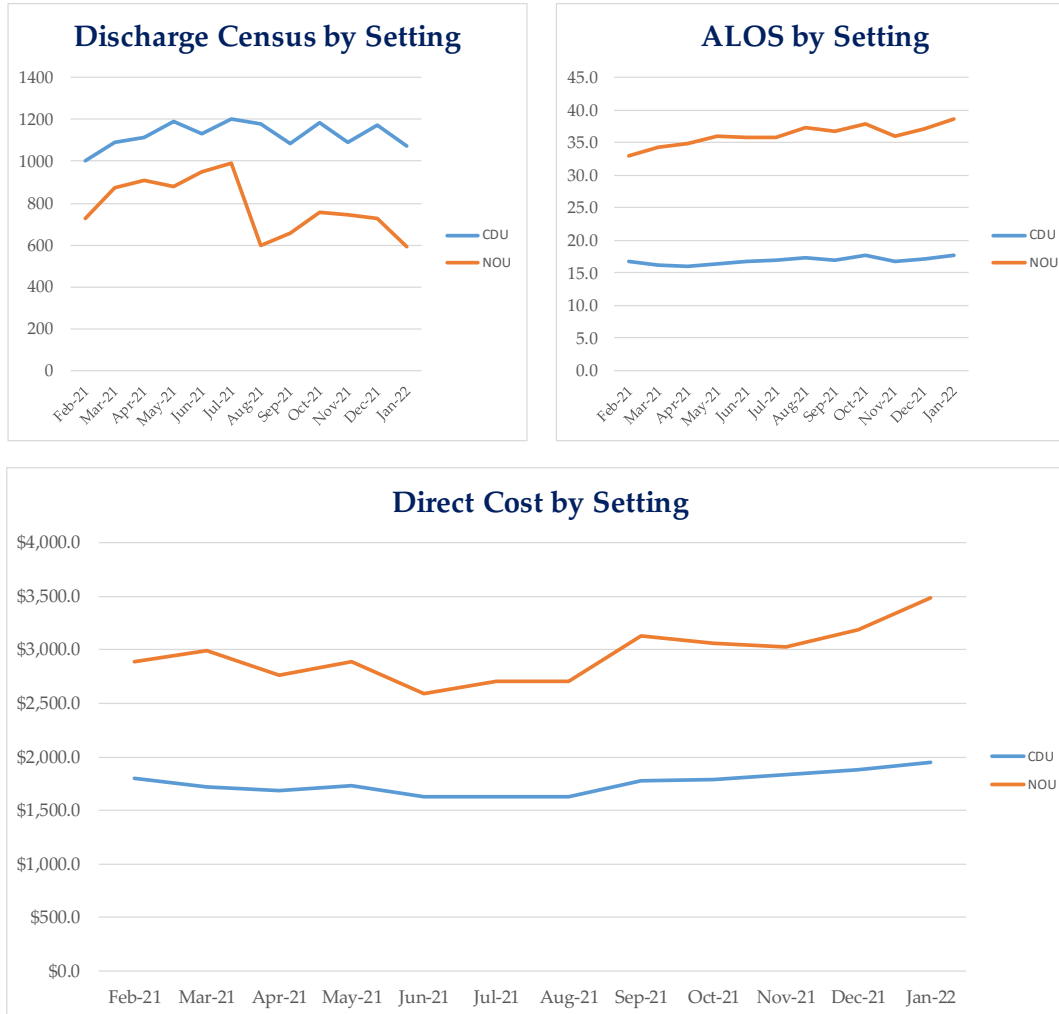
Row Labels	Sum of Cases	LOS	TC	Current TC Savings	Current Bed Days Savings
HCEHM Emory Hospital Midtown	6821	27	\$ 3,204	\$ 6,932,225	3,190
CDU	3918	18	\$ 2,451		
NOU	2903	38	\$ 4,220		
HCEJC Emory Johns Creek Hospital	3306	21	\$ 2,631	\$ 6,488,419	1,653
CDU	2516	17	\$ 2,014		
NOU	790	33	\$ 4,593		
HCEUH Emory University Hospital	5589	24	\$ 3,710	\$ 5,425,184	2,524
CDU	3260	16	\$ 3,016		
NOU	2329	35	\$ 4,680		
HCSJH Saint Josephs Hospital	7210	25	\$ 2,736	\$ 5,927,706	3,158
CDU	3772	16	\$ 1,986		
NOU	3438	36	\$ 3,558		
Grand Total	22926	25	\$ 3,097	\$ 24,773,533	10,526

Current savings:

- Avoided inpatient bed use= 13,466 patients
- Applying NOU LOS and TC
- Gain over no CDU

EMORY HEALTHCARE OBSERVATION

PATIENTS BY SETTING: CENSUS, LOS, COST



Graphs:

- Census
- Ave Length of Stay
- Total Direct Cost

Settings:

- **CDU – Clinical Decision Unit**
- **Non-OU – Inpatient bed**

CDU consistently outperforms the inpatient / NOU setting

THE OBSERVATION UNIT SUSTAINABILITY CONUNDRUM

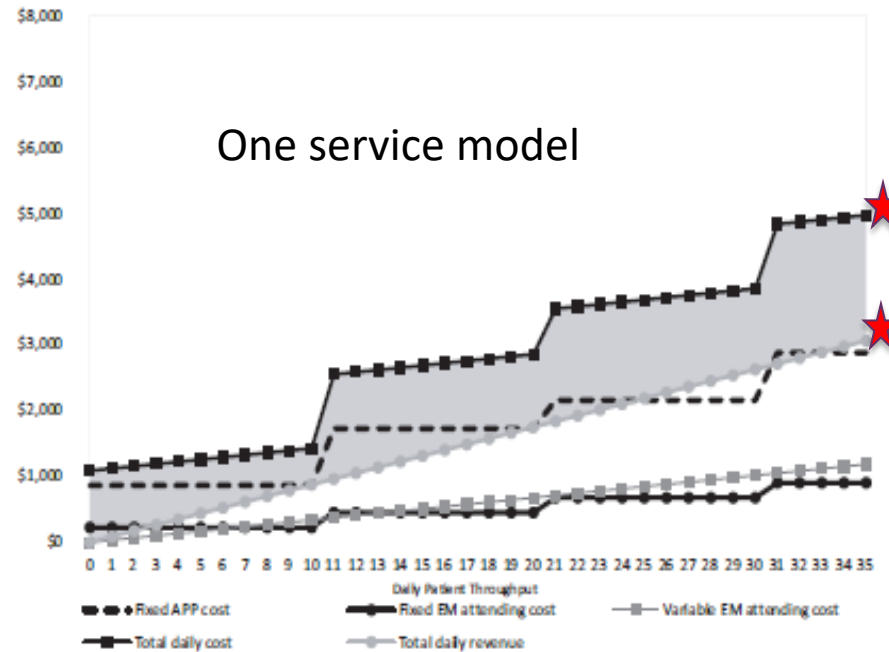
- **Works for hospitals** => GREAT!!!
 - Emergency Medicine run EDOUs outperform all other settings
 - Lower costs, LOS, admit rates. Improved inpatient bed availability, etc.
- **Doesn't always work for physicians** – Depending on billing and practice model, not sustainable:
 - CPT / payer structure
 - One service model: Must forfeit emergency CPT codes, bill observation CPT codes
 - Two service model: Able to bill both
 - Hospital subsidy often needed
 - When providing two services (emergency and observation):
 - Physicians need to be able to bill for both
 - Need an essential number of beds (20+)

Financial Viability of Emergency Department Observation Unit Billing Models

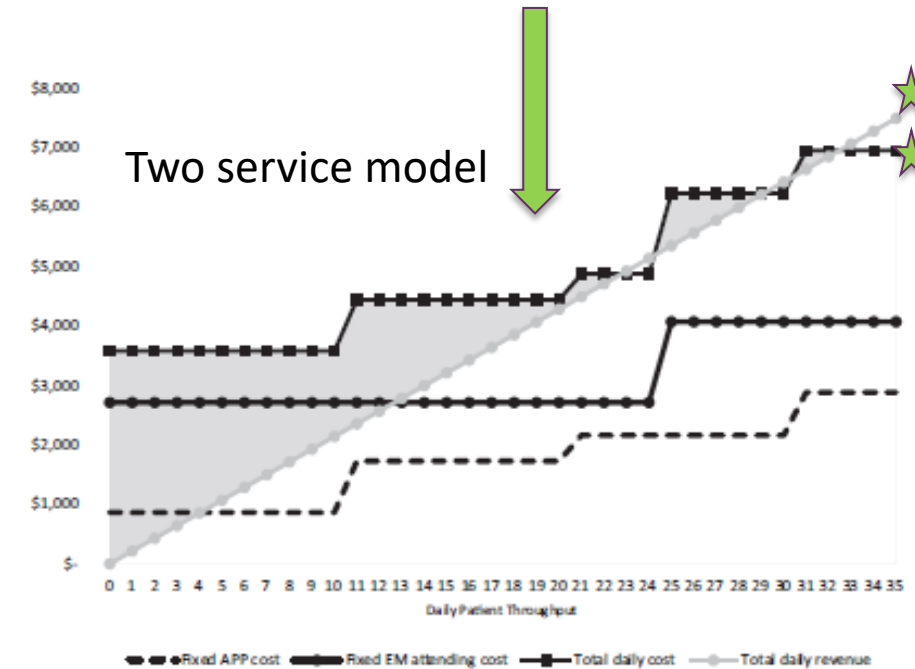
ACADEMIC EMERGENCY MEDICINE 2019;26:31-40.

Christopher W. Baugh, MD, MBA, Pawan Suri, MD, Christopher G. Caspers, MD, Michael A. Granovsky, MD, CPC, CEDC, Keith Neal, MBA, MHL, CHFP, and Michael A. Ross, MD

- Methods: Monte Carlo simulation by billing models.
- Data source: literature, national survey data, payer data



One service model: **Not sustainable**. Net negative cash flow at any number of beds



Two service model: **Sustainable**. Net positive cash flow at 20 beds or more.



2. TELEMEDICINE FOR OBSERVATION MEDICINE

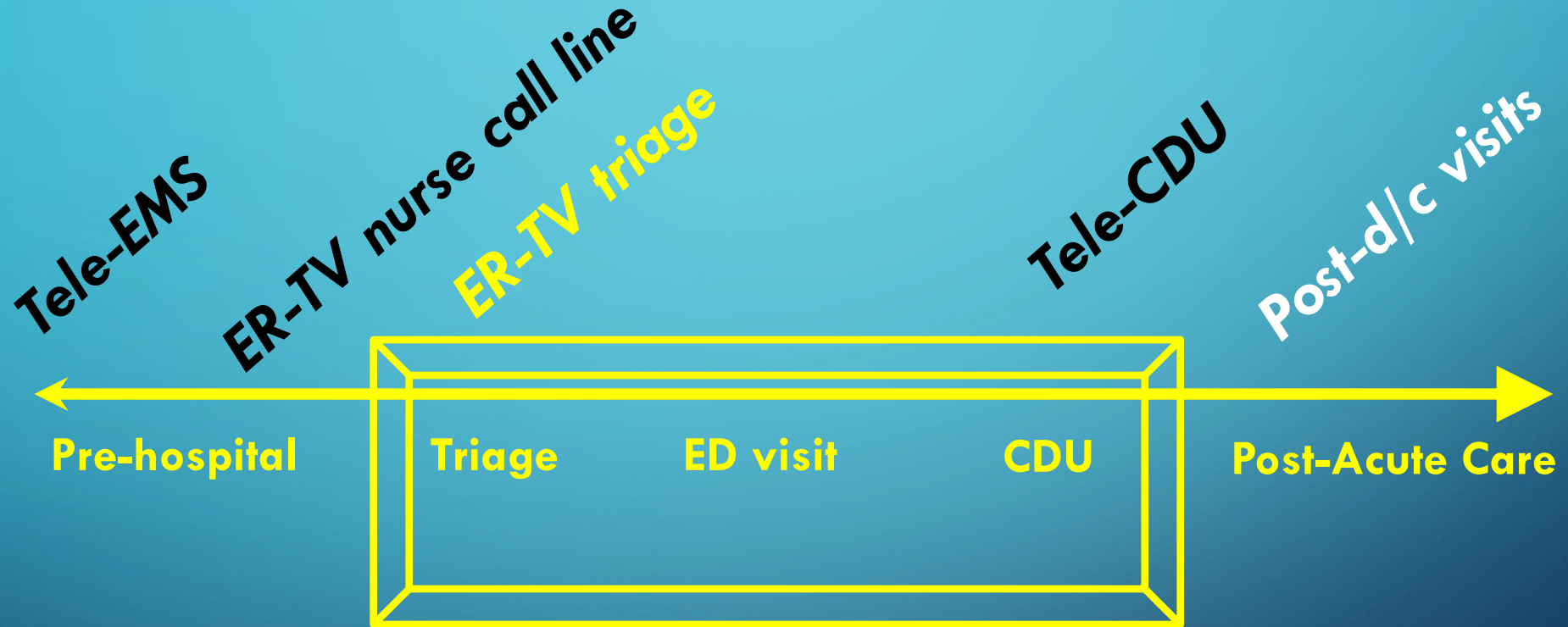


- Optimize Observation Unit availability–
 - Meet the “20-bed threshold” to support single service staffing
 - Help struggling hospitals with staffing, cost, quality
 - Share CDU protocols
 - Develop physician – APP staffing model
 - Develop quality / utilization / financial performance metrics
- Telemedicine works best for “Evaluation and Management Services”
 - CPT E/M services:
 - **Clinic Visit – Proven and established**
 - **Critical Care – Proven and established**
 - **Emergency Visit – Proven and established**
 - **Observation = opportunity!**
 - Inpatient



SRDRS

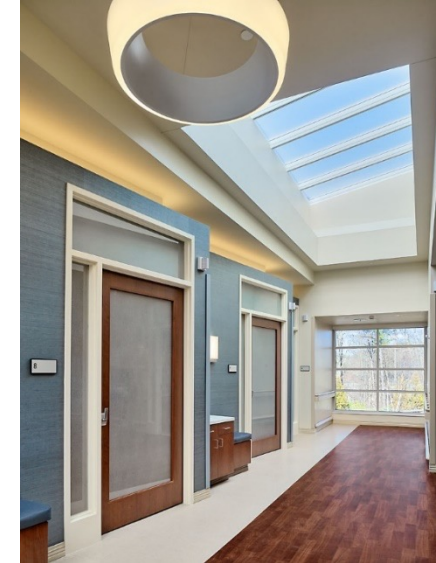
ENTER COVID PANDEMIC:
FULL SPECTRUM OF TELE-EMERGENCY CARE



HYPOTHETICAL TO REAL: ED OBSERVATION UNITS - “CLINICAL DECISION UNITS”

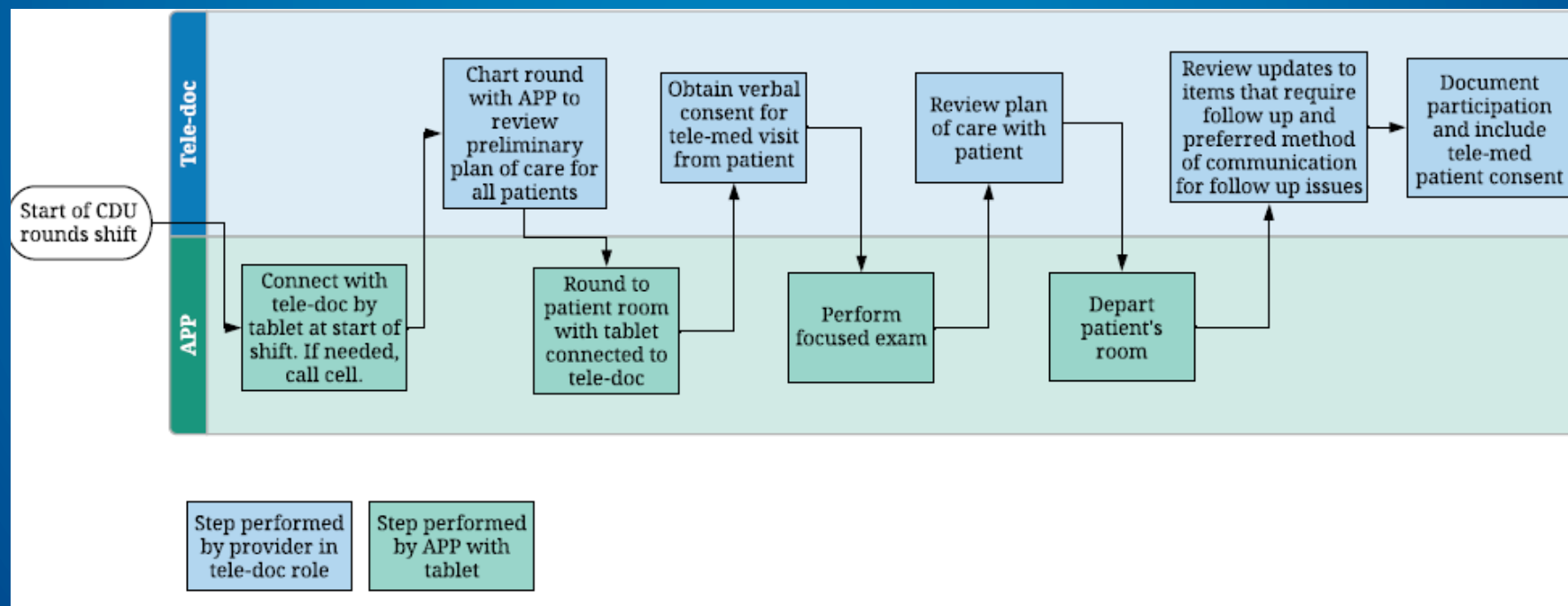
- 2004 – 2006 – EUHM (8 beds), Grady (8 beds), EUH (5 beds)
– Following site visit to Beaumont.
- 2008 – EUH: 5 => 8 beds
- 2016 – ESJH: 12 beds
- 2018 – EJCH: 10 beds
- 2019 – EUHM: 8 => 16 beds ; EUH 8 beds => 13 beds
- 2022 – EDH: 12 beds

CY 2021, 2022 Metrics	Annual # visits	Ave Obs LOS(hrs)	# ED OU beds	Combined visit	Combined beds
1. HCEHM Emory Hospital Midtown	4,777	18.8	16	8,713	29
2. HCEUH Emory University Hospital	3,936	17.1	13		
3. HCEJC Emory Johns Creek Hospital	3,069	17.1	10	7,295	22
4. HCSJH Saint Josephs Hospital	4,226	16.1	12		
EHC Total	16,007	17.4	51		
Grady	5,374		20		
Emory Total	21,381		71		





Tele-CDU Workflow



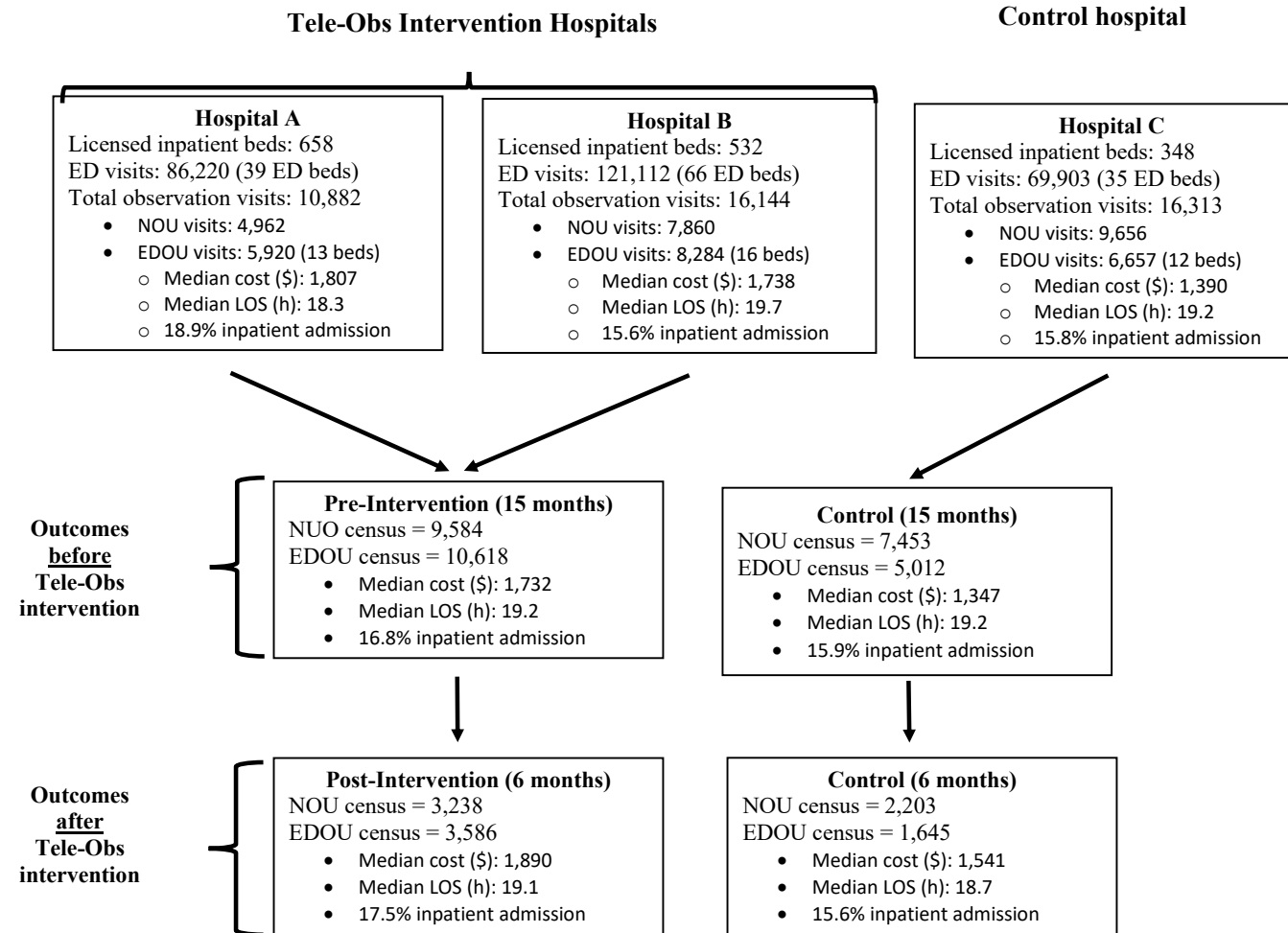
TELE-OBSERVATION MEDICINE **NON-INFERIORITY**: The Impact of Virtual Care in an Emergency Department Observation Unit

Atherine Abiri, DNP, ENP-C*; Matthew Keadey, MD, MHA; George Hughes, MD; Stephen R. Pitts, MD; Tim P. Moran, PhD;
Michael A. Ross, MD [Ann Emerg Med. 2023;81:222-233.]

- **Methods:** Retrospective diff-in-diff before-after analysis
- **Timeframe:** Jan 2019 – Feb 2021
- **Population:**
 - 20,861 EDOU patients
 - 23,055 non-EDOU observation patients
- **Outcomes:**
 - Adjusted length of stay – no difference (26.4 vs 23.5 hr)
 - Inpatient admit rate – no difference (20.9% vs 22.4%)
 - Adjusted total cost – no difference
 - Adverse events (ICU/death) – no difference
- **Conclusion:**
 - Using tele-obs to manage observation patients in an ED observation unit was not associated with significant differences in length of stay, admission rate, adverse events, or total direct cost.

Tele-Observation Medicine: The Impact of Virtual Rounding in an ED Observation Unit

Figure 1. Census by setting flow chart (figures represent discharged and admitted EDOU patients over study periods)



Abiri, A., M. Keadey, G. Hughes, S. R. Pitts, T. P. Moran and **M. A. Ross** (2023). "The Impact of Virtual Care in an Emergency Department Observation Unit." Annals of Emergency Medicine **81**(2): 222-233.

TELE-OBSERVATION MEDICINE **SUPERIORITY** DATA: THE BENEFIT OF TELE-OBSERVATION OVER TRADITIONAL OBSERVATION SERVICES

- Methods: Retrospective observational cohort study
- Timeframe: 24 consecutive months (9/2020 to 8/2022)
- Setting: Two academic teaching hospitals
 - EDOU (aka “Clinical Decision Unit” or CDU)
 - Non-Observation Unit (aka, type 4, inpatient bed setting)
- Population: 31,223 observation patients
 - Tele-EDOU = 17,424 patients
 - Traditional setting= 13,799 patients

Row Labels	# visits	Ave Obs - Hours	Ave Enc Total LOS - Hours	Ave Enc - Total Costs	Admit Rate
<input checked="" type="checkbox"/> CDU	17,424	18.0	36.0	\$4,746	18%
INPATIENT	3,117	16.0	120.1	\$13,743	
OBSERVATION PT	14,307	18.5	17.7	\$2,786	
<input checked="" type="checkbox"/> NOU	13,799	38.6	60.1	\$7,739	25%
INPATIENT	3,488	39.8	127.6	\$16,819	
OBSERVATION PT	10,311	38.2	37.3	\$4,668	
Grand Total	31,223	27.1	46.7	\$6,069	

Savings per case:

All CDU: \$2,993; 24.2 hours

Discharged CDU: \$1,882; 19.7 hours

Total 2-year savings:

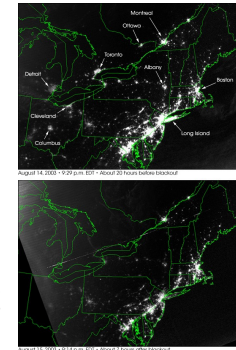
- \$52,154,700
- 17,547 bed-days

TELE-OBSERVATION SUMMARY

- Supports Type 1 EDOUs
 - Has become routine EDOU model at EUH, EUHM for three years now
 - Superior to traditional care in an inpatient bed
- Improves observation care
 - Non-inferior to in person rounding
 - Superior to traditional care in an inpatient bed
 - Addresses issues with single service conundrum
 - Improve staffing availability and flexibility
 - Improved faculty satisfaction and engagement
 - Improve consultant availability
 - Improve hospital disaster preparedness and response
 - Develop observation protocols for unique disaster conditions (i.e., radiation)
 - Improve subject matter expert availability

3. DISASTER PREPAREDNESS AND OBSERVATION UNITS

- Detroit Receiving Hospital; May 15, 1986
 - Inhalation disaster, district courthouse; 74 patients
 - <https://www.latimes.com/archives/la-xpm-1986-03-15-mn-20888-story.html>
- Riverside Methodist, Columbus; 1996
 - Influenza epidemic, 1996 – avoided EMS diversion
- William Beaumont Hospital; 2003, 2005
 - August 14, 2003 – power grid failure
 - <https://www.history.com/this-day-in-history/blackout-hits-northeast-united-states>
 - March 6, 2005 – Swimming pool CO exposure – 54 patients
 - <https://www.deseret.com/2005/3/6/19880621/carbon-monoxide-lands-55-in-michigan-hospital>
- NYU Langone Medical Center; 2016
 - Type 1 unit allowed NY hospital to survive and treat patients following a hurricane disaster
 - https://www.researchgate.net/publication/301508981_Observation_Services_Linked_With_an_Urgent_Care_Center_in_the_Absence_of_an_Emergency_Department_An_Innovative_Mechanism_to_Initiate_Efficient_Health_Care_Delivery_in_the_Aftermath_of_a_Natural_Disast
- Emory Johns Creek Hospital; Feb – June 2020
 - Converted type 1 unit into a COVID unit to allow hospital to function



SRDRS: TELE-OBSERVATION AND DISASTER PREPAREDNESS

1. **Support “daily use”** of telemedicine equipment and workflow that can be rapidly deployed in a disaster.
2. Develop **EDOU protocols** for CBRNE disaster patients:
 - Chemical, Biological, Radiation, Nuclear, Explosive
 - Limited to “6-24” hour patients = a large portion of disaster patients
3. Provide immediate **subject matter expertise** for unique disaster management (radiation, chemical, biological) when needed
4. Provide **flexible provider staffing** pool for sudden surges in patient volumes
5. **Preserve scarce resources** in a disaster (i.e., PPE, inpatient beds, etc.)

QUESTIONS?

maross@emory.edu





**AUGUSTA UNIVERSITY
MEDICAL COLLEGE OF GEORGIA**

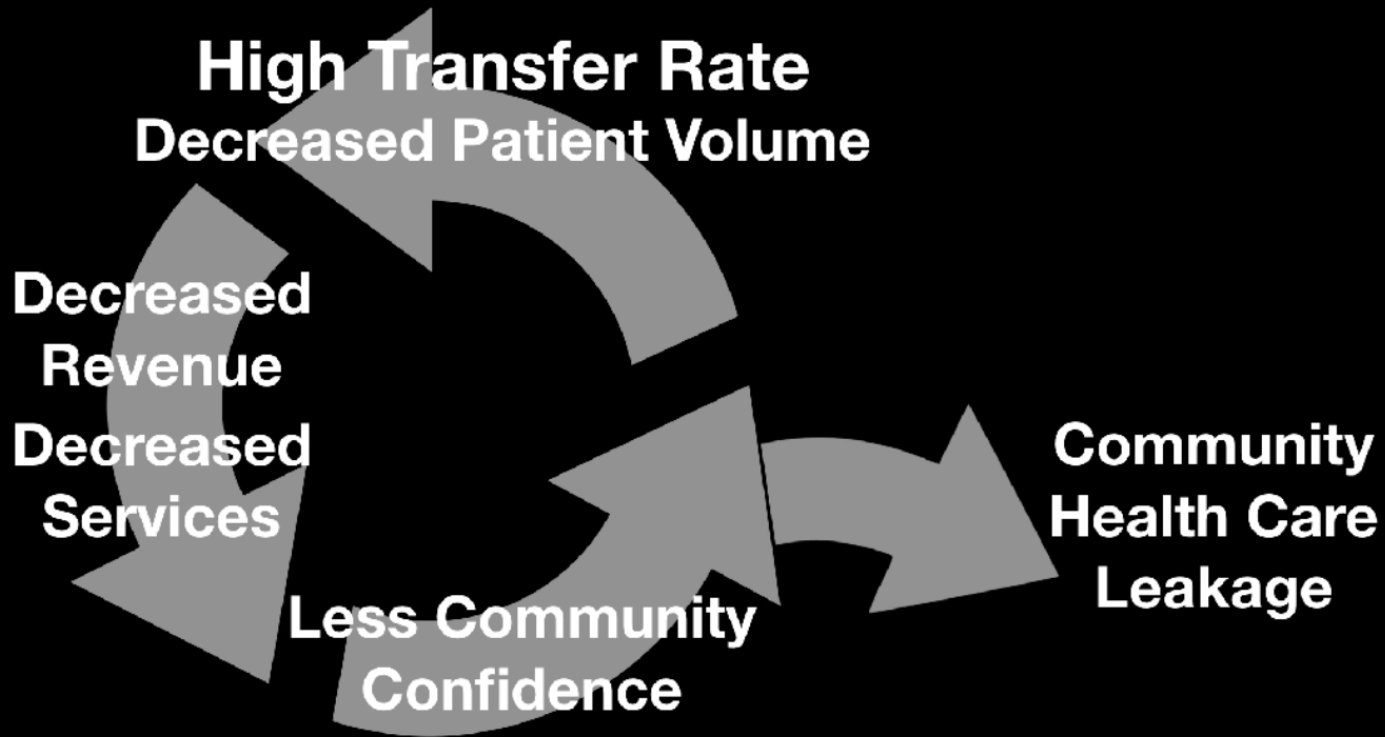
Rural Hospital Virtual Care Network

Matt Lyon, MD

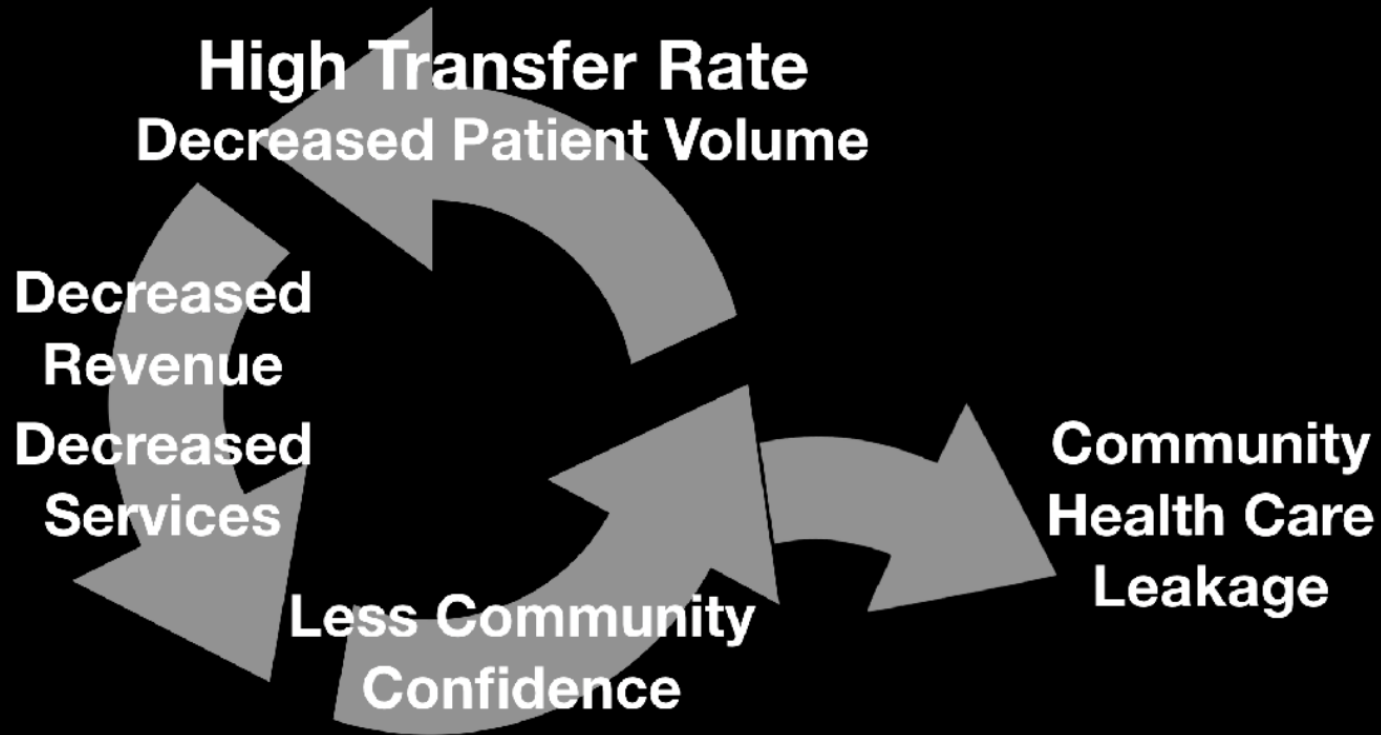
The Rural Community Hospital



Negative Revenue Cycle



Negative Revenue Cycle

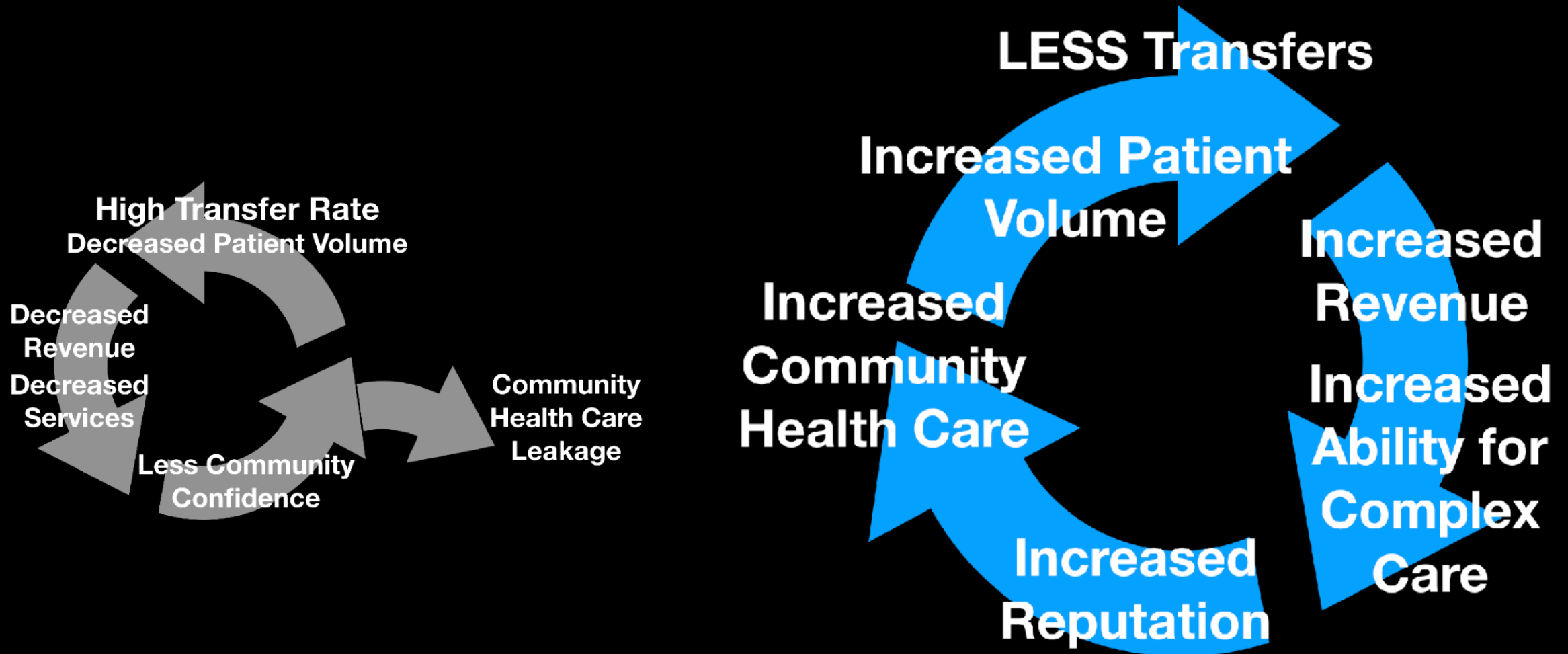


Effect on Disparities?

- Higher incidence of poorly controlled disease
- Increase in Delay in Emergency Conditions
- Delays in Specialty Treatments
- Less Coordination Care
- Higher Morbidity and Mortality

Rural Community Hospital - Focused Telemedicine

Community-Focused Telemedicine



Rural Hospital Virtual Care Network

ED-ED

Tele-Critical Care

Tele-Hospitalist

Tele-Education

AU Health Virtual Care Works in a Spoke and Hub Fashion

C O N N E C T I N G

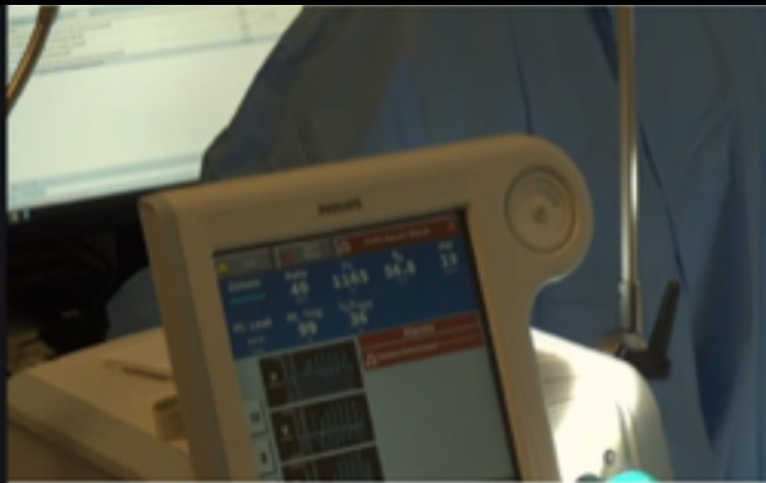
Rural Communities to an Academic Medical Center

Telemedicine Ecosystem Providing Specialized Care Remotely with the Goals:

- Decreasing Health Care Disparity
- Keeping Rural Patients in Rural Hospitals, if Possible
- Increasing Rural Hospital In-patient Volume for Financial Viability
- Expediting Transfer to Higher Level of Care When Necessary
- Decreasing Unnecessary Hospital Transfers
- Better Coordinated Care
- Providing Educational Support for Higher Complexity of Care

Anywhere in the C o n t i n u u m of Care

Triage to Discharge



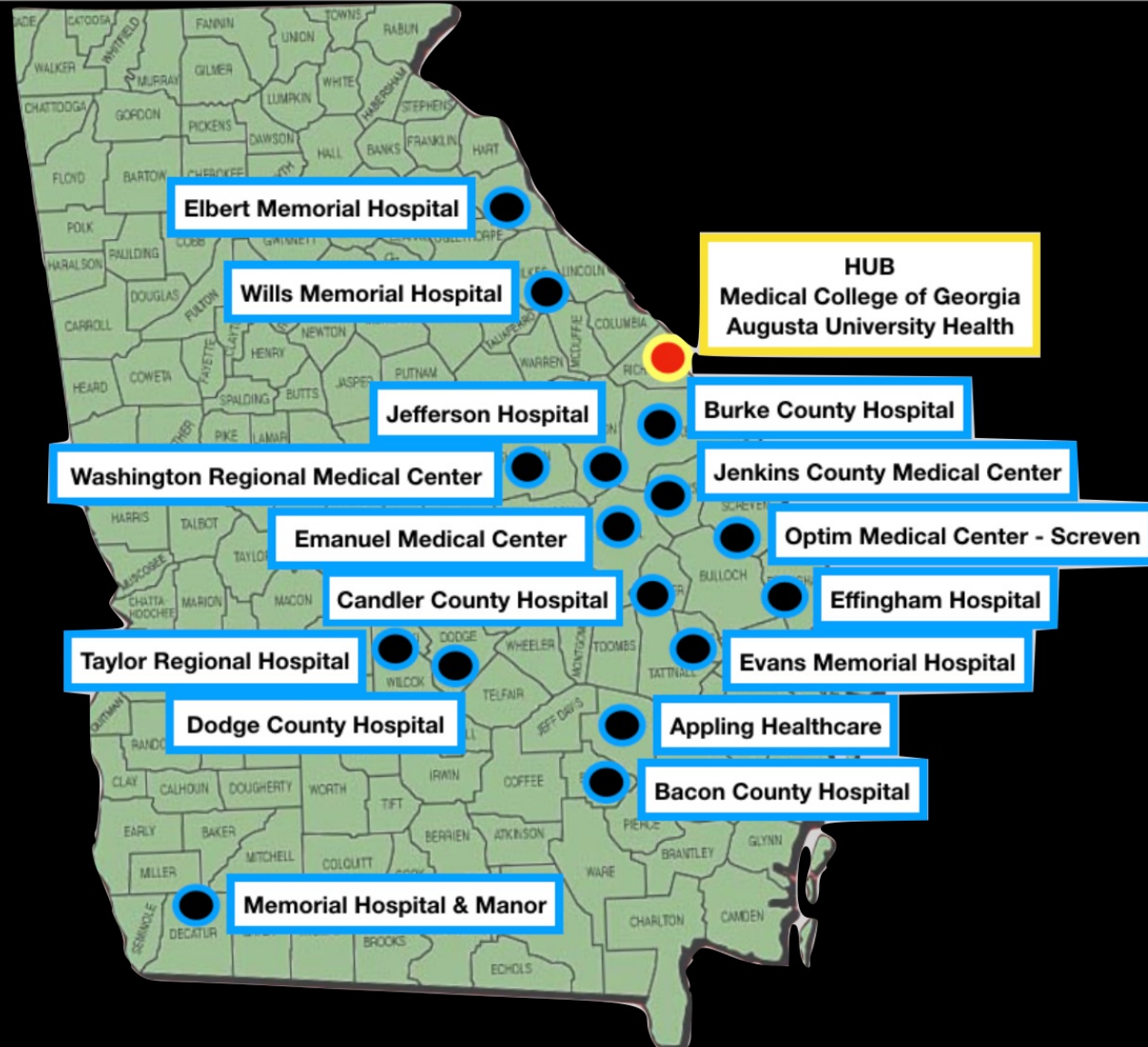
Rural Hospital Virtual Care Network

ED-ED

Tele-Critical Care

Tele-Hospitalist

Tele-Education



Rural Hospital Virtual Care Network

ED-ED

Tele-Critical Care

Tele-Hospitalist

Tele-Education

Phase 1

- ER to ER Telemedicine Consults
- **Avoidance of Unnecessary Transfers**
- **Expedited Transfer when Necessary**

Phase 2

- Inpatient/Critical Care Telemedicine Consult
- Increase Rural Hospital Average Daily Census (ADC)
- **Fill Complex Care Gap**

Phase 3

- **Post-Acute Care Relationship**
- Return of transferred patients
- Increase Rural Hospital Average Daily Census (ADC)

Phase 4

- Optimize Relationship
- **Regional Care Coordination**
- Increase Opportunities for MCG Learners in Rural Medicine

Tele-ER & Tele-Critical Care Stats

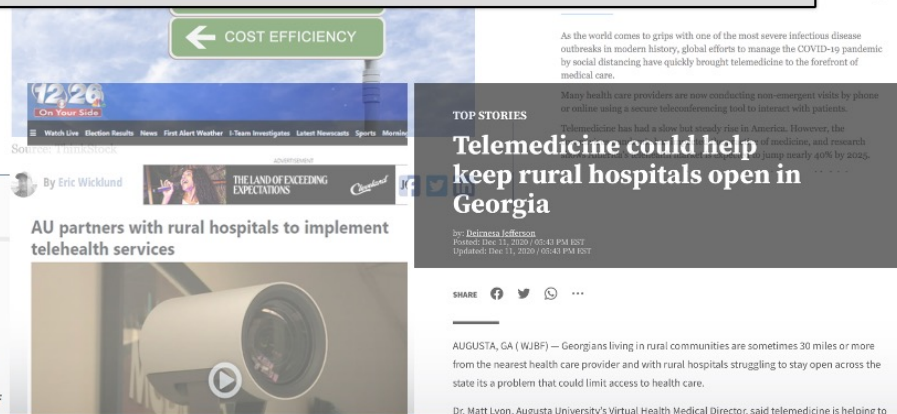
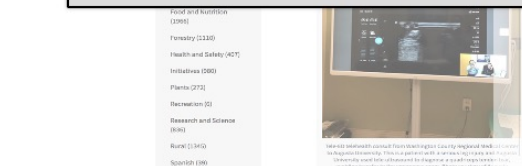
	FY2021	FY2022	FY2023	FY Totals
Total Patients	724	1186	976	2886
Total Encounters	3097	4203	2332	9632
Overall Transfer Rate	21.55%	27.40%	33.71%	28.07%
Transfer Rate to AUMC	90%	67%	77%	76%
End of Life Care	7.68%	10.06%	0.85%	6.61%

“ This is a phenomenal program and is the future for rural hospitals in the state of Georgia.” –

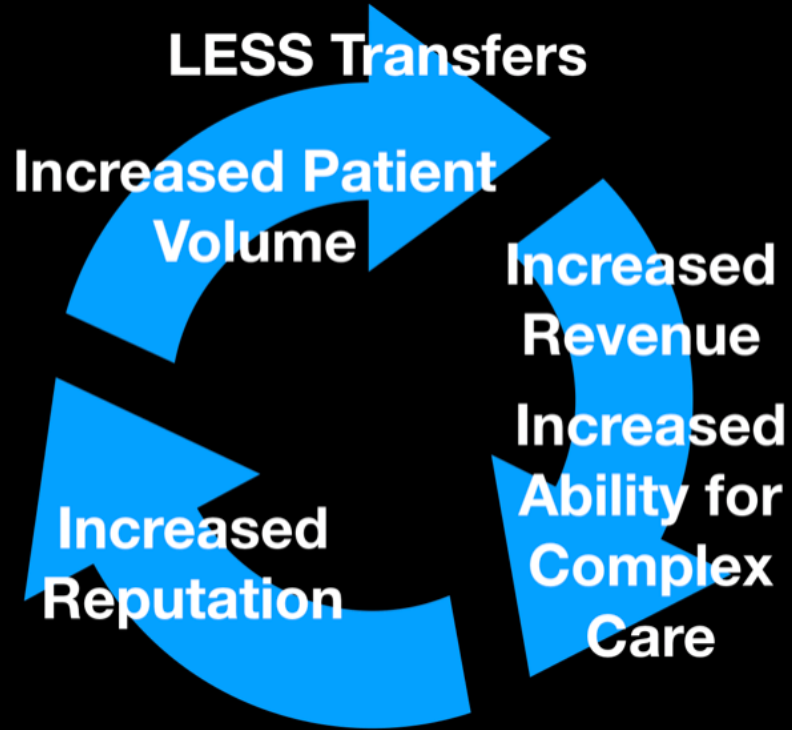
Damien Scott, CEO, Emanuel Medical Center

“As one of Georgia’s 66 rural hospitals, we continue to work closely with other healthcare partners to ensure access to quality care is available and affordable for our community. Our partnership with AU Health and their telehealth platform has been extraordinary. The teamwork, collaboration, and dedication of the staff and physicians have ensured hundreds of patients in our region had immediate access to specialty care to ultimately improve their outcomes. I am excited about our expanded partnership with our Intensive Care Unit as patients in the region present with higher acuity illnesses, limiting the need for transport to receive state of the art care close to home.” *Bill Lee, CEO, Evans Memorial Hospital*

“At Candler County Hospital, our hospital was able to recognize a 35% increase in net revenue through our collaboration with AUMC by utilization of the acute care telemedicine program. We decreased our transfers by 50%, were able to justify more acute inpatient days and we are on track for a positive operating margin in FY22. We appreciate the team approach that Dr. Lyon and Lauren have established through this very meaningful program.” *Michael Purvis, CEO, Candler County Hospital*

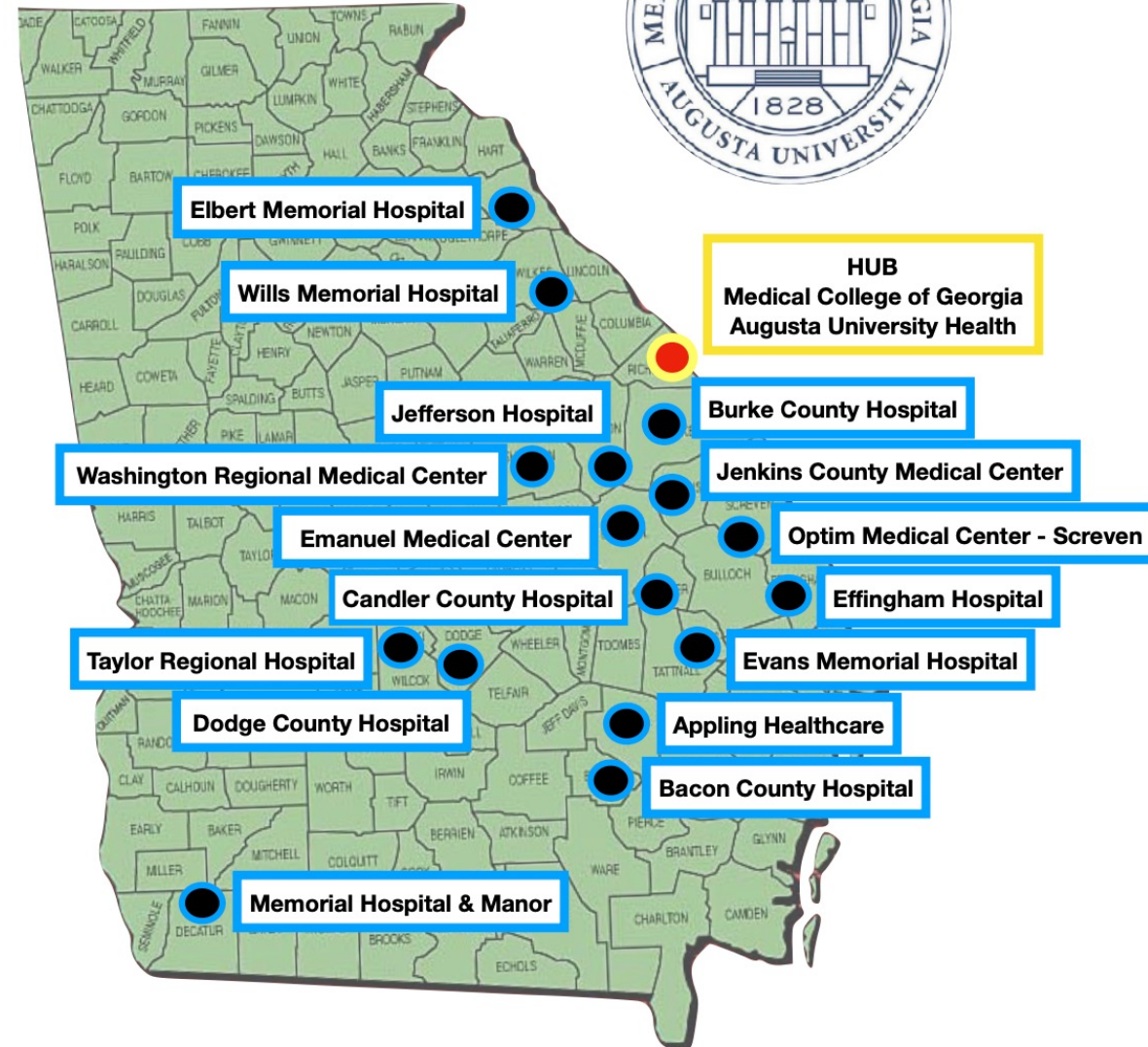


Why Is this Important In Disaster Preparedness?



- **Increased Ability for Complex Care**
 - More equipment and supplies
 - Better trained staff
- **Increased Connectivity**
 - Disaster Coordination
 - Surge management
 - Better understanding of capabilities
 - Avenues for education and training

Questions, Comments, Discussion





Southern Regional Disaster Response System

HHS Region 4

Executive Committee

Alexander Isakov, MD, MPH – Emory University – SRDRS Principal Investigator

Senem Hinson, MPH – Emory University – SRDRS Program Director

Keith Wages – Emory University – SRDRS Associate Program Director

Curtis Harris, PhD – University of Georgia Institute for Disaster Management – SRDRS Executive Director

Richard Schwartz, MD – Augusta University Health System – SRDRS Medical Director

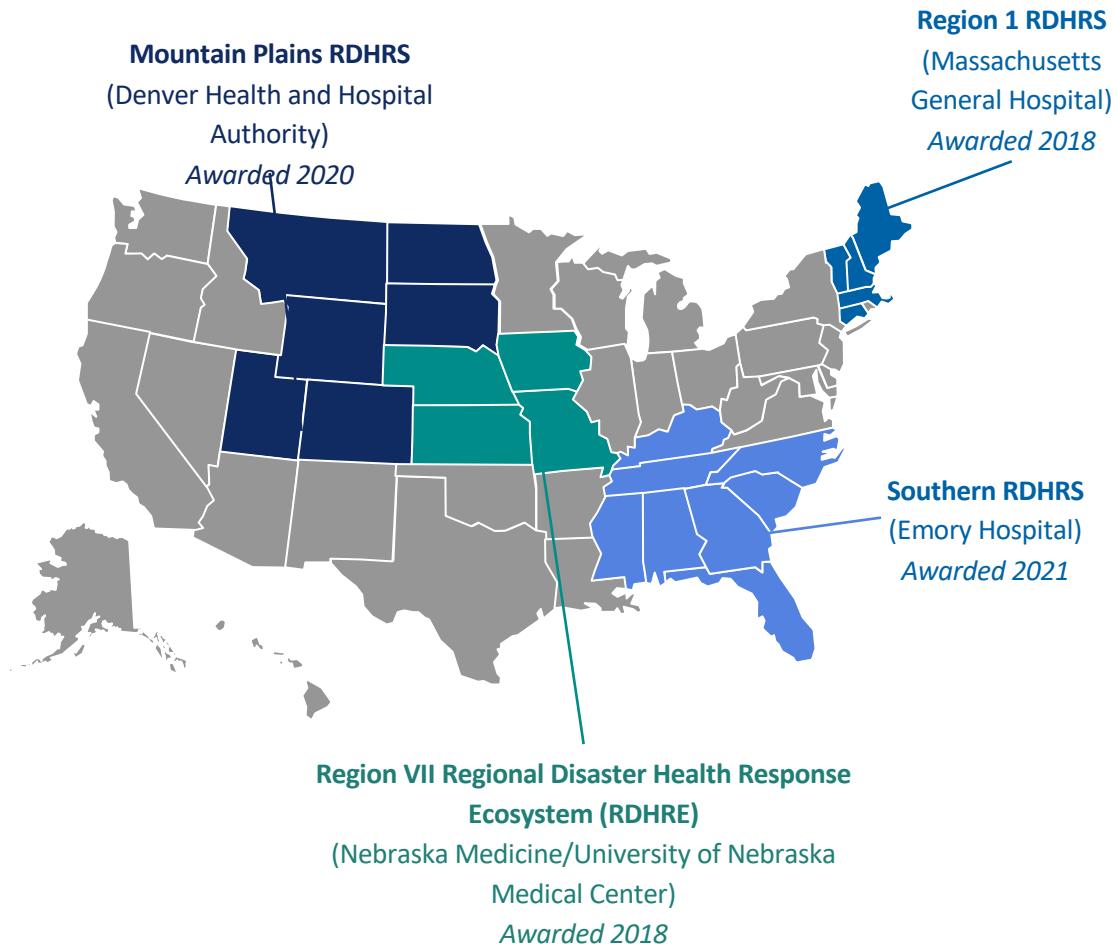
Ziad Kazzi, MD – Emory University – SRDRS Associate Medical Director

Kelly Nadeau, RN, MN, EMHP – Georgia DPH- Healthcare Preparedness Program Director

Lori Wood, MBA, MSEM, EMHP – Grady Health System – Emergency Management Executive Director

Where are the RDHRS Sites?

ASPR has awarded four demonstration sites to address health care preparedness challenges, establish promising practices for improving disaster readiness across the health care delivery system, demonstrate the potential effectiveness of an RDHRS, and make progress toward building a national system for readiness built on regional collaboration.



Build a partnership for disaster health response



Align plans, policies, and procedures related to clinical excellence in disasters



Increase statewide and regional medical surge capacity, coordinate regional medical response, expand specialty care



Improve statewide and regional situational awareness



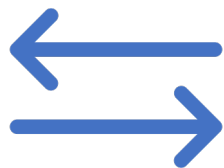
Develop readiness metrics to integrate measures of preparedness



Test capabilities through exercises



SRDRS Aims



Augment

Augment horizontal and vertical integration of key stakeholders

- Champion public-private partnerships
- Align preparedness and response plans, policies, and procedures



Improve

Improve bidirectional communication and situational awareness

- CBRNE response
- Health care organizations and government partners



Facilitate

Facilitate greater access to highly specialized clinical expertise and capabilities to improve medical surge capacity





SRDRS Select Initiatives

- Develop regional partnerships
- Develop a medical operations coordination cell (MOCC) capability
 - Track out-of-hospital patient movement
 - Improve visibility of health system capabilities and capacities by enhancing an existing health systems dashboard
 - Support patient destination decisions based on patient need and hospital capability and capacity
 - Improve access to highly specialized clinical expertise in CBRNE mass casualty management
- Expand telemedicine systems
 - Tele-Critical Care, Tele-Emergency Medicine, Tele-Observation Medicine, and Tele-EMS
 - Telephonic consultation services offered by the regional poison centers
- Develop and maintain a repository of resources for CBRNE mass casualty management



Medical Operations Coordination Cell (MOCC)

Housed at Georgia Coordinating Center (GCC)

- GCC will serve as the MOCC to:
 1. Monitor bed availability in and around their operational area to assure a common level of saturation.
 2. Provide policies that guide actions when a facility is considered overwhelmed compared to others, resulting in load-balancing.
- Partnership with ImageTrend (currently under development) will increase the capabilities and capacity of the GCC/MOCC by:
 1. Enabling SRDRS specialist connectivity with prehospital personnel to assist with out-of-hospital care .
 2. Providing triage to hospitals based on level of care needed in a CBRNE incident.
- Mobile app will launch in the next quarter
 1. Identifies EMS location and closest appropriate resources.
 2. Prefills trip report for those agencies using ImageTrend.



Collaborative Goals:

The goals of the SRDRS R4P3C are to increase the surge capacity and enhance the capability of Region IV poison control centers in providing technical and clinical consultation to medical providers, public health, emergency management, and the public during and after chemical or radiological disasters.

R4PC3 Participants



1	Louisville, KY	Kentucky Poison Control Center of Norton Children's Hospital
2	Nashville, TN	Tennessee Poison Center
3	Charlotte, NC	North Carolina Poison Center
4	Jackson, MS	Mississippi Poison Control Center
5	Birmingham, AL	Alabama Poison Information Center
6	Atlanta, GA	Georgia Poison Center
7	Columbia, SC	Palmetto Poison Center
8	Jacksonville, FL	Florida/USVI Poison Information Center - Jacksonville
9	Tampa, FL	Florida Poison Information Center - Tampa
10	Miami, FL	Florida Poison Information Center - Miami

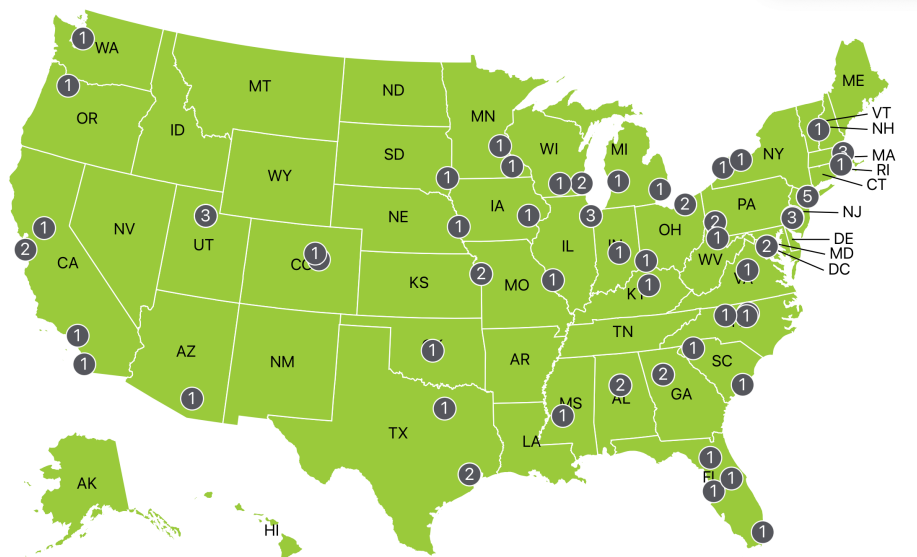




Radiation SMEs in Region 4

Building:

- Partnership with RITN, RITN Centers, Radiation Control Program Officers, and Poison Control Centers
- Roster of radiation expert volunteers through SRDRS

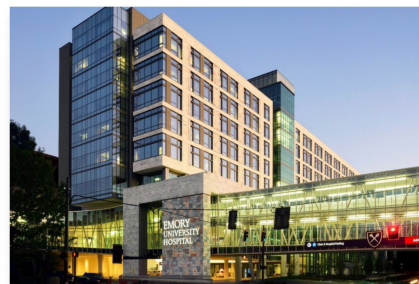




Biothreat SMEs in Region 4



Regional Treatment Centers



Region 4
[Emory University Hospital / Children's Healthcare of Atlanta](#)



Region 4
[University of North Carolina at Chapel Hill](#)

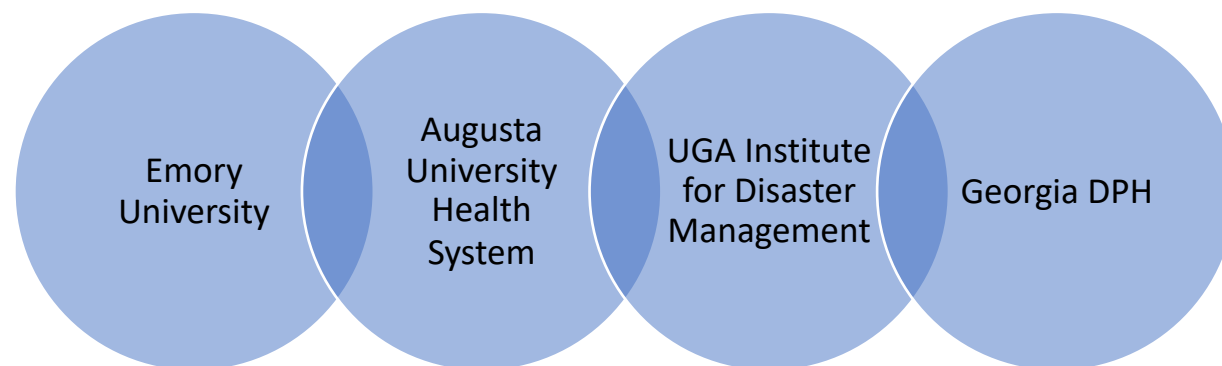


Building a Partnership for Disaster Health Response

Partners for collaboration include:

- Designated trauma centers
- Burn centers
- Pediatric specialty care centers
- Regional Emerging Special Pathogens Treatment Center (RESPTC)
- Radiological Injury Treatment Network Center (RITN)
- Georgia Poison Center
- National Disaster Life Support Education Consortium
- NETEC
- Health Care Coalitions (HCC)

Collaboration Leaders





Questions? Comments?



THANK YOU

How can we work together?
Tell us by emailing us or
visiting our website.



srdrs@emory.edu



www.srdrs4.org



Southern Regional Disaster Response System
HHS Region IV



Health

AUGUSTA UNIVERSITY



Wellstar
HEALTH SYSTEM



GEORGIA

Institute for Disaster Management



EMORY
UNIVERSITY
SCHOOL OF
MEDICINE

**Department of
Emergency Medicine**



NATIONAL CONSORTIUM OF
TELEHEALTH
RESOURCE CENTERS

ASPR

ADMINISTRATION FOR STRATEGIC
PREPAREDNESS AND RESPONSE

Our Next Webinar

The NCTRC Webinar Series

Occurs 3rd Thursday of every month.

Telehealth Topic: Telehealth in Libraries

Hosting TRC: Southwest Telehealth Resource Center (SWTRC)

Date: November 16, 2023

Times: 11 AM – 12 PM (PT)

***Please check the NCTRC website for more information on the upcoming webinar.**



Please Complete Our Survey

Your opinion of this webinar is valuable to us.

***Please participate in this brief perception survey
(will also open after webinar):***

<https://www.surveymonkey.com/r/XK7R72F>

