

Reshaping Healthcare through Telehealth  
**Where** You Live Should Not Determine **If** You Live

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**The Problem:** Too often a patient's geographic location and travel circumstances dictate their access to healthcare and their outcomes. In Alabama, access to healthcare has been deemed the #1 healthcare problem. In rural areas, this issue is being further exacerbated by hospital closings leaving Alabamians without desperately needed services. As hospitals close, outpatient facilities follow suit leaving medical deserts across our state with little to no access to care. Access to healthcare is not just a rural problem, however. Many areas considered urban in Alabama do not have access to subspecialty care with prime examples being pediatric subspecialties, critical care, stroke services, behavioral health, transplant services, and rare disease care. Furthermore, for some patients who are homebound, even getting to a medical facility nearby is problematic forcing home bound patients to pay for costly specialized transportation or forego needed healthcare appointments. These issues are not unique to Alabama, but are challenges faced across the US and even more so abroad.

**The Plan:** Although the majority of Alabama has existing and worsening access to care issues, there are oases of medical care in our state as well. The University of Alabama at Birmingham is an example of one of these oases with multiple subspecialties ranked among the best in the country. Telehealth is a tool that can be used to link providers to patients in any setting, engage patients, and improving healthcare efficiency. Telehealth has expanded from the delivery of urgent care needs to the complex management of dialysis and critical care patients. It has the promise of reducing the cost of care by bridging healthcare providers directly to the patients home, remote monitoring of patient vitals to inform care managers of worsening clinical status, and mass delivery of medical education. Telehealth is largely thought of as videoconferencing with patients. While videoconferencing is a necessary part of telehealth, it is the operations, program design, and implementation of each use case that enables the efficient delivery of telehealth services and ultimately the reshaping of healthcare delivery. The UAB telehealth program, known as UAB eMedicine has already begun delivery of urgent care visits, some clinic based visits with subspecialists, and telestroke coverage. It has the expertise to design and high quality telehealth programs aimed at reshaping healthcare delivery. However, resources are needed to truly reshape healthcare delivery.

In order to accomplish this the following key steps must be taken,

- Expansion of existing telehealth videoconferencing solutions through standards based communications at hospitals, telehealth subspecialty clinics, home health nursing, assisted living and skilled nursing facilities, and post-acute facilities
- Expansion of broadband across our state with up time of greater than 99% to ensure communications, along with IT support to facilitate this network

- Development of either bidirectional HL7 interfaces or a state real-time health Information exchange to facilitate ordering and interpretation of labs
- Expansion of a telehealth coordinating center to support growth within the UAB telehealth program to continue to plan and expand across the state. Support will be needed for implementation, as well as for ongoing evaluation and improvement in quality. A unified call center is necessary for fully operationalizing and integrating telehealth across the state
- Remote monitoring implementation with care managers to manage a growing population of patients at risk for hospitalizations
- Healthcare provider time needed to start a telehealth clinic and subsequently expand to foster sustainability.

#### **Short term objectives: (organized by healthcare setting)**

- Low acuity (home): Continue expansion of UAB eMedicine urgent care by expanding phone step up care and videoconferences thus reducing the need for ER and urgent care visits.
- Home-Based Care: Pilot and expand upon an innovative model of partnership with home health care nurses equipped with teleconferencing equipment to deliver healthcare directly into the homes of patients first use-case post hospital discharge follow up of congestive heart failure patients
- Clinic Based: Establish a telehealth subspecialty clinic hub at one site with plans to expand upon this model across the state and will include adult and pediatric subspecialties.
- Hospital Based: Expand upon the eICU model of care as well as implement at least 10 hospitals with telestroke coverage by the end of 2019.
- Post-acute care: Use telehealth to deliver care within nursing facilities to improve patient care and decrease readmissions. With 2 nursing homes implemented by the end of 2019
- Remote monitoring: Implement remote monitoring for diabetes, COPD, and congestive heart failure. With a goal of 200 patients having been monitored by the end of 2019.
- Education: Effect healthcare delivery by utilizing innovative models such as Project Echo to improve public healthcare crises such as opioids.

#### **Long-term objectives**

1. Make home-based telehealth clinic visits an integral part of caring for high risk patient populations and home based patients.
2. Establish 10 telehealth subspecialty clinic hubs across our state to greatly reduce barriers to access to care.
3. Create statewide coverage for ICU, behavioral health and stroke care

#### **Long-term Impact**

We anticipate that full implementation of telehealth in our state across the healthcare spectrum, as stated above, will improve access to care disparities, reduce the total cost of healthcare by meeting the patients' needs before hospitalizations, and improve overall healthcare outcomes in our state. Full telehealth implementation in our state, as outlined above, will make UAB a national leader and driver for healthcare delivery reform.

## **List of Potential Partners**

1. Alabama Department of Public Health
2. Children's of Alabama
3. Blue Cross Blue Shield
4. Medicaid of Alabama
5. Viva
6. UAB School of Nursing
7. UAB School of Public Health
8. UAB School of Health Professions
9. UAB School of Medicine
10. UAB School of Dentistry
11. Alabama Rural Health Association
12. Alabama Hospital Association
13. Alabama Power
14. Verizon Communications
15. Alabama Hospitals across the state including but not limited to:
  - a. Bryan Whitfield Memorial Hospital
  - b. LV Stabler
  - c. Eliza Coffee
  - d. Bibb County Hospital
  - e. University Medical Center
  - f. Mobile Infirmary
  - g. Pickens County Hospital
  - h. Mizell Memorial Hospital
  - i. Northwest Medical Center
  - j. John Paul Jones Hospital
  - k. Vaughan Regional Medical Center
  - l. Russellville Hospital
  - m. Russel Medical Center
16. Medical Association of the State of Alabama
17. Alacare