

## Proposed “Grand Challenge” Topic: Making Birmingham the Healthiest City in America

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### **Description of the problems to be addressed**

For the most part, healthcare in the United States, has been largely immune to the forces of innovation. While medical treatment has made tremendous advances over the years, the packaging and delivery of treatment still remains inefficient, ineffective, and patient unfriendly. How is it that a nation that spends one-sixth of its gross domestic product on health, still not find innovative solutions? There are many dynamic forces shaping healthcare today in Alabama and nationwide. The changes we are seeing in the healthcare industry revolve around these main areas: An aging population, an increase in consumer driven markets, and a trend towards value and knowledge-based economies.

The healthcare sector simply has too many stakeholders, each with their own agenda. If the industry was viewed as a sport, there would only be one player left on the bench, the consumer. The end-user of care does not call the shots on what method of treatment they will pay for. In large, employers and insurance companies compete with large hospitals and physician groups to attract consumers by adding advanced equipment or new surgical wings to differentiate, ultimately driving up costs. Another factor at play is the impact the Affordable Care Act has had on increasing financial risk under healthcare costs onto the individual, increasing the consumer’s expectation over the quality over their healthcare related experience. This has led to an emphasis on a value and knowledge-based economy centered on the patient experience, quality of care, and the individual’s focus on controlling their overall health and wellbeing. With a shift toward a knowledge-based economy, we are bridging gaps in people’s knowledge over their health circumstances allowing them to have more autonomy at handling their health. However, in today’s digital technology and segmented healthcare market there is both a lack of collaboration between specialized health fields and an increase in the variety and supply of information and products. This lack of coordination and clutter in supply of information and products has led consumers to feel overwhelmed at which direction to handle their health.

In Alabama alone, approximately \$2.7 billion has been invested into healthcare companies since 2000<sup>1</sup>. Despite this enormous investment in innovation and the magnitude of the opportunity for innovators to both do good, while doing well, Alabama still remains the 46th best state for quality and access of healthcare. Meanwhile, Alabama’s health spending per capita has nearly doubled in that same time period<sup>2</sup>.

Alabama’s largest city, Birmingham will continue to see rising healthcare costs due to prevalent diseases, such as diabetes. This chronic condition coupled with an aging population continues to burden healthcare systems in Birmingham. Healthcare costs for a person with diabetes is 2.3 times higher than a person without<sup>3</sup>. Other common health conditions in Birmingham include, hypertension, high cholesterol, depression/anxiety/mood disorders, and coronary artery disease<sup>4</sup>. All of these conditions prominently plaguing the region are attributable to poor lifestyle choices, like unhealthy diet, lack of exercise, smoking, and excessive stress.

Investing in better diagnostic equipment will not empower the consumer to make better decisions about their health and prevent chronic illnesses, such as diabetes. While it may aid in

the treatment, it will also continue to add to healthcare costs — a paradigm that we must shift away from. Only by identifying patients’ unhealthy habits and life styles and guiding them towards better choices, before health problems arise or become serious, can we create disruptive innovation in the healthcare industry in places like Birmingham, Alabama.

Pack Health was founded in 2013 with the mission is to “help people overwhelmed by a diagnosis access the right care and develop the self-management skills to improve well-being”, primarily through digital health coaching programs. Since its inception, we have engaged over 8,500 patients in all 50 states. We have developed a structured and systematic program to foster behavioral changes, and help patients better manage their chronic conditions. The program incorporates tools such as digital remote patient coaching into the workflow of clinicians to facilitate better outcomes, patient experience, and healthcare utilization. We hypothesize that coach-directed approach will be significantly more effective in achieving clinical and behavioral measures as compared to the patient-directed method of engagement. This hypothesis is informed through review of the fragmented literature on patient coaching and navigation which demonstrates a greater personalization and connection with patients thereby enhancing the propensity to change.

Pack Health anchors all its programs on measures that directly improve patient reported outcomes (PROs) and well-being. Pack Health also tracks and coordinates preventative care (e.g. foot and eye exams for members with type 2 diabetes) which have been shown to reduce high cost procedures down the line. To date, the Pack Health program has demonstrated meaningful and measurable success across multiple disease states, including Type 2 Diabetes. For example, Pack Health currently engages 716 patients with Type 2 Diabetes across the nation; spending 114,844 minutes with patients helping them overcome barriers to care and learn better ways to self-manage their Type 2 Diabetes. Of these, 578 patients have completed the program with clinically meaningful results including: An average 1.05 drop in HbA1c as measured before and after the program, A 19% increase in medication adherence, and an increase of 23% and 26% for completion of annual eye and foot exams<sup>5,6</sup>. Our results suggest that a high-touch, digital coaching, patient centered engagement intervention is an effective solution for helping patients with chronic conditions develop positive behaviors, increase medication adherence, and improve overall well-being.

### **Implementation process and desired outcomes**

In order to make Alabama healthy and Birmingham the healthiest city in America, it is imperative to address all populations: underserved, middle class, and upper class. Bringing large institutions such as UAB, Alabama Power, Blue Cross Blue Shield of Alabama, American Heart Association, and others together will allow us to reach these individuals and create an impact in their lives and health. The first step will be to form a steering committee with all parties involved. The next step will be to identify certain populations who will be enrolled in the Pack Health’s patient engagement program. Validated patient reported outcomes (PROs), such as the ones listed above, will be captured to demonstrate impact. Data analysis will be conducted, and white papers will be published and presented at various conferences to show the alliance of public and private entities in Birmingham to make it the healthiest.

This coalition will make Birmingham the healthiest city, which is imperative for economic development. We will create a template that cities throughout the nation can replicate.

## List of potential partners

- Pack Health:
  - Dr. Mazi Rasulnia
  - Rob Ginter
  - Uma Srivastava
  - Stephen Burton
  - Brett Wisse
  - M'Kayl Lewis
  - Maggie Belshe
- UAB
- Alabama Power
- Blue Cross Blue Shield of Alabama
- American Heart Association, Greater Southeast Affiliate
- City of Birmingham
- Federally Qualified Health Centers
- Minority Health Research Centers
- UWCA partners
- Various faith based, civic, and cultural organizations with reach within in the city

## References:

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<sup>1</sup> American Diabetes Association. (2013). Economic Costs of Diabetes in the U.S. in 2012. *Diabetes Care*, 36(4), 1033-1046.

<sup>2</sup> <https://www.kff.org/other/state-indicator/health-spending-per-capita/?activeTab=graph&currentTimeframe=0&startTimeframe=23&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D>

<sup>3</sup> <https://www.aphafoundation.org/sites/default/files/ckeditor/files/JCDH%20-%20Community%20Fact%20Sheet.pdf>

<sup>4</sup> <http://www.wsfa.com/story/33849807/list-of-top-5-health-issues-for-central-al-residents>

<sup>5</sup> Srivastava U., Burton S., Rasulnia M. Impact of Remote Digital Coaching On Patient Health and Experience. Jan, 2017. Poster presented in Alliance.

<sup>6</sup> Bowman, S, Rasulnia, M, Patel D., Masom D., Belshe M., Wright W. Evaluation the Efficacy of a Bundled Chronic Condition Management Program. *AJMC*. 201:10-16.