



Contributor:

James M. Farrell

Senior Vice President, Partner Sales



The LeadingAge Center for Aging Services Technologies (CAST) is focused on accelerating the development, evaluation and adoption of emerging technologies that will transform the aging experience. As an international coalition of more than 400 technology companies, aging-services organizations, businesses, research universities and government representatives, CAST works under the auspices of LeadingAge, an association of 6,000 not-for-profit organizations dedicated to expanding the world of possibilities for aging.

For more information contact:

Zohra Sirat, Project Manager, CAST
zsirat@LeadingAge.org
(202) 508-9438
LeadingAge.org/CAST

Reducing Blood Pressure among Engaged Participants through Multi-User Telehealth, Gamification, and Engagement Platform

Category

Health Outcomes (Blood Pressure, Blood Glucose, etc.)

Organization Name

higi SH llc

Organization Type

Health and Wellness Engagement Platform.

Other Partners

Payers, Providers, Wellness Programs, Pharmacies, Population Health and diversified healthcare technology companies.

Organization Description

higi is a technology company that is transforming the way communities take care of themselves. Founded in 2012, the company owns and operates the largest FDA-cleared self-screening health station network in the United States with nearly 11,000 stations across the United States. higi also operates a robust online community platform that is linked to the higi health station network and over 80 health devices, activity trackers and apps. To date, more than 36 million people have used a higi health station to conduct nearly 200 million biometric screenings (blood pressure, pulse, weight, and body mass index). Over 4.5 million people have signed up for a higi account that offers an all-in-one biometric and activity data feed for personal health management and information sharing with friends, family, and trusted healthcare providers.

Project Description

Ambulatory blood pressure (ABP) is known to provide prognostic information about cardiovascular disease better than office BP. ABP kiosks provide an accessible, affordable, convenient and accurate means for individuals who cannot afford home BP devices to monitor their BP. This study is applicable to the broader senior living market.

Objective

To examine the relationship between ABP and patient engagement with a nationwide ABP kiosk platform deployed in pharmacies, grocery stores, and other community centers.

Telehealth and RPM System Type

Real-time self-service or assisted biometric patient/resident/client monitoring.

Telehealth and RPM System Embodiment

Multi-user health station / kiosk.

Business Model

Subscription model paid by customer (i.e., Senior Living Community) and free to use for residents.

Implementation Approach

De-identified historic data from a nationwide ABP kiosk network (www.higi.com) was analyzed from September 2012 to April 2015. Approximately 9,700 ABP kiosks were deployed within the network during the time-period of the study. Approximately 1,928,900 patients created accounts on the engagement platform. Only patients with initial BP measurement in the hypertensive range and those who opted-in to share data for research purposes were included in the study. A total of 158,800 patients met all inclusion criteria for the study. Mean age of the study population was 49 years, with 58% male and 42% female. Almost half the patients were obese (49%). Level of engagement was defined as the number of average monthly logins on the gamification platform (i.e. kiosk, web portal, and mobile app). BP changes were defined as the difference between a patient's first and last reading on the kiosk network. Patient demographics, level of engagement with the gamification platform, and their ABP trends were analyzed.

Outcomes

Improved health outcomes (blood pressure reductions). Here is a summary of the findings:

- Patients logging in 5 or more times per month showed an average drop in Systolic BP (SBP) of 17 mmHg and an average drop in Diastolic BP (DBP) of 9 mmHg with >80% seeing any reduction in their BP and nearly half reaching BP range below hypertensive.

- There was a statistically significant difference in SBP and DBP change across frequency of engagement. Elderly patients showed trend of greater drop in BP as compared to younger patients whereas females showed greater drop in BP as compared to males.

A summary description of the study and its findings can be found in this [press release](#).

Challenges and Pitfalls to Avoid

Throughout the course of the study new kiosks were being deployed resulting in some locations where there was not enough time available to measure outcomes for that population, this may have resulted in underestimation of the potential effect. Another drawback is the pre-experimental design that lacks a control group. Further studies are needed with control groups to measure the direct effect of gamification on hypertension control.

Lessons Learned

The results show a statistically significant relationship between frequency of engagement as measured by level of monthly logins on the gamification platform and lowering of systolic blood pressure.

Advice to Share with Others

Providing an empowering method to individuals allowing and even encouraging them to engage in self-managing their health and chronic conditions with an accessible, affordable, convenient, and accurate solution can lead to positive health outcomes. This can translate to positive direct impacts to the health of residents of senior living communities and their overall business.