Impact of Remote Patient Monitoring (RPM) on 12-Month BP Outcomes: An Innovative Approach to Hypertension Management

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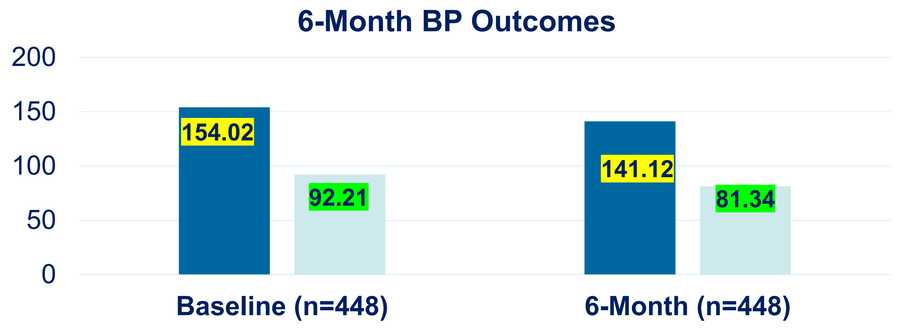
INTRODUCTION

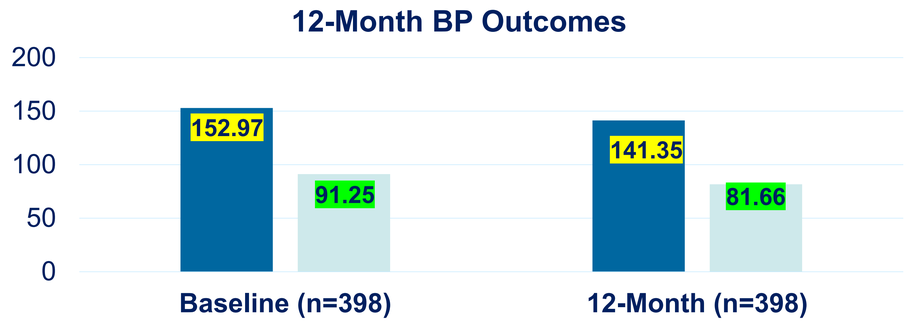
- Nationally, SC ranks 42nd (out of 50) for high blood pressure prevalence. Approximately 38% of adults in South Carolina report being told by a health professional that they had high blood pressure.
- High blood pressure costs the nation about $131 to $198 billion each year.
- Remote patient monitoring (RPM) is an accessible tool for chronic disease management that improves access to care and provides data in real time for provider action.
- While there is a growing body of evidence to suggest that BP control improves at 6 months with home monitoring, there is less evidence for effectiveness or sustained improvement at 12 months follow up time.
- A telemedicine program called Technology Assisted Case Management (TACM) was developed to test the efficacy of combining nurse case management and RPM to assist South Carolina residents achieve better blood glucose (BG) and blood pressure (BP) control.
- Following a meticulous review and in-depth analysis of our secondary outcomes pertaining to blood pressure, we have observed a noteworthy reduction in both systolic blood pressure (SBP) and diastolic blood pressure (DBP) among patients with baseline SBP and/or DBP levels exceeding 140/90 mmHg.
- These findings underscore the program's effectiveness, highlighting the substantial impact it has on patients with elevated baseline blood pressure levels exceeding 140/90 mmHg.

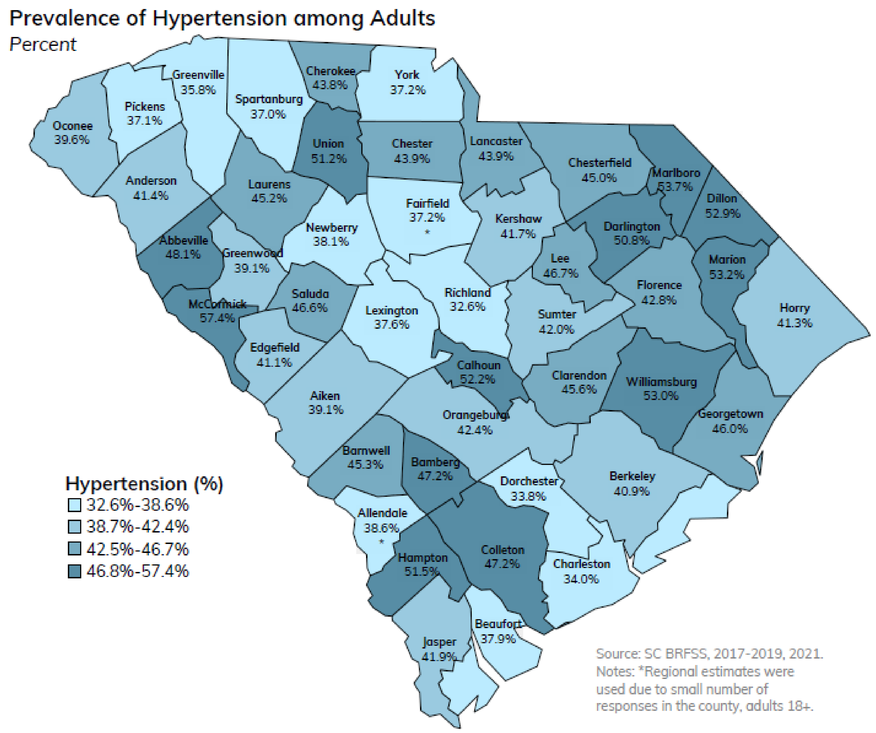
OBJECTIVES

- Determine whether RPM of blood pressure over 12 months, with provider engagement to allow for medication changes in the inter-visit period, will produce sustained improvements in BP at 12 months.
- Engage rural, underserved patient populations in chronic disease management through telemedicine.

RESULTS







METHODS

- Clinical sites across the state are recruited to participate and implement the TACM-2 program into their clinic(s).
- Patients complete 3 office visits (Baseline, 6- & 12-month visits) to collect A1C labs and BP assessments.
- Patients are given a 4G cellular 2-in-1 meter, capable of checking both blood glucose (BG) and blood pressure (BP), that transmits data directly to a secure server through SIM technology for healthcare provider review.
- An RN from MUSC monitors the data and sends each site bimonthly alert reports for patients that may need medication adjustments.
- Under supervision of the participating site's PCPs, a nurse case manager titrates both DM and HTN medications bimonthly for patients whose readings are not within recommended ranges based on algorithms developed by each site's PCPs.

KEY LESSONS

- RPM leads to improved blood pressure control which is sustained at 12 months.
- RPM is an effective tool for improving Hypertension management and delivering more timely follow-up care to rural patients.
- The easy to use design and the healthcare providers' ability to deliver inter-visit care with this technology, coupled with the sustained benefit on chronic disease control as measured by BP, suggests RPM can reduce barriers to care and improve outcomes for otherwise vulnerable and underserved populations.

REFERENCES

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