

Scalable RPM Model Improves A1c Outcomes in Underserved Diabetes Patients

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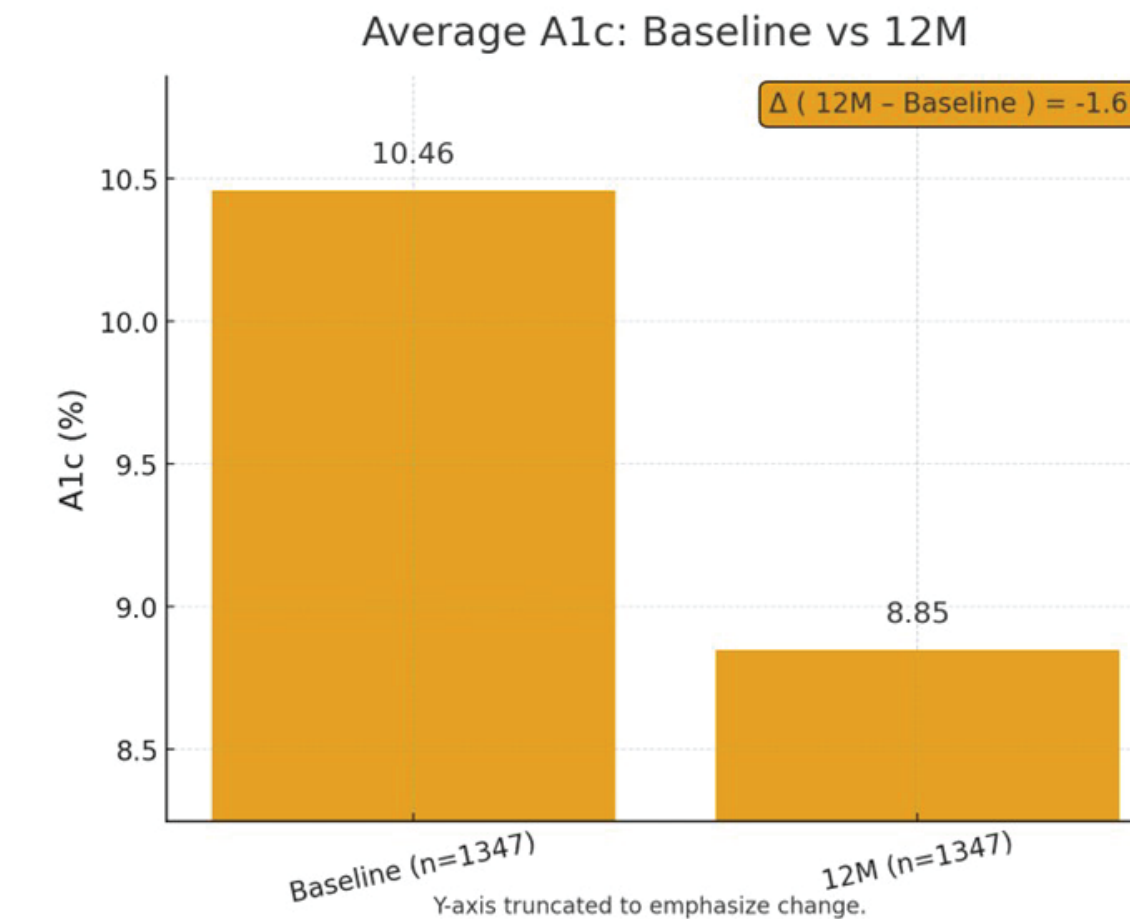
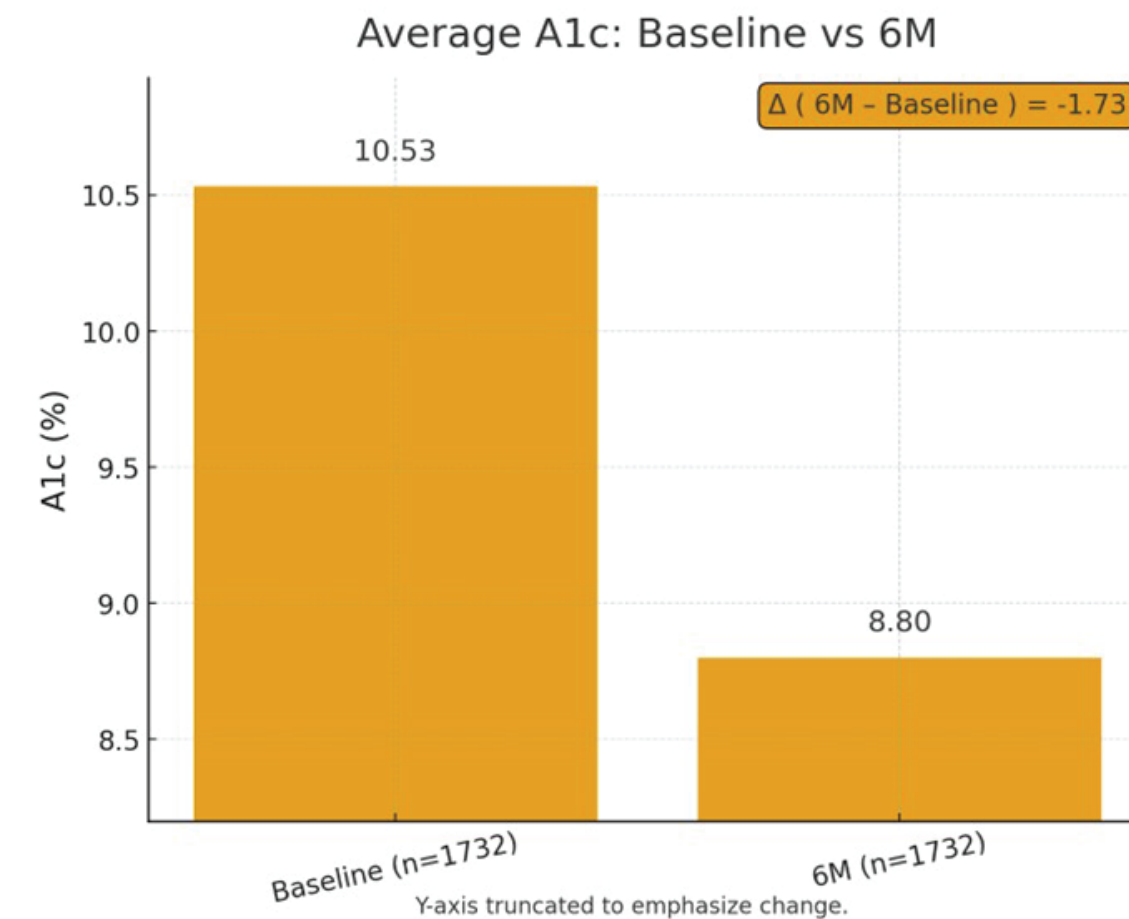
OVERVIEW OF NEED

- South Carolina has one of the highest burdens of chronic disease in the U.S., with type 2 diabetes affecting over **13% of adults**—well above the national average.
- Diabetes-related complications such as cardiovascular disease, kidney failure, blindness, and amputations drive significant costs for patients and health systems across the state.
- Remote Patient Monitoring (RPM) offers a promising opportunity to improve diabetes outcomes and reduce disparities.
- While RPM's short-term benefits are well-documented, evidence on sustained glycemic control beyond six months remains limited.

METHODS

- Program Scope:** Since 2017, a statewide RPM program in South Carolina has enrolled >2,300 adults with uncontrolled T2DM (HbA1c $\geq 8.0\%$).
- Technology:** Participants use a cellular-enabled 2-in-1 device for daily blood pressure and glucose monitoring.
 - No internet or smartphone required → accessible for low-resource settings.
- Clinical Management:** Clinicians make more frequent medication adjustments under provider supervision using evidence-based algorithms.
- Data Collection:** HbA1c measured at baseline, 6 months, and 12 months.

PROGRAM OUTCOMES



EXTENDING TO NEW POPULATIONS

Scalability Potential:

- Hypertension:** Use of cellular-enabled blood pressure cuffs to address SC's high rates of stroke and cardiovascular disease
- Heart failure:** Weight and symptom monitoring to reduce readmissions in rural communities
- COPD:** Pulse oximetry for early exacerbation detection
- Behavioral health:** Remote mood monitoring and virtual counseling to expand access in underserved counties

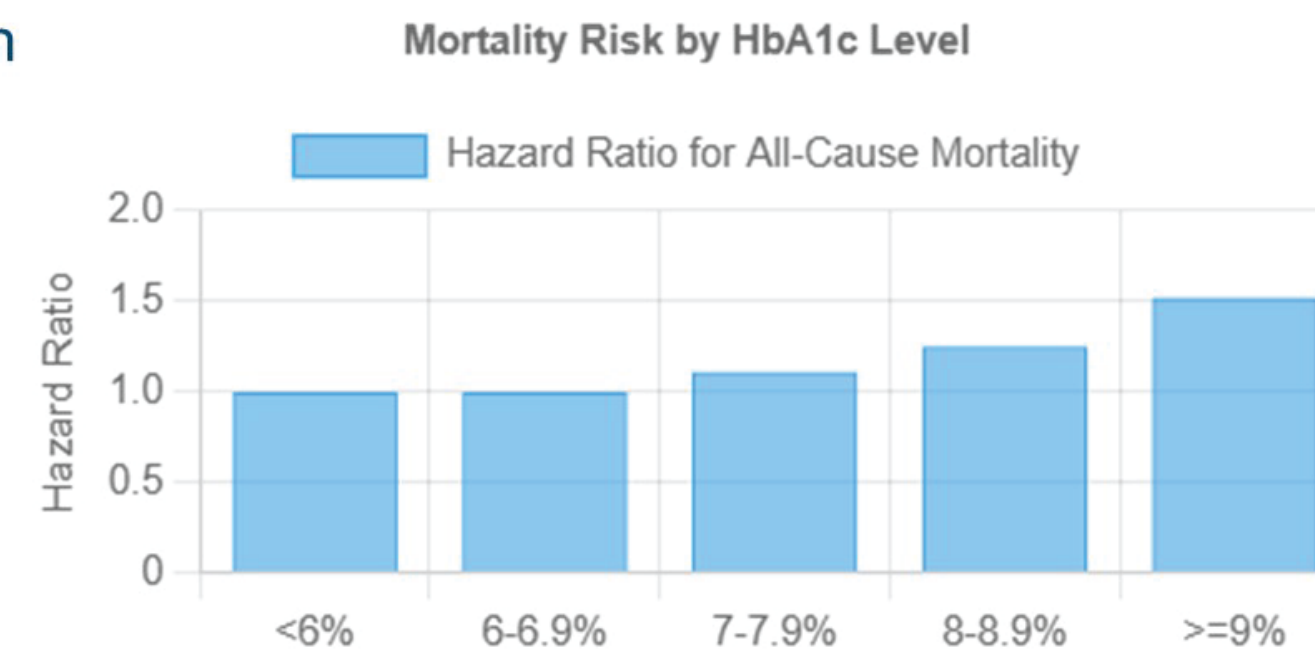
Key Enablers in SC:

- Statewide broadband initiatives supporting telehealth
- Strong Medicaid and Medicare Advantage adoption of RPM billing codes
- Partnerships with federally qualified health centers and rural hospitals

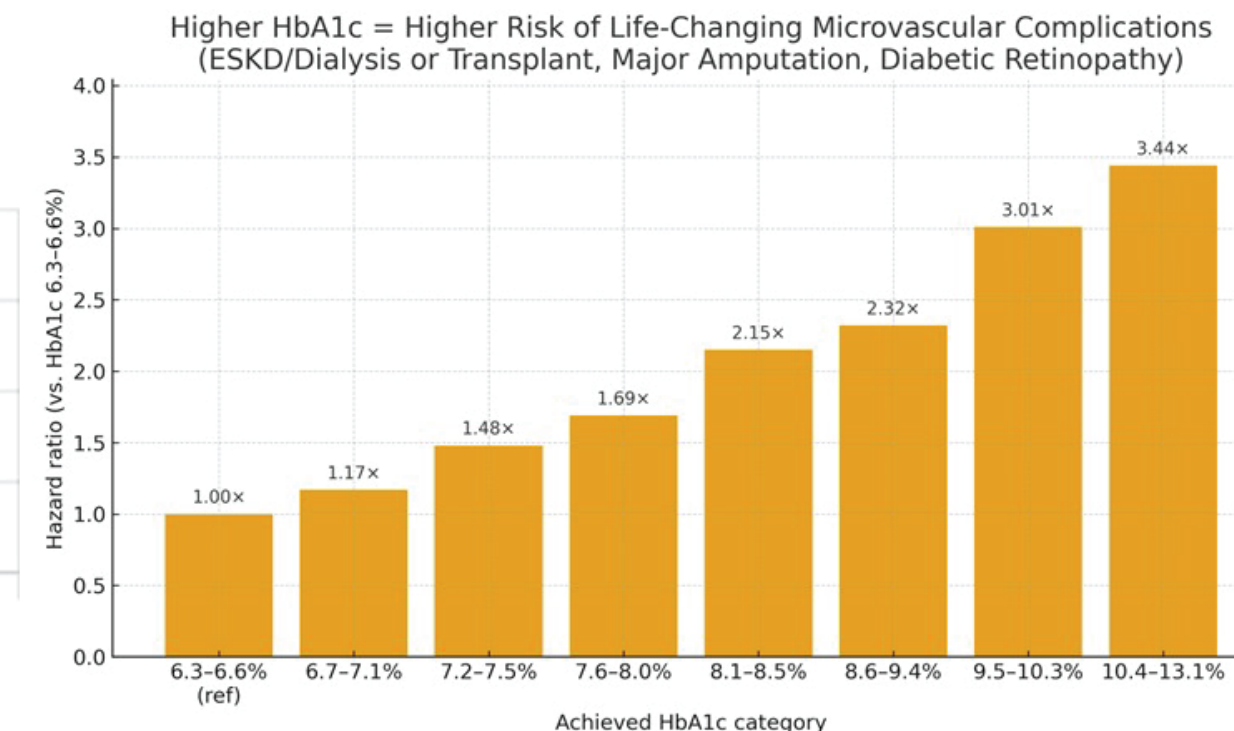
Next Steps:

- Expand RPM to **hypertension management in SC Medicare Advantage populations**
- Leverage the same data platform across multiple conditions

IMPACT OF HIGH A1C ON MORTALITY AND COMPLICATIONS



Source: "Diabetes Mellitus-Related All-Cause and Cardiovascular Mortality in a National Cohort of Adults" by Sridharan Raghavan, et al., J Am Heart Assoc. 2019 Feb 19;8(4):e011295



Source: "The Association Between Hemoglobin A1c and Complications Among Individuals With Diabetes and Severe Chronic Kidney Disease" by Dea H. Kofod, et al., Diabetes Care 2025;48(8):1400-1409

REFERENCES

Elizabeth Kirkland, Dawn Dericke, Caroline Wallinger, Chloe Cooper, Sabra Slaughter, James McElligott, and William Moran. Dissemination of remote patient monitoring: An academic-community primary care partnership in South Carolina, *Journal of Public Health Management & Practice*. 2022.