



Impact of a Hospital-Based Food Pantry Referral on Blood Pressure, Weight, and Glycemic Control Among Food-Insecure Adults

Liberty Erfe, DNP, RN, EBP-CH; Andrew Higgins, ADN, RN
Riverside Healthcare, Kankakee, Illinois



Background and Project Objective

Food insecurity is a significant social determinant of health associated with poor control of hypertension, obesity, and diabetes. Individuals experiencing food insecurity face barriers to accessing nutritious foods, contributing to suboptimal dietary intake, medication tradeoffs, and worsening cardiometabolic outcomes. Health systems have increasingly implemented routine screening for food insecurity and referrals to hospital-based food pantries; however, limited evidence exists evaluating the clinical impact of these referrals on chronic disease outcomes.

The purpose of this project is to evaluate changes in blood pressure, body weight, and hemoglobin A1c (A1C) among food-insecure adults following referral to and utilization of a hospital-based food pantry.

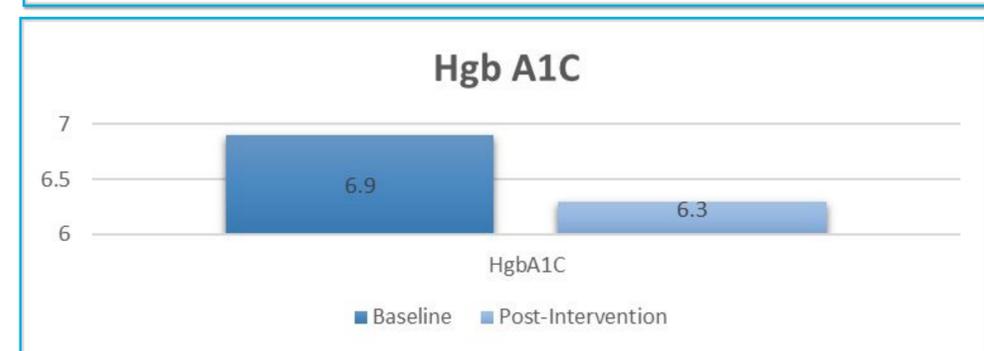
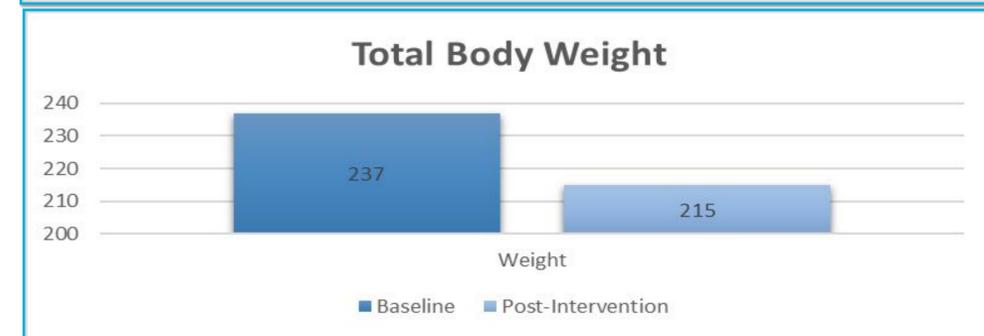
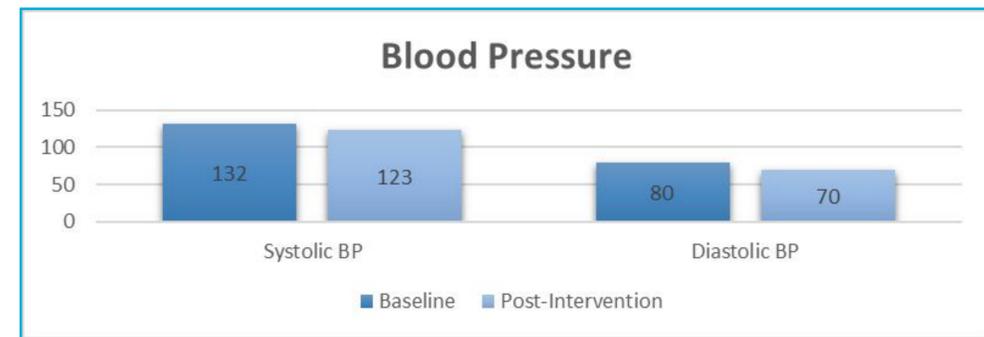
Methodology

- This evidence-based quality improvement included ten adult patients (≥18 years) who screened positive for food insecurity using a validated Accountable Health Communities Health-Related Social Needs (AHC-HRSN) Screening Tool during inpatient admission or ambulatory encounters.
- Patients who screened positive received a closed-loop referral to the hospital-based food pantry in East Court through the Epic electronic health record.
- East Court Food Pantry, also known as the Riverside Wellness Food Connection provided access to fresh produce, heart-healthy and diabetes-appropriate foods, and shelf-stable items.
- Clinical indicators including systolic blood pressure (SBP), diastolic blood pressure (DBP), weight, body mass index (BMI), and A1C were extracted from the electronic health record at baseline (time of referral) and at 6-month follow-up.
- Patient engagement at the food pantry was measured by referral completion and visit frequency at least 10 Pantry visits during the 6-month measurement period.
- Paired statistical analyses were conducted to assess changes in outcomes over time, with subgroup analyses examining outcomes by level of pantry utilization.

Explanation of Results

- The cohort of ten adult patients who completed at least 10 food pantry visits during the 6-month measurement period show improvements in cardiometabolic outcomes.
- Average baseline blood pressure: 132/80 with an average weight of 237 pounds and average baseline A1C of 6.9.
- After 6 months of obtaining their food from the hospital-based food pantry; patients' average blood pressure result is 123/70; average weight of 215 pounds; and average A1C of 6.3.
- Mean SBP and DBP decreased from baseline, indicating improved blood pressure control – Stage 1 Hypertension classification to an Elevated Blood Pressure per American Heart Association.
- Average weight and BMI dropped to 22 pounds particularly among patients with repeated pantry utilization.
- Mean A1C values decreased by 0.6, as seen in individuals with higher baseline A1C levels and more frequent pantry engagement.
- These findings are consistent with prior food-as-medicine interventions demonstrating modest but clinically meaningful improvements in blood pressure and glycemic control following enhanced access to nutritious foods.

Medical Measures of Impact



Conclusion

Referral to a hospital-based food pantry was associated with improvements in blood pressure, weight, and glycemic control among food-insecure adults with regular Pantry utilization. This project demonstrates the feasibility and potential clinical impact of integrating food pantry referrals into routine care as a strategy to address food insecurity and support chronic disease management. Hospital-based food pantries such as a Riverside Wellness Food Connection represent a scalable, patient-centered intervention that aligns with value-based care and population health initiatives aimed at improving outcomes for high-risk populations.