Submission Id: 2869

Title

A quasi-experimental evaluation of a clinic-based referral program to address food insecurity

Priority 1 (Research Category)

Social determinants and vulnerable populations

Presenters

Daniel Walker, PhD, MPH, Gennaro Di Tosto, PhD

Abstract

Context: Food insecurity, the inability to consistently access nutritionally-adequate food, increases risks for negative health outcomes – such as obesity, diabetes, and hypertension. Clinic-based solutions to address this non-medical, health-related social need are emerging. For instance, screening patients for food insecurity and referring them to local food pantries where they can access nutritious foods has shown promise in alleviating food insecurity. However, the spread of food referral programs (FRP) has far outpaced the evidence of their impact on health outcomes. Objective: To analyze a FRP offered to food insecure patients by their family medicine provider to measure its effect on health outcomes (i.e. body-mass index (BMI), blood pressure, A1c). Study design: Quasi-experimental study design to test two hypotheses: (H1) patients offered the FRP will have greater improvements in health outcomes than a matched control group not offered the FRP; and (H2) patients that were offered the FRP and visited a food pantry will have greater improvements in health outcomes than patients offered the FRP who did not visit a food pantry. Modeling applied difference-in-differences estimation, plus propensity score matching (PSM) and cluster-robust inference using matching stratum membership as the clustering variable. Setting: Two community-based family medicine clinics within a large midwestern Academic Medical Center. Population: Patients referred to the Mid-Ohio Farmacy (MOF) with a referral visit and a second 'follow-up' clinic encounter on record between 60- and 120-days following the referral visit (n=187); and a 2:1 matched control group identified via PSM among the rest of the clinics' patient population (n=374). Intervention: The MOF is a FRP that uses a systematic screening and referral process aimed at addressing food insecurity through an electronic referral that connects patients to weekly fresh produce through a food pantry near their home. Outcome Measures: BMI, blood pressure, and A1c values at referral and follow-up. Results: For H1, MOF patients had a -0.35 BMI reduction (95% CI -0.69 to -0.02) compared to PSM matched controls. No effect on other health outcomes were found for either H1 or H2. Conclusions: Clinic-based FRPs have the potential to improve health outcomes for food insecure patients and assist diet-related disease management, yet tailoring of program efforts may be necessary to show greater impacts on health outcomes.