

Evaluating Hospital Discharge Meals on Wheels Program for Patients with Food Insecurity / Malnutrition Risk

Background: Duke implemented discrete screening for HRSN in the electronic health record in 2018 and embedded an electronic social care platform (NCCARE360) to refer patients to community based organizations in 2021. Patients with Health Related Social Needs (HRSN) have significantly higher risks for hospital readmission, with one large national study finding a readmission rate of 11.9% for those without HRSNs compared to 27% with one HRSN and 63.5% with five or more HRSNs. While "Food is Medicine" interventions for patients recently discharged with HRSN is limited, there is some evidence of decreased 30 day readmission rate for heart failure patients with home delivered meals. In May 2022, the North Carolina Hospital Discharge Meals on Wheels Pilot program began taking referrals in NCCARE360 to deliver 2 weeks of meals for patients age 60+ who are food insecure or at risk of malnutrition.

Objective: Our study aims to evaluate the outcomes of referrals and effectiveness of meal deliveries in preventing 7, 14 and 30 day hospital unplanned readmission rates.

Methods: Since September 2022, Duke has referred over 620 patients to Discharge Meals on Wheel program. We merged referral outcome data (e.g. ineligible or accepted) from NCCARE360 with EHR discharge data including readmission outcome.

Results: Of patients referred, 52.3% received meals. There were minimal differences by race with of those who received meals 50% Black-African-American and 44.1% White. Those who did not receive 50% Black and 41.9% White. Overall ethnicity of the cohort was 94.1% non-Hispanic-or-Latino. Initial results showed decreased unplanned readmission rates for 7 and 14 days but not at 30 days.

Conclusion: These early findings indicate potential benefit of meal delivery post-discharge but also suggest longer-duration interventions may be needed to see full effect.