

Comparing Reach and Engagement of a Novel Text Message Intervention between English- and Spanish-speaking Caregivers

Background: Text messaging may offer health systems a low-cost, user-friendly method to provide social resource information at hospital discharge. Assessing equitable reach and engagement is paramount prior to wide-scale implementation.

Objective: To compare reach and engagement of a novel, text message intervention to address Food Insecurity (FI) between English- and Spanish-speaking caregivers

Methods: We conducted a one-year prospective pilot to evaluate a novel, automated text messaging system designed to deliver geographically-tailored food resource information to families with FI after hospital discharge. English- and Spanish-speaking caregivers of hospitalized children with a positive FI screen documented during routine clinical care were included. Caregivers received a food resource text message 1 day and 4 days after discharge and two interactive text message surveys. Primary outcomes were *system-collected* measures of reach and engagement. Among survey respondents, *caregiver-reported* measures of reach and engagement were also measured. We compared outcomes by language using Chi-Squared tests. We also conducted semi-structured interviews with 20 English- and 11 Spanish-speaking caregivers to understand intervention usability and acceptability.

Results: Of 190 caregivers, 134 (71%) spoke English and 56 (29%) spoke Spanish. There were no differences in system- or caregiver-reported reach by language. As compared to English-speaking caregivers, Spanish-speaking caregivers more frequently engaged by clicking the FindHelp link (49% v. 52%, $p=0.028$) and responding to follow-up surveys (67% v. 45%, $p=0.009$), but less frequently used the information to search for food resources (68 v. 93%, $p=0.021$). In interviews, Spanish-speaking caregivers expressed mistrust in information received from a text message and preference for discussing resources with someone.

Conclusion: Our text message intervention for FI equitably reached English- and Spanish-speaking caregivers. Spanish-speaking caregivers may need additional interpersonal contact by phone or in person to use the resources provided.