The Family Check-Up for Health (FCU4Health): A Family-Centered Health Maintenance Approach to Improve Nutrition and Prevent Obesity in Early Childhood

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Introduction

- Obesity is an epidemic in the United States that begins very early in life and disproportionately impacts Latino, African American, and American Indian children (Ogden et al. 2017)
- Family-based interventions are best practice for prevention and management of obesity in early to late childhood (e.g., Whitlock et al., 2014), yet they have not been widely adopted and sustained in the US healthcare system (Smith, George, & Prado, 2017).
- Improved obesity rates and BMI trajectories were identified in two completed randomized trials of the Family Check-Up (Smith et al. 2015; Van Ryzin & Nowicka, 2013), an evidence-based program designed to address conduct problems and substance use (Dishion et al. 2008).
- To achieve a population-level impact on reducing rates of childhood obesity, research is needed on ways to implement evidence-based programs in communities and systems of care that reach the families in greatest need and at greatest risk for health disparities.
- We adapted the Family Check-Up to address pediatric obesity and health behaviors in the primary care setting. The new program, called the Family Check-Up 4 Health (FCU4Health; Smith, Berkel, et al., 2018a), is currently being tested in primary care with 6-12 year old patients with elevated BMI in an ongoing randomized trial (Smith, Berkel, et al. 2018b).
- In the current study, we are testing the FCU4Health as a prevention model in coordination with multiple systems: a preschool, an integrated primary care/behavioral health clinic, and a family resource center.
- This study will evaluate the promise and implementation of the FCU4Health delivered in primarily, Latino families low-income community to prevent obesity in children ages 2 to 5 years of age. A health maintenance model is used for repeated assessment and intervention across a 3-year period.

Method

Participants & Procedures

- Children ages 2 to 5 years of any weight/BMI recruited for inclusion in the study from schools, community resource center, and an integrated primary care/behavioral health clinic in Maricopa County, Arizona.
- Recruitment materials are distributed to the caregiver(s) of eligible children through partnerships with the school and the community resource center. In-person recruitment occurred in the healthcare clinic (by providers) and the resource center (by study staff).
- Upon consenting to participate, families are assessed in the home using validated surveys and semi-structured family interaction tasks (FIT). See Table for primary process and outcome measures.
- Randomization occurs at the end of the assessment. Families randomized to the FCU4Health arm (n=125), compared to services as usual (n=80), are then offered the program (see Figure below).

Primary Process and Outcome Measures

- Efficacy/Effectiveness–Implementation Hybrid Type I Trial design (Currall et al. 2012). Simultaneous evaluation of the effectiveness of the FCU4Health to improve dietary practices and nutritional intake in service of preventing obesity and its implementation in an underserved community with health disparities in childhood obesity rates.
- Allocation: Effectiveness trials often result in limited power to examine associations between implementation and program outcomes. As a result, we used an unbiased methodology to examine associations between implementation and outcomes.
- Health maintenance approach. Similar to a prior trial of the original FCU (Dishion et al. 2008), families randomized to the intervention arm will be offered the FCU4Health feedback and motivation session and the individually-tailored follow-up services yearly over three years, resulting in regular and repeated contact with families and thus multiple opportunities for the family to engage in the program and for the facilitator to monitor progress and emerging challenges and intervene in the right amount at the right time.
- Evaluation: All families in the trial are assessed yearly on the outcomes listed in the table below.
- Training and monitoring FCU4Health delivery. FCU4Health facilitators receive formal in-person and e-learning based training in the program followed by individual and group consultation during delivery. Fidelity to the program is monitored by rating feedback sessions using the validated COACH rating system (e.g., Smith et al., 2013).

Trial Design

- Recruitment
- Assessments
- FB1 FB2 FB3 Services
- Surveys and semi-structured family interaction tasks (FIT).
- Note: W = Assessment Wave. FB = FCU4Health Feedback Session.

Public Health Impact

- Designs combining the feasibility of effectiveness trials, while simultaneously evaluating implementation, could speed translation of promising programs.
- This trial will test the feasibility of implementing the FCU4Health across multiple health and community-based service systems. Cost of implementation and cost-effectiveness outcomes are of high relevance.
- The health maintenance model could prove to be a key advantage in slowing the childhood obesity epidemic compared to other intervention delivery approaches and, if successful, are well-aligned with the routine contact of the primary healthcare and school systems, which could support implementation.
- To appreciably move the needle on obesity rates in childhood, family-based approaches to improve nutrition and dietary practices early in life, before obesity is present, are desperately needed.

Selected References


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