

Methods of a Multidisciplinary, Community-based Intervention for Overweight and Obese Preschoolers: A Family-Oriented, Healthy Eating, Activity, and Lifestyle Training with Hands-on experience (FOR HEALTH)

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Background and Study Purpose

- About 20% of Canadian children and adolescents are overweight and another 12% are obese - a more than 3-fold increase since 1979.
- U.S. NHANES data show that almost 23% of preschool children are overweight and 8.4% are obese. Canadian prevalence data for this age group is lacking.
- Recent systematic reviews on weight management interventions in school-age children and youth concluded that multidisciplinary, family-targeted behavioral interventions are safe and can be effective in reducing obesity. However, there is a paucity of data on such interventions in preschool children.
- The purpose of this study is to address the research gap on effective interventions for overweight and obese preschool children. Primary objectives are a) to test the feasibility of and family satisfaction with a novel 1-year multidisciplinary, family-centred intervention for overweight and obese children 2-6 years of age, and b) to assess its effectiveness to reduce BMI z-scores (BMI-Z) and to improve health-related quality of life (QoL).
- Secondary objectives include to improve nutritional choices, physical activity, and to decrease screen time.

Methods

- Based on a review of the literature and previous local experiences with lifestyle interventions for older children, the 1-year multidisciplinary community-based FOR HEALTH program was developed in collaboration with community partners, mainly the YMCA London and a local family health team.
- Phase 1** is currently assessing a) the feasibility of administering the program in a community setting (YMCA) and b) patient satisfaction. Since December 2013, 2½ - 6 year-old overweight and obese children (BMI ≥ 85th percentile for age and sex) and their families are being enrolled (8-12 families).
- Phase 2** will test whether FOR HEALTH is effective in reducing participants' BMI-Z, and in improving QoL. 32 families will be randomly assigned to a treatment or control group. Controls will receive the same intervention 6 months after the start of the treatment group.

Recruitment

- Patients are being referred to the study by their family physician, paediatrician, or paediatric sub-specialist.
- The study was announced to the community using multiple communication pathways:
 - Letters and emails to London physicians
 - Letters to principals of schools with JK and SK
 - Presentations to London family health teams and community nurses
 - Broad distribution of study posters incl. libraries
 - Advertisements in local media
 - Study websites (hospital and Facebook)

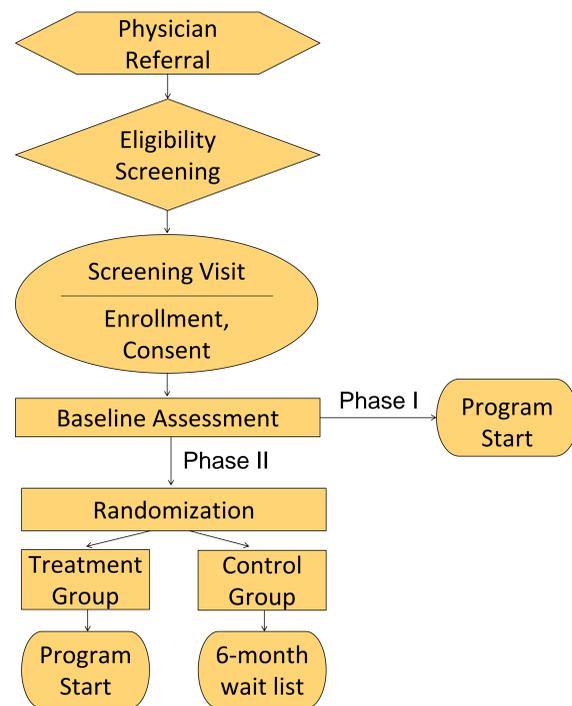


Figure 1. FOR HEALTH - Referral and Screening Flowchart.

Eligibility

- An initial eligibility pre-screening is performed upon receipt of the referral. If eligible, the family is contacted and invited to an orientation and screening visit, which also includes a motivational "Readiness to Change" assessment.

- Once eligibility and the family's interest in participating is confirmed consent is signed.
- Exclusion criteria include chronic medical conditions that might impact program participation (e.g. diabetes mellitus, heart-, gastrointestinal diseases, uncontrolled asthma, psychological and physical disabilities), and an inability to speak and understand English.

Program Structure and Features

- The program consists of a 4-month intensive phase with ten 90-minute group and two individual sessions, followed by two monthly sessions and follow-up meetings at 9 and 12 months.

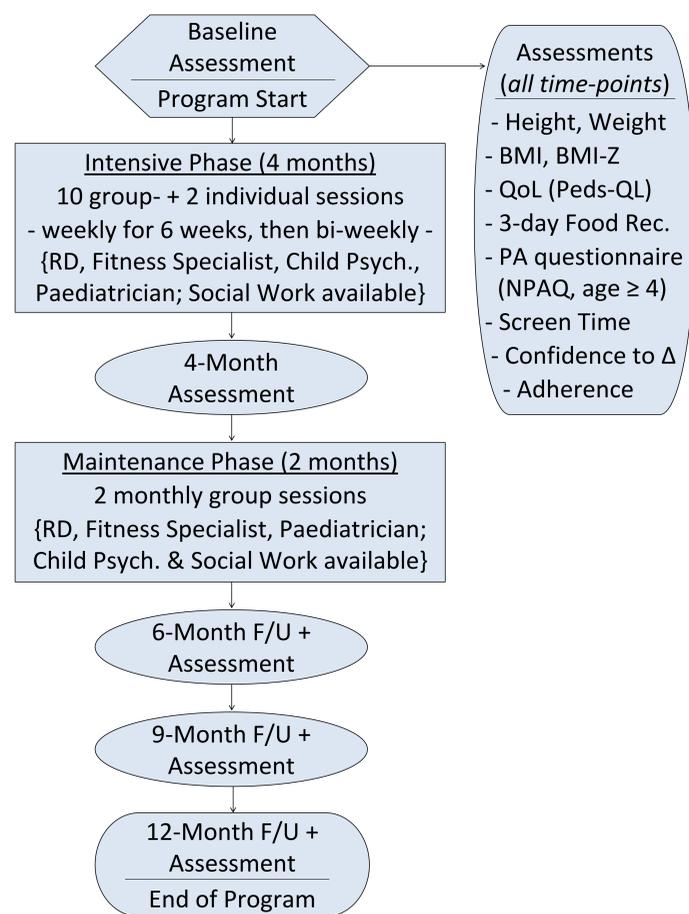


Figure 2. Program Structure and Assessment Flowchart.

- Each group session consists of four elements:
 - 60-minute interactive caregiver education
 - 60-minute child Physical Activity
 - Nutrition Break with healthy food tasting
 - Parent - child activity
- Individual sessions (up to 60 minutes) by dietitian and child psychologist for individualized counseling.
- Cooking Class, Grocery Shopping & Food Label Tour

Session	Key content Group Education (Intensive Phase)
1	Program Introduction; Child Growth & Childhood Obesity
2	Goal Setting (SMART Goals)
3	Food Groups and Meal Planning
4	Habits and Overcoming Barriers
5	Nutrition 101 & Food Label Reading
6	Child Psychology 101 (Parenting, Rewards, Body Image, ...)
7	Physical Activity 101 & how to reduce Sedentary Time
8	Cook Healthy, Stay Healthy

Table 1. Key Focus of Group Session Education during the Intensive Program Phase

Results (Phase I - Enrollment Status)

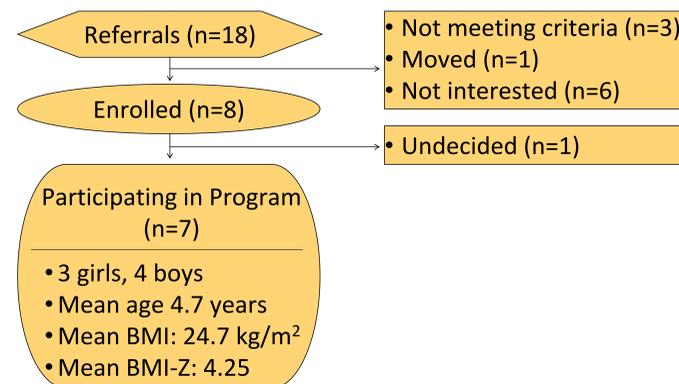


Figure 3. Preliminary Phase I Enrollment

Conclusions

- The results of this pilot study will form the basis for a larger, community-based trial in this field.

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