

The Fit Family Challenge: A Primary Care Childhood Obesity Pilot Intervention

Bonnie T. Jortberg, et al

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Adviser: Hamid Barahimi

Presentation: Mahta Gheiraty

Childhood obesity has increased dramatically over several decades

- Obesity rates
 - doubled among children
 - quadrupled among adolescents
 - in the past 30 years.
- Childhood obesity
 - detrimental immediate
 - long-term health effects.
- health problems can be carried into adulthood.


In 2005, formed an expert committee for obesity prevention

In 2007,

- The expert committee published revised recommendations on childhood obesity
- Include:
- annually reviewing body mass index (BMI) to screen for obesity,
- limiting intake of sugar-sweetened beverages
- encouraging consumption of recommended quantities of healthy fruits and vegetables
- limiting screen time to 2 hours/day
- increasing physical activity.

In 2009

- The CDC initiated the Common Community Measures for Obesity Prevention Project (the Measures Project)

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- ❑ These strategies included:
 - promoting physical activity
 - healthy food
 - beverage choices
 - limiting sedentary activity
 - particularly among children and adolescents.



□ The US Preventive Services Task Force (USPSTF) recommends:

- screening children 6 years old for obesity
- offering comprehensive behavioral interventions
- intensive counseling to promote weight loss

Improvements in BMI and/or weight loss in the pediatric population

- lifestyle interventions
 - included increasing physical activity
 - Family involvement
 - Improving the diet
 - longer-term interventions generally



➤ The primary care practice an ideal site to:

- identify overweight and obese children
- Educate parents and children about the health risks of obesity
- Establish and implement therapeutic interventions

Barriers:

- Many providers have not had training in behavioral interventions
- Including motivational interviewing
- The treatment of overweight children, and
- Do not feel confident in counseling or managing their overweight and obese patients.

Behavioral strategies:

□ That focused on implementation of the 5-2-1-0-messages

- ≥ 5 serving of fruits and vegetables
- ≤ 2 hours of screen time
- ≥ 1 hour of daily physical activity
- 0 servings of sugar-sweetened beverages

□ Saw parents' perceived improvement in providers' behavior

□ Rates of counseling for their child regarding obesity.

Objective:

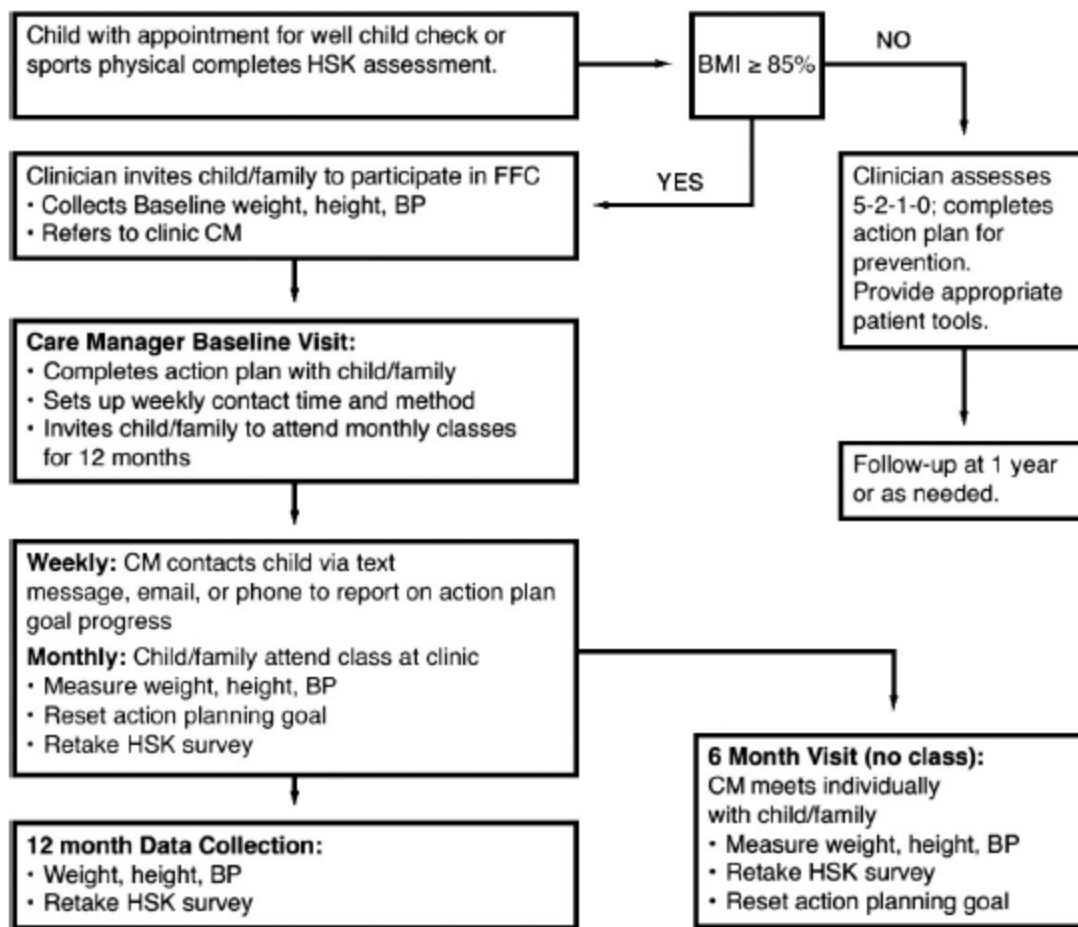
- ❑ The primary aim of this pilot study was to test whether a childhood obesity intervention delivered by trained primary care clinicians and staff could be implemented
- ❑ Followed by changes:
 - BMI
 - Blood pressure
 - At-risk lifestyle factors.

Methods

- This pilot study was conducted at 29 primary care practices
- Colorado Academy of Family Physicians (CAFP)
- September 2011 to May 2014
- 18 practices were in an urban location
- 11 were in a rural location
- 6 were federally qualified health centers
- Each practice was asked to recruit a minimum of 10 children and their families

- 290 children plus family members participated in the FFC
- All children between the ages of 6 and 12 years
- Children with a BMI percentile 85
- Exclusion criteria included children with psychiatric diseases requiring medication that causes obesity

Figure 1. Fit Family Challenge (FFC) flow diagram. BMI, body mass index; BP, blood pressure; CM, care manager; HSK, HeartSmartKids.



Intervention:

- (1) Weekly contact and goal-setting with the child's primary care practice's designated FFC care manager
- (2) Attendance at a monthly group visit with parent(s) and other family members
- (3) Collection of weekly goals and monthly weight, height, blood pressure and lifestyle factors.

Intervention:

- Questionnaire on an iPad provided to each practice at baseline and at each monthly group visit.
- The questionnaire, called HeartSmartKids, asked questions to determine lifestyle factors related to 5-2-1-0.

Results:

- Children had variable durations of follow-up time:
 - 70% ----- 9 to 15 months,
 - 17% -----6 to 9 months,
 - 7% -----3 to 6 months,
 - 6% -----3 months.

Figure 2. Body mass index (BMI) percentile (top) and z-score (bottom), by duration in the program.

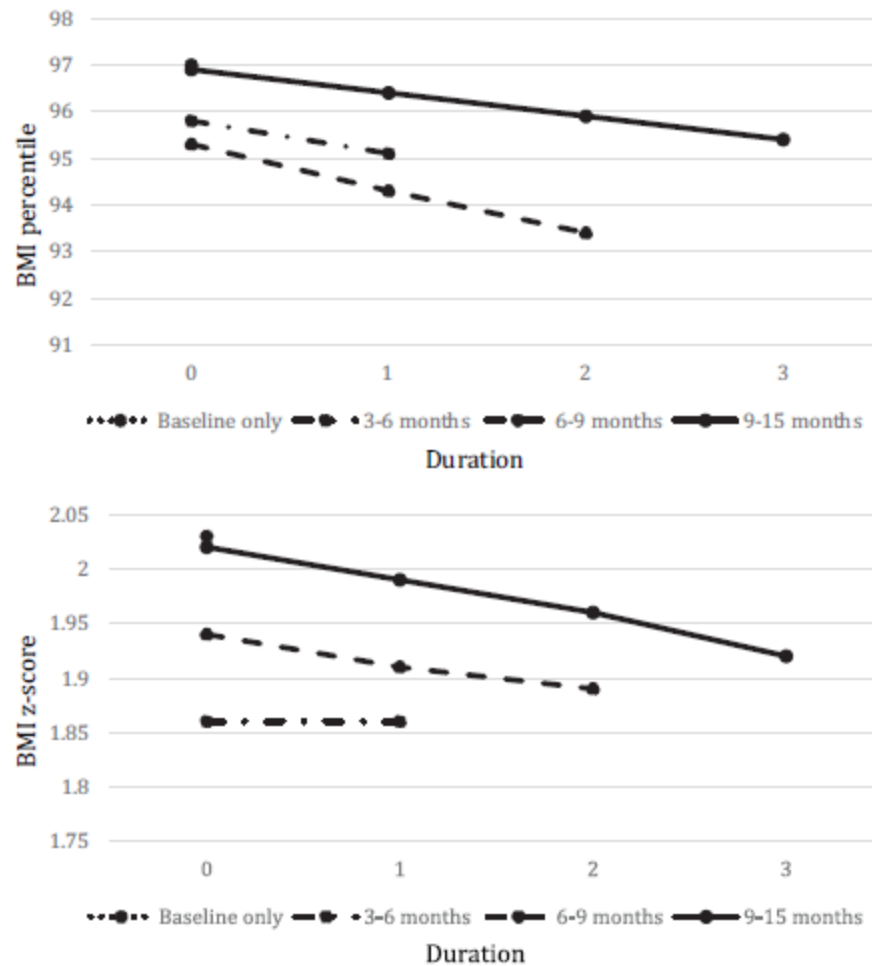


Table 3. BMI Percentile and BMI z-Score Changes

Outcome	Last Follow-up Time	Original Sample		multiple imputation	
		Change per 3 Months, Coefficient (SE)	<i>P</i> Value	Change per 3 Months, Coefficient (SE)	<i>P</i> Value
BMI percentile	Baseline	—	—	—	—
	3–6 Months	–0.64 (0.50)	.2023	–0.33 (0.29)	.2722
	6–9 Months	–0.92 (0.37)	.0137	–0.30 (0.37)	.4202
	9–15 Months	–0.49 (0.24)	.0391	–0.45 (0.17)	.0094
BMI z-score	Baseline	—	—	—	—
	3–6 Months	–0.006 (0.030)	.8546	–0.007 (0.040)	.8652
	6–9 Months	–0.024 (0.021)	.2413	–0.036 (0.052)	.5097
	9–15 Months	–0.030 (0.013)	.0217	–0.048 (0.023)	.0329

BMI, body mass index; SE, standard error.

Clinical Outcomes:

Outcome	Baseline visits (n=264)	Change per 3 months	Overall P Value
BMI percentile	2.92	+0.35	<.0001
BMI z-score	1.62	-0.03	.1925

Heart Smart Kids Question	Baseline(n =290)	Change per 3 months	P Value
Fruit and vegetable intake(servings/day)	2.92	+0.35	<.0001
Milk type:decrease fat content (high is worse)	1.62	_0.03	.1925
Physical activity,at least 60 min/day (days/week)	3.81	+0.45	<.0001
Family activity(times/week)	2.41	+0.21	.0051
Hours/day of screen time	2.28	_0.11	.0147
Suger-sweetened beverage intake (servings/day)	1.56	_0.15	<.0001
Eating our weekly(times/week)	1.45	_0.11	.0006

Discussion:

- Improvements in BMI percentile among participants who stayed in the program at least 6 months
- Improvement in BMI *z-scores among participants who stayed in at least 9 months*
- lifestyle outcomes also significantly improved.

Discussion:

- Develop culturally appropriate childhood obesity interventions
- Strategies to engage these families
- The importance of addressing the issue of food and social insecurity.

Limitations:

- Lack of time
- Lack of adequate staff
- Lack of reimbursement
- The funders of this project requiring that all practices receive the intervention; thus randomization was not possible.
- Our results for the lifestyle changes were derived from self-reported data from the child/parent

Conclusion:

- The FFC pilot program improved clinical outcomes for childhood obesity and lifestyle risk factors
- Intervention for primary care practices
- Cultural considerations and interventions that address food insecurity also need to be addressed to improve participation and retention in childhood obesity programs.

Questions??

