



# Addressing Food Insecurity in a Pediatric Weight Management Clinic: A Pilot Intervention

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## ABSTRACT

**Introduction:** Our objectives were to (a) identify rates of food insecurity among patients seen in a pediatric weight management clinic and (b) test a pilot intervention to address food insecurity in the identified patients.

**Methods:** All new patients seen in the clinic were screened for food insecurity and Supplemental Nutrition Assistance Program (SNAP) benefit status. Families with food insecurity and no SNAP benefits were asked if they wanted SNAP

enrollment assistance from a partnering food bank. Those agreeing to assistance were connected to the food bank.

**Results:** A total of 116 new patients were evaluated in the clinic during the intervention; 28 (24%) endorsed food insecurity, and 40 (34%) were eligible for SNAP enrollment assistance. Three (8%) of the eligible patients completed the SNAP enrollment process.

**Discussion:** Food insecurity in this pediatric weight management clinic was common. However, even when given direct access to SNAP enrollment assistance, only a small minority of patients matriculated into this program. *J Pediatr Health Care.* (2016) 30, e11-e15.

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## KEY WORDS

Food insecurity, obesity, food assistance

## INTRODUCTION

Children and adolescents from low-income families are more likely to have obesity than their higher-income counterparts (Ogden, Lamb, Carroll, & Flegal, 2010). One of the many potential mediators between low socioeconomic status and obesity may be food insecurity, which is defined as a “household-level economic and social condition of limited or uncertain access to adequate food” (U.S. Department of Agriculture, Economic Research Service, 2014). Food insecurity is associated with poor nutrition, including limited fruit and vegetable intake, less frequent breakfast eating, and more sugar-sweetened beverage and fast food consumption (Bruening, MacLehose, Loth, Story, & Neumark-Sztainer, 2012; Widome, Neumark-Sztainer, Hannan, Haines, & Story, 2009). Further, it is hypothesized that food insecurity may contribute to obesity via consumption cycling, that is, eating more

when food is available to offset times of scarcity (Olson, Bove, & Miller, 2007). This relationship between food insecurity and obesity is termed “paradoxical” because food insecurity is a state of limited access leading to hunger, and obesity is a state of overconsumption (Dietz, 1995, p. 766).

The Supplemental Nutrition Assistance Program (SNAP), formerly known as the Food Stamp Program, was developed to reduce hunger and improve the health and well-being of low-income individuals. SNAP is a federally funded entitlement program that provides electronic benefit cards to purchase food for qualifying families. One of the eligibility criteria is a monthly gross income at or below 130% of the federal poverty guideline (i.e., \$2,584 per month for a family of four in 2014–2015; U.S. Department of Agriculture, Food and Nutrition Service, 2014). Several studies have shown that participation in SNAP improves food security (Cook et al., 2002; Ettinger De Cuba et al., 2012; Mabli & Ohls, 2015). In addition, although not a consistent finding, some studies suggest that SNAP may be protective against obesity, even if there is on-going food insecurity (Goldman, Ettinger de Cuba, Sheward, Cutts, & Coleman, 2014; Jones, Jahns, Laraia, & Haughton, 2003). For example, one study showed that children in food-insecure households without SNAP compared with those with SNAP had 1.7 times increased odds of being overweight. Furthermore, the weight status of the children in the food-insecure households that received SNAP was the same as those in the food-secure households (Goldman et al., 2014).

The current report describes a pilot intervention to address food insecurity among patients who were seen in a multidisciplinary pediatric weight management clinic. The prevalence of low socioeconomic status among patients seen in pediatric weight management clinics is high (Jasik et al., 2015), yet the prevalence of food insecurity in these patients is unknown. As such, our objectives were to (a) identify the prevalence of food insecurity among households of patients seen in a multidisciplinary pediatric weight management clinic and (b) develop and describe outcomes of a pilot clinical intervention to address food insecurity in families attending this clinic.

## METHODS

This pilot clinical intervention was conducted between August 5 and November 17, 2014, in a multidisciplinary, tertiary-care, university-based pediatric weight management clinic in partnership with Second Harvest Heartland.

One of the many potential mediators between low socioeconomic status and obesity may be food insecurity.

The pediatric weight management clinic, located in a medium-sized, diverse metropolitan community in Minnesota, provides care for children and adolescents with obesity. Second Harvest Heartland, one of the nation’s largest food banks, serves Minnesota and western Wisconsin. Its mission is to “end hunger through community partnerships.” For this pilot intervention, Second Harvest Heartland outreach workers provided direct assistance with the SNAP enrollment process to the families of patients attending the pediatric weight management clinic.

During the 3-month pilot time period, all new patients who were seen in the pediatric weight management clinic were screened for food insecurity using a validated two-item instrument (97% sensitive and 83% specific; Hager et al., 2010) completed by the parent/guardian. According to the instrument, an answer of *yes* to either of the following was considered positive for food insecurity: *Within the past 12 months we worried whether our food would run out before we got money to buy more* or *Within the past 12 months the food we bought just didn’t last and we didn’t have money to get more*. The parent/guardian also indicated if he or she already received SNAP benefits. From the medical record, patient body mass index (BMI), age, sex, race/ethnicity, and health insurance type were abstracted. This project was deemed exempt for review by the institutional review board.

Families identified through the screening process as not receiving SNAP benefits and having either (a) food insecurity or (b) public health insurance (i.e., Medicaid) were asked if they wanted to be referred to Second Harvest Heartland for SNAP enrollment assistance. Health insurance status was used as an eligibility criterion because it is a surrogate for low income, which is one of the SNAP benefit eligibility criteria. The pediatric weight management clinic staff provided the name, language spoken, and phone number of the families agreeing to SNAP enrollment assistance to the Second Harvest Heartland outreach workers who, in turn, contacted the families by phone to facilitate SNAP enrollment. Second Harvest Heartland outreach workers logged the disposition of the calls. The outreach workers were fluent in Spanish.

## Statistical Analyses

Descriptive statistics are presented as  $n$  (%) or mean  $\pm$  standard deviation. Continuous variables between the three groups (total cohort, food-secure group, and food-insecure group) were compared using a one-tailed  $t$  test with unequal group sizes, and categorical variables between these groups were compared using chi-square tests;  $p$  values less than 0.05 were considered statistically significant.

## RESULTS

A total of 116 new patients (mean age = 12.3  $\pm$  3.2 years, 43% boys, 47% White, mean BMI = 31.9  $\pm$  7.0 kg/m<sup>2</sup>)

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