Background

The World Health Organization defines food security as existing when individuals have sufficient access to safe and nutritious foods to maintain health.1 In 2013, more than 45 million American households (8 million children) were food insecure. Food insecure households often rely on food pantries for emergency food assistance, yet this supplemental food assistance often fails to meet the dietary needs of food insecure households. Preliminary data (Spees, in review) revealed that 51% of Central Ohio food pantry patrons were characterized by high levels of obesity (38%), hypertension (41%), and diabetes mellitus (15%), all of which are risk factors for cardiovascular disease. Almost 30% had to choose between paying for food and paying for medicine or medical care within the past year and 40% do not have a primary care physician. The chronic lack of access to healthy foods leads to health disparities that make food insecure families more vulnerable to chronic disease, including type 2 diabetes (T2DM). In 2012, reportedly 29.1 million people in the US had T2DM and 8.1 million of those were undiagnosed.2 We propose that those who are food insecure experience health risks and conditions that are undiagnosed, unmanaged and compounded by inadequate access to health education and care.

Methods

Students completed six hours of classroom training at The Ohio State University and three hours of onsite training prior to data collection. Data was collected on iPads using REDCap (Research Electronic Data Capture), a secure data management system. The Ohio State University Institutional Review Board (IRB) approved this study, and subjects received a $20 gift card for participation. Survey questions included race, age, gender, marital status, socioeconomic status, current employment and education level. Health status questions included primary medical home, health insurance, utilization of social services, chronic disease, disabilities, high risk behaviors, perceptions of health and self-efficacy. Barriers to healthy eating and food access consisted of questions relating to transportation, caregiving, childcare and financial tradeoffs. Food security status was categorized as “marginal or high food security,” “low food security,” or “very low food security” based on the USDA’s household food security module.3 Cardiovascular screening included BMI, blood pressure, waist circumference, hemoglobin A1c, and a lipid panel. Clients previously diagnosed with T2DM completed the US Diabetes Distress questionnaire.4 Distress was measured using a Likert scale that rated 17 situations from 0 (no distress) to 6 (serious distress). Based upon screening results, clients were categorized and received targeted education and/or healthcare referrals (Figure 1).

Preliminary Results

The typical participant was a black female with a high school education, currently unemployed. While reasons for unhealthy eating were highly varied, affordability and picky eating were cited frequently. Students completed 6 hours of classroom training at OSU.

Fig. 1. CARE Connect Process used to triage participants.

Fig. 2. The typical participant was a black female with a high school education, currently unemployed.

Fig. 3. Participants reported a variety of health conditions with hypertension (31.6%) as the leading issue.

Fig. 4. Most participants (77%) were referred for further cardiovascular evaluation.

Fig. 5. White measure for unhealth eating were highly related, affordability and picky eating were cited frequently.

References