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Food insecurity challenge to families in the greater Chattanooga area: the case of the food bank

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INTRODUCTION

Food insecurity, or limited household access to safe, affordable, and nutritious foods, remains one of the major challenges for many American families. Food banks play a prominent role in addressing this challenge (Barrett, 2002; Handforth, Hennink, and Schwartz, 2013; Campbell, Ross, and Webb, 2013; Riches, 2002; Nord, Coleman-Jensen, Andrews, and Carlson, 2010). In the past, ensuring that the population in need would receive necessary caloric intake was the primary focus of food banks (Feeding America, 2008; *CAFB Annual Report*, 2012-2013; Girard, 2014). Recently, however, food banks have experienced large-scale organizational change as they focus on meeting the nutritional needs of their client population (Handforth *et al.*, 2013; Campbell *et al.*, 2013; Feeding America, 2008; *CAFB Annual Report*, 2012-2013; Girard, 2014). Providing foods with higher nutritional value has presented these organizations with the additional challenge of managing perishable foods, which is associated with higher operational costs for an organization.

This paper focuses on organizational changes at the Chattanooga Area Food Bank (CAFB) in response to the food insecurity challenge, and places these developments in a national context. First we identify the magnitude of the challenge that food insecurity presents in the United States. We then place issues of food insecurity that families in the Southeast Tennessee area experience in the context of these national developments. Finally, we discuss the role of the Chattanooga Area Food Bank in combating issues related to food insecurity in the region. This research showcases the opportunity for academics and practitioners alike to expand their understanding of organizational change and develop best practices for nonprofit food banks in addressing food insecurity of families in need.

MAKING A CASE FOR FOOD INSECURITY

NATIONAL TRENDS

Over the last decade, food insecurity and associated issues have received increasing attention from policymakers and academics. In 2010, an estimated 17.2 million Americans experienced food insecurity, a record high since 1995, and up to 3.9 million households were unable to provide adequate and nutritious food for children (Coleman-Jensen, Nord, Andrews, and Carlson, 2011; Coleman-Jensen and Nord, 2013). These trends are linked to serious health risks, including poorer physical and functional health (Olson, 1999; Dinour, Bergen, and Ming-Chin, 2007; Crawford and Webb, 2011; Stuff, Casey, Szeto, Gossett, Robbins, Simpson, Connell, and Bogle, 2004).

For example, many researchers have identified a link between food insecurity and obesity rates among low-income adults. There is evidence that, because of monetary and time costs, low-income families rely more on nutritionally poor but energy-dense foods. More valuable foods, like fruits and vegetables, have a negative consumption rate as food insecurity increases (Dinour *et al.*, 2007; Crawford and Webb, 2011). Obesity-related conditions are some of the leading causes of preventable death in the United States. The Centers for Disease Control (CDC) and Prevention report that obesity is common, serious and costly (CDC, 2012). In the United States, more than one-third of adults (34.9%) are obese (Ogden, Carroll, Kit, and Flegal, 2014). The risks of obesity include many health conditions, including coronary heart disease, stroke, high blood pressure, type II diabetes, cancers, such as endometrial, breast, and colon cancer, high cholesterol, liver and gallbladder disease, sleep apnea and respiratory problems, degeneration of cartilage and underlying bone within a joint (osteoarthritis), reproductive health complications such as infertility, and mental health conditions (Olson, 1999; Dinour *et al.*, 2007; Stuff *et al.*, 2004). Estimates from 2006 report the medical costs for obese individuals were \$1,429, or 42 percent, higher a year than for individuals with normal weight (Finkelstein, Trogdon, Cohen, and Dietz, 2009). Food insecurity can also result in a number of psychological and behavioral problems, including stress, depression, anxiety, preoccupation with food, low quality of life, and low social support (Olson, 1999; Dinour *et al.*, 2007; Dunifon and Kowaleski-Jones, 2003; Whitaker, Phillips, and Orzol, 2006; Stuff *et al.*, 2004).

A major step in combating obesity and associated health risks is the provision of nutritious foods. The above research confirms the importance of food security as an indicator of general well-being and a target of public concern (Handforth *et al.*, 2013; Campbell *et al.*, 2013). As service providers to a growing number of food-insecure households, food banks have accepted the challenge of providing nutritional foods to clients using nutritional profiling, nutritional policies, fresh food distribution, and increased outreach and collaboration (Handforth *et al.*, 2013; Campbell *et al.*, 2013; Cotugna and Beebe, 2002). Because food banks serve as a food security safety net to needy households, it is an ethical responsibility for nonprofit food banks to improve nutritional service to clients (Feeding America, 2011).

FACTORS AFFECTING FOOD PROVISIONS IN THE UNITED STATES

THE ROLE OF FEDERAL POLICIES AND THE ECONOMY

The federal government became involved in food assistance during the Great Depression. Surplus commodities were purchased from farmers to provide economic relief, and commodities were redistributed to needy American families (Roth, 2013; Daponte and Bade, 2006). Two program models have since emerged: commodities distribution and supplemental food stamps. Both of these models have undergone policy and funding fluctuations throughout the twentieth century. Commodities distribution operates through the distribution of food commodities from the federal government to the states, and from the states to local distributors, including food banks. Supplemental food stamps, on the other hand, provide direct support to needy individuals, who are then able to make select purchases at partnering food retailers (*A Short History of SNAP*, 2014; *The Emergency Food Assistance Program*, 2013; Roth, 2013).

Both program models have faced challenges to their key mission, eliminating hunger, as well as operational challenges related to client and distributor fraud, data collection of client usage, and consistency in provided services (Roth, 2013; Daponte and Bade, 2006; Berry, 1984). In theory, the current design of these programs suggests that the Supplemental Nutrition Assistance Program (SNAP) serves as supplemental food assistance for low-income individuals and families, and commodities distribution provides emergency food assistance for individuals and families experiencing temporary economic setbacks. However, federal reductions in funding and increased eligibility requirements for SNAP leave many low-income Americans unable to meet their basic needs (Feeding America, 2011). For example, the Personal Responsibility and Work Opportunity Reconciliation Act, a product of 1996 welfare reform, not only limited or ended the eligibility of certain groups for SNAP, it also cut the value of the monthly allotment of stamps for the average recipients (Eisinger, 1999). Federal commodities programs are experiencing cuts as well, exemplified by the fact that between 2010 and 2011 the Emergency Food Assistance Program (TEFAP) commodities dropped by 30% (Feeding America, 2011). As a result, the traditional client population served by emergency food assistance programs has been replaced by individuals for whom food stamps are either no longer an option or for whom they are now insufficient (Feeding America, 2011)

Client need is compounded by economic trends, including the most recent downturn, the Great Recession. Periods of economic instability often result in increased unemployment, poverty rates, and food and gas prices, which adds strain to individual and family budgets, as well as increased reliance on food

assistance (*Feeding America*, 2011). For example, between 2007 and 2012 the number of individuals receiving SNAP benefits increased by 76% (Zedlewski, Waxman and Gundersen, 2012). Additionally, the Feeding America network reported the number of clients it served increased from 25 million to 37 million from 2005 to 2009, a 46% increase. This highlights the increased reliance of low-income individuals and families on assistance programs during times of economic hardship, as well as the strategies implemented by these clients to attain food security. As SNAP benefits fall short of providing Americans with food security, individuals rely on a mix of public and private food assistance, showcasing the importance of food banks in providing calorically and nutritionally sufficient foods (*Feeding America*, 2011).

FEEDING AMERICA: GUIDING LOCAL CHANGE

The CAFB operates under specific standards and guidelines set forth through the umbrella governance of the Feeding America organization. Feeding America is the fourth-largest nonprofit organization in the United States, and helps to feed 37 million Americans each year. The organization identifies particular needs in the member agency service areas, provides distribution logistics, and sets goals for member fulfillment. Through Feeding America, donated food is moved among participating food banks throughout established territories, and overly abundant food items in one area are redirected to specific areas that may be experiencing a shortage. This process allows for the efficient sharing of food items and less spoilage and waste (<http://feedingamerica.org/>).

In 2008, Feeding America completed a new strategic plan that changed both the organization's name and its mission. Originally titled "America's Second Harvest," the organization decided to rebrand as "Feeding America" in an effort to promote awareness of hunger issues and more effectively engage the public, a fact that is also reflected in their new mission (*Feeding America*, 2008). Included as a strategic priority is the goal to increase food supplies and nutritious staples available to member agencies by "investing in the most cost efficient sources of healthy, in-demand food, including sourcing more fresh produce and increasing donations through retail store" ("Mission and Values," 2014, p.1; *America's Second Harvest*, 2008). For example, Feeding America reports that 68% of foods distributed are nutritional contributions, including fruits, vegetables, whole grains, protein and dairy ("Nutrition Initiative," 2014). Considering that Feeding America identifies needs, distributes foods, and sets fulfillment goals for member agencies, it is not surprising that the 2008-2012 strategic plan influenced service delivery at local food banks.

CHANGES IN FOOD BANKS: FROM NON-PERISHABLES TO NUTRITIOUS FOODS

ADDRESSING THE ISSUE OF FOOD INSECURITY

The work of nonprofit organizations in addressing the needs of American families has attracted considerable scholarly attention (Boris & Steuerle, 1999; Salamon, 1995; Smith & Lipsky, 1993; Feiock and Andrew, 2006). The first food banks in the U.S. were created in the 1960s, and during the 1970s these nonprofit organizations became backed by federal government grants and tax incentives (Cotugna and Beebe, 2002). Food banks also received donations from private companies, mostly manufacturers of canned foods and nonperishable items. Moving into the twenty-first century, however, both the food items supplied and service delivery methods have begun to change (Handforth *et al.*, 2013; Campbell *et al.*, 2013, Cotugna and Beebe, 2002). The increased reliance of low-income individuals and families on nonprofit food banks, as well as the growing evidence that these individuals face risks of chronic disease linked to lack of nutritious foods, has led food banks to adopt what we have labeled the “nutrition initiative.” This involves the implementation of nutrition profiling, nutrition policies, fresh produce distribution, and other innovative strategies to create habits of healthy living and break the cycle of dependency on emergency food assistance (Handforth *et al.*, 2013; Campbell *et al.*, 2013).

NUTRITION PROFILING AND POLICIES

Nutrition profiling involves a ranking system to assign nutritional value to food distributed from the food bank. Several different strategies have been implemented to assess nutritional value, including numbered or colored labels, ranking scales, or an algorithm to rank products (Handforth *et al.*, 2013). Many food banks rely on the USDA’s MyPlate Initiative, which focuses on healthy food selection and portion control, for profiling guidance (Choose MyPlate, 2014). Nutrition profiling systems allow organizations to educate staff, clients, and donors about healthy eating habits and also promote the nutrition initiative by influencing the food items procured (Campbell *et al.*, 2013; Handforth *et al.*, 2013).

More controversial strategies are nutrition policies whereby food banks develop donation restrictions that exclude particular food items from distribution. These items include sugary beverages, sugary or savory snacks, prepackaged and processed meals, and other unhealthy food products. Policies to reduce minimally nutritious foods are not as favorable among food banks as nutrition profiling

because there is concern that policies will limit client choice, threaten donor relationships and community partnerships, and negatively impact distribution numbers among food bank organizations (Handforth *et al.*, 2013; Campbell *et al.*, 2013).

FRESH PRODUCE DISTRIBUTION

Food banks have also increased the provision of fresh produce, which accounts for a large portion of highly nutritious foods distributed. This is a result of the health benefits of fresh produce, as well as their availability and lower cost in comparison to canned vegetables. Food banks also face decreasing donations from canned/nonperishable food manufacturers (Handforth *et al.*, 2013; Campbell *et al.*, 2013). Out of the food groups promoted by the MyPlate initiative (fruits and vegetables, lean proteins, whole grains, and low-fat dairy), most food banks report increases in fresh produce and substantial improvements in produce donations (Campbell *et al.*, 2013). As fresh produce supplies have increased, food banks have addressed barriers to fresh food distribution, including “investing in new product-sourcing approaches, building community partner capacity, and increasing the effectiveness of distribution methods” (Handforth *et al.*, 2013, p. 414). Often, food banks receive large produce donations and must have the facilities and resources to potentially store, refrigerate and transport perishable food items. This challenge is exacerbated by the fact that many member agencies are unable to distribute large amounts of fresh produce after the food items have been delivered by the food bank (Handforth *et al.*, 2013; Campbell *et al.*, 2013).

Specific strategies have been developed to confront these barriers. For example, food banks created mobile food pantries, which enable the transportation of items directly to clients through a farmer’s market distribution model. This allows food banks to accept large donations of produce without wasting the majority of these food items or adding pressure to their member agencies for distribution (Handforth *et al.*, 2013; Cotugna and Beebe, 2002). Other programmatic strategies include nutrition education, partnerships with the health sector, and partnerships with other community organizations that, for example, combine children’s after school care with tutoring, mentorship and nutrition education, or provide adult participants with nutrition and financial management skills (Cotugna and Beebe, 2002; “Nutrition Initiative,” 2014).

CHATTANOOGA AREA FOOD BANK: A CASE STUDY

As federal policies changes and economic fluctuations challenge the abilities of individuals to adequately obtain food, clients rely more heavily on emergency food assistance (Feeding America, 2011). This demand is complicated by the fact

that many food banks, especially those in the Feeding America network, attempt to provide both calorically and nutritionally valuable foods. The CAFB serves as a real-world case where an organization must navigate and negotiate resources to reduce hunger and provide sustainable foods for individuals and families. This case allows us to evaluate how an organization must deal with environmental changes, including policy changes, economic factors, and service provisions, in order to reduce food insecurity for individuals in the Greater Chattanooga Area.

FOOD INSECURITY IN SOUTHEAST TENNESSEE

According to the U.S. Census of 2010, Tennessee is one of the poorest states in the nation. Estimates included in a 2012 census report suggest that 18% of Tennesseans fall below the poverty line, making it the eleventh poorest state in the U.S. (Bishaw, 2013). It is not surprising, then, that Tennessee faces food insecurity rates of 17.1%, with a child food insecurity rate of 24.7% (FeedingAmerica.org). The 20 counties served by the CAFB, which are located in the Southeast region of Tennessee, are no exception to national trends in food insecurity, and actually exceed the national averages. Nationally, it is estimated that 14.3% of U.S. households experience food insecurity each year (Coleman-Jenson, Gregory, and Singh, 2014).

Additionally, the high rates of obesity prevalent in Tennessee, and more specifically, the Chattanooga Area, are linked to food insecurity (Wilson, 2012). Overall, Tennessee is ranked as one of the most obese states in the nation, with 30.8% of adults weighing in as obese (Centers for Disease Control and Prevention, 2012). Alarming, these rates are high in children as well, with 36.5% of children aged 10-17 in Tennessee classified as overweight or obese (Child and Adolescent Health Measurement Initiative, Data Resource Center, 2007). For example, in Hamilton County in 2008, a shocking 60.8% of adults were either overweight or obese (Centers for Disease Control and Prevention, 2008). Specifically, 57% of Hamilton County adults were classified as overweight or obese; 30% were told they have high blood pressure; 31% were told they have high cholesterol; 74% ate less than the recommended five fruits and vegetables a day; and 63% did not meet the standard physical activity recommended to maintain a healthy lifestyle. Additionally, in 2012, nearly two-thirds of low-income children in Hamilton County were overweight or obese, with approximately 16% in the 95th percentile for Body Mass Index (BMI) (Wilson, 2012).

These issues can be directly tied to food insecurity in low-income families. According to a report by the Urban League of Greater Chattanooga (ULGC), access to healthy food is a major concern in Chattanooga. Many communities are located in what the USDA defines as “food deserts,” or areas where individuals

do not have access to affordable and nutritious foods. In response to surveys conducted by the ULGC, 27% of individuals in Chattanooga reported no access to fresh fruits and vegetables within a 1-mile travel radius. This situation is complicated for low-income individuals who must navigate monies and transportation in order to collect healthy food items (“Healthy Food Access,” 2012).

THE CAFB CHALLENGE: MEETING CLIENT NEEDS

To combat food insecurity, the CAFB has increased access to healthy foods for clients in the Greater Chattanooga Area. The mission of the CAFB is to lead “a network of partners in eliminating hunger and promoting better nutrition in the region” (<http://www.chattfoodbank.org/>). The CAFB acts as a centralized distribution point that provides over one million pounds of food monthly to 20,000 individuals experiencing food insecurity. In fact, the majority of the CAFB’s clients are defined as the “working poor,” meaning that individuals maintain employment but fail to provide food security due to low income. Other clients, such as veterans, the elderly, and the disabled, live on fixed incomes. The CAFB also distributes food boxes as temporary food support to individuals and families in Hamilton County facing emergency food security situations (www.chattfoodbank.org).

In 2010, Feeding America conducted the Hunger in America national survey of agencies and clients for food bank members. This study included 181 Feeding America members that distributed food to 12,700 agencies. Locally, 398 clients were interviewed for the Chattanooga Area Food Bank. According to data collected through a survey of clients, the CAFB reports that 86% of their clients are white, 8% are black, and 3% are of Hispanic origin. Additionally, 40% of the individuals served were children under 18 years of age, and 5% were elderly. Thirty-one percent of the households served reported at least one employed adult. The CAFB survey also explored questions related to family budgets, health status, and food resources. Here, 40% of the clients reported very low food security, and many reported making decisions between food and other necessities. For example, 52% of CAFB clients have faced a decision between purchasing food and paying for utilities. Another 34% reported choosing between paying for food and paying for rent or a mortgage (Braley, Daly, Waxman, and Engelhard, 2010; www.chattfoodbank.org).

A MISSION OF NUTRITION: NEW FOOD BASKET, DELIVERY, AND PROGRAMS

In 2013, the CAFB changed its mission from, “to gather and share groceries with our neighbors,” to one that reflected the need for caloric intake and nutritional:

“Leading a network of partners in eliminating hunger and promoting better nutrition in the region” (*CAFB Annual Report, 2009-2010*; www.chattfoodbank.org). As the CAFB explained in its 2012-2013 *Annual Report*:

Food Banks and their agency partners have long struggled with the question of whether it is best to fight hunger, quantity of food, or fight malnutrition, quality of food. Earlier this year, the Board of Directors of the Chattanooga Area Food Bank decided that — for the sake of our entire region — we have no choice but to do both. (p. 15)

During 2013 the CAFB distributed over 10 million pounds of food, feeding an average of 20,000 individuals each week. After implementing the mission change, the CAFB was also able to track the distribution of 1,401,561 pounds of fresh food donated through a network of retail partners like Wal-Mart, Bi-Lo, and Publix. Thus, fresh food staples accounted for approximately 10% of the total food distribution (*CAFB Annual Report, 2012-2013*). To further reflect the importance of nutrition, the CAFB recently reevaluated its inventory system and adopted a nutrition profiling system. This system follows the Feeding America *Foods to Encourage* categorical profiling. While the CAFB has yet to adopt a nutrition policy, which would prevent the donation of nutritiously poor foods, they have considered such an implementation. In comparison to national trends in the food bank nutrition initiative, the CAFB has focused most heavily on increasing fresh food access to clients through changes in the programs it provides and in its service distribution (L. Kilpatrick, personal communication, November 4, 2014).

Since its mission change, the CAFB has modified its overall programs to provide more fresh produce to clients. This is especially true in the case of its mobile pantries, which have increased in number of distributions and distributions of nutritious foods annually. In previous years, the CAFB provided two mobile food pantries quarterly. However, with the increase in fresh produce donations, there is a need to increase distribution, and food pantries have been identified as the most efficient way to do so. Currently, the CAFB provides 2-3 food pantries per week to the Chattanooga Area. Targeted mobile food pantries have also been developed since the change in mission, including a children’s mobile pantry in 2012 and a senior’s mobile pantry in 2013. Finally, the Sack Pack program, which provides low-income children with meals for the weekend, has been adjusted in an effort to support the nutrition initiative. For example, now an apple is provided in every Sack Pack distributed by CAFB (L. Kilpatrick, personal communication, November 4, 2014).

The CAFB has also implemented new programs that promote the nutrition initiative, including Farm to Family, the Senior Grocery Program, and a pilot milk program. The Farm to Family program seeks to complement the national partner donations of fresh food items by promoting locally grown foods. The program is multi-faceted and garners donations from both farmers and Chattanooga area citizens through partnerships with regional growers, who are asked to donate “seconds,” and collaborations with farmer’s markets, which provide “fresh food drive” collection bins (*CAFB Annual Report, 2012-2013*; www.chattfoodbank.org). The Senior Grocery Program, was established in 2013 through grant funding from the American Association of Retired People (AARP). The program provides 150 vulnerable seniors with fresh produce to complement nonperishable items provided by the federal Commodities Supplemental Food Program. Every month, sixty-pound food parcels filled with fresh fruits and vegetables provide the equivalent of 50 nutritious meals easily prepared by the elderly (*CAFB Annual Report, 2012-2013*; www.chattfoodbank.org). This year, the CAFB is developing a milk program. Once it locates a provider and establishes a set milk price per gallon, the CAFB will partner with its strongest member agencies to distribute milk to clients. Member agencies will be required to raise two dollars per gallon and must have the ability to distribute at least 48 gallons of milk each week (L. Kilpatrick, personal communication, November 4, 2014). Many program changes and new program developments reflect fundamental attributes of the nutrition initiative, including concern for client health and choice, an emphasis on nutrition education, and partnership with other organizations to teach clients and break the cycle of dependency on emergency food supply.

Finally, the new mission of the CAFB has had a profound effect on changes to the product distribution model. Approximately two years ago (2011-2012) the food bank completed two deliveries every quarter. Currently, CAFB is completing 40 deliveries per month. The increased cost to the food bank is managed by charging member agencies a \$40 delivery fee, and .40¢ per traveled mile (L. Kilpatrick, personal communication, November 4, 2014). Storage facilities at the CAFB, however, have undergone little change. The CAFB has added a small walk-in cooler to their Dalton, Georgia branch, and the headquarters in Chattanooga has added shelving units in their cooler to better utilize cold space, allowing the CAFB to store three times as many refrigerated items. However, the lack of space for growth at the current warehouse has forced the food bank to quickly distribute most large produce donations (L. Kilpatrick, personal communication, November 4, 2014).

ADDRESSING CHALLENGES

Like many other food banks, however, the CAFB and its member agencies face a series of challenges in response to organizational changes (Handforth *et al.*, 2012; Campbell *et al.*, 2013; Cotugna and Beebe, 2002). Currently, when the CAFB receives large produce donations, it must facilitate distribution to member agencies before the items perish. The greater the number of distributions, the greater the operational costs to both the CAFB and the member agencies. One strategy to promote member agency acceptance of fresh produce donations is to waive the shared maintenance fee they are required to pay per pound of food they accept (Cotugna and Beebe, 2002). However, these challenges extend beyond the subject of shared maintenance costs, as many member agencies are only open one day in a month, do not have the capacity to accept large donations of fresh produce, or do not have the vehicles to successfully transport bulk donations (L. Kilpatrick, personal communication, November 4, 2014).

The CAFB has also encountered challenges with its nutrition profiling system, which is complex and sometimes categorizes food items unclearly. In order to reduce the burden of use for member agencies in selecting food based on nutritional value, the CAFB is considering implementing a simpler system that would label food items as red, yellow, green, or 1, 2, 3 (L. Kilpatrick, personal communication, November 4, 2014). Additionally, while the CAFB has pondered the use of nutrition policies, it is concerned this would threaten donor relationships and decrease the accessibility of food (L. Kilpatrick, personal communication, November 4, 2014). This speaks to the importance of developing regional, rather than national, policies for food banks. Certain regions of the United States may farm more fresh produce than others, and certain food manufacturers are concentrated in specific areas as well. Many practitioners have argued that Feeding America should develop and implement a national system for coherence among member food banks (Handforth *et al.*, 2013; Campbell *et al.*, 2013), but this fails to recognize the unique needs of food banks in their respective areas.

DISCUSSION

In response to external challenges, many food banks have improved their management and distribution of nutritious foods. Food banks, especially those under the guidance of Feeding America, are increasingly incorporating nutrition into their mission statements, utilizing nutrition profiling and policies, and exploring alternatives to current models in their storage and distribution of fresh produce (Handforth *et al.*, 2013; Campbell *et al.*, 2013; Cotugna and Beebe, 2002). However, food banks have also experienced a number of growing pains

while incorporating profiling systems, or ensuring adequate storage for fresh produce distribution. For example, Campbell *et al.* (2013) reported that, although the MyPlate healthy foods include fruits and vegetables, lean protein foods, whole grains and dairy products, the majority of food banks focus on an increase in fresh produce distribution. Other fresh items, like lean meats or low fat dairy, and dry storage foods like beans, legumes, and whole grains, are not readily available to all food banks in all regions of the United States. It is likely that, because fresh foods will be locally delivered, specific areas will have greater access to different food types.

Several authors have identified the need for Feeding America to develop a uniform system concerning the nutrition initiative (Handforth *et al.*, 2013; Campbell *et al.*, 2013). We suggest, however, that a profiling system should include additional factors that food banks face individually. The United States for example, is geographically divided into several regions that vary agriculturally, economically, and politically. As a state, California has been incredibly successful in implementing a nutrition focus because they have greater year-round access to fresh produce than other regions, and have the state policies in place to establish partnerships with state farmers (Campbell *et al.*, 2013). Additionally, commodities distribution is regulated at the state level, so even food banks that have regional access to the same produce and manufacturers may face different restrictions. We suggest, instead, that food banks rely on identified best practices that would allow for regional and state specific considerations in developing nutrition profiling, nutrition policies, and distribution guidelines. This may be one step forward for nonprofit food banks in improving their efficiency and effectiveness in service delivery.

Food banks are increasingly incorporating nutrition into their mission statements, utilizing nutrition profiling and policies, and exploring alternatives in the storage and distribution of fresh produce (Handforth *et al.*, 2013; Campbell *et al.*, 2013; Cotugna and Beebe, 2002). Thus, food banks are making a clear and planned response to environmental factors to better meet the needs of their clients. These new trends in service delivery have provided additional challenges for food banks. Organizations may have difficulty implementing profiling systems, or the systems may have classifications difficult for member agencies to understand. Nutrition policies reduce the distribution of unhealthy and nutritionally poor foods, but they also restrict client choice, may damage relationships with donors, and reduce the amount of food distributed annually. Finally, increasing the distribution of nutritious and fresh foods also increases the number of scheduled deliveries and the distribution costs to the food bank and member agencies. Moreover, these organizations face a bottleneck in distributing fresh produce because many of their member agencies are unable to handle large, perishable

food donations and the time restrictions inherent in the distribution of fresh produce.

CONCLUSION

Food insecurity remains one of the major challenges for families in need in Southeast Tennessee. The CAFB has been a leading force in assisting families in the region to address this challenge. Specifically, the CAFB has moved from delivering calorically sufficient foods to delivering foods with a high nutritional value. Several factors have been driving changes in the service and delivery models used by food banks in the United States, including federal policy changes, economic fluctuations, the nutrition initiative, and organizational changes from the umbrella organization, Feeding America. Food banks respond to and cooperate with policies that can potentially affect their access to federal funding sources. These resources only become scarcer when the economy experiences a downturn. Additionally, demographic trends have shifted the food bank focus to one of nutritional quality over caloric quantity. Technological advances have facilitated transitions in food bank operations and increased their abilities to monitor distribution networks, store and distribute fresh foods, advance communications with corporate partners for the acquisition of fresh foods, and develop nutrition profiling systems and policies.

In conclusion, placing the CAFB within a national context offers a model for addressing organizational change within food banks, especially concerning the shift in service delivery from providing foods with sufficient caloric intake to providing foods with high nutritional value. This research showcases the opportunity for academics and practitioners alike to expand their knowledge of organizational change and develop best practices for reducing food insecurity. Understanding how food banks face challenges in juggling government policies, economic fluctuations, and responses to client nutritional demands will allow these organizations to make more informed decisions and develop innovative responses to ever-shifting political and social realities.

REFERENCES

- A Short History of SNAP. (August, 2014). United States Department of Agriculture Food and Nutrition Service. Retrieved from: <http://www.fns.usda.gov/snap/short-history-snap>
- Barrett, C. B. (2002). Food security and food assistance programs. In B. Gardner and B. Rausser (Eds.), *Handbook of Agricultural Economics* (Vol. 2) (pp. 1-95). Amsterdam, Netherlands: Elsevier Science BV.

- Berry, J. January 1, 1984. Feeding Hungry People: Rulemaking in the Food Stamp Program. *Library Journal*, 109.
- Bishaw, A. (2013, Sept.). Poverty: 2000 to 2012: American community survey briefs. *U.S. Census Bureau*. Retrieved from: <http://www.census.gov/prod/2013pubs/acsbr12-01.pdf>
- Boris, E. and E. Steuerle. (Eds.). (1999). *Nonprofits and government*. Washington, DC: Urban Institute Press.
- Braley, G., Daly, M., Waxman, E., & Engelhard, E. (2010). *Hunger in America 2010: Local Report Prepared for the Chattanooga Area Food Bank (4304)*. Retrieved from: https://www.scribd.com/fullscreen/37056983?access_key=key-29nylxkom8odsxvyyeqx&allow_share=false&escape=false&show_recommendations=false&view_mode=scroll
- Campbell, E. C., Ross, M., & Webb, K. L. (2013). Improving the nutritional quality of emergency food: A study of food bank organizational culture, capacity, and practices. *Journal of Hunger & Environmental Nutrition*, 8, 261-280.
- Centers for Disease Control (CDC). (2012). Adult overweight and obesity. Retrieved from: <http://www.cdc.gov/obesity/adult/index.html>
- Chattanooga Area Food Bank. (2010). *2009-2010 annual report of the Chattanooga Area Food Bank*. Retrieved from: <http://chattfoodbank.org/wp-content/uploads/2010/04/2010-Annual-Report.pdf>
- Chattanooga Area Food Bank. (2013). *2010-2013 annual report of the Chattanooga Area Food Bank*. Retrieved from: <http://chattfoodbank.org/wp-content/uploads/2014/02/2013-Annual-Report.pdf>
- Choose MyPlate (2014). About Us. Retrieved from: <http://www.choosemyplate.gov/about.html>
- Coleman-Jensen, A., Gregory, C., & Singh, A. (2014). Household Food Security in the United States in 2013. Washington, DC: US Department of Agriculture: Economic Research Service.
- Coleman-Jensen, A., Nord, M., Andrews, M., & Carlson, S. (2011). Household Food Security in the United States, 2010. Washington, DC: US Department of Agriculture: Economic Research Service.
- Coleman-Jensen, Al & Nord, M. (September, 2013). Household Food Security in the United States in 2012. United States Department of Agriculture. Economic Research Service, Economic Research Report Number 155, 1-33.
- Cotugna, N., and Beebe, P. D. (2002). Food banking in the 21st century: Much more than a canned handout. *For Your Information*, 102 (10), 1386-1388.

- Crawford, P. B., & Webb, K. L. (2011). Unraveling the paradox of concurrent food insecurity and obesity. *American Journal of Preventative Medicine*, 40, 274-275.
- Daponte, B., & Bade, S. (January 01, 2006). How the Private Food Assistance Network Evolved: Interactions between Public and Private Responses to Hunger. *Nonprofit and Voluntary Sector Quarterly*, 35, 4, 668-690.
- Dinour, L. M., Bergen, D., & Yeh, M. C. (2007). The food insecurity-obesity paradox: A review of the literature and the role food stamps may play. *Journal of the American Dietetic Association*, 1952-1963.
- Eisinger, P. (1999). Food pantries and welfare reform: Estimating the effect. *Focus*, 20, 23-28.
- Feeding America. (2011). *Food Banks: Hunger's New Staple*. Retrieved from: http://feedingamerica.org/hunger-in-america/hunger-studies/~media/Files/research/HungerNewStapleFullReport_FINAL.ashx?.pdf
- Feeding America (2014). Nutrition Initiative. Retrieved from: <http://www.feedingamerica.org/our-response/we-feed-families/nutrition-initiative/>
- Finkelstein, E. A., Trogon, J. G., Cohen, J. W., and Dietz, W. (2009). Annual medical spending attributable to obesity: Payer-and service-specific estimates. *Health Affairs*, 28 (5), 822-831.
- Girard, K. (2014). Banking on nutrition: The emergency food system's path to more healthful food. *Breakthroughs (Spring)*.
- Gortner, H. F., Nichols, K. L., & Ball, C. (2007). *Organization Theory: A Public and Nonprofit Perspective*. Belmont, CA: Thomson Wadsworth.
- Handforth, B., Hennink, M., Schwartz, M. B. (2013). A qualitative study of nutrition-based initiatives at selected food banks in the Feeding America network. *Journal of the Academy of Nutrition and Dietetics*, 113, 411-415.
- Healthy Food Access, 2012. Urban League of Greater Chattanooga; www.ulchatt.net; 2012 Health Symposia: Healthy Food Access. April 18, 2012.
<http://www.ulchatt.net/images/stories/pdfs/urban%20league%20of%20greater%20chattanooga%20-%20healthy%20food%20access%20paper%20full%20version.pdf>
- Nord, M., Andrews, M., & Carlson, S. 2004. Household food security in the United States, 2003. Food and Rural Economics Division, Economic Research Service, U.S. Department of Agriculture, Food Assistance and Nutrition Research Report No. 42.
- Nord, M., Coleman-Jensen, A., Andrews, M. & Carlson, S. 2010. Household food security in the United States, 2009.

- Ogden C. L., Carroll, M. D., Kit, B.K., & Flegal K. M. (2014). Prevalence of childhood and adult obesity in the United States, 2011-2012. *Journal of the American Medical Association*, 311(8), 806-814.
- Olson, C. M. 1999. Nutrition and health outcomes associated with food insecurity and hunger.
- Riches, G. (2002). Food banks and food security: Welfare reform, human rights, and social policy. Lessons from Canada? *Social Policy and Administration*, 36(6), 648-663.
- Roth, D. (2013). Food stamps: 1932-1977: From provisional and pilot programs to permanent policy. *Economic Research Service, U.S. Department of Agriculture*. Retrieved from: <http://www.nal.usda.gov/ric/ricpubs/foodstamps.htm>
- Salamon, L. (1995). *Partners in public service*. Baltimore: Johns Hopkins Press.
- Smith, S. R., & Lipsky, M. (1993). *Nonprofits for hire: The welfare state in the age of contracting*. Cambridge, MA: Harvard University Press.
- Stuff, J. E., Casey, P. H., Szeto, K. L., Gossett, J. M., Robbins, J. M., Simpson, P.M., Connell, S., & Bogle, M. L. (2004). Household food insecurity is associated with adult health status. *Journal of Nutrition*, 134 (9), 2330-2335.
- The Emergency Food Assistance Program. (July, 2013). United States Department of Agriculture Food and Nutrition Service Nutrition Program Fact Sheet.
- Wilson, M.K. 2012 (December 15).Community Food System Data Collection and Synthesis. Hamilton County Health Fast Facts. Chattanooga/Hamilton County Food Coalition. Retrieved from: <http://www.jlchatt.org/documents/12373/6168583/FoodCoalitionAssessmentWilson.pdf/f83bc6d8-3947-4cff-aeaf-f96ddf87bca2>
- Zedlewski, S., Waxman, E., and Gundersen, C. (2012, July). SNAP's role in the great recession and beyond. *The Urban Institute*. Retrieved from: <http://www.urban.org/UploadedPDF/412613-SNAPs-Role-in-the-Great-Recession-and-Beyond.pdf>