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Developing the Food Navigator role at Everyone's Harvest

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Everyone's Harvest with Hester Parker

Collaborative Health & Human Services

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## **Abstract**

Everyone's Harvest (EH) is a 501(c)(3) non-profit that operates farmers' markets. In order to reduce hunger in Monterey County, Everyone's Harvest offers several food assistance programs for low-income people including the Market Match (MM) incentive program which matches CalFresh money, modern day food stamps, dollar for dollar. The problem is that in Monterey County 1 in 4 adults and 1 in 3 children are food insecure. The purpose of the Food Navigator (FN) at EH is to engage with the local community and connect low-income people with food assistance resources, primarily the MM program. This project is a role development and program monitoring project that focuses on developing a standardized operating procedure for the Food Navigator at Everyone's Harvest. In addition to developing the role, this project included performing the Food Navigator role. Empirical evidence was collected and used to identify the impact of the Food Navigator at the farmers' markets. The numbers of new and recurring MM participants were tracked and shopper satisfaction surveys were also conducted at the markets. Results suggested the FN manual will provide EH with a stable FN program. Analysis of survey and MM data indicated the FN had a positive effect on the number of new MM participants. Recommendations include continuing the FN internship at EH and hiring one FN at a 0.5 full-time equivalent (FTE).

*Keywords:* Food insecurity, Farmers Market, Food assistance, CalFresh, Hunger, Food Navigator, Poverty

### **Agency & Communities Served**

Service learning was conducted at Everyone’s Harvest (EH) which is a non-profit 501 (c) (3) organization located in Monterey, CA. The mission of EH is “to provide access to healthy, affordable fruits and vegetables through certified farmers’ markets and community food programs” (Everyone’s Harvest, 2023, para. 2). The community served is the diverse Monterey County communities, and any person who uses CalFresh, modern day food stamps (USDA SNAP, 2022, para 4), has an Electronic Benefits Transfer (EBT) card and patrons at an EH farmers market. Their vision is “for every community to have a fair and sustainable food system” (Everyone’s Harvest, 2023, para. 2). Through the Market Match (MM) Program, which matches EBT money dollar for dollar up to \$15, EH aims to increase access for low-income people to sustainable nutritious fruits and vegetables (Everyone's Harvest, 2023). Services provided are the MM Program for CalFresh users, the Fresh Rx program for patients with valid fruit and vegetable prescriptions, edible education events and food navigation activities. Lastly, EH serves local produce vendors with a reduced cost market stall rental rate.

### **Problem Model Background and Literature Review**

In figure 1 a brief model of the problem of hunger in Monterey County is presented. The problem model will serve as the foundation for the remainder of this literature review.

Figure 1: **Problem Model**

<b>Contributing Factors</b>	<b>Problem</b>	<b>Consequences</b>
Cost of housing & food competition	Too many hungry people in Monterey County, CA.	Negative health impacts
Economic instability		Educational deficits
Lack of awareness and service providers		Generational trauma

## **Problem Statement**

Currently, in Monterey County, California one in four adults and one in three children are faced with food insecurity (Food Bank for Monterey County, 2022). There are many hungry people in Monterey County. Given the fact that Monterey County is also the leader in childhood poverty in the state of California, there is a crisis at hand. Food insecurity is defined as the disruption of food intake or eating patterns because of lack of money and other resources (Office of Disease Prevention and Health Promotion [ODPHP], 2020). Poverty is defined by the Census Bureau by using a set of money income thresholds that vary by family size and composition to determine who is in poverty. The Census Bureau also defines poverty as living below the poverty threshold which for a family of three in the United States is \$21,720 annually according to The Office of the Assistant Secretary for Planning and Evaluation (ASPE). Also, individuals making less than \$12,760 annual income are considered impoverished (ASPE, 2020). If the total family income is less than the threshold for the number of members in the family then every individual in that family is considered impoverished (U.S. Census Bureau, 2020).

Monterey County is a worldwide leader in agricultural production both in crop variety and quantity. So, it is surprising that there is such a large-scale social problem related to nutrition in Monterey County. Though, in many areas the amount of food is adequate the nutritional quality is lacking. In areas like Salinas or south county, there are large communities of Latino migrant farmworkers (Butterfield, 2022, para. 4). In those same places there are food desert areas where high quality nutritious food is almost nonexistent, or the cost burden is too high for the lowest income members of that community. Transportation has been found to be a noted barrier for eating healthy foods (Haynes-Maslow, L et al., 2019). So, bringing food assistance resources to food desert areas will increase access to nutritious fruits and vegetables. Based on an article in

the Children and Youth Services Review written by Morrissey in 2016, it was concluded “Hispanic children are more likely to experience food insecurity at all socioeconomic levels...than other race children” (Morrissey et al., 2016, p. 89). Given Monterey County’s unique geographical location and populations, it is a precious world resource full of vibrant people who all deserve a high quality life. That is why it is important to address the issue of food insecurity in Monterey County.

### **Contributing Factors**

#### ***Cost of Housing & Food Competition***

The high cost of housing in California has been credited for children experiencing increased incidences of adverse childhood events (ACE’s). An ACE includes household food insecurity (Nobari & Whaley, 2021). Monterey County is disproportionately affected by the negative health and social impacts of food insecurity because of the high housing cost and high number of migrant farmworkers. The average rent and mortgage is \$1,600 and \$2,352 monthly respectively (Butterfield, 2022, para. 1). The high cost of housing means that families must often make a choice between eating another meal or saving that money to pay for housing. Another adverse effect of the high housing cost is food competition. A small food budget for the average low-income family means that after paying rent in Monterey County buying organic fruits and vegetables is often cost prohibitive. The remaining food choices that fit the budget are nutritionally deficient things like fast food and processed grocery foods. In the competition between nutrition and cost, cost often wins out. According to Chen, the consumption of fast food due to reduced healthy food options leads to increased rates of obesity in children (Chen et al., 2016). That is why it is important to address the issue of housing cost and food competition in Monterey County.

### ***Economic Instability***

As the child poverty capital of California (Foodbank Monterey, 2020), poverty is the leading cause of food insecurity among children in Monterey County (County of Monterey Health Department, 2016, para. 4). According to Healthy People 2020, “the risk of food insecurity increases when money to buy food is limited or not available” (ODPHP, 2020, para. 9). Research over the past several years has identified low-income as the primary cause of food insecurity (Wright et al., 2014). Statistical data indicated that 31.6% of low-income households in the United States were food insecure in 2016 compared with the national average of non low-income households at 12.6% (ODPHP, 2020). Deep poverty is defined as “living in a household with a total cash income below 50 percent of its poverty threshold” (U.S. Census Bureau, 2016, p. 1). The reason low-income and poverty are primary contributing factors of food insecurity is because families who are living in these income thresholds often have to make choices between purchasing food and paying for other basic necessities such as housing and utilities (ODPHP, 2020). The 2019 annual report on household food security published by the United States Department of Agriculture (USDA), reported that in households containing people living below 185% of the federal poverty line, rates of very high food insecurity increased exponentially (USDA, 2020). Given this information it is clear that Monterey County has a poverty problem causing a food insecurity problem.

### ***Lack of Awareness & Service Providers***

Lack of awareness about social support programs is one of the biggest barriers to access, especially for low-income families. The Michigan Fitness Foundation (MFF) conducted a years-long study that concluded one of the most effective ways to increase fruit and vegetable consumption in low-income communities was to increase engagement via edible education at

farmers markets (Michigan Fitness Foundation, 2023). This study was foundational in developing the Food Navigator (FN) role as a nationwide effort to combat food insecurities and disparities. Additionally, a 2019 article published in the *Journal of Nutrition & Education Behavior*, examined the benefits of awareness and concluded that the Double Up Food Bucks Program in Utah farmers markets was more successful in matching EBT users dollars at markets with a FN conducting edible education events (Durward et al., 2019).

Because of changing food assistance regulations and policy as people age their knowledge of the food assistance network diminishes. Generally, people do not closely monitor policy changes until it directly affects themselves. The lack of awareness about MM, CalFresh, Fresh Rx and other food assistance programs is something that continually feeds into itself. For example, a parent from a low-income family may be unaware that their college student child is now eligible in 2023 for CalFresh benefits, so the parent will not recommend they apply. This results in a compounding lack of awareness from generation to generation. Additionally, in a 2021 cross-sectional study conducted in *BioMed Central (BMC) Public Health*, it was found that simply being aware of the benefits of fresh fruits and vegetables led to mothers being markedly more encouraged by family and likely to eat fresh fruits and vegetables (Englund et al., 2021).

To conclude, adding a Food Navigator at Everyone's Harvest will increase the total number of service providers in Monterey County. The FN will also decrease the lack of awareness about food assistance programs like MM at EH which is one of the main contributing factors to the problem of excessive hunger in Monterey County.



## **Consequences**

### ***Negative mental health impacts***

A unique aspect of Monterey County is that it is home to several military installations such as the Navy's Naval Postgraduate School (NPS), the Army's Defense Language Institute (DLI), and a Veterans Affairs health clinic. In a 2021 article examining food insecurity in US veterans in the journal of Social Psychiatry & Psychiatric Epidemiology it was found that of the 2,360 veterans studied, 11.3% were food insecure. It was also noted that of those food insecure individuals, 3.7% endorsed suicidal ideation (Kamdar et al., 2021). It was also found that food insecure veterans had markedly higher rates of depression. Military veterans may or may not have support from friends and family when they are discharged. For Monterey County veterans food insecurity is an unacceptable result of a lack of support.

Additionally, there are nine colleges in Monterey County. This fact combined with the eligibility of college students to qualify for CalFresh benefits in 2023 means there is a unique opportunity to address food insecurity in the college student population in Monterey County. Based on a study published in the American Journal of Health Promotion in 2018, college students were shown to be to be susceptible to adverse mental health effects such as depression, suicidal ideation, and anxiety from being faced with food insecurity (Payne-Sturges et al., 2018).

After examining two groups of people who could be viewed as smart and capable individuals such as veterans and college students; it was concluded that hunger has no boundaries, knows no age limit and does not care about professions. It can touch anyone.

### ***Educational deficits***

It has been found that college students were also negatively impacted by hunger in terms of academic performance. A 2020 study (Leung, et al., 2021), on the academic performance of

793 college students, found that approximately one quarter, 24% of the students experienced food, financial or housing insecurity. Also, it was noted that grade point averages (GPA) were .013 lower for food insecure students than their food secure counterparts. Housing and financially insecure students also had lower GPAs than their secure counterparts. It is clear that some students in college must overcome barriers to access to college. Food insecurity should not be one of the barriers for students at a four year university. In a different study examining the academic performance of college students in the Journal of American College Health (Weaver et al., 2020), it was found that, among the volunteer student population that was surveyed, rates of food insecurity were high. There was also a notable correlation between food insecurity and lower GPA which suggests that food insecurity is a major contributing factor to lower overall GPA among college students regardless of other challenges or insecurities they may face. Let it be known that college students face many challenges when going to school. Facing food insecurity is one of the surest ways for students of all ages to have academic struggles.

### ***Generational Trauma***

One major consequence of food insecurity is generational trauma which causes increased Adverse Childhood Events (ACE's), such as food insecurity. Everyone's Harvest is aiming to reduce those incidents by providing a FN to the community. Currently, outreach to elementary schools is low regarding food assistance programs and evolving regulations. In a 2021 study, "Creating Healthy Food Environments in Family Childcare Settings" published in the European Journal of Public Health (Kunkel et al., 2021), it was found that there was a significant increase in participants' use of federal food assistance programs after participating in the two hour Start Strong edible education session. Their programmatic goal was to reduce participants' salt intake and increase food assistance program participation. The goal was accomplished because of early

intervention and education (Kunkel et al., 2021). The FN program is vital to public education about hunger and access to aid resources. A well trained FN program can bridge the gap between farmers, policy makers, service providers and the end users.

## **Project Description and Implementation Process**

### **Project Proposal**

#### ***Developing the Food Navigator role at Everyone's Harvest***

I filled the role of Food Navigator (FN) at Everyone's Harvest (EH) and documented the role for future use in the form of a role guidebook. I researched FN programs nationwide and identified best practices to include in the role guidebook documentation. California State University, Monterey Bay (CSUMB) library databases and government agency websites were used to identify FN programs with noted historical success. I collaborated with noted successful agencies such as the Michigan Fitness Foundation (MFF). Additionally, I conducted food navigation activities as well as data collection at EH farmers markets. Then, I was responsible for synthesizing and presenting that information into a culturally competent role guidebook for the EH-FN to continue to use in Monterey County.

### **Project Justification & Benefits**

The primary purpose of the project was to develop a standard operating procedure for the FN at EH. EH was expected to have obtained a resource that can be passed along to future FNs, and that can serve as a framework for future programmatic changes. FN was a new position that was created the year 2022 at EH. So, having a standard operating procedure and employee guidebook served as a resource for the organization, and the individual FN. This project addressed the issue of the FN position being a countywide and state-wide pilot program. Additionally, the economic impact of this project for the local community was a pleasant

byproduct. Every \$1 of MM money given to a CalFresh user resulted in \$3 being put back into the local economy (Market Match, 2022, para. 3). Additionally, in a three year study conducted on the effectiveness of farmers market FN's it was determined that 57% of vendors and 50% of market managers thought the FN made a positive impact on overall fruit and vegetable consumption (Scott, M et al., 2020). Benefits of this project included increased organizational cohesion, higher quality of services provided, as well as a better countywide FN program and food assistance network.

Overall, this project primarily addressed the contributing factor of lack of awareness and service providers in Monterey County. It addressed this by creating an Everyone's Harvest Food Navigator (EHFN) program based on identified best practice methods for FN activities. This project met best practice standards because inspiration was taken from peer reviewed industry leaders who provided guidance materials and empirical statistical analysis that justify the approaches recommended by this project. Activities such as Market Match (MM), community outreach, Fresh Rx, edible education, and cooking demonstrations are some examples of best practice methods to be used by the FN. By conducting food navigation in line with identified best practices, EH will be able to more reliably predict the outcomes of their activities and program growth. Having predictable program participation growth is good for the organization regarding future grant requests. In addition, a Food Navigator at farmers markets who specifically targets low-income CalFresh users and connecting them with the MM healthy incentive program will decrease the financial burden of purchasing high quality fruits and vegetables.

## **Expected Outcomes & Assessment Plan**

The overall desired outcome was to develop and deliver a Food Navigator employee manual to Everyone's Harvest. Another desired outcome of the EHFN was to generate 15 new MM Program participants. One additional desired outcome was partnership building with local cities.

The assessment plan for the FN role guidebook project was to have periodic peer review sessions between the writer and the intern mentor. As for the FN farmers market aspect, the number of new MM Program participants and MM redemptions were tracked over a two year period, August to May 2021 to 2022 and August to May 2022 to 2023. Analysis of the number of MM transactions and new MM users were identified as core measures of success for the FN at farmers markets. EH tracks the number of MM redemptions at every market as part of their own policy. So, organizational historical data was used to measure outcomes between 2022 and 2023.

## **Implementation Process**

Broadly, the implementation process of developing the FN role consisted of conducting research to identify best practices and industry leaders. Then, conducting outreach to identified best practice stakeholders such as the Michigan Fitness Foundation (MFF) and Monterey County Women, Infants, Children (WIC) office. After this step, food navigation activities such as edible education, market tours, and survey administration were conducted at EH markets to acquire organizational data used in the grant process for program justification. Next, data evaluation was synthesized, and all findings compiled into the final FN role manual. The last step of implementation was to provide EH with recommendations for future FN's to improve upon. See Appendix A for project implementation timeline.

## **Project Results**

The first desired outcome of this project was to develop a deliverable Food Navigator employee manual for Everyone's Harvest. The manual was to be used by future Food Navigators as a guidebook for developing their edible education and outreach events throughout the seasons. The next desired outcome as the acting Food Navigator was to generate 15 new Market Match (MM) Program participants and increase overall MM participation in the eight month period. Measurements used included tracking the number of new MM users as well as overall MM redemptions at each market, results of shopper satisfaction surveys which surveyed awareness of and participation in Food Navigation activities, as well as mentor's final approval of the deliverable Food Navigator Manual. The method used for the manual editing and approval process was a peer review and work sharing process between the writer and mentor.

The first desired outcome of generating the Food Navigator Manual was met. The manual was successfully developed and delivered to Everyone's Harvest. The manual was implemented for a new incoming Food Navigator intern starting in Fall 2023. The method for farmers market data review was statistical analysis which included comparing MM participation data. Key data points included the amount of MM dollars distributed, new MM participants, and the number of overall MM redemptions from August 2021 to April 2022 compared to the same period in 2022 to 2023.

The second desired outcome of 15 new MM participants was not met, but nearly achieved at 87% (n=13) of the intended amount. Analysis showed that during the '21 to '22 period there was \$31,742 MM dollars distributed with 2,368 transactions. And during the '22 to '23 period there was \$21,194 MM dollars distributed with 2,246 transactions. Importantly,

during the 2022 to 2023 period it was concluded that 13 new MM Program participants were generated directly as a result of interacting with the Food Navigator.

A noteworthy factor for failing to meet the second desired outcome is during the project from 12/19/22 to 4/16/23 three out of five of the farmers markets were not operating which limited edible education opportunities. One confounding variable was the change in the amount of MM money that was being matched during the two time periods. From 9/1/21 to 3/1/22 the MM amount was \$15, nearly the entire project time. Between 8/17/22 and 12/31/22 the MM amount was \$10, and from 1/1/23 to 4/16/23 the MM amount increased from \$10 to \$15. This change cannot be ignored and may account for a portion of any statistical increase or decrease found between the two periods. Equally important is the fact that, in Monterey County during February and March 2023, there were severe weather events for several weeks which heavily impacted market closures, market attendance and produce availability. So, there was no way to determine whether or not the FN had a positive impact on the overall amount of MM participation during the 2022 to 2023 period. Finally, partnership building efforts were successful as the FN conducted a community outreach event in partnership with the Monterey County Free Libraries (MCFL), Marina branch, at the Dad's Read reading fair in May 2023.

### **Conclusion & Recommendations**

In conclusion, the Food Navigator CSUMB intern program was beneficial and worthwhile for Everyone's Harvest to invest in. After completion of this project, it was concluded that lack of awareness, cost of housing and economic instability are all confirmed contributing factors to the excessive rates of hunger in Monterey County. The result of 13 new MM participants generated by the FN indicated that addressing the contributing factor of "lack of service providers and awareness of food assistance resources" by direct interaction between

service providers and service users is a viable strategy for reducing hunger in Monterey County. The Food Navigator was an effective way for the organization to achieve its mission as well as expand the organizational capacity and network of community partners. The benefit of increased outreach and new MM program participants means paying someone to perform the FN role would make financial sense for the organization.

Recommendations moving forward for Everyone's Harvest were to continue their Market Match and Fresh Rx programs, those programs were a great benefit to the overall health of Monterey County. Recommendations to strengthen MM data tracking included adding a permanent new data category "new MM user" for use at the farmers markets. Next, for outreach it was recommended that Everyone's Harvest partner with managers of low-income housing developments, such as Eden Housing who manages Cypress Gardens in Marina, CA, in order to target that population. In conjunction, it was recommended that EH increase outreach efforts within Monterey County K-12 schools. Lastly, regarding staffing, having an employee who could concentrate their efforts on bolstering the Everyone's Harvest Food Navigator (EHFN) program with supplemental aid from CSUMB FN interns would enable the EHFN program to flourish. So, in addition to retaining the Food Navigator interns it was recommended to create a paid Food Navigator position at a 0.5 full-time equivalent (FTE) at Everyone's Harvest.



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## Appendix A

### Project Implementation Timeline

Task	Timeline	Parties Involved	Materials/ Services Needed	Completed Product
Meet for Project Approval	8/22/22	Mentor, Student	Zoom link, Project proposal	Project approval
Research & identify successful programs	10/16/22	Student	Research categories: Food assistance resources, hunger, CalFresh education, farmers market programs	Successful programs identified
Conduct Food Navigation at farmers' markets	8/15/22 to ongoing	Mentor, Student	Food assistance resources provided by county, edible education guides, google sheets survey	Participation data successfully collected and logged
Collect educational materials distribution data for Monterey County WIC office	October to November 2022	Student	Google sheets templates provided by Monterey County WIC office	Data logged into database
Report educational materials distribution data to Monterey County WIC office	11/18/22	Student	Google sheets templates provided by Monterey County WIC office	Data successfully reported to and retrieved by WIC office
Meet with mentor & discuss identified best practices	11/22	Mentor, Student	Zoom link, meeting agenda	Best practices and successful organizations identified for outreach
Collaborate with Michigan Fitness Foundation	12/22	Teresa Zwemer Mentor, Student	Zoom link, meeting agenda	Meeting minutes
Workshare with mentor to design manual framework	12/22	Mentor, Student	Zoom link, meeting agenda & materials, best practice methods	Successfully designed a framework for the FN manual
Conduct satisfaction surveys at market	January to March 2023	Student, Market Manager	iPad, mobile hotspot borrowed from Monterey County Free Libraries	Survey results
Meet to discuss measured outcomes	April 2023	Student, Mentor	Meeting agenda, zoom link, survey data, demographic data	Data trends identified and synthesized into manual and capstone paper
Synthesize research findings into FN manual	April 2023	Student, Mentor	CSUMB library database	Manual work progress approved by mentor

Conduct community outreach with Marina Library at Dad's Read	May 2023	Student, New FN intern, Market Manager	Educational materials, edible education supplies	Distributed educational materials to patrons and provided edible education information
Meet with mentor to discuss finalized version and recommendations for FN manual	May 2023	Student, Mentor	Meeting agenda, zoom link, FN manual draft	Manual draft approved by mentor
Present outcomes & capstone	May 2023	Student, Capstone panel	Capstone paper and presentation materials	Successfully presented outcomes