Fresh Food for All

Howard Baker Public Policy Challenge
Spring 2018

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Executive Summary

*Fresh Food for All: Connecting Women, Infants, and Children with Local Farmers*

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides important nutrition services to women, infants, and children who meet eligibility requirements. Proper nutrition is essential for this population’s development. The Farmers’ Market Nutrition Program (FMNP) provides WIC recipients with the opportunity to purchase fresh, local fruits and vegetables to help support their health.

Not all WIC recipients take advantage of this healthy opportunity. Last year, nearly 70% of Knox County WIC recipients did not use their FMNP vouchers. A small policy change, providing educational materials to address potential barriers to using the farmers’ market, would improve the FMNP redemption rate and increase the accessibility of farm-fresh produce for WIC recipients.

**The problem:**

Only 32% of WIC recipients seized the opportunity to have more fresh produce last year. Additional policies are needed to ensure Knox County WIC recipients receive educational tools to increase the FMNP redemption rate.

**The solution:**

The *Fresh Food for All* policy initiative aims to increase the accessibility of fresh, local produce by providing educational materials to assist WIC recipients so that shopping at local area farmers’ markets can be less intimidating. The goal of *Fresh Food for All* is to increase FMNP voucher redemption from 32% in the 2017 season to 50% in the 2018 season.

The policy will require Knox County WIC staff to provide educational tools to help WIC recipients navigate farmers’ markets when they receive their FMNP vouchers. These tools will include an educational flyer and online website designed to address potential barriers to using farmers’ market.
Problem Statement

Fresh fruits and vegetables provide essential vitamins and minerals critical for the health and wellbeing of mothers and infants during and after pregnancy. Poor nutrition and vitamin deficiencies during pregnancy, infancy, and childhood are major causes of health problems during development and throughout the lifespan. Long-term health consequences include: poor physical growth, slowed brain development and function, delayed behavioral development, reduced immunity, and an increased risk of morbidity and mortality (see Figure 1). However, there is a solution—**Good nutrition from fresh fruits and vegetables can help these children gain and sustain their full developmental potential.**

*Figure 1. Conceptual Framework of Determinants of Undernutrition and Overnutrition*

WIC is designed to provide supplemental food, health care referrals, and nutrition education to pregnant and postpartum women, infants and children up to five years of age that meet the eligibility requirements set by state agencies. WIC eligibility requirements include nutritional need(s), proof of US and state residency and a household income at or below 185% the Federal poverty level.
WIC vouchers can be used to purchase fruits and vegetables from supermarkets or grocery stores, but quality, fresh produce can be difficult to find, especially in lower income communities that have been deemed “food deserts”. Farmers' markets offer a wide variety of fresh, seasonal produce that is easy to locate and purchase. To increase access to fresh fruits and vegetables, many states and counties have enacted the Farmers’ Market Nutrition Program (FMNP). FMNP equips WIC recipients with additional vouchers that can be used to purchase fresh, locally grown produce at area farmers’ markets.

A study in Ohio revealed that WIC participants who used FMNP vouchers had an overall increase in fruit and vegetable intake compared to WIC recipients who did not use the FMNP vouchers. Though some programs have been successful, several barriers to shopping at farmers’ markets with these vouchers have been identified suggesting the need for program improvements to increase participation and voucher redemption. In another study, WIC participants reported the need for online and print nutrition education materials to help guide them when using their FMNP vouchers at farmers’ markets.

Knox County launched their inaugural WIC-FMNP program in July 2017 (see Figure 2). An evaluation of the 2017 program revealed that only 32% of Knox County WIC participants redeemed their FMNP vouchers during the 2017 farmers’ market season. Low participation rates may result in loss of future funding and support for WIC-FMNP.

Figure 2. Knox County WIC-FMNP program logistics

Under the WIC-FMNP program, Knox County WIC recipients receive two $5.00 vouchers per eligible household member in the months of July and August to spend on locally grown fruits and vegetables from area farmers.

Knox County WIC recipients must be aware of the FMNP voucher program, familiar with the benefits it provides, and know how to use vouchers to purchase healthy, local produce. Currently there are no FMNP educational materials available for the Knox County WIC participants. The 2018 FMNP is slated to begin in July 2018. Therefore, now is the opportune time to prepare WIC recipients for the coming season by providing educational materials on how and where they can use their vouchers, along with creative and healthy ways to cook, prepare, store, and enjoy the nutritious, local fruits and vegetables from Knox County farmers’ markets. Supportive policies are needed to prepare and distribute FMNP educational tools and resources to WIC participants to cultivate a healthier Knox County WIC community.
Policy Options

The *Fresh Food for All* policy initiative will focus on educating WIC recipients about the WIC-FMNP vouchers with an overall goal to **increase redemption rates to 50%** for the 2018 season. The 50% redemption rate was stated as the Knox County WIC clinic’s goal during a meeting with stakeholders in March. The policy should require that all WIC staff distribute an educational flyer upon distribution of FMNP vouchers that will provide information about the vouchers and guide recipients to an informational website. The Farmers’ Market 101 website and educational flyer will be designed to address potential barriers to voucher redemption. The website will contain more in-depth information and provide links to outside resources recipients may find helpful (e.g. transportation information, recipe ideas, etc.). The potential barriers that were discussed during the stakeholder meeting to Knox County WIC-FMNP voucher redemption will be included in the website and can be found in Figure 3. Currently, FMNP voucher recipients verbally discuss the redemption process with Knox County WIC nutrition educators when an interest in the program is directly expressed. However, WIC nutrition educators are busy and must touch on other state-mandated topics during these meetings. Creating a policy to require the educational flyer to accompany all FMNP vouchers will increase awareness within the Knox County WIC population and improve the WIC-FMNP voucher redemption rate at local area farmers’ markets, without burdening WIC staff.

**Figure 3.** Content included in educational materials to address barriers of FMNP voucher recipients.

<table>
<thead>
<tr>
<th>Farmers Market 101 Website &amp; Educational Flyer Program Contents</th>
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<tbody>
<tr>
<td>What can I expect to find at my local farmers market?</td>
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<tr>
<td>(Produce Seasonality)</td>
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<tr>
<td>Where and when are my local farmers’ markets?</td>
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<tr>
<td>(Market Schedules &amp; Locations)</td>
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<tr>
<td>How do I get to my local farmers market?</td>
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<tr>
<td>(Public Transportation &amp; Parking Maps)</td>
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<tr>
<td>What can I use my vouchers to buy?</td>
</tr>
<tr>
<td>(Eligible WIC-FMNP Products)</td>
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<tr>
<td>Who are my local area farmers that accept my vouchers?</td>
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<tr>
<td>(Farmer Bios)</td>
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<tr>
<td>How much can I afford to buy with my vouchers?</td>
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<tr>
<td>(Budget Widget)</td>
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<tr>
<td>What can I make with my fruit and vegetable purchases?</td>
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<tr>
<td>(Recipe Ideas)</td>
</tr>
</tbody>
</table>

**Beneficiaries**

The target population of this policy initiative will be WIC mothers, infants, and children in Knox County, Tennessee who receive the FMNP vouchers for Summer 2018. Figure 4 depicts the breakdown of WIC recipients in Knox County, indicating a large proportion of recipients (73.3%) are children and infants.9 Most Knox County WIC recipients (75%) are white and 16.4% are reported to be Hispanic/Latino.9 Almost 15% of Knox County residents live in poverty10 and
11.3% who are low income do not live close to a grocery store\textsuperscript{11}. This is higher than the 2016 national poverty rate (12.7%)\textsuperscript{12} and the national rate of low income individuals that live greater than one mile from a grocery store (4.1%).\textsuperscript{13} In Tennessee, approximately 38% of children are overweight or obese,\textsuperscript{14} which is higher than the national average of 31.2%.\textsuperscript{15} For WIC recipients aged 2-4 years old in Tennessee, the obesity rate is nearly 15%,\textsuperscript{14} while the national average for this age group is 10.4%.\textsuperscript{15} The current goal of Healthy People 2020 is to decrease preschool children’s obesity rate to 9.4%,\textsuperscript{15} indicating the long road ahead before this is met in Knox County. These statistics create a staggering backdrop for just how important WIC vouchers are to our most vulnerable community members. It is crucial to the health of WIC families that they are aware of a resource that could increase their access to fresh, local fruits and vegetables.

\textbf{Figure 4.} Knox County WIC Participants Categories by Percentages, 2018.\textsuperscript{9}

The health of children is an important part of WIC’s purpose.\textsuperscript{16} Because obesity and poverty are often intertwined,\textsuperscript{17} it is important that policies and services provide opportunities for families to not only purchase fruits and vegetables, but to also learn how to cook with and enjoy them. The high rates of poverty and childhood obesity in Knox County support the urgency for these services to be more well-known. The FMNP is an important strategy to assist families in these goals and may assist in obesity prevention efforts.

The \textit{Fresh Food for All} policy initiative will effectively meet the needs of voucher recipients by addressing barriers to farmers’ market attendance found in previous research.\textsuperscript{8,18} Currently in Knox County, educational materials are not distributed with FMNP vouchers and due to time constraints, WIC staff do not discuss program details unless explicitly asked by interested recipients. Providing an educational flyer directing WIC recipients to the detailed information on the Farmers’ Market 101 website will allow recipients to explore the program outside of their short WIC appointment considering the limited time of KCHD WIC educators.

\textbf{Implementation}

Implementation of the \textit{Fresh Food for All} policy initiative will occur at the WIC clinic at the KCHD. This policy will require WIC nutrition educators to distribute an educational flyer to all FMNP voucher recipients in Summer 2018. This will encourage all recipients to begin a conversation about redeeming their vouchers and/or may increase participation for people who had not shown an interest in the 2017 program. The educational flyer will provide information on the program, as well as direct people to an online resource for more in-depth program details. The educational flyer will be created by the KCHD marketing specialist and the website will be
developed by two UT graduate assistants. All materials will be available in English and Spanish, per mandated WIC requirements.\textsuperscript{19}

**Innovation**
This policy initiative is novel; while many cities across the country and state of Tennessee have implemented the Farmers’ Market Nutrition Program, there is no known online resource that provides specific information about local farmers’ markets or attempts to address known barriers of voucher redemption.

**What Has Been Done**
Several studies and initiatives have tried to address barriers that WIC participants face when redeeming FMNP vouchers, however none have been conducted in Tennessee. In one study, qualitative focus groups with WIC recipients uncovered barriers and potential solutions to voucher redemption. Participants reported that online resources were helpful, but a paper resource was just as helpful to those who did not have access to a computer or internet.\textsuperscript{8} In 2017, a team of investigators designed FMNP educational materials for WIC recipients at eight WIC centers located in low-income, high-need communities in New York City.\textsuperscript{20} The goal was to decrease barriers and increase facilitators of using WIC-FMNP vouchers by WIC recipients at the local farmers’ markets. Educational materials were given to WIC staff members to be distributed and explained to WIC recipients. The WIC recipients were given tours of local farmers’ markets and how to locate farm stands that accepted the vouchers prior to receiving the vouchers. Another study concluded that FMNP voucher redemption rate increased from 33\% to 80\% with the use of educational materials, instructions, and tours of the local farmers’ markets.\textsuperscript{20}

**Alternatives**
Interviews with WIC recipients who participated in the 2017 Knox County WIC-FMNP could help assess their fruit and vegetable intake as it related to the program. This could also provide insight for future program promotion. Additionally, once evaluation of the 2018 program is conducted and analyzed, future program adaptations may continue to increase redemption. Future programming could include hosting a farmers’ market close to KCHD, where FMNP vouchers could be redeemed more conveniently or providing tours of local Knox County Farmers’ Markets since this has been successful at other sites across the country.

**Outcomes**
The Fresh Food for All policy initiative will make a large impact on the Knox County community. With increased redemption rates, not only will WIC families benefit from fresh, local produce, but area farmers will benefit from increased revenue. The 32% FMNP voucher redemption in 2017 added an extra $11,810 to participating farmers’ sales in the months of July and August.\(^8\) The anticipated increased redemption for 2018 will enhance the existing economic benefits to area farmers and the local food system. Additionally, FMNP vouchers could assist with lowering the state’s Medicaid expenditures\(^16\) by influencing the consumption of fresh fruits and vegetables and improving the health of WIC families long term. With increased redemption rates, the three-year approval period for the FMNP will likely be extended for Knox County, ensuring this benefit will be available for all Knox County WIC families for years to come.

**Action Plan**

*Successful implementation of the Fresh Food for All policy initiative will need to include support from three key area stakeholders: KCHD WIC Office, the KCHD Community Assessment and Planning Division, and Nourish Knoxville.*

**Figure 5. Fresh Food for All Influence Map**

Community collaboration among these three stakeholders would assist with successful execution of the program. In this model, the KCHD WIC Office would be responsible for educating Knox County WIC recipients on the new educational tools available to them. KCHD Community Assessment and Planning would assist with marketing the educational program to the local community and listing information on participating farmers and farmers’ markets in the local area. Nourish Knoxville, the parent organization to the Market Square Farmers’ Market, would assist with securing biographical information on participating farmers, assessing produce seasonality, and estimating produce costs. University of Tennessee graduate students will work with all three stakeholders to create the online educational website. Potential roadblocks include a reluctance of WIC recipients to participate in the program and a lack of available time for KCHD WIC educators to explain the program to all eligible WIC recipients.

In March 2018, an initial stakeholder meeting was conducted with all three influential stakeholder groups as part of the development of this policy brief. Representatives from all three stakeholder groups were given opportunities to discuss potential policy strengths, challenges, and alternate suggestions. After discussion, all stakeholders agreed that a policy to create and distribute digital and printed educational materials would be the best approach to increasing WIC-FMNP redemption for the 2018 season.
Fresh Food for All

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**Evaluation Plan**

A three-step evaluation plan for the *Fresh Food for All* policy initiative will include a mixed methods approach utilizing both quantitative and qualitative evaluation techniques, and is included as Figure 6.

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**Figure 6.** Three step evaluation plan

- **September 2018**
  - Conduct a survey of all Knox County WIC recipients documenting their experiences, challenges, and successes with the FMNP-WIC program and educational resources.

- **November 2018**
  - Conduct focus groups with a sample of Knox County WIC recipients detailing information collected in the quantitative survey.

- **December 2018**
  - Tabulate WIC-FMNP redemption at all Knox County area farmers’ markets for comparison to 2017 program redemption rates.

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**Budget**

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<th>Expense Category</th>
<th>Expense</th>
<th>Amount Required</th>
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<td>Other Costs</td>
<td>UT Graduate Assistants</td>
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<tr>
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<td>Flyer Materials</td>
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<tr>
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<td>Posters</td>
<td>105</td>
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<td>Focus Group Incentives</td>
<td>500</td>
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<tr>
<td></td>
<td>Website Domain Fees</td>
<td>60</td>
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<td></td>
<td><strong>Total</strong></td>
<td><strong>5,165</strong></td>
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**Budget Justification**

**Personnel expenses** for this project are requested for the development of marketing materials. The Knox County Health Department’s marketing specialist will design the paper educational materials. UT graduate assistants will be paid $15 per hour for 20 hours a week for a total of 1 month to design the website and print paper flyers. A Public Health Nutrition faculty member will supervise the graduate assistants. The faculty member will provide $300 in-kind for five hours of project supervision. The website will be hosted by WordPress, which charges a monthly fee of $5 for a unique web domain name.
Materials and Supplies- Flyers will be printed on cardstock at UCopy. It costs $2,100 to print 5,000 flyers. Additionally, five 36" x 48" posters will be printed and advertised at locations including the Health Department. These posters can be printed at the University of Tennessee library for $21 each.

Incentives- $500 is requested for incentives to recruit 50 focus group participants. Each focus group participant will receive one $10 gift card to a local retailer.

The total cost is $5,165

Additional potential funding sources to supplement any funding received from the challenge have been outlined in Appendix A.

Conclusion

The FMNP provides fresh fruits and vegetables to WIC recipients. However, last year only 32% of WIC-FMNP vouchers were redeemed at Knox County farmers' markets.

Additional policies are needed to improve the health of Knox County’s women, infants, and children by increasing WIC recipients’ redemption of FMNP vouchers for fresh produce.

Call to Action

Supporting Fresh Food for All will:

- Provide WIC participants with educational tools to help them purchase fresh produce with ease.
- Integrate key stakeholders to ensure successful implementation of the educational program.
- Increase redemption of FMNP vouchers at local area farmers’ markets.
- Improve the health of WIC participants by helping them purchase fresh produce.
- Increase revenue for local area farmers and farmers’ markets.
References


## Appendix

### Appendix A. Potential Funding Sources\(^{21,22}\)

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>Application Deadline</th>
<th>Funding Source</th>
<th>Total Dollar Amount Per Year</th>
<th>Funding Purpose</th>
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<tr>
<td><strong>Community Partners</strong></td>
<td>Grant available 3/1/18-2/28/19</td>
<td>W.K. Kellogg Foundation Grant</td>
<td>$171,712 total funding available</td>
<td>“Advance local procurement of healthy, nutritious food by building connections between local communities, key institutions and local and national partners to transform the food supply chain to increase access to healthy food by children and families and support local economies”</td>
</tr>
<tr>
<td><strong>Appalachian Community Fund</strong></td>
<td>4/12/2018</td>
<td>Appalachian Community Fund</td>
<td>Up to $3,000</td>
<td>“Funding for nonprofit organizations who work toward the movement of people toward the establishment of environmental, economic, racial, and social justice and the redistribution of wealth, power, and resources”</td>
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Appendix B. *Fresh Food for All* educational flyer (sample)

**WIC Farmers’ Market Nutrition Program**

Do you want to learn more about where, when, and how to use your WIC Farmers’ Market Nutrition Program (FMNP) vouchers?

Visit the WIC-FMNP information website to discover:

<table>
<thead>
<tr>
<th>Icon</th>
<th>Information</th>
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<tbody>
<tr>
<td>🕒</td>
<td>Where and when your local farmers’ markets are open</td>
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<tr>
<td>🍎</td>
<td>What products you will find at your local farmers’ markets in July &amp; August</td>
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<td>🚌</td>
<td>How you can get to your local farmers’ markets</td>
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<td>🛍️</td>
<td>What products you can buy with your farmers’ market nutrition vouchers</td>
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<td>🏆</td>
<td>Who your local farmers are that will accept your farmers’ market nutrition vouchers</td>
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<td>💰</td>
<td>How much you can buy with your farmers’ market nutrition vouchers</td>
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<td>🍽️</td>
<td>How you can prepare the fruits &amp; vegetables you buy at the farmers’ markets</td>
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## Appendix C. 2018 Timeline

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<td><strong>Initial Stakeholder Meeting</strong></td>
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<td><strong>Howard Baker Policy Challenge</strong></td>
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<td><strong>Develop Farmers’ Market 101</strong></td>
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<td><strong>Distribute Farmers’ Market 101 to WIC participants</strong></td>
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<td><strong>Farmers’ Market Nutrition Program</strong></td>
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<td><strong>Conduct Surveys</strong></td>
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<td><strong>Conduct Focus Groups</strong></td>
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<tr>
<td><strong>Calculate FMNP Redemption</strong></td>
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Appendix D. Logic Model of the *Fresh Food for All Policy* Change and Evaluation, 2018

**Inputs**
- Policy team members
  - UT Department of Nutrition graduate students
  - UT Department of Public Health graduate student
- Stakeholders
  - Nourish Knoxville
  - KCHD WIC Office
  - KCHD Community Assessment & Planning
- Marketing team
  - KCHD Marketing Specialist
  - UT Graduate Assistants
  - Public Health Nutrition Faculty Member

**Outputs**
- WIC staff provides Farmers’ Market 101 to WIC participants

**Outcomes**
- WIC participants know how to purchase and cook local produce
- FMNP redemption increases to 50% for Summer 2018 season
- Revenue increases for local area farmers and farmers’ markets

**Health Outcome**
- The health of women, infants, and children in Knox County improves